

**AN ANALYSIS OF THE SOUTH AFRICAN TAX  
INCENTIVE FOR RESEARCH & DEVELOPMENT AND  
AN INTERNATIONAL COMPARISON**

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**An analysis of the South African tax incentive for research & development and an  
international comparison**

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## ABSTRACT

The promotion of science & technology and the creation of an enabling environment for countries innovation systems has been a growing worldwide trend in developed countries, with 21 out of 30 member countries of the Organisation for Economic Co-operation and Development (OECD) currently utilising some form of tax incentive program aimed at encouraging investment in research and development (R&D) by private industry.<sup>1</sup> Encouraging R&D and associated innovation is generally seen as an effective tool in advancing science and technology, which in turn leads to the creation of new products and services, an increase in international competitiveness of local business, direct foreign investment and social spin-offs in the form of increased employment and economic growth.<sup>2</sup>

R&D is, however, expensive and involves high levels of technical risk, with the costs and risk involved often outweighing the potential profit. Consequently, many businesses choose not to perform R&D, which has resulted in governments of most developed countries having implemented various incentives to encourage private business to undertake R&D. These incentives can take the form of either direct incentives (grants, soft loans, subsidies etc) or indirect incentives (such as tax incentives). Tax incentives effectively subsidise the costs of R&D, making it a more attractive and profitable alternative for business. Developed countries, including: the United States of America (US), the United Kingdom (UK), Japan, China, Canada and Australia have all adopted a combination of both direct and indirect incentives, with various tax incentive measures receiving much attention in the last 2 decades.

In South Africa the legislation providing for R&D tax incentives has been substantially amended in recent years through a number of Taxation Amendment Acts,<sup>3</sup> culminating in the enactment of s 11D of the Income Tax Act 58 of 1962 (the Act). The aim of this dissertation is to critically examine the current South African tax incentive scheme as contained in s 11D, focusing on the eligibility requirements of that incentive. In addition, the dissertation will highlight design features and characteristics of the incentive, particularly in respect of its

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<sup>1</sup> R Atkinson and S Andes. "U.S. Continues to Tread Water in Global R&D Tax Incentives". (2009) *The Information Technology & Innovation Foundation 1* <http://www.itif.org/files/WM-2009-03-rd.pdf>. (Accessed: 11 November 2009). This compares to the 12 OECD member countries providing an incentive in 1996 (refer: [www.oecd.org/dataoecd/40/33/40024456.pdf](http://www.oecd.org/dataoecd/40/33/40024456.pdf) (Accessed: 11 November 2009)) highlighting the growing popularity of this policy tool.

<sup>2</sup> OECD. *Tax Incentives for Research and Development: Trends and Issues*. (2003) <http://www.oecd.org/dataoecd/12/27/2498389.pdf> (Accessed: 26 November 2009).

<sup>3</sup> Refer 'History' section in Chapter 2 below.

generosity, predictability, simplicity, administration and targeting.<sup>4</sup> The design and characteristics of the South African incentive is then compared to those of three different countries: the UK, Australia and Canada.<sup>5</sup> Based on the analysis and comparison, certain lessons are identified for South Africa<sup>6</sup> and various opinions are advanced on the effectiveness of the current structure and whether particular aspects of it could be improved going forward.

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<sup>4</sup> These are all characteristics identified as fundamental for any successful tax incentive scheme. OECD (see note 2; 4) and European Commission report. “*Promoting innovation by tax incentives - a review of strategies and their importance to biotech growth*”. (2006) <sup>9</sup> [http://www.finbio.net/ajankohtaista/yic-report\\_june\\_2006.html](http://www.finbio.net/ajankohtaista/yic-report_june_2006.html) (Accessed: 30 November 2009).

<sup>5</sup> Refer Chapters 3,4 and 5 below for comparatives with Australia, UK and Canada respectively.

<sup>6</sup> Refer Chapter 6 below.

## **DECLARATION**

I hereby declare that this dissertation is entirely my own work

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Shane Terrence Price

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## Chapter 1

### INTRODUCTION

#### OBJECTIVES

Over the past 6 years significant changes<sup>7</sup> have been made to the provisions of the Act dealing with the deductibility of expenditure on scientific and technological R&D. The current R&D tax incentive is contained in s 11D of the Act. The first objective of this dissertation is to critically analyse the eligibility requirements to be met by companies to qualify for the incentive.

Aside from the eligibility requirements, the design, characteristics and the administration of a tax incentive differ extensively between countries. Policy makers can learn from other countries, particularly those countries which have had incentives in place for longer periods and have adapted those incentives to cater for changing circumstances. With this in mind, a further objective of this dissertation is to describe and compare the design, characteristics and administration of the South African R&D tax regime to those of three different countries. A chapter of this dissertation is dedicated to describing each of the chosen three country's R&D tax incentive schemes and comparing it to that of the current R&D tax regime in South Africa.

The countries chosen for this comparison are Australia, the UK and Canada. The reason for this choice is that all three countries have had a R&D tax incentive system in place for a longer period than South Africa. The design of each system is also different and has been well monitored by the respective government, with information on the systems readily available through reliable online resources.<sup>8</sup>

All three countries offer a unique approach to the design of their R&D tax incentive system, with lessons to be learnt for a fledgling system such as South Africa's. Direct comparisons between regimes is difficult, given the differences in structure, however common themes do emerge and these are highlighted and compared.

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<sup>7</sup> Refer to section under 'History' in Chapter 2 below for a summary of the various amending Taxation Acts.

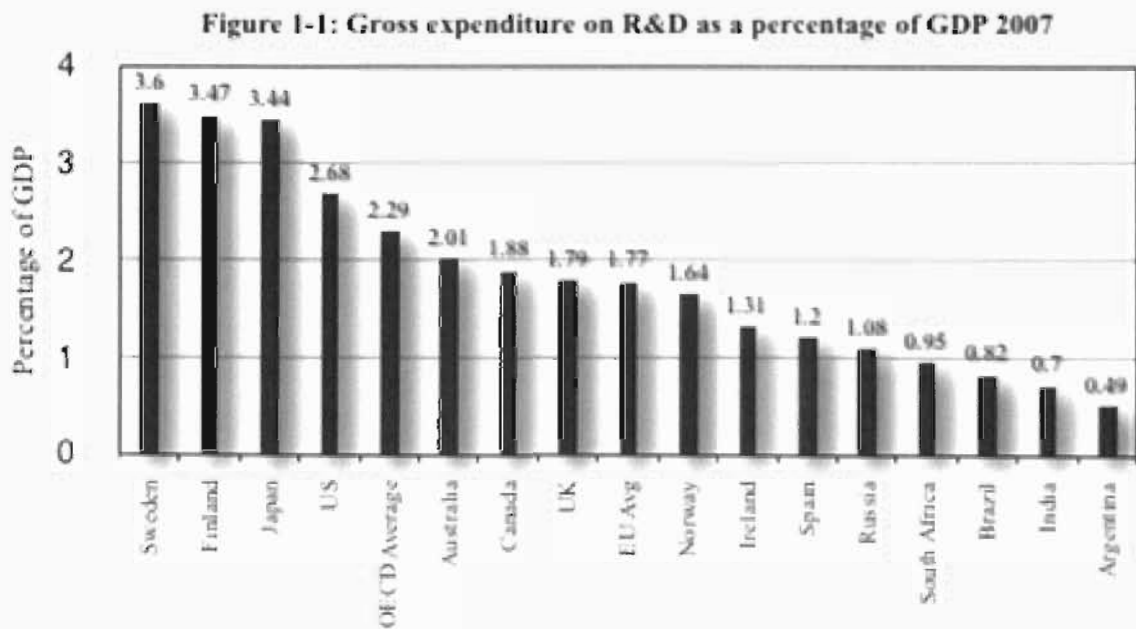
<sup>8</sup> Predominantly government online resources.

By way of conclusion, this dissertation identifies various lessons which could assist the development of the South African R&D tax regime in the future, with the way forward for South Africa's relatively infant R&D tax regime commented on. Although relevant, whether or not the objectives of the Legislature have been achieved or appear to be on the right track is difficult to comment on given the relatively short period of time that the incentive has been in place, as well as a lack of studies done on its impact.

### STATISTICAL OVERVIEW

As a starting point for this dissertation and to create a context in which policy decisions are made, which influence the design of R&D tax regimes worldwide, a brief statistical overview is provided below.

Most developed countries have had R&D tax incentives in various guises in place for substantially longer periods than South Africa. This is reflected in the comparative spending on R&D by those countries. Figure 1 below illustrates how South Africa's expenditure on R&D, as



expressed as a percentage of GDP, is comparatively low to that of selected OECD countries.<sup>9</sup>

<sup>9</sup> Statistics obtained from government/international statistic websites, particularly: [www.scotland.gov.uk/Topics/Statistics/Browse/Business/BERD/table6d](http://www.scotland.gov.uk/Topics/Statistics/Browse/Business/BERD/table6d) and [www.uis.unesco.org/template/pdf/S&T/Factsheet\\_No2\\_ST\\_2009\\_EN.pdf](http://www.uis.unesco.org/template/pdf/S&T/Factsheet_No2_ST_2009_EN.pdf) and <http://www.statcan.gc.ca/pub/88-221-x/2008002/part-partie1-eng.htm> (Accessed: 30 October 2009).

From the above figure it is clear that leading developed countries, such as Sweden and Finland, have comparatively high levels of expenditure on R&D, all above 3% of GDP. South Africa 's level of expenditure on R&D is well below that of most developed countries, although it does compare favorably to other developing countries such as Brazil (0.82%), India (0.7%) and Argentina (0.49%). South Africa has set itself a target of achieving a gross expenditure on R&D (GERD) of 1% by survey year 2008/09 and at this stage does appear to be on track.<sup>10</sup>

The latest survey by the Department of Science & Technology<sup>11</sup> (DST) shows that South Africa 's GERD was just over R16.5 billion (2005/06: R14.1 billion), equating to 0.95% of GDP (2005/06: 0.92%). In comparison, few OECD countries have a GERD equivalent to less than 1% of GDP as indicated in the figure above, with the average R&D spend by OECD countries standing at 2.29%.

Business expenditure on R&D has actually decreased from 58.3% (2005/06) to contributing 55.9% of overall R&D in 2006/07.<sup>12</sup> Foreign funding of R&D has also steadily decreased in its overall contribution, from 17.9% (2004/05) to 14.5% (2005/06) to 10.6% (2006/07).<sup>13</sup> The survey also revealed that a continuing feature of South Africa 's expenditure on R&D by the business sector, is that a "small number of large R&D-performing firms are still responsible for the majority of R&D expenditure".<sup>14</sup> It is important to note that the impact of the new R&D tax regime is only expected to be felt in the 2007/08 survey results, given its implementation in late 2006.<sup>15</sup>

With the above statistical overview in mind, the next chapter of this dissertation will focus on the first objective, being an analysis of the eligibility requirements for the R&D tax incentive, together with an overview of its design, main characteristics and administration.

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<sup>10</sup> Department of Science and Technology, *2006/2007 National Survey of Research and Experimental Development* (2009) iv [www.hsrc.ac.za/CCUP-RnD-7.phtml](http://www.hsrc.ac.za/CCUP-RnD-7.phtml) (Accessed: 25 November 2009).

<sup>11</sup> DST survey (see note 10: iv).

<sup>12</sup> DST survey (see note 10: xii).

<sup>13</sup> DST survey (see note 10: 16).

<sup>14</sup> DST survey (see note 10: 15).

<sup>15</sup> DST survey (see note 10: 15).

## Chapter 2

### SOUTH AFRICA'S R&D TAX INCENTIVE SCHEME

#### HISTORY

The original provision in the Act dealing with the deductibility of R&D expenditure was s 11B, introduced into South African legislation by s 29 of the Revenue Laws Amendment Act.<sup>16</sup> The R&D tax provision was substantially altered<sup>17</sup> by the introduction into the Act of s 11D, which replaced s 11B.

Section 11D of the Act was first proposed in the Revenue Laws Amendment Bill 2006 and was subsequently enacted into South African legislation by s 13 of the Revenue Laws Amendment Act,<sup>18</sup> promulgated on 7 February 2007 and deemed to come into operation in respect of all relevant R&D expenditure incurred on or after 2 November 2006.

Trevor Manuel in his annual Budget Speech commented that:

“To encourage businesses to increase investment in technology and innovation, the deduction for current research and development expenditure will be increased from 100 per cent to 150 per cent, and a more favourable regime for depreciation of R&D capital expenditure is proposed”.<sup>19</sup>

Section 11(gB) of the Act was also amended to provide for the full deductibility of expenses incurred in registering, extending or renewing intellectual property (e.g. patents and designs). These expenses were previously allowed under s 11B, which section applied only in respect of expenditure incurred before 2 November 2006.

Since its promulgation s 11D has undergone a number of ‘tweaking’ amendments through various Acts, specifically:

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<sup>16</sup> Act 45 of 2003.

<sup>17</sup> The most significant change was to the rate of deduction for R&D revenue expenditure, from the 100% of s 11B to an incentivised 150% deduction under s 11D; the accelerated depreciation allowance for R&D capital expenditure was also made more favourable by reducing the depreciation period from 4 years to 3 years.

<sup>18</sup> Act 20 of 2006.

<sup>19</sup> TA Manuel, Annual Budget Speech (2006) 18

<http://www.treasury.gov.za/documents/national%20budget/2006/speech/speech.pdf> (Accessed: 29 January 2008)

- (1) Taxation Laws Amendment Act (Act 8 of 2007) s 13
- (2) Taxation Laws Second Amendment Act (Act 9 of 2007) s 3
- (3) Revenue Laws Amendment Act (Act 35 of 2007) s 19
- (4) Taxation Laws Amendment Act (Act 3 of 2008) s 11
- (5) Revenue Laws Amendment Act (Act 60 of 2008) s 19
- (6) Taxation Laws Amendment Act (Act 17 of 2009) s 16

The amendments contained in the abovementioned acts ranged from purely stylistic changes to radical material changes.<sup>20</sup>

### OVERVIEW OF DESIGN

Government opted for simplicity in the design of s 11D, according to the DST:

“to ensure that South African taxpayers and enterprises of all sizes and in all sectors of the economy are encouraged to conduct R&D locally which will lead to new, improved, or technologically advanced products, processes or systems.”<sup>21</sup>

The R&D tax incentive is designed as a tax deduction/allowance, as opposed to a tax credit.<sup>22</sup> A tax deduction is a deduction from gross income of R&D expenditure (often the deduction is more than the actual expenditure, in South Africa’s system the deduction is for 150% of the R&D expenditure) to calculate taxable income. By contrast, a tax credit is a direct deduction from a company’s tax liability, expressed as a percentage of the R&D expenditure. A tax credit does have the advantage of not being influenced by the rate of corporate tax, thereby possibly contributing to greater certainty for companies carrying out R&D.

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<sup>20</sup> For instance, Act 8 of 2007 introduced the most wide-ranging material changes including: that the taxpayer be ‘carrying on a trade’, must intend to use the product of R&D ‘in the production of income’ and that the R&D must be ‘directly’ for a closed list of purposes. Most recently Act 17 of 2009 extended the accelerated depreciation allowance to ‘improvements’ in respect of years of assessment ending on or after 1 January 2010.

<sup>21</sup> DST. *Guide to Tax Incentives for Research and Development* 1 [www.dst.gov.za](http://www.dst.gov.za). (Accessed: 19 October 2009) See also: SARS. *Interpretation Note 50* (2009) 3 [www.sars.gov.za/home.asp?pid=5993](http://www.sars.gov.za/home.asp?pid=5993) (Accessed: 19 October 2009) emphasising the simplification of the R&D tax incentive system, as contrasted to the old regime under s 11B.

<sup>22</sup> Canada has a tax credit incentive - see chapter 5 below. Among OECD countries, tax credits are more popular than allowances, with a 2006 study showing that 12 out of 19 OECD members used tax credits with the remainder utilising allowances: Refer: <http://www.oecd.org/dataoecd/53/4/36764076.pdf> 14 (Accessed: 19 October 2009).

South Africa's R&D tax incentive is broad-based, non-industry specific and available to all companies, foreign companies included,<sup>23</sup> conducting R&D in South Africa. It is a volume-based incentive, as oppose to an increment system. In other words, taxpayers qualify for the deduction if they have R&D expenditure, regardless of the level of that expenditure. There are no minimum spend requirements or any set maximum amounts for R&D claims. With an increment based system, taxpayers need to increase their annual R&D spend, with the level of tax support varying according to how much their R&D expenditure has increased when compared to a year-on-year historical level of R&D. Some countries have a combination of a volume and increment based system.<sup>24</sup>

In terms of structure, s 11D can broadly, for ease of reference, be broken down into 4 sections, specifically:

- 1) Deduction of qualifying operating expenditure.<sup>25</sup>
- 2) Accelerated depreciation allowance<sup>26</sup> for capital expenditure.
- 3) Exclusions and limitations.<sup>27</sup>
- 4) Other provisions.<sup>28</sup>

Sections 1 and 2 above provide for two types of R&D expenditure and their respective tax treatment, specifically:

- Qualifying revenue (or non-capital) expenditure, which is deductible at 150%; and
- Qualifying capital R&D expenditure, which is deductible as an accelerated depreciation allowance over three years: 50% in the first year the capital asset is brought into use by the taxpayer, followed by a deduction of 30% and 20% respectively in the following two years, i.e. 100% over 3 years.

The requirements for eligibility contained in the above-mentioned sections will now be examined in more detail.

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<sup>23</sup> Although there are no specific foreign company incentives: for example tax holidays for foreign researchers.

<sup>24</sup> For example - Australia employs aspects of increment support to their tax incentive system - refer Chapter 3 below.

<sup>25</sup> Section 11D(1).

<sup>26</sup> Sections 11D(2), 11D(3) and 11D(4).

<sup>27</sup> Sections 11D(5), (5A), (5B) and (6).

<sup>28</sup> Sections 11D(7), (8), (9), (10), (11), (12), (13), (14), (15), (16), (17) and (18).

## ANALYSIS OF ELIGIBILITY REQUIREMENTS

### **Section 1: Deduction of qualifying operating expenditure**

#### *The Law – s 11D(1)*

- 1) For the purposes of determining the taxable income derived by a taxpayer from carrying on any trade there shall be allowed as a deduction from the income of such taxpayer so derived, an amount equal to 150 per cent of so much of any expenditure actually incurred by that taxpayer directly in respect of activities undertaken in the Republic directly for purposes of—
- a) the discovery of novel, practical and non obvious information; or
  - b) the devising, developing or creation of any-
    - i) invention as defined in section 2 of the Patents Act, 1978 (Act No. 57 of 1978);
    - ii) design as defined in section 1 of the Designs Act, 1993 (Act No. 195 of 1993), that qualifies for registration under section 14 of that Act;
    - iii) computer program as defined in section 1 of the Copyright Act, 1978 (Act No. 98 of 1978); or
    - iv) knowledge essential to the use of such invention, design or computer program,
 if that information, invention, design, computer program or knowledge is of a scientific or technological nature and is intended to be used by the taxpayer in the production of his or her income or is discovered, devised, developed or created by the taxpayer for purposes of deriving income.

#### *Requirements for eligibility*

In order for revenue expenditure by a taxpayer to qualify for the 150% tax deduction incentive contained in s 11D(1) above, that taxpayer-:

- 5) must be carrying on a trade;
- 6) must actually incur expenditure,
- 7) which expenditure must be directly in respect of activities in the Republic,
- 8) which activities must be directly for a closed list of R&D purposes; and

the resulting product from that R&D:

- 9) must be of a scientific or technological nature; and
- 10) the taxpayer must intend to use the product in the production of his income, or
- 11) the product must be discovered, devised, developed or created by the taxpayer for purposes of deriving income.<sup>29</sup>

Each of these requirements is examined in more detail below.

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<sup>29</sup> SARS Interpretation Note (see note 21; 5).



### (1) Trade requirement

A prerequisite for claiming the R&D deduction is that the taxpayer needs to be conducting a trade. This ensures the section is in line with the general deduction formula contained in s 11 of the Act.

‘Trade’ is defined in s 1 of the Act as including:

“every profession, trade, business, employment, calling, occupation or venture, including the letting of any property and the use of or the grant of permission to use any patent as defined...or any design as defined...or any trade mark as defined...or any copyright as defined...or any other property which is of a similar nature”

It has been held by our courts that the above definition should be given a wide interpretation.<sup>30</sup> The definition is non-exhaustive and includes ‘trade’ itself. Our courts have taken into account a wide variety of circumstances/factors in determining whether a taxpayer is carrying on a trade. These circumstances include:

“the nature of the investment asset, the character of the investor, the intention with which the asset has been acquired, any change in such intention and the circumstances surrounding disposals.”<sup>31</sup>

The intention of the taxpayer was considered an important factor in earlier Appellate Division cases<sup>32</sup> when determining whether the taxpayer’s activities constituted a trade. This intention is evidenced by the taxpayer’s conduct and may change at some point.<sup>33</sup> However, a court will need to weigh up all the particular circumstances of each case. Some of the factors are listed above but the list is not exhaustive and none of the circumstances is of over-riding importance or individually decisive in its nature.<sup>34</sup> Ultimately, a trading activity must involve some ‘active step’, where the taxpayer crosses ‘the Rubicon’<sup>35</sup> and goes over from simply holding an asset as a capital investment, embarking on a trade or scheme in which such asset is used as stock-in-trade rather than capital.<sup>36</sup>

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<sup>30</sup> ITC 770 19 SATC 216, 1954 *Taxpayer* 91, cited with approval in *Burgess v CIR* 1993 (4) SA 161 (A), 1993 *Taxpayer* 153, 55 SATC 185.

<sup>31</sup> *CIR v Guardian Assurance Co South Africa Ltd* 1991 (3) SA 1 (A) at 19B.

<sup>32</sup> See: *CIR v Pick ‘n Pay Employee Share Purchase Trust* 1992 54 SATC 271 (A) at 281, *Natal Estates Ltd v SIR* 1975 (4) SA 177 (A), 37 SATC 193.

<sup>33</sup> *Pick ‘n Pay* supra.

<sup>34</sup> *Guardian Assurance, Natal Estates Ltd* supra.

<sup>35</sup> *Natal Estates* supra.

<sup>36</sup> *Natal Estates* supra.

It has been held that a loan by a person who does not carry on a business of lending money does not constitute a trade.<sup>37</sup> In addition, although most trades will be carried on with the object of making a profit, profit itself is not the essence of a trade.<sup>38</sup>

It would seem that a taxpayer can carry on a wide range of transactions/activities that would fall into the classification of a trade and thereby overcome the first hurdle in qualifying for the R&D tax incentive.

Pre-trade R&D expenditure is deductible under s 11A of the Act, but not at the incentivised rate contained in s 11D.

## **(2) Actually incur**

Actually incurred does not mean 'actually paid'. South African courts have held<sup>39</sup> that where a taxpayer has incurred an unconditional liability in a year of assessment, that liability is actually incurred even if paid in a subsequent year. Conversely, if a liability is conditional upon the occurrence of an uncertain event, then the taxpayer will not be held to have actually incurred expenditure until that event occurs and the liability becomes unconditional.

In order, therefore, for R&D expenditure to qualify for the incentive, a taxpayer must have an unconditional liability to pay the R&D costs, even if those costs are not actually paid in the relevant tax year.

## **(3) Directly in respect of activities in the Republic**

The term "Republic" is defined in s 1 of the Act and means the territory of the Republic of South Africa, including the territorial waters, the contiguous zone and the continental shelf referred to respectively in ss 4, 5 and 8 of the Maritime Zones Act, No. 15 of 1994. A South African company conducting R&D activities offshore, or engaging a foreign university to conduct that R&D, would therefore not qualify for the incentivised R&D deduction for expenditure on those offshore R&D activities. In addition, that taxpayer is unlikely to obtain a

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<sup>37</sup> *Kirsch v CIR* 1946 WLD 261, 14 SATC 72.

<sup>38</sup> *De Beers Holdings v CIR* 1986 (1) SA 8 (A).

<sup>39</sup> See *Caltex Oil (SA) Ltd v Secretary for Inland Revenue* 1975(1) SA 665(A); *Port Elizabeth Electric Tramway Co Ltd v Commissioner for Inland Revenue* 1936 CPD 241 at 244, and *Commissioner for Inland Revenue v Delfos* 1933 AD 242 at 257.

deduction under the general deduction formula, contained in s 11(a) of the Act, as the expenditure in question would in all likelihood be regarded as capital expenditure.<sup>40</sup>

The expenditure must be directly related to the particular R&D activity, which must itself be conducted within the Republic of South Africa. Indirect expenditure on R&D activities would therefore not qualify for the R&D tax incentive. Sibanda & Zandwijk,<sup>41</sup> in their discussion document list three examples of indirect R&D expenditure, which would not qualify for the incentive:

- “(a) expenditure incurred to purchase shares in R&D Co;
  - (b) expenditure incurred to purchase goods or services from R&D Co; and
  - (c) general grants, i.e. general donations to Universities,
- irrespective of whether the receipts are used by R&D Co to finance qualifying R&D activities”.<sup>42</sup>

#### **(4) Activities directly for R&D purposes**

As opposed to the above requirement where ‘directly’ referred to the expenditure, ‘directly’ in this context refers to the activities themselves, which must be directly for R&D purposes.

Our courts have examined the meaning of “directly” in a number of tax cases. Eloff JP in *Formscaff Investments (Pty) Ltd v Commissioner for Inland Revenue*,<sup>43</sup> referring to the judgment of Corbett J,<sup>44</sup> distinguished plant that is directly involved in the process of manufacture to plant that is used in an activity that is ancillary to the main activity, using the example of a “lorry that was used to convey sand and other materials to make concrete might not be part of the plant that was used directly” to make that concrete (such as the shuttering and formwork used to make the moulds for the concrete shapes in this particular case, which were used directly in a process of manufacture).

In his majority judgment in the case of *CIR v Wandrag Asbestos (Pty) Ltd*,<sup>45</sup> Kumleben JA held:

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<sup>40</sup> As it’s creating an asset of ‘enduring benefit’.

<sup>41</sup> South African Commercial and Intellectual Property Attorneys and consultants to Treasury on s11D and other recent Intellectual Property sections of the Act. [www.zaiplaw.co.za](http://www.zaiplaw.co.za) (Accessed: 19 October 2009) Hereinafter referred to as S&Z.

<sup>42</sup> S&Z. *S11D: R&D Tax incentive Discussion Document 3* <http://www.zaiplaw.co.za/images/stories/s11D.R%26D.Guideline.pdf> (Accessed: 30 November 2009). Hereinafter referred to as the S&Z Discussion Document.

<sup>43</sup> 55 SATC 251 at 259.

<sup>44</sup> In the Cape Case of 26 SATC 317 at 319-320.

<sup>45</sup> 57 SATC 123, also cited as 1995 (2) SA 197 (A).

“Thus in this case it is the connection between payment in terms of clause 4(a) and the procurement of the export orders that must be direct. It is not necessary that there should be a direct connection between the payment and the orders themselves.

It cannot be gainsaid that this payment was, and was intended to be, remuneration for Gefco for such procurement through its (Gefco’s) appointed agents and perhaps employees. It was conceded that had Wandrag appointed and paid its own foreign agents for this purpose, the expenditure would have been directly incurred by Wandrag whether or not they in turn appointed subagents who actually secured the orders. I can see no distinction in principle between that situation and the present in which Gefco was commissioned and paid to undertake this task and it in turn appointed agents who obtained the orders. It is true that the agreement as a whole cannot be classified as one of agency. But on the assumption that the selling commission in clause 4(a) was the *quid pro quo* for marketing Wandrag’s asbestos and for nothing else, one may validly regard this term of the agreement as one of agency in the sense of a mandate given by Wandrag (the mandator) to Gefco (the mandatory) in terms of which the latter undertook to perform the task of procuring orders for export for the former.”<sup>46</sup>

The South African Institute of Chartered Accountants (SAICA) refer to the aforementioned case in its submission to SARS<sup>47</sup> and conclude from the above that:

“The term “directly” therefore also applies in circumstances where a specifically identified amount is paid to a third party and that third party is not in a position to redirect the funds so received to any other activity other than the activity specifically identified by the payee of the funds.”<sup>48</sup>

This reference appears to broaden the definition of ‘directly’ to include 3<sup>rd</sup> party payments in certain circumstances, where that 3<sup>rd</sup> party is only able to utilise the funds provided for specifically identified R&D activities.

Corbett J in Income Tax Case No.1061<sup>49</sup> held:

“The sections in question speak of plant or machinery used by the taxpayer ‘directly’ in a process of manufacture or other process considered by the Secretary to be of a similar nature. The use of the word ‘directly’ in these sections indicates that the legislature intended a distinction to be drawn between plant or machinery directly used in a process of manufacture etc. and plant or machinery which is only indirectly so used. Full effect must be given to this intention. The word ‘directly’ in this sense, is defined by the *Shorter Oxford English Dictionary* to mean –

‘Without the intervention of a medium; immediately; by a direct process or mode’.

The same dictionary defines the adjective ‘direct’, in a cognate sense, as meaning–

‘Without intervening agency; immediate’.

Sections 12(1) and 12(2), therefore, have reference to plant or machinery used directly, i.e. without the intervention of some other medium or agency, in the process of manufacture etc.”

In *SIR v Consolidated Citrus Estates Ltd*,<sup>50</sup> it was held that:

“It would thus seem that ‘directly’ refers to and qualifies the act of incurring the expenditure. Obviously the expenditure must have been incurred by the taxpayer, i.e. He must have incurred the liability or made the

<sup>46</sup> *Wandrag supra* at 136.

<sup>47</sup> SAICA submission. Letter dated 28 November 2008.

[www.saica.co.za/documents/Submission\\_to\\_SARS\\_Draft\\_Int\\_Notes\\_s11D\\_RD.pdf](http://www.saica.co.za/documents/Submission_to_SARS_Draft_Int_Notes_s11D_RD.pdf) (Accessed: 30 November 2009).

<sup>48</sup> SAICA letter (see note 47; 3 para 3.4).

<sup>49</sup> 26 SATC 317 (C) at 318.

<sup>50</sup> 1976 (4) SA 500 (A), 38 SATC 126. This case is highlighted in the SARS Interpretation Note (see note 21; 11).

payment. 'Directly' appears to have been deliberately added in order to serve some purpose that the legislature had in mind. That purpose, I think, was to postulate that the connection between the taxpayer's incurring the expenditure and the object for which it was incurred (being one of those specified in paras (a) to (f) in the subsection) should be direct, ie. straight, and close, not devious and remote (cf Concise Oxford English Dictionary sv 'direct'). The reason was probably to stimulate the personal efforts of the individual exporter to develop an export market for his products; and therefore to ensure that for the expenditure to qualify for the additional and special allowance, it had to be incurred by the exporter himself and also had to be easily identifiable and thus readily provable to the Secretary's satisfaction, as being clearly expenditure for one or other of the specified objects."<sup>51</sup>

The previous two cases referred to above illustrate that requiring a direct link between expenditure and the R&D activity considerably narrows the scope of the incentivised deduction. Activities which are indirectly for R&D do not qualify for the incentivised deduction.<sup>52</sup>

Examples of indirect activities include: administration, maintenance, security, cleaning, storage marketing, clerical, legal costs<sup>53</sup> etc. It would appear that only salaries of staff engaged directly in R&D, together with costs of consumables used in qualifying R&D, would therefore meet the requirements for deductibility in s 11D(1).<sup>54</sup>

Whether or not the expenditure is directly in respect of the relevant R&D activity will depend on the facts and circumstances. If wages are paid to an employee and that employee spends 50% of his time engaged in R&D and 50% of his time doing other work, then only 50% of the expenditure will be directly in respect of R&D activities and deductible at the incentivised 150%.

The activities the taxpayer is undertaking cannot be for just 'general' scientific and technological R&D; the Legislation includes a 'closed list of R&D purposes'<sup>55</sup> at which the activities must be directed in order to qualify for the tax incentive. Each of those purposes is more fully described below:

- (a) the discovery of novel, practical and non obvious information

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<sup>51</sup> at 148.

<sup>52</sup> R Jooste "Invention may mean a thousand things....but legislation could mean a thousand more". (2007) *Finweek* 19 July.

<sup>53</sup> These activities are described as '*qualifying indirect activities*' in terms of the UK R&D tax incentive, discussed in chapter 4 below. S&Z regards the definition of R&D as being narrower than that of the corresponding UK definition. Refer S&Z Discussion Document (see note 42; 5).

<sup>54</sup> S&Z Discussion Document (see note 42; 4).

<sup>55</sup> SARS Interpretation Note (see note 21: 5). This list is contained in s 11D(1)(a) and (b).

‘Discover’ is defined as “find out or become aware of, whether by research or searching or by chance”.<sup>56</sup> In other words, for something to be discovered it was always pre-existing but has only now been brought to the discoverer’s attention; this can be contrasted with an invention that is invented i.e. is the result of an application of human ingenuity, it is a new creation that was never pre-existing.<sup>57</sup>

‘Novel’ is defined as “of a new kind or nature; strange; previously unknown”<sup>58</sup> and as “new, unusual or different”.<sup>59</sup> According to SARS, the information must be “new or unusual and must not be available in South Africa or elsewhere to be considered ‘novel’”.<sup>60</sup>

Information is defined as: “something told; knowledge”.<sup>61</sup> The term can therefore be equated with ‘know-how’ and ‘knowledge’. The ‘knowledge’ as it is used in s 1(a) does not have to be essential to anything;<sup>62</sup> it is simply knowledge for its own sake.

The information discovered must also be practical<sup>63</sup> and non obvious. Where something is non obvious, it cannot be easily seen or recognised or understood.<sup>64</sup>

An example would be the discovery of a particular plant with medicinal purposes. The plant and its practicalities have always been in existence, but the discovery of its usefulness, as a result of research, falls into the category of novel, practical and non obvious information.

DA Zandwijk, a director of S&Z, describes the scope of the deduction of know-how under this section as being quite narrow, as “in practice, R&D expenditure will seldom relate to the “discovery” of pre-existing information”.<sup>65</sup>

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<sup>56</sup> *The Concise Oxford Dictionary*, 9<sup>th</sup> edition, Clarendon Press, Oxford, 1995.

<sup>57</sup> SARS Interpretation Note (see note 21; p 7 para 4.2.1).

<sup>58</sup> *The Concise Oxford Dictionary* (see note 56).

<sup>59</sup> Online Thesaurus dictionary definition <http://www.thefreedictionary.com/novel> (Accessed: 28 October 2008).

<sup>60</sup> SARS Interpretation Note (see note 21; 6).

<sup>61</sup> *The Concise Oxford Dictionary* (see note 56).

<sup>62</sup> Contrasted with the ‘knowledge’ referred to in s 11D(1)(b), which needs to be essential to the invention etc.

<sup>63</sup> i.e. capable of being constructively used (as oppose to theoretical).

<sup>64</sup> In contrast to the Concise Oxford Dictionary definition of ‘obvious’.

<sup>65</sup> DA van Zandwijk. *To what extent is expenditure relating to development of know-how deductible in terms of our R&D tax incentive.* [www.zaiplaw.co.za/content/view/full/110/29/](http://www.zaiplaw.co.za/content/view/full/110/29/) (Accessed: 29 November 2009).

Despite this narrow scope, however, one motivation for including this section is that:

“s25(2)(a) of our Patents Act, which denies “discoveries” the status of an invention and thereby the benefit of patent protection (and entrance into s11D(1)(b)(i)).”<sup>66</sup>

The only other situation where R&D expenditure incurred in respect of know-how is deductible under s 11D, is where that know-how is essential to an invention, design etc.<sup>67</sup>

(b) The devising, developing or creation of any invention as defined

Invention is defined in the Patents Act<sup>68</sup> as meaning “an invention for which a patent may be granted under section 25”.<sup>69</sup> There are a number of exclusions and requirements listed in s 25 of the Patents Act, which need to be met for an invention to qualify for registration as a patent.

In terms of s 25(1) the invention must be “new” and involve an “inventive step” and “must be capable of being used or applied in trade or industry or agriculture”.

What is important to note is that s 11D(1) does not require that the taxpayer actually register a patent; although the invention needs to be capable of registration as a patent and must meet the requirements of a patentable invention as set out in s 25 of the Patents Act, no registration actually needs to be made by the taxpayer. This could be viewed as a positive factor in contributing to the simplicity of the section. A number of factors determine whether or not a taxpayer would patent an invention, including: costs, hassle, potential benefits and disclosure requirements. By enabling a taxpayer to qualify for the s11D incentive despite not actually registering a patent, the Legislature has simplified the section and its requirements.

Something is ‘new’ if it has not been made “part of the state of the art”.<sup>70</sup> In other words the invention cannot have been made public (not just in South Africa but anywhere in the world).<sup>71</sup> Publication can be oral, written, by use or in any other way.<sup>72</sup>

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<sup>66</sup> Van Zandwijk (see note 65).

<sup>67</sup> Section 11(1)(b)(iv). Refer discussion below on page 27.

<sup>68</sup> Act 57 of 1978.

<sup>69</sup> Section 2 definitions.

<sup>70</sup> Patents Act, s 25(5).

<sup>71</sup> Patents Act, s 25(6).

<sup>72</sup> Patents Act, s 25(6).

It is important to note that ‘trade secrets’ are not part of the ‘state of the art’, so although not ‘new’ for the company that has devised a particular trade secret, should another company devise the same product, it would meet the requirement of being ‘new’ as the product has not been made generally known.

To involve an ‘inventive step’, s 25(10) of the Patents Act requires that the invention be non obvious to a person skilled in the particular art. This is therefore a subjective test and SARS practice is that:

“In the event of obviousness being contested, SARS will take into account any examination report or opinion conducted by an expert in the field, such as an examining patent authority or a professional patent attorney”.<sup>73</sup>

There are a number of exclusions in the Patents Act of inventions which are not patentable. Therefore any expenditure associated with activities for the purpose of discovery, devising or creating such an invention would not qualify for the incentivised deduction. Section 25(2) specifically excludes the following from being a patentable invention:

- a discovery;<sup>74</sup>
- a scientific theory;<sup>75</sup>
- a mathematical method;<sup>76</sup>
- a literary, dramatic, musical or artistic work or any other aesthetic creation;
- a scheme, rule or method for performing a mental act, playing a game or doing business;
- a program for a computer; or
- the presentation of information,

The following are also excluded from being patentable and therefore ineligible for deduction:

- an invention the publication or exploitation of which would be generally expected to encourage offensive or immoral behavior;<sup>77</sup> or

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<sup>73</sup> SARS Interpretation Note (see note 21: 7).

<sup>74</sup> A discovery does however qualify for the deduction under s 11D(1) of the Act.

<sup>75</sup> A scientific theory, although not patentable, may qualify as a discovery of novel, practical or non obvious information and therefore qualify for the R&D deduction under s 11D(1)(a).

<sup>76</sup> Similarly a mathematical method may qualify for deduction under s 11D(1)(a) despite not being patentable.

<sup>77</sup> Section 25(4) of the Patents Act.



- for any variety of animal or plant or any essentially biological process for the production of animals or plants, not being a micro-biological process or the product of such a process.<sup>78</sup>
  - An invention of a method of treatment of the human or animal body by surgery or therapy or of diagnosis practised on the human or animal body shall be deemed not to be capable of being used or applied in trade or industry or agriculture.<sup>79</sup>
- (c) The devising, developing or creation of any design as defined

A design is defined in the Designs Act<sup>80</sup> as meaning either an “aesthetic or a functional design”. SARS point out<sup>81</sup> that “aesthetic designs” are generally not of a scientific or technological nature and therefore only “functional designs” would generally qualify under s11D. A “functional design” is defined in s 1 of the Designs Act as meaning:

“any design applied to any article, whether for the pattern or the shape or the configuration thereof, or for any two or more of those purposes, and by whatever means it is applied, having features which are necessitated by the function which the article to which the design is applied, is to perform, and includes an integrated circuit topography, a mask work and a series of mask works:”

As with a patent, the design does not need to actually be registered as such but does need to be capable of being registered i.e. it needs to meet the requirements set out in s 14 of the Designs Act. Section 14 requires that a functional design be “new” and “not commonplace in the art in question”.

Similarly to the requirements for an invention discussed above, a design will be ‘new’ if it is different from or doesn’t form part of the state of the art i.e. it has not been made public anywhere worldwide.

- (d) The devising, developing or creation of any computer program as defined

A computer program is defined in s 1 of the Copyright Act<sup>82</sup> as meaning:

“a set of instructions fixed or stored in any manner and which, when used directly or indirectly in a computer, directs its operation to bring about a result”

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<sup>78</sup> Section 25(4) of the Patents Act.

<sup>79</sup> Section 25(11) of the Patents Act.

<sup>80</sup> Act 195 of 1993.

<sup>81</sup> SARS Interpretation Note (see note 21, p 8 para 4.2.3).

<sup>82</sup> Act 98 of 1978.

Unlike the requirements for eligibility of a design, the section makes no reference to a computer program actually needing to be capable of qualifying for copyright protection. In addition, the definition above appears to be quite wide and the hurdle for qualification as a computer program is therefore relatively low at first glance.

The availability of this section is considerably narrowed when one takes into account the specific exclusions contained in s 11D(5) of the Act. Computer programs designed for internal use, by their nature (e.g. accounting, human resource or admin programs) would fall foul of the specific exclusion contained in s 11D(5)(b), in respect of expenditure related to “management or internal business processes”.

However, according to S&Z, Treasury has indicated that “where a computer program is developed for more than one sale or license, this exclusion will not apply”.<sup>83</sup> Thus *bona fide* 3<sup>rd</sup> party developers<sup>84</sup> are more likely to succeed in claims for deduction under this section. No reference in the Legislation can be found for this ‘multiple-sales’ test and SARS in its Interpretation Note<sup>85</sup> appears to suggest differently, that despite multiple sales intention by a taxpayer all other requirements still need to be met including that any program must not be for management or internal business processes. Development of websites, customer satisfaction questionnaires, internet sale systems would all fall foul of s 11D(5)(e) “market research, sales or marketing promotion”, even if devised by *bona fide* 3<sup>rd</sup> party developers.

This narrow interpretation by SARS conflicts with global practice, more relevant to *bona fide* 3<sup>rd</sup> party developers, being that systems developed for multiple sales i.e. software development for purposes of “sale, rent, license, hire or lease of two or more non associates of the company”,<sup>86</sup> with sufficient documentary evidence of these multiple sales, would render expenditure for development of the system deductible. However, as SARS correctly point out, no “multiple sales” test is included in our legislation. Therefore, were a taxpayer to develop software for multiple sales, that taxpayer would still need to meet the other requirements of s 11D, such as the scientific & technological requirement and the exclusions under s 11D(5), before associated expenditure will be deductible. Multiple sales is a factor our Courts may well take into

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<sup>83</sup> S&Z (see note 42: 9).

<sup>84</sup> As oppose to spin-off IT companies designing computer programs for internal group use.

<sup>85</sup> See note 21: 9.

<sup>86</sup> SARS Interpretation Note (see note 21: 9).

consideration when examining computer programs, but it is not a specific allowable deduction in our legislation.

Therefore, although at a first glance the test for computer programs does appear to be broad, cognisance must be taken of the exclusions particularly pertinent to computer programs as well as the overreaching requirement that any developed computer programs must be of a scientific or technological nature for associated expenditure to meet the deduction requirements.

- (e) The devising, developing or creation of any knowledge essential to such invention, design or computer program

The term ‘knowledge’ is not defined in the Act and it is therefore necessary to refer to its ordinary grammatical meaning. The Merriam-Webster Online Dictionary<sup>87</sup> defines ‘knowledge’ (noun) as being:

“the fact or condition of knowing something with familiarity gained through experience or association (2) : acquaintance with or understanding of a science, art, or technique b(1) : the fact or condition of being aware of something (2) : the range of one's information or understanding<sup>2</sup> answered to the best of my knowledge”

The knowledge (or ‘know-how’ as it is commonly referred to) must be “essential” to the use of the invention, design or computer program.

An example is a company designing a new type of low-cost housing which can be built cheaply and easily out of renewable sources by the ultimate owner, who needn't be trained in building methods. An employee of that company then draws up a comprehensive manual with a step-by-step guide to building the housing. The employee's salary would be a deductible expense as its produced knowledge essential to the housing design.

SARS have prepared a list of activities that it regards as directly eligible for R&D purposes<sup>88</sup> and those it regards as being excluded from eligibility for R&D purposes.<sup>89</sup> Although not legally binding on a taxpayer, they are a useful guideline when assessing whether activities would meet the requirements of s 11D.

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<sup>87</sup> [www.merriam-webster.com/dictionary/knowledge](http://www.merriam-webster.com/dictionary/knowledge) (Accessed: 20 October 2009).

<sup>88</sup> SARS Interpretation Note (see note 21; 34).

<sup>89</sup> SARS Interpretation Note (see note 21; 35).

In summary, the legislation appears to require a 4-pronged approach to determining whether any expenditure falls within the eligibility requirements of s 11D(1). Essentially the taxpayer will need to identify the particular activity which results in that taxpayer incurring expenditure. The activity needs to be analysed to determine whether or not it is an activity which is directly for R&D purposes. If the activity is for R&D purposes, then any expenditure which is incurred directly in respect of that activity is deductible at the incentivised rate of 150%.

### **(5) Scientific or technological nature**

Section 11D provides for “Deductions in respect of scientific or technological research and development”. Expenditure on other types of research and development, such as on social sciences, arts, management and humanities; or on market research, sales or marketing promotion are specifically excluded by subsec 5.

‘Research and Development’ is not a defined term in our Act.<sup>90</sup> This lack of a definition in the new legislation may create uncertainty for taxpayers unsure of exactly what qualifies as R&D, which could be viewed as a disadvantage of our R&D tax incentive.<sup>91</sup>

The issue also arises as to when R&D actually starts. According to S&Z, R&D starts when:

- “(a) one has identified the scientific or technological step that is to be attained;
- (b) has the requisite intention to develop something new; and
- (c) commences activities to reach that goal”<sup>92</sup>

This definition of the start of R&D effectively precludes the costs of “brainstorming sessions”, a general precursor to research endeavors.

Not all R&D necessarily results in tangible marketable products as evidence of the taxpayers endeavors. Accordingly, to determine whether or not a taxpayer has conducted R&D, regards need not be had of any accomplishments, but instead a taxpayer’s intention at the outset of any R&D would need to be ascertained i.e. the taxpayers “purpose” must be to discover new information of a scientific or technological nature, nothing needs to be produced. Of paramount importance therefore is the taxpayer’s intention. It would appear prudent for a taxpayer to keep

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<sup>90</sup> It was defined under s 11B, which although no longer applicable is indicative of the type of expenditure the Legislature contemplated when drafting this section.

<sup>91</sup> Refer international comparisons below, where R&D is defined in each of the three countries compared.

<sup>92</sup> S&Z Discussion Document (see note 42; 2).

written records of this intention e.g. minutes of meetings, brainstorming sessions etc. The obvious embodiment of this intention would be the taxpayer's project plan.<sup>93</sup>

In the event of a dispute with SARS, the onus is on the taxpayer to prove that he undertook qualifying R&D expenditure, which practically would require an ability to identify steps taken at the outset before embarking on R&D.

### **(6) Intention to use in production of income**

For expenditure to be deductible under s 11D, the taxpayer must intend to use the information, invention, design, computer program or knowledge in the production of his/her income. This refers to income in the defined sense as being what remains of a taxpayer's gross income after deducting any exempt amounts.<sup>94</sup> When determining whether or not expenditure is incurred in the 'production of income', our Courts have accepted the following passage from Watermeyer AJP's judgment in *Port Elizabeth Electric Tramway*<sup>95</sup> as being the approach to adopt:

"The purpose of the act entailing the expenditure must be looked at. If it is performed for the purpose of earning income then the expenditure attendant upon it is deductible....what attendant expenses can be deducted? How closely must they be linked to the business operations? Here, in my opinion, all expenses attached to the performance of a business operation *bona fide* performed for the purposes of earning income are deductible whether such expenses are necessary for its performance or attached to it by chance or are *bona fide* incurred for the more efficient performance of such operation, provided they are so closely connected with it that they may be regarded as part of the cost of performing it."<sup>96</sup>

In *Joffe & Co (Pty) Ltd v CIR*<sup>97</sup> the court referred to the expenditure as having to be a 'necessary concomitant' of the business operations.

In *Sub-Nigel Ltd v CIR*<sup>98</sup> it was held that income does not necessarily have to be produced in the current tax year for the associated expenditure to be in the production of that income, but simply means that the expenditure must be to produce income; whether or not income is actually produced is not a determinant of the deductibility of the associated expenditure. Therefore developmental expenditure, which is unsuccessful in producing a marketable product will still meet the 'production of income' requirement, provided that the developmental expenditure is closely connected to the income-earning operations or is a necessary concomitant of the business operations.

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<sup>93</sup> Although prudent, the drawing up of a R&D Plan is not a requirement of s 11D, but is required in terms of the Australian equivalent legislation (refer Chapter 3 below)..

<sup>94</sup> Section 1 of the Act.

<sup>95</sup> *Supra*.

<sup>96</sup> This passage has been quoted with approval in many cases, eg. *CIR v Genn* 1955 (3) SA 293 (A).

<sup>97</sup> 1946 AD 157, 13 SATC 354.

<sup>98</sup> 1948 (4) SA 580 (A), 15 SATC 381.

## **(7) Product for purposes of deriving income**

In a relatively recent addition to the closing paragraph of s 11D(1),<sup>99</sup> the Legislature has stressed that the product doesn't necessarily have to be used by the taxpayer itself to produce income but the taxpayer's intention when researching or developing the potential product must be to derive income in some form from that product; his motive must not be simply philanthropic for instance. Income is again used in the defined sense. This would enable a R&D company to qualify for the s 11D incentive, even if the product produced is used by another entity to produce income; provided the R&D company obtains a fee for its services.

That concludes the analysis of eligibility requirements for R&D revenue expenditure as contained in s 11D(1), which provides for a deduction of qualifying non-capital R&D expenditure at an incentivised rate of 150%. The analysis now turns to the treatment of R&D capital expenditure and the accelerated depreciation allowance.

## **Section 2: Accelerated depreciation allowance**

### ***The Law – section 11D(2), (3) and (4)***

- 2) There shall be allowed as a deduction by a taxpayer in respect of any building, part thereof, machinery, plant, implement, utensil, article or improvement thereto which-
  - a) Is owned by that taxpayer, or acquired by that taxpayer as purchaser in terms of an agreement contemplated in paragraph (a) of the definition of 'instalment credit agreement' in section 1 of the Value-added Tax Act, 1991, (Act No. 89 of 1991); and
  - b) Is new and unused when brought into use by that taxpayer solely and directly for purposes contemplated in subsection (1),
  - c) .....
  - d) ....

an amount equal to 50 per cent of the cost to that taxpayer of that new and unused building, part thereof, machinery, plant, implement, utensil, article or improvement in the year of assessment that it is brought into use by that taxpayer and 30 per cent in the first succeeding year of assessment and 20 per cent in the second succeeding year of assessment: Provided that no deduction shall be allowed to a taxpayer under this section in respect of any building, part thereof, machinery, plant, implement, utensil, article or improvement if that taxpayer ceased to use that building, part thereof, machinery, plant, implement, utensil, article or improvement solely and directly for purposes contemplated in subsection (1) during any previous year of assessment.
- 3) For the purposes of this section, the cost to the taxpayer of any building, part thereof, machinery, implement, utensil, article or improvement thereto shall be deemed to be the lesser of-
  - a) the actual cost to the taxpayer in respect of the acquisition, installation and erection thereof;
  - b) the cost which a person would, if he or she had acquired, installed or erected that building, part thereof, machinery, plant, implement, utensil, article or improvement under a cash transaction concluded at arm's length on the date on which the transaction for the acquisition, installation or erection thereof

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<sup>99</sup> Act 60 of 2008 s 19(1).

- was in fact concluded, have incurred in respect of the cost of such acquisition, installation or erection;  
or
- c) .....
- d) where the building, part thereof, machinery, plant, implement, utensil, article or improvement has been acquired to replace an asset which has been damaged or destroyed, such cost less any amount which has been recovered or recouped in respect of the damaged or destroyed asset and has been excluded from the taxpayer's income in terms of section 8(4)(c), whether in the current or any previous year of assessment.
- 4) Notwithstanding any other provision of this section, any building, any part thereof or improvement thereto shall be deemed not to have been used for purposes contemplated in subsection (1) unless such building, part thereof or improvement is regularly used for those purposes and is specifically equipped for such use.

### ***Overview***

Section 11D(2) provides for the deduction of capital expenditure, which would otherwise not be deductible under the general deduction formula contained in s 11(a) of the Act.<sup>100</sup> The section allows for deduction of expenditure on certain qualifying assets, being: buildings (or part thereof), machinery, plant, implement, utensil, article or improvements thereto (hereinafter collectively referred to as 'eligible assets'), subject to certain conditions. The deduction is in the form of an allowance spread over 3 years from the date the eligible asset is first brought into use by the taxpayer at the rate of 50% in the first year it is brought into use, 30% in the succeeding year and 20% in the final year.

### ***Requirements***

The following requirements need to be met before the capital expenditure qualifies for the allowance:

- (1) The eligible asset must be owned by the taxpayer or have been acquired by the taxpayer in terms of an installment credit agreement.**

This closes the tax structuring loophole where taxpayers could effectively have created separate entities, one of which owned the property and leased it to a related company allowing for double deductions. This is consistent with other capital allowances in the Act.<sup>101</sup>

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<sup>100</sup> The capital expenditure may be deductible under another provision of the Act, such as the s 11(e) depreciation allowance, but normally over a longer period than the accelerated 3-year period provided for in this instance. An exception is computer software which has an eligible life of just 2 years in terms of the SARS Practice Note 19, in which case a taxpayer should make an election in terms of s 11D(6) to write off such software over 2 years in terms of s 11(e) and not 3 years under s 11D. Buildings are not depreciable in terms of any other provision in the Act.

<sup>101</sup> Refer s 11(e) of the Act for example.

**(2) The eligible asset must be new & unused; and**

Second-hand items would therefore not qualify for the accelerated depreciation allowance.

**(3) must be brought into use solely and directly for R&D;**

The Legislature has limited the types of R&D assets to a very specific small class of assets that are exclusively applied by the taxpayer to R&D projects. Again the term ‘directly’ is used in the legislation, emphasising the proximity of the use of the asset to the R&D function.

In terms of s 11D(4), any building or part thereof or improvement needs to be regularly used for R&D and specifically equipped for such purpose. Occasional use of a building for R&D would therefore not allow for its acquisition cost being subject to the accelerated depreciation allowance.

To this point, the dissertation has examined the eligibility requirements for R&D revenue and capital expenditure, as well as commenting on the design of the R&D tax incentive scheme. The focus now shifts to that of the administration of the scheme before concluding the discussion on the South African R&D tax regime.

## ADMINISTRATION

The R&D tax incentive scheme is administered jointly by three government departments:

- National Treasury, which is responsible for tax policy and formulation of the incentive.
- SARS, which monitors the use of the tax deduction and ensures compliance with the relevant tax legislation.
- DST, which provides feedback to Parliament on the effectiveness of the scheme. DST will make the information it collects available to SARS in the event of uncertainty regarding eligibility of activities. It is also responsible for promoting the scheme and providing general advice to stakeholders.<sup>102</sup>

To claim the R&D tax incentive, taxpayers have to do the following:

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<sup>102</sup> DST. *A guide to Scientific and Technological Research and Development Tax Incentives*. 4. [www.dst.gov.za/r-d/Guide%20to%20Tax%20Incentives.pdf/view](http://www.dst.gov.za/r-d/Guide%20to%20Tax%20Incentives.pdf/view) (Accessed: 25 November 2009).



- (1) Complete and submit information to the DST as prescribed in the R&D Tax Incentive Form. This form is available on request and can be downloaded from the DST website. The form must be submitted to the DST within six months of the taxpayer's financial year end. It will be possible to submit these forms online in the future.
- (2) Complete the relevant entries and schedules in the Income Tax Return Form as prescribed by SARS.

Compared to the three countries discussed later, the support provided by government, particularly for new claimants of the R&D tax incentive, is minimal. Brochures provided by DST are outdated and time consuming to download (due to the superfluous graphics of the 19mB guideline). The questionnaire form cannot be submitted online, despite assurances for the past couple years that this function will be available in the future. The SARS website is difficult to navigate but does provide a detailed guideline to s 11D.

These are all important considerations, particularly for SMEs, which find it difficult to comply with lots of red tape and regulation, as manpower is predominantly concerned with keeping the business going, not with completing tax returns and monitoring R&D expenditure.

## CONCLUSION

The dissertation to this point has provided an overview of the design of the South African R&D tax incentive, as well as examining in-depth the requirements for eligibility.

In terms of design, the tax incentive has the following features:

- It is broad-based, non-industry specific available to all companies, foreign companies included,<sup>103</sup> conducting R&D in South Africa.
- It is a volume-based incentive as opposed to an incremental one.
- The system is designed as a deduction and an allowance as opposed to a tax credit system.

Characteristics of the system are that it is relatively simple: there are no incremental calculations involved,<sup>104</sup> no onerous administrative requirements (e.g. preparation and

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<sup>103</sup> Although there are no specific foreign company incentives, e.g. tax holidays for foreign researchers. This may be an important consideration for a small country like South Africa, with smaller countries tending to benefit from the transfer of technologies from abroad whereas bigger countries, with their large budgets and better resources, are able to increase innovation. Refer OECD (see note 2; 6).

<sup>104</sup> J Warda "Tax Treatment of Business Investments in Intellectual Assets: An International Comparison STI Working Paper 2006/4". [www.oecd.org/dataoecd/53/4/36764076.pdf](http://www.oecd.org/dataoecd/53/4/36764076.pdf) 13 (Accessed: 1 December

presentation of lengthy plans), no ceilings on the amount of the R&D claim or minimum spend. Simplicity is sometimes stressed at the expense of certainty, with, for instance, no actual definition of R&D provided in the legislation, a factor possibly creating uncertainty for taxpayers as to whether certain activities would qualify.

The scheme is in some respects very generous,<sup>105</sup> but this is curtailed to some extent by the narrowness in the R&D expenditure it applies to, through, for instance: the exclusion of indirect activities and the narrow applicability of expenditure on 'know-how' and 'computer software'.

With the large number of changes to the scheme since its inception, it could be argued that it lacks predictability for taxpayers, which in turn leads to uncertainty and a reluctance of taxpayers to engage in R&D. As a tax deduction and not a credit, it is also influenced by the corporate tax rate, creating further uncertainty for taxpayers concerned about the long term governmental approach to corporate tax rates.

Administrative procedures are fairly straightforward, with companies answering a few additional questions in their annual tax return and completing an information form for DST. However, minimal support is provided by the agencies required to administer the scheme, with very little information or guidance provided. Guidelines are outdated and difficult to download, often focusing on graphics and presentation rather than content. Forms cannot be submitted online and are often not available for download due to changes.

There appears to be very little ongoing engagement with stakeholders or attempts to keep improving service delivery<sup>106</sup> and very little promotion and advertising of the scheme to companies via the relevant SARS and DST websites. No surveys have been conducted with companies to gauge their satisfaction with the scheme and support. There are no specialised units dealing with claims; considering the often cutting edge, scientific research (e.g. biotechnology) and associated activities - it would appear to be prudent to have scientifically trained individuals to assess claims, ensuring consistency.<sup>107</sup>

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2009). Generally there has been a move away from incremental systems to volume-based systems in the OECD, which are seen as simpler to implement.

<sup>105</sup> The 150% deduction is high when compared to that of Australia at 125% for instance.

<sup>106</sup> Contrasted with the very proactive governmental departments in the UK, Canada and Australia - refer to the international comparisons in chapters 3,4 and 5.

<sup>107</sup> Refer HMRC specialist units discussed in chapter 4 below.

In light of the above observations of the design and characteristics of the South African incentive, together with the analysis of eligibility requirements, the focus of this dissertation shifts now to the R&D tax incentive dispensation in three developed countries: Australia, UK and Canada. A broad overview of the R&D tax incentive in those three countries is individually examined in 3 separate chapters. The design of those schemes is compared to that of South Africa, together with commentary of their characteristics and how they compare to those highlighted above.

## Chapter 3

### AUSTRALIAN TAX INCENTIVE SYSTEM

#### INTRODUCTION

The Australian tax concession for R&D expenditure<sup>108</sup> was first introduced in July 1985<sup>109</sup> and was then considered one of the most generous tax incentives in the world.<sup>110</sup> At the time of its introduction it allowed firms to deduct R&D expenditure at 150% (now at 125%),<sup>111</sup> with the basic aim of improving Australia's private business investment in R&D and increasing the international competitiveness of Australian industry.<sup>112</sup> The scheme was intended to be temporary and was to expire on 30 June 1991.<sup>113</sup> It became 'permanent' in March 1991,<sup>114</sup> although it has undergone a number of amendments since then.<sup>115</sup>

The Australian legislation governing the R&D Tax Concession is contained in ss 73B to 73Z of the ITAA 1936 and Part IIIA of the Industry Research and Development Act, 1986.<sup>116</sup> The relevant sections are extremely detailed, canvassing: objectives of the legislation,<sup>117</sup> complicated calculations of incremental expenditure,<sup>118</sup> descriptions of various group/partnership/foreign structures and their implications,<sup>119</sup> and very detailed definitions.<sup>120</sup> The legislation is far more detailed than the corresponding South African legislation. Similarly to the South African R&D tax concession, the concession is broad-based and non-industry specific, as well as being structured as an incentivised deduction as opposed to a tax credit.

<sup>108</sup> Known as the 'R&D Tax Concession' and hereinafter referred to as such or as 'the concession'.

<sup>109</sup> R Lattimore "Research and Development Fiscal Incentives in Australia: Impact and Policy Lessons". (1997) Chapter 7, p 91 *OECD Policy evaluation in innovation and technology, towards best practices*.

<sup>110</sup> Lattimore (see note 109, 91).

<sup>111</sup> Section 73B(14)(b) of the Income Tax Assessment Act 1936, hereinafter referred to as the ITAA 1936. All references in this chapter to sections refer to those contained in the ITAA 1936 unless otherwise stated.

<sup>112</sup> Section 73B(1AAA).

<sup>113</sup> Lattimore (see note 109, 93).

<sup>114</sup> Lattimore (see note 109, 93).

<sup>115</sup> The Australian government has recently published a discussion document on the proposed overhaul of the current R&D Tax Concession system from one based on a super deduction to that of a more simple tax credit. The new system is envisaged to apply for income tax years commencing after 30 June 2010 and will apply to new & existing R&D activities. This is briefly discussed below. The focus of this Chapter is, however, on the R&D Tax Concession in its current format.

<sup>116</sup> Hereinafter referred to as the IR&D Act.

<sup>117</sup> Section 73B(1AAA).

<sup>118</sup> Section 73RA.

<sup>119</sup> See for instance s 73BL.

<sup>120</sup> Section 73B.

Administration and policy direction of the R&D Tax Concession is handled collectively by The Commissioner of Taxation, as the head of the Australian Tax Office (ATO), together with AusIndustry<sup>121</sup> and Innovation Australia.<sup>122</sup> Innovation Australia is responsible for administration of the concession, for promoting it and ensuring its effectiveness, as well as providing advice to Government and companies on the operation of the program.<sup>123</sup> Innovation Australia can issue certain certificates such as whether or not a company's activities are 'eligible R&D activities'. These certificates are binding on the Commissioner. The Commissioner is in turn responsible for determining "whether a company's expenditures, and legal and financial structures, are eligible."<sup>124</sup> Policy direction is determined by the Government department of Innovation, Industry, Science and Research, which draw officers from AusIndustry, its delivery arm.<sup>125</sup>

In terms of the Innovation Australia annual 2008/09 report, 7 754 businesses had registered for the R&D Tax Concession by 20 June 2009, investing AUS\$14.2 billion in R&D for the 2007/08 income tax year.<sup>126</sup> The latest available Australian Bureau of Statistics survey<sup>127</sup> indicates that business expenditure on R&D for 2006/07 was in excess of AUS\$12 billion, representing an increase of 16.48% from 2005/06.

## FEATURES OF THE CONCESSION

There are basically four elements to the R&D tax concession, specifically:

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<sup>121</sup> Division of the Australian governmental department of 'Innovation, Industry, Science and Research', responsible for delivery of governments principal business programs. Their website is: [www.ausindustry.gov.au](http://www.ausindustry.gov.au) (Accessed: 7 November 2009).

<sup>122</sup> An independent statutory body established to assist with the administration of the Australian Government's innovation and venture capital programs, refer: [www.ausindustry.gov.au/InnovationAustralia/Pages/InnovationAustralia.aspx](http://www.ausindustry.gov.au/InnovationAustralia/Pages/InnovationAustralia.aspx) (Accessed: 7 November 2009).

<sup>123</sup> ATO and AusIndustry. *Guide to the R&D Tax Concession*. (2008) [www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Pages/GuidetotheRDTaxConcession.aspx](http://www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Pages/GuidetotheRDTaxConcession.aspx) (Accessed: 30 January 2009). Hereinafter referred to as the AusIndustry Guide.

<sup>124</sup> Lattimore (see note 109; 95).

<sup>125</sup> AusIndustry Guide (see note 123; 12).

<sup>126</sup> Page 47.

[www.innovation.gov.au/Section/AbouttheDepartment/Annual%20Report%20200809/resources/pdf/DIISR\\_AR\\_2009.pdf](http://www.innovation.gov.au/Section/AbouttheDepartment/Annual%20Report%20200809/resources/pdf/DIISR_AR_2009.pdf) (Accessed: 23 November 2009).

<sup>127</sup> 2006/07 survey. [www.abs.gov.au/AUSSSTATS/abs/@.nsf/Lookup/8112.0!xplanatory%20Notes12006-07?OpenDocument](http://www.abs.gov.au/AUSSSTATS/abs/@.nsf/Lookup/8112.0!xplanatory%20Notes12006-07?OpenDocument) (Accessed: 23 November 2009).

- (1) A deduction from assessable income, available to all eligible companies,<sup>128</sup> of up to 125% for qualifying R&D expenditure on “Australian-owned R&D activities”.<sup>129</sup> The deduction is claimable on lodgment of a tax return.<sup>130</sup> In comparison, the R&D needs to be undertaken in South Africa but the residence of the ultimate owner of the IP is not a factor.<sup>131</sup>
- (2) An R&D Tax Offset, available to smaller companies<sup>132</sup> whose annual R&D expenditure is between AU\$20 000 and AU\$2 million. Essentially the company can claim thirty cents back in cash for every one dollar it would otherwise be eligible for under the concession.<sup>133</sup> A company which chooses to make use of the tax offset must forego any claim it may have had under the concession.<sup>134</sup>
- (3) The R&D Incremental (175% Premium) Tax Concession: this is an additional 50% deduction on top of the 125% deduction available to companies that increase their R&D expenditure to above a particular threshold relative to their average R&D expenditure over the previous 3 years.<sup>135</sup>
- (4) An R&D Incremental (175% International Premium) Tax Concession available in respect of “Foreign-owned R&D activities” carried on by an Australian-incorporated company on behalf of a foreign company, which formed part of the same group of companies as at the time of expenditure. The company can claim 100% deduction for R&D expenditure incurred on behalf of the foreign group and an additional 75% of expenditure above a rolling 3-year average of expenditure.<sup>136</sup>

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<sup>128</sup> Companies must be incorporated in Australia to be eligible for the concession.

<sup>129</sup> This is where effective ownership of the intellectual property (IP) produced through the R&D resides in Australia, compared to “Foreign-owned R&D activities” where ownership of the resultant intellectual property resides outside Australia.

<sup>130</sup> Section 73B(14).

<sup>131</sup> This factor is to be addressed in the proposed new Australian R&D tax credit which will change the definition of an eligible activity to one that is carried out in Australia regardless of where the resultant IP is owned, thereby enabling foreign companies to conduct their R&D through Australian incorporated entities but still retain ultimate ownership of any IP produced.

<sup>132</sup> Those companies with grouped turnover of less than AU\$5 million and R&D expenditure between AU\$20 000 and AU\$2m in the 2009/10 tax year.

<sup>133</sup> Sections 73I and 73J.

<sup>134</sup> Section 73I(4).

<sup>135</sup> Section 73QA.

<sup>136</sup> Section 73QB.

Provided certain conditions are met,<sup>137</sup> companies can also claim a 125% deduction for R&D expenditure abroad. R&D expenditure abroad must be limited to 10% of the total R&D expenditure on an Australian project, of which the international expenditure must form part of.<sup>138</sup>

Other criteria of the R&D Tax Concession are that to qualify, companies must:

- register with Innovation Australia;<sup>139</sup>
- spend a minimum of AUS\$20 000 on R&D in the year of assessment<sup>140</sup> (unless R&D activities are contracted to a Registered Research Agency, in which case the threshold does not apply);
- the R&D activities must be either carried on by or on the company's behalf.<sup>141</sup> The 'on own behalf' requirement requires that the company claiming the R&D tax concession must be taking the financial risk of the R&D project, must control the R&D project and effectively own the project results;<sup>142</sup> and
- prepare and maintain a comprehensive R&D plan in accordance with Innovation Australia guidelines.<sup>143</sup>

Although the basic concession (at 125%) is less generous than the South African concession, companies which progressively increase their expenditure on R&D (thereby meeting one of the objectives of the legislation)<sup>144</sup> benefit by qualifying for a higher 175% deduction of qualifying expenditure. However, calculations and application of the incremental concession is complicated, which is a possible hindrance to its utilisation, particularly by smaller companies, lacking the expertise or finances to afford expert assistance.

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<sup>137</sup> Such as obtaining advance approval from Innovation Australia. For other conditions refer fact sheet at: [www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Documents/Factsheets%20July%2009/RD%20Tax%20Con%20-%20overseas%20RD%20Dec08.pdf](http://www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Documents/Factsheets%20July%2009/RD%20Tax%20Con%20-%20overseas%20RD%20Dec08.pdf) (Accessed: 23 November 2009).

<sup>138</sup> AusIndustry Fact Sheet (see note 137). This is in contrast to the Act which provides that the R&D activities must be carried out in the Republic (see above under 'Analysis') with no incentivised deduction available for R&D conducted abroad.

<sup>139</sup> Section 39J of the IR&D Act

<sup>140</sup> Section 73B(14)(b)

<sup>141</sup> Section 73B(1) definitions

<sup>142</sup> AusIndustry guide (see note 123: 14)

<sup>143</sup> Section 73B(2BA)

<sup>144</sup> Section 73B(1AAA)(b)

The Australian system does not allow for international double dipping<sup>145</sup> as companies need to be Australian incorporated and the IP needs to be owned locally. In contrast, the South African system is more attractive to foreigners, as it does allow for international double dipping.

An advantage of the concession over the South African R&D tax scheme and an example of governments targeting certain companies, is the tax offset available to smaller companies enabling them to claim a cash refund rather than a deduction, thereby assisting with cash flow, an important consideration for small, often cash-strapped companies.

### ELIGIBLE EXPENDITURE

Unlike the South African legislation, ‘research and development activities’ and ‘research and development expenditure’ are defined terms in the ITAA 1936.<sup>146</sup> ‘Research and development expenditure’ refers to the following:

- contracted expenditures paid to Registered Research Agencies (RRA)<sup>147</sup>
- salary expenditure<sup>148</sup>
- other expenditure (including overhead and consumables)<sup>149</sup>
- that are incurred directly in respect of eligible R&D activities.<sup>150</sup>

As with the South African R&D tax scheme, the concession does limit eligibility to expenditure directly related to the R&D activities. However, the Australian legislation is far more detailed in terms of defining exactly what expenditure qualifies.

### ELIGIBLE ACTIVITIES

To meet the definition of an eligible R&D activity, the activity needs to meet 3 criteria, specifically:

- (1) be systematic, investigative and experimental (SIE); which

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<sup>145</sup> Refers to the situation where a foreign multinational can claim both the R&D tax incentive in its home country and in the foreign country it is conducting the R&D in.

<sup>146</sup> Section 73B(1) definitions.

<sup>147</sup> RRA’s are defined in s 73B(1). Payments to RRA’s do not need to meet the minimum AU\$20 000 to qualify for the concession.

<sup>148</sup> Also comprehensively defined in s 73B(1) - allows for apportionment for staff partly engaged in R&D activities; excludes the salaries of support staff (which may qualify for deduction under ‘other expenditure’) and staff indirectly engaged in R&D.

<sup>149</sup> This includes administrative costs and overheads which are ‘directly’ incurred in respect of R&D activities, but excludes indirect costs e.g. preparation of tax returns.

<sup>150</sup> AusIndustry guide C2 page 30



- (2) must involve innovation or high levels of technical risk; and be done for
- (3) the purposes of acquiring new knowledge or creating new or improved material, products, devices, processes or services.

Section 73B(2C)<sup>151</sup> lists 10 categories of activity which are not SIE and therefore don't qualify for the concession. This is in contrast to the corresponding South African legislation where 5 activities are specifically excluded by s 11D(5) of the Act. However, it could be argued that most, if not all, of the additional excluded activities in the ITAA 1936 would none-the-less be excluded by the wording in the Act. For instance: 'preparation for teaching' is a specifically excluded activity for R&D purposes.<sup>152</sup> Although not specifically excluded in the Act under s 11D(5), 'preparation for teaching' would none-the-less fall foul of s 11D(1). This is, however, another example of how thorough and detailed the Australian legislation is.

The definition includes two categories of eligible activities:<sup>153</sup>

- (1) SIE activities (previously referred to as 'core activities'); and
- (2) Activities (previously termed 'supporting activities') directly related to the 'core activities'

An activity is not a R&D activity unless it is undertaken in accordance with a plan complying with certain guidelines.<sup>154</sup> For activities to be innovative there must be an "appreciable element of novelty"; and to involve "high levels of technical risk" there must be an element of uncertainty and the removal of such uncertainty requires a "program of systematic, investigative and experimental activities" and a "systematic progression of work... from hypothesis to experiment, observation and evaluation, followed by logical conclusions".<sup>155</sup>

In contrast, the South African Legislature has stressed that any activities need to be directly for a closed list of purposes, which would therefore appear to preclude any supporting activities. In this respect the Australian legislation appears to be more generous.

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<sup>151</sup> ITAA 1936.

<sup>152</sup> Section 73B(2C)(j).

<sup>153</sup> AusIndustry Guide (note 123; 76).

<sup>154</sup> Section 73B(2BA).

<sup>155</sup> Section 73B(2B).

In both Australia and South Africa, no new products actually need to arise – the taxpayer’s intention, as indicated by documentary evidence, should be to create, devise, or develop something. The taxpayer doesn’t actually have to achieve that purpose to obtain the deduction for R&D done.

## CAPITAL EXPENDITURE

The ITAA 1936 provides for a different tax treatment of depreciating assets (plant) and capital used for R&D purposes depending on when the asset was acquired. If the asset was acquired prior to 29 January 2001, the old legislative provisions apply.<sup>156</sup> Different rules also apply depending on whether the asset was acquired between 29 January 2001 and 1 July 2001<sup>157</sup> or after 1 July 2001,<sup>158</sup> when the new rules apply.

Under the old rules pertaining to plant acquired prior to 29 January 2001, which plant had to be used exclusively for R&D purposes, the deduction available was in the form of a 3-year incentivised depreciation allowance. From the first year the plant was brought into exclusive use and the following two years, the rate of deduction was a third of qualifying plant expenditure multiplied by 1.25 (if the companies aggregate expenditure on R&D was greater than AUS\$20 000 or at a third of the expenditure if the companies aggregate R&D expenditure was less than or equal to AUS\$20 000).<sup>159</sup>

The new rules<sup>160</sup>, which apply to plant/depreciating assets and capital works (excluding buildings) acquired after 29 January 2001, have the following features:

- The assets do not have to be used exclusively for R&D.<sup>161</sup>

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<sup>156</sup> Section 73B(1).

<sup>157</sup> Section 73BH. The essential difference lies in the calculation of the notional capital allowance. This was calculated in terms of Division 42 of the ITAA 1936 up to 30 June 2001. After that date a new uniform capital allowances regime was introduced into the ITAA 1936, with the result that Division 42 no longer applied and the notional capital allowance for calculating the R&D Allowance was now calculated in terms of the Division 40 of the ITAA 1936.

<sup>158</sup> Section 73BA.

<sup>159</sup> Section 73B(15).

<sup>160</sup> Contained in s 73BH (for assets acquired prior to 1 July 2001) and 73BA (assets acquired post 1 July 2001).

<sup>161</sup> Use and corresponding deduction can be pro-rata’d between R&D and other usage. Refer fact sheet available online at:

[www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Documents/Factsheets%20July%2009/RD%20Tax%20Con%20-%20Plant%20and%20depreciating%20assets%20Dec08.pdf](http://www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Documents/Factsheets%20July%2009/RD%20Tax%20Con%20-%20Plant%20and%20depreciating%20assets%20Dec08.pdf) (Accessed: 23 November 2009).

- The accelerated depreciation allowance no longer applies. Instead assets are depreciated over their effective lives but at 125% of the notional capital allowance for the duration of the time the asset is used for R&D.<sup>162</sup>
- Intangible assets and buildings are excluded from this regime.
- Normal capital allowance provisions<sup>163</sup> apply for assets not used for R&D purposes for a period of time in a year of income.

To be eligible for the R&D allowance, depreciable assets (plant) must qualify for the notional capital allowance under Division 42 of the Act.<sup>164</sup>

Costs of certain low-cost items<sup>165</sup> qualify for immediate write-off.<sup>166</sup>

Prior to 1987 buildings dedicated to R&D could be depreciated over 3 years at 150% of cost.<sup>167</sup> In terms of the existing legislation, buildings (including any extensions, alterations or improvements) do not qualify for the R&D tax concession but may qualify for the normal capital allowance provisions in the ITAA 1997.<sup>168</sup>

The accelerated depreciation allowance in the Act does appear to be more generous than the corresponding capital allowance under the new rules in the ITAA 1936. Although, assuming adequate expenditure on R&D is retained, Australian companies will in the long term obtain a higher deduction at 125% of the cost of depreciating assets, South African taxpayers obtain an immediate benefit, usually a more advantageous position in business. In addition, the allowance in the Act applies to buildings (or part thereof and improvements) used for R&D, which is not allowed in the ITAA 1936. However, the assets do need to be used solely and directly for a closed list of R&D purposes in terms of the Act, a more onerous requirement than that of the ITAA 1936, where use can be apportioned between R&D and other uses.

## ADMINISTRATION

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<sup>162</sup> Section 73BH(2). Companies must spend more than AUSS\$20 000 on R&D, failing which the allowance is not at the 125% incentivised amount but reverts back to the notional capital allowance.

<sup>163</sup> Division 40 deduction with slight modifications applied to the normal depreciating rules.

<sup>164</sup> Section 73BH(1).

<sup>165</sup> Items costing less than AUSS\$100.

<sup>166</sup> Practice Statement PS LA 2003/8.

<sup>167</sup> A Sawyer "Reflections on providing tax incentives for research and development: New Zealand at the cross roads". (2005) 119 *Journal of Australian Taxation* 8(1) [www.rsnz.org/](http://www.rsnz.org/) (Accessed: 28 October 2008).

<sup>168</sup> Division 43 of the ITAA 1997. Depending on its use, the deduction period for buildings constructed after 27 February 1992 will be between 25 and 40 years.

Claims for the concession are made via a self-assessment system by completing the relevant R&D section in the annual tax return form, together with a R&D schedule which must be submitted at the same time as the return.<sup>169</sup> To be eligible for the concession, companies must register their R&D activities annually with Innovation Australia by lodging a registration application within 10 months of the end of the company's income year. Registration applications can be submitted electronically via the AusIndustry website.<sup>170</sup> Help guides and online assistance with the application is available on the AusIndustry website. Online applications are assessed by AusIndustry within 10 days of submission (30 days if a hard copy is submitted).<sup>171</sup>

## CONCLUSION

The current Australian R&D tax concession has been described as "complex and outdated"<sup>172</sup> and is to be replaced from 1 July 2010 with a more simplified and predictable R&D tax credit<sup>173</sup> replacing the super deduction. In this regard, the Australian Government has released a consultation paper,<sup>174</sup> with the aim of initiating a consultative process with business and other stakeholders to produce a more predictable and simple system. The definition of an 'eligible R&D activity' is to be tightened to prevent deduction of undesirable expenditure<sup>175</sup> and the new incentive is to be aimed at SME's which are "more responsive to Fiscal incentives".<sup>176</sup>

Comparing the South African R&D tax credit to the Australian concession as it currently stands, it is evident that the SA R&D tax scheme is simpler and more generous than the current Australian system, which has in fact become less generous over the years, for instance:

- A reduction in the basic concession rate from 150% to 125%.

<sup>169</sup> The return and schedule can be submitted electronically. Refer AusIndustry Guideline C1 p 8.

<sup>170</sup> [www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Pages/ApplicationFormsforRegistrationofRDActivities.aspx](http://www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Pages/ApplicationFormsforRegistrationofRDActivities.aspx) (Accessed: 27 November 2009).

<sup>171</sup> AusIndustry fact sheet  
[www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Documents/Fact%20Sheets/RD%20Tax%20Concession%20Fact%20Sheet.pdf](http://www.ausindustry.gov.au/InnovationandRandD/RandDTaxConcession/Documents/Fact%20Sheets/RD%20Tax%20Concession%20Fact%20Sheet.pdf) (Accessed: 23 November 2009).

<sup>172</sup> K Carr "New R&D Tax Credit" (18 September 2009) Media release  
<http://minister.innovation.gov.au/Carr/Pages/NEWRDTAXCREDIT.aspx> (Accessed: 28 October 2009).

<sup>173</sup> [www.ausindustry.gov.au/InnovationandRandD/RandDTaxCredit/Pages/RandDTaxCredit.aspx](http://www.ausindustry.gov.au/InnovationandRandD/RandDTaxCredit/Pages/RandDTaxCredit.aspx) (Accessed: 28 October 2009).

<sup>174</sup> Australia, Treasury. *The New Research and Development Tax Incentive*. (2009).  
<http://www.treasury.gov.au/contentitem.asp?NavId=-037&ContentID=1599> (Accessed: 28 October 2009).

<sup>175</sup> Consultation Paper (see note 174, 2).

<sup>176</sup> Consultation Paper (see note 174, 2). Essentially Australian companies earning less the AUS\$20 million will qualify for the 45% refundable tax credit; companies earning AUSS\$20m or more will qualify for the 40% standard tax credit.

- Removing the accelerated depreciation allowance and replacing it with a slower 'useful life' deduction.
- Excluding buildings from qualifying for the incentivised deduction.

Australia has, however, indicated a new more concerted approach to increasing R&D in the country, with its proposed new credit system.

Administratively, the Australian submission process is streamlined and effective. Online assistance and guidelines are numerous and readily available. The legislation is, however, complicated and would be difficult for non-tax professionals to follow. Submission of supporting documentation and the preparation of a comprehensive plan are onerous requirements, particularly on smaller taxpayers.

This dissertation now examines the second of the comparative countries R&D tax incentive provisions, being that of the United Kingdom.

## Chapter 4

### UK TAX INCENTIVE SYSTEM

#### INTRODUCTION

##### Legislation and governing bodies

The UK's R&D tax incentive was introduced in terms of the Finance Act 2000,<sup>177</sup> which came into effect on 28 July 2000. Section 68 and schedule 19 to that Act gave effect to a new definition of "*research and development*" inserting s 837A into Part XIX of the Income and Corporation Taxes Act 1988.<sup>178</sup> The effect of that section and of regulations made under it was to clarify the extent and meaning of R&D for the purposes of the 1988 Act. Section 69 and schedule 20 of the 2000 Act set out the requirements to be satisfied for tax relief to be available in respect of expenditure on R&D, in particular, expenditure qualifying for relief was defined.<sup>179</sup> The tax incentive scheme was initially only available to small or medium sized companies (SME), but was extended to large companies in 2002.<sup>180</sup>

Her Majesty's Revenue and Customs (HMRC)<sup>181</sup> are responsible for administering the scheme, with the Department of Business, Innovation and Skills (BIS)<sup>182</sup> promoting it and providing assistance & guidelines.

##### Overview

The UK government's target is to increase expenditure on R&D to 2.5% of GDP by 2014 (from a level of 1.9% in 2004). Its R&D tax incentive scheme effectively comprises two schemes - one for SME's, introduced in 2000 and applying to expenditure by SME's after April 2000, and

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<sup>177</sup> Hereinafter referred to as 'the 2000 Act'.

<sup>178</sup> Hereinafter referred to as 'the 1988 Act'.

<sup>179</sup> Schedule 20, Part 1, s 3 of the 2000 Act.

<sup>180</sup> Relief granted in terms of Schedule 12 of the Finance Act 2002.

<sup>181</sup> [www.hmrc.gov.uk](http://www.hmrc.gov.uk)

<sup>182</sup> The UK government's main business department, formed by the merger of two departments: the Department for Business Enterprise and Regulatory Reform (BERR, formerly the Department of Trade & Industry(DTI)) and the Department for Innovation, Universities and Skills (DIUS). Their website is: [www.bis.gov.uk](http://www.bis.gov.uk).

one for larger corporations applying in respect of expenditure after 1 April 2002. Each scheme has a different structure and benefit. Companies need to be liable to pay corporation tax in order to claim under the scheme. UK companies have a period of two years to claim the credit.<sup>183</sup>

HMRC statistics<sup>184</sup> show that in 2006/07 approximately 6600 claims were made under the R&D tax incentive scheme, totalling GBP670 million. Of the total claims, nearly 80% were made under the SME scheme, including over 1000 claims for payable credits. However, approximately 70% of the actual amount claimed was claimed under the large corporation scheme.

## FEATURES OF THE SCHEMES

Similarly to South Africa and Australia, the scheme is designed as a volume based deduction (or in some instances as a cash refund). It is broad-based, applying to all companies and all industry. The amount of the deduction differs, however, according to the size of the company claiming it.

### **SME Scheme**

SME's are defined in terms of the European Commission definition of SME's, being basically a company with less than 500 employees<sup>185</sup> and either annual turnover of less than €100 million or a balance sheet less than €86 million, which is not part of a larger corporation that would fail this test.<sup>186</sup>

Companies meeting the definition can claim an enhanced deduction of up to 175% on qualifying expenditure incurred in respect of R&D activities from 1 August 2008.<sup>187</sup> In addition,

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<sup>183</sup> United Kingdom. HMRC. *Research and Development (R&D) Relief for Corporation Tax*. <http://www.hmrc.gov.uk/ct/forms-rates/claims/randd.htm> (Accessed: 27 November 2009). Hereinafter referred to as the HMRC Guide.

<sup>184</sup> Available at: [www.hmrc.gov.uk/stats/corporate\\_tax/randdmenu.htm](http://www.hmrc.gov.uk/stats/corporate_tax/randdmenu.htm) (Accessed: 23 November 2009).

<sup>185</sup> The definition of SME has recently been extended, in terms of s 50 of the Finance Act 2007, to cover companies with between 250 and 500 employees (previous limit was 250), thus opening up the incentive and credit facility to more companies. This new definition applies in respect of R&D spending from 1 August 2008. This is considered to have a particular impact on the software industry, where average company size falls squarely into the new definition thereby allowing an industry that contributes to a large extent to the total R&D in the UK to benefit from the SME legislation. In addition limits on balance sheet size (previously EUR43m) and turnover (previously EUR50m) have also doubled.

<sup>186</sup> Section 50 of the Finance Act 2007.

<sup>187</sup> Section 26 and Schedule 8 of the Finance Act 2008. The rate of relief was 150% for expenditure up to 31 July 2008.

loss-making SME's<sup>188</sup> can, subject to a forfeiture of the aforementioned enhanced deduction benefit, claim a cash refundable tax credit from HMRC equating to GBP24.50 for every GBP100 spent, an obvious cash-flow advantage for SME's. Under the SME Scheme, a cap of a maximum of EUR7.5m in R&D assistance exists per project.<sup>189</sup>

### Large Corporation Scheme

Large companies can claim a deduction of up to 130% (previously 125%) of qualifying expenditure on R&D activities from 1 April 2008<sup>190</sup> when calculating their taxable profits. Large companies are not entitled to claim the cash refundable tax credit.

To qualify for either the SME or Large Corporation Scheme, companies must spend a minimum of GBP10 000 on qualifying R&D expenditure in an accounting period.<sup>191</sup> Companies have two years to make a R&D claim.<sup>192</sup>

The differences between the schemes are briefly set out in the table below:<sup>193</sup>

**Table 4-1: Comparison between SME and Large Company scheme (UK)**

SME scheme	Large company scheme
175% rate of enhanced deduction	130% rate of enhanced deduction
24.5% repayable tax credit	No payable credit
Company can claim for expenditure on R&D it sub-contracts to others	Company can only claim for expenditure on R&D it carries out itself, unless it sub-contracts R&D to certain qualifying bodies, individuals or partnerships of individuals
Company cannot claim for contributions to independent research	Company can claim for contributions to independent research
Claim can be reduced if the R&D project is subsidised or a grant is received in respect of it	No reduction for grant or subsidy

<sup>188</sup> The SME must be a going concern to be eligible - Schedule 9(1)(6) of the Finance Act 2008.

<sup>189</sup> Section 29 of the Finance Act 2008.

<sup>190</sup> Schedule 8(2) of the Finance Act 2008.

<sup>191</sup> HMRC Guide (see note 183).

<sup>192</sup> HMRC Guide (see note 183). This was reduced from 6 years for accounting periods ending on or after 31 March 2006.

<sup>193</sup> Table based on that obtained from HMRC CIRD manual at CIRD 80250, available at: <http://www.hmrc.gov.uk/manuals/cirdmanual/cird80250.htm> (Accessed: 1 January 2009).



Company must own the intellectual property arising out of the R&D	Company need not own the intellectual property arising out of the R&D
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### ELIGIBLE EXPENDITURE

In broad terms, revenue expenditure on the following is claimable under the R&D tax incentive scheme:<sup>194</sup>

- Employment costs of staff (or costs paid to staff providers) directly and actively engaged in R&D.
- Costs of consumable or transformable materials used directly in carrying out R&D.
- Power, water, fuel and computer software used directly in carrying out R&D.

This is broadly similar to the eligible expenditure under the SA R&D tax regime.

### ELIGIBLE ACTIVITIES

R&D is defined in the 1988 Act<sup>195</sup> as following generally accepted accounting practice.<sup>196</sup> Essentially, any activities which directly contribute to a project undertaken to achieve an advance in science or technology through the resolution of a scientific or technological uncertainty<sup>197</sup> are R&D activities for tax purposes. The definition is based on the OECD's Frascati Manual definition.<sup>198</sup> Certain indirect activities also qualify as R&D activities but do not qualify for the incentivised deduction.<sup>199</sup> Under the South African R&D tax regime, indirect activities do not qualify at all for deduction.

The project must seek to advance "overall knowledge or capability",<sup>200</sup> not just the knowledge of the particular company conducting the R&D. R&D can lead to either tangible or intangible

<sup>194</sup> United Kingdom. DIUS. [www.dius.gov.uk/innovation/business\\_support/randd\\_tax\\_credits/about.aspx](http://www.dius.gov.uk/innovation/business_support/randd_tax_credits/about.aspx) (Accessed: 23 November 2009).

<sup>195</sup> Section 837A.

<sup>196</sup> As contained in SSAP 13 and modified for tax purposes by "Guidelines on the Meaning of Research and Development for Tax Purposes" issued by the Secretary of State for Trade and Industry, which guidelines are given legal force by Parliamentary Regulations. The guidelines are available online at: <http://www.dius.gov.uk/~media/publications/F/file13258> (Accessed: 2 December 2009). They are extremely detailed and provide extensive examples to enable taxpayers to assess whether their activities qualify as R&D.

<sup>197</sup> Guidelines (see note 196, paragraphs 3-12).

<sup>198</sup> Sawyer (see note 166: 125).

<sup>199</sup> Guidelines (see note 196, paragraphs 5 and 31).

<sup>200</sup> Guidelines (see note 196, paragraphs 6 and 20). Overall knowledge is that which is generally known or deducible by a competent professional and would exclude 'trade secrets' of another company.

products.<sup>201</sup> Unlike the South African legislation, there is no list of closed purposes at which R&D must be directed.<sup>202</sup> Similarly to the Act, importance is attributed to the intention of the taxpayer, which must be to advance science or technology - no actual advance need be achieved and nothing need actually be produced.<sup>203</sup>

When determining whether there is a scientific or technological uncertainty, the standard of a professional working in the particular field is applied.<sup>204</sup>

“Directly contribute” is defined reasonably widely in the guidelines<sup>205</sup> as including: “activities to create and adapt software, materials or equipment” needed for R&D, “planning activities”, as well as “design, testing and analysis”. This is in contrast to the tighter definition associated with the use of the word “directly” in the South African context.

#### CAPITAL EXPENDITURE

Expenditure on capital to be used for R&D does not qualify for the incentivised deduction, however 100% capital allowances for R&D based capital expenditure is available.<sup>206</sup> Similarly expenditure on buildings used for R&D can be written off immediately by both small and large companies.<sup>207</sup>

The system of immediate 100% write-off for capital expenditure on R&D is substantially more generous than the three year incentivised allowance available under the Act.

#### ADMINISTRATION

Companies must submit their R&D claims within two years of the end of their accounting period. The credit is claimed with a submission of a corporate tax return (CT600). A criticism in the past of the UK tax credit scheme is that scientifically trained inspectors were not employed

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<sup>201</sup> Guidelines (see note 196, paragraph 7).

<sup>202</sup> Guidelines (see note 196, paragraph 9), which lists examples of outcomes of R&D but emphasis is on the intention of the taxpayer to advance science & technology, not on what the taxpayer intends to produce.

<sup>203</sup> Guidelines (see note 196, paragraph 10).

<sup>204</sup> Guidelines (see note 196, paragraph 13).

<sup>205</sup> Guidelines (see note 196, paragraphs 26 and 27).

<sup>206</sup> A Hawkes “Crackdown on R&D tax relief driven by BE case”. (2005) *Accountancy Age* 1 September. HMRC have also published a comprehensive online guideline available at: <http://www.hmrc.gov.uk/manuals/camanual/CA60000.htm> (Accessed: 27 November 2009).

<sup>207</sup> OECD (see note 2;13). Apportionment of the cost of a building is also available for buildings used partly for R&D, refer HMRC guide (see note 183).

by HMRC to assess claims for the credit.<sup>208</sup> This has been addressed through the creation of specialist units, HMRC R&D units, which process most R&D claims “to help ensure greater consistency in dealing with claims and more certainty for companies making claims.”<sup>209</sup> These units were established from 1 November 2006 and deal with all R&D claims aside from those dealt with by Large Business Service.

## CONCLUSION

The aim of HMRC and the UK government has been to create a simple and flexible R&D tax scheme, which in turns contributes to predictability and certainty for taxpayers, encouraging utilisation.<sup>210</sup> Characteristics of the UK R&D tax scheme are:

- Its simplicity: the claims process is straightforward, with minimal administrative burden for accessing the credit. The legislation has been simplified over the years through a consultative process with business in enhancing tax credit. The HMRC regularly undertakes surveys with stakeholders to deduce the accessibility and success of the scheme.<sup>211</sup>
- Consistency: Numerous easy-to-understand guidelines have been published and are regularly updated, with inspectors trained in accordance with those guidelines.
- Generosity: Limits have been increased over the years, with the 175% deduction for SMEs comparatively more generous than SA’s tax incentive. In addition, a refundable tax credit is available to SME’s in loss-making positions, with the SME scheme recently extended to a greater number of companies.
- Certainty: the R&D legislation has been stable since 2000, with the definition of R&D improved and ambiguities in the legislation removed.
- Large companies funding independent research can qualify for the credit and SME’s subcontracted R&D qualifies for Credit.<sup>212</sup>
- Administration: The scheme is well publicised with companies encouraged to utilise it. A wide range of assistance is available to taxpayers, including: specialised units in HMRC, electronic guidelines (on HMRC and DTI websites) and case studies and accessibility to the staff manual available<sup>213</sup> on the HMRC website.

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<sup>208</sup> Hawkes (see note 206).

<sup>209</sup> Obtained from the DIUS guideline

[www.dius.gov.uk/innovation/business\\_support/randd\\_tax\\_credits/about](http://www.dius.gov.uk/innovation/business_support/randd_tax_credits/about) (Accessed: 26 October 2009).

<sup>210</sup> United Kingdom. HM Treasury, DTI, HMRC *Supporting Growth in Innovation: enhancing the R&D tax credit* (2005) 5 [http://www.hm-treasury.gov.uk/d/RDtax\\_credit.pdf](http://www.hm-treasury.gov.uk/d/RDtax_credit.pdf) (Accessed: 2 December 2009).

<sup>211</sup> HM Treasury Guide (see note 210; 6).

<sup>212</sup> HM Treasury Guide (see note 210; 6).

<sup>213</sup> United Kingdom. HMRC “Corporate Intangibles Research and Development Manual”. This is a manual produced to assist claimants, advisers and inspectors to understand HMRC’s interpretation of the R&D tax incentive scheme. It is used by HMRC staff when assessing claims.

In contrast, although comparatively simple, the South African tax incentive has gone through a number of changes since its inception, possibly creating doubt amongst taxpayers and increased costs of compliance. However, the Act does appear to be entering a period of stability in respect of the R&D tax scheme where taxpayer's can be relatively certain of the deductions available and the operation of the R&D system going forward.

Generally, the UK R&D scheme appears to be better structured than the corresponding SA scheme. The UK fundamentals of simplicity, consistency and certainty enhance the scheme, increasing its accessibility to taxpayers and encouraging its use. Published guidelines define important terms, creating more certainty for taxpayer. Definitions also appear to be on the whole, wider than that of either defined or deduced corresponding terms in SA legislation.

The UK scheme has targeted SME's for more favourable treatment and has recently extended that scheme to more taxpayers. In addition loss-making SME's can qualify for tax refunds. On the whole, there are a number of lessons SA could learn from the UK scheme.

In the next chapter the Canadian R&D tax incentive scheme is examined.

## Chapter 5

### CANADA TAX INCENTIVE SYSTEM

#### INTRODUCTION

Canada has been described as a “pioneer country”<sup>214</sup> in terms of its Scientific Research and Experimental Development (SR&ED) tax incentive program,<sup>215</sup> which has been in place since 1986.<sup>216</sup> This is a federal program aimed at increasing R&D amongst companies of all size and operating within all sectors. In addition to the federal program, most provinces have their own supplementary programs, which are an added incentive for private business to conduct R&D in Canada<sup>217</sup> and impacts on the generosity of the innovation system of Canada as a whole (the different provincial programs are varied and wide ranging and therefore fall outside the scope of this dissertation, which focuses exclusively on the federal program).

The SR&ED Program is administered by Canada Revenue Agency (CRA).<sup>218</sup> It is the single largest form of federal government support, annually providing in excess of 18000 claimants with investment tax credits (ITC) exceeding 4 billion CAD. Of those claimants about 75% are small businesses.<sup>219</sup>

#### FEATURES OF SCHEME

The SR&ED Program is available to any business operating and carrying our R&D in Canada. Eligible businesses fall into three groups:<sup>220</sup>

- Canadian-controlled private corporations (CCPC).

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<sup>214</sup> European Commission report (see note 4; 15).

<sup>215</sup> Hereinafter referred to as the ‘SR&ED Program’.

<sup>216</sup> Sawyer (see note 166; 120).

<sup>217</sup> Quebec, for example, offers a fully refundable tax credit of 37.5% on the first 3 million CAD of R&D salaries per year for a Canadian controlled SMB. In addition, companies entitled to tax credits can secure a loan from Investissement Quebec for 75% of the tax credit receivable. Foreign workers in R&D also qualify for provincial tax holidays for 5 years. Refer website: [www.investquebec.com/en/index.aspx?page=339](http://www.investquebec.com/en/index.aspx?page=339) (Accessed: 24 November 2009).

<sup>218</sup> Their website is: [www.cra-arc.gc.ca/menu-eng.html](http://www.cra-arc.gc.ca/menu-eng.html).

<sup>219</sup> Canada. CRA. “*Overview of the Scientific Research and Experimental Development (SR&ED) Tax Incentive Program*” 1. <http://www.cra-arc.gc.ca/E/pub/tg/rc4472/rc4472-c.pdf> (Accessed: 13 November 2009). Hereinafter referred to as the CRA Guide.

<sup>220</sup> CRA guide (see note 219, 5).

- Other corporations.
- Proprietorships, partnerships and trusts.

The scheme is designed as a volume-based tax credit. Entities can claim a 100% deduction for eligible R&D expenditure (including capital expenditure) to reduce taxable income.<sup>221</sup> In addition, qualifying R&D expenditure carried out in Canada is pooled and qualifies for ITCs.<sup>222</sup> Certain expenditure on R&D carried on outside Canada also qualifies for ITCs.<sup>223</sup>

The rate of ITC is generally 20%, with an enhanced credit of 35% on qualifying R&D expenditure available to small CCPCs.<sup>224</sup> The more favourable ITC rate available to CCPCs only applies to a maximum of 3 million CAD qualifying SR&ED expenditure.<sup>225</sup> The ITC is reduced to the standard rate of 20% for SR&ED expenditure over the 3 million CAD limit.<sup>226</sup> The ITC must first be applied to reduce the current years tax, with any excess being fully refundable to small CCPCs.<sup>227</sup> This, like the comparative UK refundable tax credit for SME's, is particularly beneficial to smaller start-up companies in greater need of immediate cash flow than of reduced cash flow in the future.

Unused ITCs can be carried back 3 years and carried forward 20 years for tax years ending after 1997.<sup>228</sup> This is an important consideration for non-profitable companies, which don't benefit from standard allowances/deductions as they have no taxable profit to reduce (a particularly pertinent factor in the biotech industry where companies can take between 10 and 20 years to become profitable).<sup>229</sup> Allowing companies to carry forward credits to a time when they are profitable and can be utilised is an attractive incentive for SMEs and start-ups. In comparison,

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<sup>221</sup> Invest in Canada Bureau. *The advantages of doing research in Canada 2008/2009: An overview of research and development tax incentives*. 1. <http://investincanada.gc.ca/eng/publications/rd-tax-incentives.aspx> (Accessed: 1 December 2009).

<sup>222</sup> These are tax credits applied directly to the tax payable by companies. This is different to the deduction system of SA, UK and Australia, where companies can deduct an incentivised amount from assessable income prior to calculating tax payable.

<sup>223</sup> Limited to salary & wages of Canadian-resident employees conducting SR&ED outside Canada, limited to 10% of the taxpayer's total salary & wages directly attributable to SR&ED expenditure in Canada for the year. This was a new incentive introduced by the 2008 Canadian Budget. Refer: <http://www.budget.gc.ca/2008/plan/ann4a-eng.asp#business> (Accessed: 1 December 2009).

<sup>224</sup> Where the CCPC's taxable income in the previous tax year was less than 400 000 CAD

<sup>225</sup> The limit was recently increased from 2 million CAD. See Invest in Canada Bureau (see note 221, 1).

<sup>226</sup> The 3 million CAD limit is also phased out for CCPC's that earned taxable income of between 400 000 and 700 000 CAD in the previous tax year, with the 3 million reduced by 10 CAD for every 1 CAD over the 400 000 CAD. There is also a phase out for CCPC's who's taxable capital employed in Canada in the previous taxation year is between 10 and 50 million CAD. These limits were also increased in the 2008 budget (see note 223), applying to taxation years ending on or after 26 February 2008.

<sup>227</sup> Any unused ITCs in respect of expenditure above the 3 million CAD limit and capital expenditure is only 40% refundable - refer 2008 budget (see note 223)

<sup>228</sup> CRA guide (see note 219; 6).

<sup>229</sup> European Commission Report (see note 4; 9).

expenditure on R&D in South Africa can only be claimed in the year it is incurred, with the deduction only carried forward if the tax computation results in the entity having an assessed loss.<sup>230</sup>

Canada's use of tax credits is an important difference when comparing to the systems of SA, Australia and the UK. Most OECD members use tax credits as opposed to allowances/deductions - an important distinction being that credits are not affected by the corporation tax rate.<sup>231</sup>

### ELIGIBLE EXPENDITURE

R&D expenditure on the following qualifies for immediate deduction and ITCs:

- salary & wages (including certain R&D expenditure incurred abroad as discussed above),
- materials,
- machinery,
- equipment (excluding used, including lease costs),
- capital expenditure (excluding land & buildings),
- overheads and
- SR&ED contracts.<sup>232</sup>

Claimants have the option of either applying a traditional or formula based method of calculating R&D expenditure. The traditional method requires that all expenditure including overheads are specifically identified. The alternative proxy method uses a formula for determining overheads.<sup>233</sup>

The SR&ED Program applies to a greater array of expenditure than the corresponding South African tax incentive. In particular, capital expenditure qualifies for ITCs.

### ELIGIBLE PROJECTS

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<sup>230</sup> H Keshav "How SA's R&D tax incentive stacks up against the US's" (2008) 1 *Moneyweb* <http://www.moneywebtax.co.za/moneywebtax/view/moneywebtax/en/page265?oid=23796&sn=Detail> (Accessed: 1 October 2008).

<sup>231</sup> European Commission Report (see note 4: 9).

<sup>232</sup> CRA guide (see note 219: 8) and Invest in Canada Bureau publication (see note 221: 3).

<sup>233</sup> CRA guide (see note 219: 8).

Scientific research and development is a defined term in the Canadian Income Tax Act.<sup>234</sup> To be eligible work must either be:<sup>235</sup>

- Experimental development, which is work done to achieve technological advancement;
- Applied research, which is work done to advance scientific knowledge with a specific practical application in view; or
- Basic research, which is work done to advance scientific knowledge without a specific practical application in view.

In addition, direct supporting activities falling into one of the categories of: engineering, design, operations research, mathematical analysis, computer programming, data collection, testing and psychological research and corresponding to the needs of the experimental development, applied research or basic research are also eligible for the SR&ED incentive.<sup>236</sup>

Excluded from eligibility for the SR&ED Program are the following:<sup>237</sup>

- market research or sales promotion;
- quality control or routine testing of materials, devices, products or processes;
- research in social sciences or the humanities;
- prospecting, exploring or drilling for, or producing minerals, petroleum or natural gas;
- commercial production of a new or improved material, device or product, or the commercial use of a new or improved process;
- style changes; and
- routine data collection

To be eligible the R&D work undertaken must involve a process of systematic investigation, which would include: identifying a problem, setting out a plan of action with objectives in mind and the experimental methodology to be adopted and then testing the hypothesis.<sup>238</sup> The work done must fall into the definition of scientific R&D and must not fall into an excluded category (as described above). In addition, the work must have the objective of either technological advancement or of advancing scientific knowledge.<sup>239</sup> The project does not actually have to succeed for expenditure to be eligible under the SR&ED incentive.<sup>240</sup>

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<sup>234</sup> Subsection 248(1).

<sup>235</sup> CRA guide (see note 219; 6).

<sup>236</sup> CRA guide (see note 219; 6).

<sup>237</sup> CRA guide (see note 219; 6).

<sup>238</sup> CRA guide (see note 219; 7).

<sup>239</sup> CRA guide (see note 219; 7).

<sup>240</sup> CRA guide (see note 219; 7).



The definition, like that of the UK system, follows the Frascati manual definition. It does appear to be broader than the South African incentive, allowing for particular supporting activities, with similar excluded activities.

#### CAPITAL EXPENDITURE

Expenditure on SR&ED capital (excluding buildings) can be 100% written off in the year the expenditure is incurred.<sup>241</sup> Capital expenditure also qualifies for ITCs. Canada allows a partial credit for equipment used more than half the time on R&D.<sup>242</sup> Purchases of land and buildings do not qualify as SR&ED expenditure.<sup>243</sup>

Aside from the treatment of buildings, the SR&ED Program is more favourable to taxpayers than the corresponding accelerated depreciation allowance provided for in the Act.

#### ADMINISTRATIVE PROCEDURES

Corporations have 18 months after the end of the tax year in which the expenditure was incurred to file claims under the SR&ED scheme.<sup>244</sup> Claimants need to file an income tax return, together with two prescribed forms.<sup>245</sup> The prescribed forms, together with guidelines on filling them in are available online on the CRA website.<sup>246</sup>

The CRA has set service standards and goals for processing SR&ED claims. They aim to process claims for refunds within 120 days and non-refundable claims within 365 days.<sup>247</sup>

The CRA offer various services to potential claimants under the SR&ED Program, including:<sup>248</sup>

- A first-time claimant service: which provides advice for first-time claimants and access to CRA staff to assist with the process.

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<sup>241</sup> CRA guide (see note 219; 8).

<sup>242</sup> OECD (see note 2; 13).

<sup>243</sup> Invest in Canada Bureau publication (see note 221; 3). They may qualify for Capital Cost Allowances of between 4% and 10% depending on what the building was made of and the date acquired. Refer: <http://www.cra-arc.gc.ca/tx/bsnss/tpcs/slprtnr/rprtnng/cptl/dprcbl-eng.html#buildings> (Accessed: 2 December 2009).

<sup>244</sup> CRA guide (see note 219; 10).

<sup>245</sup> CRA guide (see note 219; 10).

<sup>246</sup> <http://www.cra-arc.gc.ca/txcrdt/sred-rsde/pblctns/menu-eng.html>

<sup>247</sup> CRA guide (see note 219; 12).

<sup>248</sup> CRA guide (see note 219; 15).

- A pre-claim project review service: a free advisory service available to potential claimants, which can assist claimants with determining whether their potential R&D projects will be eligible for the SR&ED Program, creating greater up-front certainty for taxpayers.
- Account Executive Service: an optional, free service, in terms of which a designated CRA official is assigned to the business to assist with the claims process.

The CRA also offers free public seminars on both general and specific queries relating to the SR&ED Program.<sup>249</sup> The CRA website contains a wide variety of information, including: guides, details on the abovementioned forms, publications and seminars, initiatives, links to provincial programs etc.<sup>250</sup> The site is easy to navigate and is well maintained.

Results of a web-based survey among claimants of the SR&ED incentive conducted by the CRA in 2005 revealed that:<sup>251</sup>

- Most (over 80%) of respondents were satisfied with the services of the CRA under the SR&ED Program and of the outcome of their latest reviewed claim.
- Most (79%) of respondents felt that the CRA processed their claims consistently from year to year.
- Respondents were generally (71%) satisfied with the overall administration of the SR&ED Program.

Issues identified by the survey were the understandability of publications (only 40% of respondents saying the claim form was easy to understand) and the timeliness in processing of claims (17% of respondents being dissatisfied).

The CRA places a continuous emphasis on supporting the needs of small business as indicated by its Small Business Action Plan.<sup>252</sup> The focus of the plan is on reducing compliance costs, creating awareness and enhancing accessibility to the program. Through continued consultation with small business forums, the CRA has set itself various objectives, together with an action plan to achieve these.

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<sup>249</sup> CRA guide (see note 219; 16).

<sup>250</sup> Refer to the CRA website: <http://www.cra-arc.gc.ca/txcrdt/sred-rsdc/menu-eng.html> (Accessed: 1 December 2009)

<sup>251</sup> Survey available at: <http://www.cra-arc.gc.ca/txcrdt/sred-rsdc/nttvs/menu-eng.html> (Accessed: 1 December 2009)

<sup>252</sup> Available at: <http://www.cra-arc.gc.ca/txcrdt/sred-rsdc/nttvs/menu-eng.html> (Accessed: 1 December 2009)

## CONCLUSION

The Canadian SR&ED Program is a generous scheme, allowing for 100% deduction of capital and revenue expenditure on R&D, as well as catering for a tax credit on that SR&ED expenditure of either 20% or 35%. When combined with the various provincial schemes, the Canadian SR&ED Program is particularly generous. The tax credit system, the more popular choice amongst OECD countries, differs from the deduction schemes applicable in Australia, UK and South Africa.

Similarly to the UK and Australian systems, the Canadian SR&ED Program does favour SMEs, with a higher ITC rate of 35% and the option of a refundable tax credit. The system is slightly complicated by the phase-out limits and maximum expenditure thresholds.

In terms of eligibility, a wide range of expenditure qualifies under the SR&ED Program, which also caters for some R&D expenditure outside Canada. SR&ED is defined in the Canadian Income Tax Act.

The SR&ED Program appears to be well administered by the CRA, which is constantly striving to improve its service, through consultation with stakeholders. Lengthy processing time of claims and complicated claim forms are issues identified by the CRA, which it aims to resolve. A particular emphasis is placed on the needs of smaller companies, with various services available to assist in their claims process, together with an objective of improving the accessibility of the program to those companies.

This concludes the international comparison section of the dissertation. In the following chapter various lessons are identified for the South African R&D tax regime, taking into account the international comparison.

## Chapter 6

### LESSONS FOR SOUTH AFRICA AND WAY FORWARD

In the preceding three chapters the R&D tax incentive schemes for three countries, respectively: Australia, the UK and Canada, were described and compared to that of South Africa. As a result of this comparison various lessons have been identified which could assist policy makers in the design of the South African R&D tax regime going forward. These lessons are described below. They are not the only lessons and need to be taken in the context of South Africa's R&D tax regime still being in its infancy, with its effectiveness undecided at this stage. As feedback is obtained by the DST from surveys going forward, extremely positive results may indicate that no change is currently needed to the system. However, as shown in the international comparison, R&D tax systems are constantly evolving and policy makers need to be aware of developments in other countries, to ensure local systems are at their most effective. With this in mind, the following lessons are identified:

#### VOLUME OR INCREMENT-BASED

South Africa, together with the UK and Canada (and Australia in general) has a volume-based tax incentive as opposed to an incremental based system (such as the US and aspects of the current Australian system). Proponents of an incremental based system would argue that a tax incentive system should be aimed at increasing R&D spending by companies and not simply rewarding for R&D done, which may have been done anyway, leading to possible windfalls for companies that would have conducted R&D irrespective of an incentive e.g. SASOL, a major South African corporate, had an annual R&D operational budget of R400m and capital expenditure of R100 million on pilot plant & equipment in 2006,<sup>253</sup> prior to the implementation of the R&D tax incentive.

This is a potential failing of South Africa's volume-based incentive, with its wide application leading to unintended windfalls for some companies and no actual encouragement for private expenditure on R&D. However, this theoretical advantage of an incremental based system needs to be weighed up against the practicalities of keeping a system simple, rather than additional

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<sup>253</sup> T Mokopanele "SARS seeks definition of R&D for its tax changes". (2006) 17 *The Star* 20 February and M le Roux "Sasol to be major beneficiary of tax break on research costs". (2006) 19 *Business Day* 12 October

complexities of formulae, defining base period and level, as well as fluctuating relief for companies, increased record keeping requirements, auditing problems due to changes in key personnel over time;<sup>254</sup> all factors deterring companies from carrying on R&D.<sup>255</sup> The South African Legislature has set out to create a simple system, which possibly precludes introducing a system that is solely increment based. A possible solution then to the windfall issue is to combine incremental and volume-based features<sup>256</sup> or to introduce a targeting aspect to the legislation.

## TARGETING

Australia, UK and Canada all have aspects of the incentive targeted at SMEs, which arguably respond best to incentives, as well as having the potential to grow and provide new jobs etc., but have the inherent financial constraints and inability to attract investors averse to high risk. This is an area that South African policy makers may well need to investigate, to stimulate entrepreneurs and smaller companies to conduct R&D in an economy where R&D has historically been the domain of large companies.<sup>257</sup> All three of the international companies discussed in this dissertation offered a more generous incentive for smaller companies, as well as added benefits such as a cash refundable portion.

## MONITORING AND IMPROVING

Countries are also constantly improving the attractiveness of their R&D tax regimes.<sup>258</sup> Australia is totally overhauling its tax deduction scheme and replacing it with a tax credit scheme in 2010 (This was after introducing the offset and the international 175% increment system in recent years). The UK has extended its tax incentive scheme to larger companies and more recently increased the deduction for both the large and small tax incentive scheme. Canada recently increased phase-out limits and expenditure limits, increasing the number of smaller companies qualifying for the favourable ITC rate of 35%. The lesson for South Africa is that the R&D tax incentive scheme needs to be constantly monitored, with stakeholders continuously consulted to ensure the scheme is internationally competitive and domestically functional. Studies by the OECD have shown that there has been a general trend of moving away from tax allowances to that of tax credits, as Australia is currently doing. This may be another area for policy makers to investigate.

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<sup>254</sup> Keshav (see note 230: 1)

<sup>255</sup> European Commission Report (see note 4: 10)

<sup>256</sup> European Commission Report (see note 4: 10). Such as used in Australia, France, Spain

<sup>257</sup> Refer Statistical overview in Chapter 1

<sup>258</sup> OECD study (see note 2: 12)

## EFFECTIVE ADMINISTRATION

The SA tax incentive scheme could be better administered, with surveys conducted by authorities to judge its effectiveness, together with greater efforts at promoting and streamlining the claims process. Both the UK and Canada in particular, through the HMRC and CRA respectively, have focused on effective administration of their R&D tax schemes. The respective agencies have focused on service delivery and improvement of processes and information; identified problem areas through a consultative process with industry and strove to remedy those problems. There is sense of accountability with the two agencies, a refreshing attitude when dealing with government departments.

Areas to focus on administratively include:

- Processing time of claims;
- consistency in processing;
- dedicated professional units assessing claims and assisting taxpayers;
- simplification of forms and streamlining of claims process;
- publication and updating of simplified guidelines;

The above list is not exhaustive, but by focusing on those areas, authorities would in all likelihood ensure greater certainty for taxpayers, with a resultant increase in uptake of the scheme and attainment of the Legislature's objective of increasing R&D spend by private industry.

## OTHER

Two other areas<sup>259</sup> which deserve a brief mention and could be considered by policy makers are:

- Introducing a provincial scheme, similar to that in Canada, where each province in South Africa offers it's own, locally managed scheme. This would not only increase the generosity of the R&D tax regime as a whole, but also allow government, through a local consultative

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<sup>259</sup> F Teng-Zeng "Industrial Research and Development and Tax Incentive Policies: A Survey and Lessons for Africa". (2006) 53 *The African Finance Journal* Volume 8 Part 1. Teng-Zeng discusses some of the lessons referred to in this chapter.

process to encourage particular areas in the country, where R&D may be historically low, to conduct R&D, thereby stimulating and transferring resources to those areas.

- Introducing incentives aimed at foreign companies. With the increasing internationalisation of R&D, countries are in competition to attract large multinationals to conduct R&D within their borders, for the direct benefit of foreign investment, together with the possibility of R&D spillovers.<sup>260</sup> As mentioned in the statistical overview<sup>261</sup> foreign R&D in South Africa has been steadily decreasing over the years. South Africa's economy from an R&D perspective has been described as "more 'closed' than 'open'".<sup>262</sup> This could be partially remedied by the introduction of foreign-specific incentives such as income tax holidays for foreign researchers.<sup>263</sup> One positive step by the South African Legislature in this regard has been the opening up of the R&D tax incentive to what is termed "international double dipping"<sup>264</sup> as a result of amendments to s 11D(7) of the Act.<sup>265</sup>

This chapter has identified various lessons, arising out of the international comparison, for South African policy makers when considering changes to the R&D tax regime going forward. The following chapter concludes this dissertation.

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<sup>260</sup> M Kahn "Internationalization of R&D: Where does South Africa stand?". (2007) 7 *South African Journal of Science* 103 January/February

<sup>261</sup> Chapter 1 above

<sup>262</sup> Kahn (see note 260; 7)

<sup>263</sup> An incentive utilised in Quebec

<sup>264</sup> See note 145

<sup>265</sup> DA Zandwijk "R&D tax incentive opened-up to double-dipping" (2008) 60 *Fimweek* 21 August <http://www.zaiplaw.co.za/content/view/full/148/29/> (Accessed: 23 February 2009)

## Chapter 7

### CONCLUSION

The objectives of this dissertation were the following:

- to examine the current R&D tax regime in South Africa with particular emphasis on the eligibility requirements of s 11D;
- to provide an overview of the design features and characteristics of the South African tax regime and describe its administration;
- to compare the South African R&D tax regime to the R&D tax incentive schemes of 3 countries: Australia, UK and Canada; and finally
- to identify lessons from the international comparison for the South African R&D tax regime going forward.

South Africa has only recently introduced its tax incentive for R&D and its impact on private business expenditure is difficult to determine at this stage, although the next DST survey for the 2007/08 tax year may shed more light on the incentives impact.

What is evident though is that the Legislature does appear to have been successful in its stated aim to keep the R&D tax incentive simple. In addition, the incentive is reasonably generous at a 150% deduction, together with the availability of an accelerated depreciation allowance, and compares favourably with those of the other three comparative countries, being Australia, UK and Canada.

In terms of eligibility requirements, the incentive does, at first glance, appear to be quite wide, but the analysis has shown that its ambit has been narrowed by the emphasis on 'directly', and the solely & exclusivity requirement for the accelerated depreciation allowance.

In terms of design, the Legislature has opted not to target any segment, industry or size of company but has made the incentive available to all. The international comparison has highlighted this as a major difference between the three countries compared, all of which, to some extent, have targeted SMEs. The table below highlights the different design features discussed in the international comparison.



**Table 7-1: Comparison between design features**

	<b>South Africa</b>	<b>Australia</b>	<b>United Kingdom</b>	<b>Canada</b>
<b>Type of incentive</b>	Tax deduction	Tax deduction and cash offset	Tax deduction	Tax credit
<b>Volume or increment based</b>	Volume based	Combination of volume and increment	Volume	Volume
<b>Rate</b>	150%	125% volume and 175% increment	175% -SMEs 130% - large corps	Generally 20%, enhanced rate of 35% for SMEs. Tax credit is taxable
<b>R&amp;D Capital expenditure</b>	Accelerated depreciation allowance 50/30/20; Buildings included	Plant depreciated over effective life at 125%. Buildings depreciated over 25 - 40 years	100% immediate write-off including buildings	100% immediate write-off (excluding buildings) and ITCs
<b>Targeting</b>	Broad-based, non-industry specific	Broad based, but offset available to SME's	Favorable SME treatment; refundable credit	SMEs more favorable rate of 35% ITC; also refundable tax credit
<b>Limitations</b>	None	Minimum spend of AUS\$20 000,	SME - minimum spend of GBP10 000, max aid of GBP7.5m/project	SME scheme limitations of 3m CAD eligible expenditure; phase-out limits apply

Going forward, it's crucial that the R&D tax incentive scheme is properly monitored and constantly updated. In this respect the DST should possibly take on a more proactive role, liaising with stakeholders and looking for ways of improving delivery of the scheme.

The international comparison has highlighted a few lessons for the R&D tax incentive, which policy makers may consider when adapting the scheme in the future. The lessons identified are: introducing incremental aspects to the scheme, considering targeting of SMEs, adequate

monitoring of the scheme, effective administration, introducing additional provincial incentives and introducing particular incentives for foreign companies.

Forthcoming DST surveys and feedback on the effectiveness of the scheme in its current form will indicate whether policy makers will need to make any changes to the scheme. However, as a starting point the R&D tax incentive is a huge improvement on the old R&D tax regime and provided it is continually monitored and adapted, the target of increasing R&D expenditure in the private industry is likely to be attained.