DPS FRAMEWORK SCHEDULE 4: LETTER OF APPOINTMENT AND CONTRACT TERMS

Part 1: Letter of Appointment

Dear Sirs

Letter of Appointment

This letter of Appointment dated Tuesday 29th October 2019, is issued in accordance with the provisions of the DPS Agreement (RM6018) between CCS and the Supplier.

Capitalised terms and expressions used in this letter have the same meanings as in the Contract Terms unless the context otherwise requires.

Order Number:	CR19082
From:	The Department for Business, Energy and Industrial Strategy (BEIS) ("Customer")
To:	FRONTIER ECONOMICS LIMITED of, Mid City Place, 71 High Holborn, London, WC1V 6DA ("Supplier")

Effective Date:	Monday 04th November 2019
Expiry Date:	Tuesday 30th June 2020

Services required:	Set out in Section 2, Part B (Specification) of the DPS Agreement and refined by: the Customer's Project Specification attached at Annex A and the Supplier's Proposal attached at Annex B; and Annex C contract charges

Key Individuals:	[redacted]

Contract Charges (including any applicable discount(s), but excluding VAT):	The total contract value shall not exceed £99,991.00 Ex VAT as per the breakdown in Annex C
Insurance Requirements	Additional public liability insurance to cover all risks in the performance of the Contract, with a minimum limit of £5 million for each individual claim Additional employers' liability insurance with a minimum limit of £5 indemnity

	Additional professional indemnity insurance adequate to cover all risks in the performance of the Contract with a minimum limit of indemnity of £2 million for each individual claim. Product liability insurance cover all risks in the provision of Deliverables under the Contract, with a minimum limit of £5 million for each individual claim
Liability Requirements	Suppliers limitation of Liability (Clause 18.2 of the Contract Terms);
Customer billing address for invoicing:	finance@services.uksbs.co.uk

FORMATION OF CONTRACT

BY SIGNING AND RETURNING THIS LETTER OF APPOINTMENT (which may be done by electronic means) the Supplier agrees to enter a Contract with the Customer to provide the Services in accordance with the terms of this letter and the Contract Terms.

The Parties hereby acknowledge and agree that they have read this letter and the Contract Terms.

The Parties hereby acknowledge and agree that this Contract shall be formed when the Customer acknowledges (which may be done by electronic means) the receipt of the signed copy of this letter from the Supplier within two (2) Working Days from such receipt

For and on behalf of the Supplier:

Name and Title:

[redacted]

Signature:

[redacted]

Date: 6/11/19

For and on behalf of the Customer:

Name and Title:

[redacted]

Signature:

[redacted]

Date:

06/11/2019

ANNEX A

Customer Project Specification

1. Background

The project will focus on econometric analysis of HMRC corporate tax data, which is linked to company data, to investigate to what extent, when controlled for other factors, investment levels and patterns of private and public (listed) UK companies differ.

It is frequently argued that companies listed on a stock exchange are more "short-termist", i.e. invest less, than privately owned companies (for example, *Davies, Haldane, Nielsen and Pezzini (2014): "Measuring the costs of short-termism"*).

The evidence about differences in the extent of short-termism across different company types is though sparse and often conflicting. This is partially the case because of data-limitations in existing UK studies. For example, a recent US study (*Feldman et al (2018): "The Long and Short of It: Do Public and Private Firms Invest Differently?"*) used more granular tax data and showed that public companies might actually invest at higher levels.
The Department has secured a rare opportunity for researchers to access HMRC corporate tax data via the HMRC Datalab. Using this data, which includes data on investment levels (such as R&D expenditure), provides the opportunity to carry out new and novel analysis on investment patters of UK companies.

There is high interest into the perceived lack of "long-termism" as amongst UK companies within the Government. This criticism often focuses on investment levels in listed companies in particular.[1] This research would help develop the existing evidence base on investment patterns and drivers of investment further.

Boosting productivity is one of the key elements of the Department's Industrial Strategy and a robust evidence base on corporate investment – a key driver of productivity – will help further policy development.

As the research will involve handling sensitive HMRC data, researchers who access the raw or intermediate data must undertake and pass a Safe Researcher Training (SRT) course run by ONS, UKSA and HMRC Datalab, unless they have already undertaken an equivalent course (previously SURE training). The raw data must also be accessed using secure HMRC Datalab facilities. Bidders should explain whether the team members they propose have already undergone such training or worked with Datalab/HMRC data.

2. Aims and Objectives of the Project

The primary aim of the research is to replicate Feldman et al (2018), or a similar study, in the UK context. This US study uses US corporate tax returns. Re-weighing the data to generate observationally comparable sets of public and private firms, it finds evidence that public firms invest more overall, particularly driven by R&D. Exploiting within-firm variation in public status, it finds that firms dedicate more of their investment to R&D following IPO and reduce these investments upon going private.

Overall, the research would aim to assess to what extent the US findings with regards to different investment levels and patterns apply to the UK context. In doing so, it would also help establish to what extent different company types make different use of existing tax credits.

We are also keen for the research to go beyond 'just' looking at levels, but also to look at the effectiveness of investment. For example, *Dechezleprêtre, Einiö, Nguyen and Van Reenen (2016): "Do Tax Incentives For Research Increase Firm Innovation? An RD Design for R&D"* (LSE Centre for Economic Performance) used HMRC and FAME data to establish the effectiveness of R&D tax credits by estimating the impact of investment on a Total Factor Productivity (TFP) measure. In essence, we would seek to get a population breakdown of such analysis, to help understand whether investment is more effective (results in higher TFP increases) in private or public companies.

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[1] Somewhat related, the Department commissioned research that investigated whether the use of share buybacks could be corwding out investment:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817978/share-repurchases-executive-pay-investment.pdf

A. Finally, FAME data, which is already partially linked to the HMRC tax data, provides information on company ownership and thus enables identification of private companies that are part of a wider public group versus fully independent private companies. Where possible, we would like to distinguish between these companies throughout, which would in reality mean splitting the company population into four groups: a) public listed; b) public unlisted: c) independent private; d) private subsidiaries of public groups. Such a breakdown would be helpful to assess whether a degree of short-termism could be caused by stock market pressures.

B. **Overall, the study should aim to answer the following main questions:**

1. How do investment levels of private and public (listed) UK companies compare?

2. Is there any evidence that the corporate form is associated (causally) with investment levels?

3. Is there any evidence of different investment patterns when comparing different types of companies; for example, is capital investment in tangible assets higher in private companies while public companies are more likely to carry out high-risk R&D investment, as would be indicated by higher use of R&D tax credits?

4. *(To the extent feasible)* Are there differences in investment levels (and the impact of investment on productivity/TFP) between independent private companies and private subsidiaries of public groups?

5. *(To the extent feasible)* Are there differences in productivity/TFP changes across company types? In other words, are returns to investment higher for some company types? For example, are public companies potentially more resourceful in their use of investment?

3. Suggested Methodology

The overall research should consist of:

1) A brief literature review on the existing evidence. This should build on the main existing UK and international evidence sources identified.

2) Quantitative data-analysis of the HMRC data on corporate tax returns, which is linked to further company financial data. The HMRC data covers 2.8 million companies and is available for years from April 2000. There will therefore be a very substantial panel from which to draw a matched sample of public and private companies.

We currently envisage that the supplier would replicate the US study by Feldman et al (2018) to address they main questions 1.-3. identified in the "aims and objectives" section of this invitation to tender.
In essence, following the approach by Feldman et al (2018) approach, the research would take two approaches. Firstly, it would use the large HMRC dataset, which consists of private and public companies, to provide time-series analysis of a matched sample. Secondly, the study would look into companies that change status (from private to public or vice versa) and investigate whether these changes are associated with changes in investment behaviour.
We are aware that a successful supplier will have to familiarise themselves with the HMRC data before deciding on the final econometric approach, but bidders should at this stage outline potential and preferred options. This would include a discussion on: a) matching procedures; and b) proposed regression equations, including possible control variables. While the HMRC dataset is rich and has already been supplemented with FAME data, bidders should also be aware that we currently also hold licences to FAME and Capital IQ data. If not already included, data from these sources could potentially be matched. To enable bidders to assess the scope of the data at this stage, we have attached a list of variables currently included in the HMRC data, consisting of the corporate tax (CT600) data and matched BvD/FAME variables (Appendix 1 Data variables).
Questions 4. and 5. go beyond the scope of the Feldman et al (2018) research. Bidders should at this stage set out how a further breakdown into independent private companies and subsidiaries of listed companies could be achieved and integrated into the overall approach. On the question of effectiveness of investment, we would welcome views on how effectiveness could be measured from the financial data available. As a baseline, we note that *Dechezleprêtre, Einiö, Nguyen and Van Reenen (2016): "Do Tax Incentives For Research Increase Firm Innovation? An RD Design*

for R&D" (LSE Centre for Economic Performance) used this HMRC data to assess the effectiveness of R&D tax credits. As part of this, they matched the HMRC data with FAME data to derive Total Factor Productivity Impacts. Bidders should set out whether and how such an assessment could be integrated into the analysis.

4. Deliverables

- Weekly catch-ups over the phone.
- Following an initial review of the HMRC data, a short paper including: a brief literature review; basic descriptive statistics; and the proposed final methodology.
- A minimum of two in-person meetings: 1) introductory kick-off meeting; and 2) mid-point meeting mid-March.
- Progress report presenting preliminary findings and obstacles at the mid-point meeting.
- Final report in the BEIS Research Paper template as well as intermediary data outputs (data behind results; charts and tables) in a suitable, accessible format.

Annex C Contract charges

SOURCING REFERENCE:	CR[illegible]
SOURCING DOCUMENT TITLE:	Comparative analysis of investment patterns of private and public (listed) UK companies
BIDDER NAME	Frontier Economics

Please complete the shaded yellow sections only.

Please note that the staff costs in section 1 should equal the staff costs outlined in section 2. Section 2 provides further detail around the project team and the distribution of staff days.

The figure used for evaluation is the total Cost (ex VAT) provided in Section [illegible]. This total cost is the total staff costs (ex VAT) and the [illegible] overhead costs, cost of production of materials and capital costs associated with the delivery of the project (ex VAT).

Section 1: Total Project Costs (Summary)

Objective	Number of Days	Total Staff Cost Per Objective (ex VAT)	Total Cost (Ex VAT)
1. Research	[redacted]		
2. Data collection/compilation			
3. Primary research/interviews			
4. Drafting			
5. Analysis			
6. Project Management			
7. Meetings			
TOTAL	[redacted]	[redacted]	£ 99,991.00

Section 2: Total Staff Costs (Please complete)

Job Title	Standard Rate/Fees excluding VAT (£/Day)	Discounted Rate/Fees excluding VAT (£/Day)	Objective Area (Please Select)	Number of Days	Travel and Subsistence, Overhead costs, cost of production of materials and capital costs associated with the delivery of the project (ex VAT)	Total Staff Cost (ex VAT)	Total Cost (ex VAT)
[redacted]							
	£ -	£ -			£ -	£ -	£ -
TOTAL STAFF COSTS						[redacted]	£ 99,991.00

Notes:

Day rate is for 8 hr day.

Half day rate is for 4 hrs.

Part 2: Contract Terms

Contract Terms v6.0