



POLICY AND STRATEGY

Tax policy report: Report on UK and Norway R&D Tax Credit Schemes

Date:	6 July 2018	Priority:	Medium
Security level:	In Confidence	Report no:	18-19 0061 IR2018/455

Action sought

	Action sought	Deadline
Minister of Research, Science and Innovation	Agree to forward this briefing to the Minister of Finance	13 July 2018
Minister of Revenue	Agree to forward this briefing to the Minister of Finance	13 July 2018

Contact for telephone discussion (if required)

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6 July 2018

Minister of Research, Science and Innovation

Minister of Revenue

Report on UK and Norway R&D Tax Credit Schemes

Executive summary

1. In late June, officials from Inland Revenue, Ministry of Business, Innovation and Employment and Callaghan Innovation went to Norway and the UK to discuss the R&D tax credit schemes operating in these countries. These countries were chosen for more intensive examination because they have operated a refundable tax credit scheme for over 15 years.

2. Key findings from the trip are as follows:

- R&D tax credits have been successful at increasing the amount of R&D undertaken
- It is important that an R&D tax credit is designed within the larger framework of government support for research and innovation and is tailored to the particular circumstances in that country
- There is a difficult balance between promoting R&D and maintaining fiscal control. In each country, expenditure has risen rapidly as the schemes have been made more liberal and generous
- Pre-approval of the R&D project, though increasing compliance costs, has benefits of providing certainty for applicants, potentially improving the quality of R&D undertaken, and improving the quality of claims. It is important there is integration of the science and technology advisors who approve the R&D and tax officials who approve the R&D expenditure.
- Setting a threshold of minimum R&D expenditure has benefits of avoiding a large number of small claims that have greater integrity risks and which can overwhelm the scheme's administration.
- A requirement to periodically independently evaluate the scheme leads to good outcomes.

Recommended action

3. The Ministry of Business, Innovation and Employment, and Inland Revenue recommend that you:

	Min. R, S & I	Min. Revenue
Note the contents of this report	Noted	Noted
Agree to forward a copy of this report to the Minister of Finance	Agree/Disagree	Agree/Disagree

s 9(2)(a)

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Background

4. Recently officials from MBIE, Inland Revenue and Callaghan Innovation travelled to Norway and the UK to meet with public sector officials and private sector representatives to discuss the R&D tax credit schemes operating in those countries. These countries were selected because they have had refundable tax credit schemes operating for more than a decade so provide lessons for New Zealand relating both to the immediate task of introducing the tax credit in 2019 and developing a more sophisticated tax credit in 2020. This trip was a follow on from an earlier visit by an MBIE official (3215 17-18 refers). On this trip, the New Zealand officials met with some of the same officials but also met with a wider range of government and private sector parties.

5. Policy and service design staff were part of the group and the focus of the meetings was both policy and how those policies are administered from the perspective of the government and the recipients of the tax credit.

6. Officials we met with were frank in their assessment of what is working well and weaknesses within their schemes.

7. Key features of the R&D tax credit schemes in each country are presented in Appendix 1. A list of the organisations with whom we met is in Appendix 2.

8. Even though there are differences between each country's scheme and their experiences, there was significant commonality in what we learnt, so this report is organised by key theme relevant to the design and implementation of an R&D tax credit.

Key themes from what we were told

Tax credit schemes need to be country specific

9. s 6(b)

10. In both countries, the tax credits are perceived as achieving the goal of positive additionality. That is, for each pound/krone of tax revenue foregone, more than 1 pound/krone of R&D is generated. In addition, they considered there is a social benefit from the increased R&D.

11. s 6(b)

There are benefits from keeping the tax credit simple

12. Though neither scheme is unduly complex, each had some more complicated features whose value was uncertain:

- In the UK there are two quite distinct schemes – one for SMEs and one for larger companies. The credit rate and the way the credit is paid differ between the schemes. Private sector representatives expressed a preference for one scheme.
- In Norway, in addition to an annual per-firm cap, there is a cap on the hourly labour cost per R&D employee. This had been introduced in 2007 as a way of constraining the costs of the tax credit scheme. s 6(b)

There is a difficult balance between encouraging R&D and fiscal control

13. In each country, there has been an expansion in the scheme's generosity over time in an effort to stimulate more firms to enter the scheme or to undertake more R&D – in Norway through a more liberal definition of eligible R&D, higher caps and marketing of the scheme, and in the UK through higher credit rates and the removal of the minimum R&D expenditure threshold. s 6(b)

14. There have been significant increases in the fiscal cost of the schemes. In Norway, the cost of the tax credit rose by 140% between 2011 and 2015, and provisional estimates indicate a further 40% increase over the following two years. In the UK, the cost of the tax credit schemes rose by 140% between 2011-12 and 2015-16.

15. s 6(b)

16. In both countries, the increased costs have been driven more by SMEs than larger firms, and more from an increase in the number of claimants than an increase in the average value per claim. The experience of Norway indicates that even a relatively low cap on claims (the cap is roughly NZ\$1m) does not control the overall cost of the scheme. Average claims are well below this level, and costs have been driven by an increased number of claimants.

17. A similar pattern had also been observed in Australia. s 6(b)

18. s 6(b)

Refundability

19. Refundability is perceived as an essential characteristic of each country's scheme, because of the value of this element to SMEs. In Norway, whose scheme is heavily oriented to SMEs, about 70% of tax credit applicants are in loss.

20. Refundability introduces greater risks. In Norway, these are managed through low caps and pre-approval of the R&D by the Research Council. In the UK the risk management mechanisms are a cap linked to other taxes paid by the firm and a reduction in pay out if the tax credits are surrendered for cash by firms in loss.

21. The overall message was that the risks of refundability can be managed to a tolerable extent.

22. s 6(b)

Pre-approval

23. Approval of the R&D project by the Research Council before the firm can claim the tax credit is a key feature of the Norwegian scheme. This acts as a gatekeeper/screening function so is an integrity mechanism. In addition, firms appreciate the certainty this provides them that they will receive the tax credit when their claim is submitted. Firms are able to use their pre-approval, and the consequent certainty they will receive the tax credit, to attract private sector finance.

24. s 6(b)

25. In Norway the separate approval of the R&D by the Research Council and eligible expenditure by the Tax Administration has both strengths and weaknesses. s 6(b)

26. s 6(b)

Threshold

27. Neither scheme operates with a minimum level of R&D expenditure. s 6(b)

s 6(b)

28. s 6(b)

s 6(b)

29. s 6(b)

Collecting data

30. Both countries emphasised the importance of designing the processes of enrolment and application for the credit so as to collect useful data. There were two aspects to this:

- ensuring that data is collected that will allow subsequent data analytics to review claims efficiently. Screening of claims based on standard metrics was seen as a good way to ensure that audits can be used sparingly but effectively. For instance, if a firm is reporting increased R&D, it is useful to test whether there are also increases in capital expenditure, staff costs or turnover. If none of these is present, it is potentially a warning sign about the validity of the R&D.
- ensuring data is collected that will facilitate periodic evaluation of whether the scheme is achieving additionality and other policy objectives.

Involvement of stakeholders

31. s 6(b)

. This needs to happen throughout the policy development phase and in an ongoing way once the scheme is implemented. The UK has constituted a Consultative Committee as its primary mechanism for building and maintaining contact with the private sector.

Contracted and overseas R&D

32. Both schemes allowed claims for contracted R&D. The UK limits this to 65% of the value of the claim, as it considers this proportion, on average, will reflect the labour content of the contracted R&D. s 6(b)

33. Because of EU rules¹, both countries allow overseas R&D to be eligible. s 6(b)

34. Capping a claim at the level of PAYE payments by the firm, which applies in the UK's large company scheme but not the SME scheme, was considered a useful mechanism for constraining fraud.

¹ Even though not a member of the EU, Norway complies with its rules with respect to state aid for businesses. The UK also indicated it would continue to adhere to EU rules after the UK leaves the EU.

Evaluation of the scheme

35. Because of EU state aid rules, both countries are required to have their schemes independently evaluated on a regular basis. Both countries considered this as desirable. It provides regular opportunities to detect and address problems within the scheme. In turn, this enables smaller adjustments rather than large changes to the scheme.

The R&D and Innovation ecosystem

36. s 6(b) [redacted] Direct grant funding in both Norway and the UK is generally targeted at specific industries and technologies and for supporting government objectives (e.g. sustainability and clean energy). s 6(b) [redacted]
[redacted]
[redacted]

37. s 6(b) [redacted]
[redacted]
[redacted]

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Appendix 1: Details of the Norwegian and UK R&D Tax Credit Schemes

The Norwegian Tax Credit – (the SkatteFUNN)

38. The SkatteFUNN is relatively open in terms of defining eligible R&D activities. The company has to work on a new or improved product, service or process:

- There has to be a clear objective and defined scope, ie, measurable goals or milestones
- The project plan has to distinguish between the R&D project and BAU. Only activities vital for reaching the R&D objective are eligible
- There has to be novelty in at least part of the new product, service or process
- The project has to go beyond State of the Art

39. The scheme is relatively restrictive in terms of company eligibility:

- An applicant must have a permanent establishment in Norway.
- It must be liable for company tax in Norway (ie, not a not for profit)
- The results must benefit the applicant company. This means you cannot do research on behalf of another company (and claim the credit). This also means research done for a MNC parent company is not eligible if none of the benefits of the R&D will stay in Norway.

40. The tax credit is at the relatively high rate of 20% for SMEs or 18% otherwise, and it is generous in terms of providing full refundability for firms in loss.

41. But the overall generosity of the scheme is constrained. Effectively, it is targeted towards SMEs, with support for larger companies channelled through various grants:

- In general, the maximum eligible expenditure is NOK 25m (about NZ\$5m). At the 20% credit rate, this means a maximum credit of NOK 5m (NZ\$1m)
- The maximum can go as high as NOK 50m (NZ\$10m) if the project is done jointly with an Approved Research Organisation (and at least NOK 25m of the cost is attributed to the Research Organisation). This provision is rarely used.
- In addition, there are limits on how much salary cost can be claimed for any one employee. This caps out at an hourly rate of NOK 600 (NZ\$120)
- Even though firms apply per project and can have multiple projects, the caps apply per company.
- The one generous feature of the cap is it is per individual company. There are no aggregation tests so separate subsidiaries can each claim up to the cap.

42. A very significant feature of the SkatteFUNN is its grant like features:

- Applicants must first apply to the Research Council and receive approval for their R&D project. This functions somewhat as a pre-approval mechanism, though applications do not have to be submitted until 1 September of the year in which the R&D is being carried out, in order to be able to claim the tax credit in that year.
- There is an appeals process, if the Research Council declines an application.
- This application is on a prescribed form. Applicants set out objectives, description of novelty, and the activities (including who is undertaking them, timeframes and cost).
- Only after the Research Council approves the application, does the project enter the scheme and the company is eligible to claim the tax credit.
- At the end of each year, companies submit a progress report (in addition to submitting their tax credit claim).
- Companies keep specific project accounts (as defined by the Tax Administration).
- The claim, when submitted as part of the tax claim, must be approved by an external auditor.

43. Other Data about Norwegian R&D:

- Currently (2016) total R&D is a bit over 2% of GDP.
- Grown from 1.5% of GDP in mid-2000s
- Currently a bit below the EU average
- Business R&D shown steady growth since mid-2000s – now 30% higher
- Government support for BERD evenly divided between tax incentives and grants. Government support for BERD is just under 0.2% of GDP, NZ is just under 0.1% of GDP
- The fiscal cost of the tax incentive was relatively stable from 2003-2012, but has grown rapidly in recent years as a result of increases in caps, more promotion of the scheme and a significant increase in the number of applicants.

The UK Tax Credit Schemes

44. There are effectively two schemes in the UK – one for SMEs and one for large firms (and SMEs who are contracted to do R&D).

45. To qualify for the more generous SME scheme, firms must have²:

- Fewer than 500 employees and
- Either – turnover less than EUR 100m or balance sheet less than EUR 86m

46. Aggregation rules apply to rule out small companies owned by big companies claiming they are small.

47. The definition of eligible R&D activities is the same for both schemes. It is relatively standard. The guidance material published by HMRC (the scheme administrator) emphasises that R&D activity ends when uncertainty is resolved.

² This boundary between SMEs and large firms is twice the norm within EU regulations. The UK received special dispensation from the EU to set the boundary higher.

48. Between the schemes, there are differences between the rate of credit and the way it is paid:
- SMEs can deduct an extra 130% of their R&D cost. At the corporation tax rate of 19% (a relatively low rate across the OECD), it means that for (firms in profit) for every pound of R&D expenditure, 44p is returned by way of lower taxes³. For firms in loss, they can cash out 14.5% of surrenderable losses (these are the lesser of their loss and 230% of their R&D). This means that for every pound of R&D, the firm gets 33p returned.
 - Large firms get a 12% pre-tax credit. This is paid above the line – so the benefit is gained by firms in loss as well as by firms in profit. The amount paid for the credit can't exceed the amount of PAYE and NIC (National Insurance Contribution) paid.
49. There is a cap on the credit of EUR 7.5m within the SME scheme.
50. By OECD standards, the SME benefits are at the higher end of the range. The large firm rate is about median for OECD. The large firm rate is slightly lower than 12.5% proposed for NZ, but the SME benefit is higher.
51. The rates have been stable since 2014, but there was movement - down then up – prior to that. Some of this was linked to falling corporation tax rates – ie, as the tax rate fell the tax credit rate was increased to maintain the same benefit.
52. In 2012, the minimum threshold was removed.
53. There is an opt-in Advance Assurance (pre-approval) scheme. It's available only to micro businesses. It provides a guarantee of eligibility for 3 years. It can be retrospective to the R&D.
54. Costs have been growing rapidly. As of 2015-16, 26,000 firms were claiming (of which 22,000 were SMEs). The total cost to the Government was GBP 2,875m. The cost of the tax credit has grown partly as a result of increased generosity of the scheme but also because of the growth in the number of claimants.
55. Expenditure on tax credits is (2015-16) about 0.15% of GDP – one of the higher levels in the OECD. (By way of comparison, if NZ were to spend \$300m on the R&D tax incentive it would be 0.1% of GDP.) Tax credits now comprise greater expenditure than grants, whereas in the 2000s it was the other way around.
56. The amount of BERD that is used to claim the tax credits has risen more quickly than total BERD as measured in the National Statistics Survey. In 2006, tax credit BERD was 56% of Statistics measured BERD. By 2015-16 it was 99%.
57. Total R&D spending in the UK is about 1.7% of GDP. As a % of GDP, it appears to have grown minimally since 2000. It's below the average for OECD for EU countries (2.3%). The UK government has a target of raising R&D spending to 2.4% of GDP.

³ By way of comparison, with a 12.5% tax credit, the equivalent for NZ would be that for every \$ of R&D expenditure, 40c is returned by way of lower taxes. In part, the lower tax credit is offset by the higher tax rate.

Appendix 2: Organisations met with

Meetings in Norway

- Nærings- og fiskeridepartementet (Industry and Fisheries department; the policy lead for science and technology)
- Forskningsrådet (Research Council)
- Skatteetaten – (The Norwegian Tax Administration)
- Næringslivets Hovedorganisasjon (Confederation of Norwegian Enterprise)
- Finansdepartementet (Norwegian Ministry of Finance)
- Statistisk sentralbyrå (Norwegian Statistics Department)
- KPMG
- Samfunnsøkonomisk analyse AS (an economic consultancy – the firm undertaking an evaluation of the SkatteFUNN)

Meetings in UK

- Department for Business, Energy and Industrial Strategy
- HM Treasury
- The Policy Lab (within the UK Cabinet Office)
- HMRC (the tax administration)
- KPMG and clients
- Office of Tax Simplification
- Innovate UK

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