

AN EARLY ECONOMETRIC ASSESSMENT OF THE LIKELY PRODUCTIVITY EFFECTS OF UK COVID-19 SUPPORT MEASURES FOR SMES

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Starting points

- Aim here is to examine the potential effects of UK government support for firms during the COVID-19 pandemic on future productivity outcomes
- At this point data on productivity outcomes is unavailable so for this early assessment we adopt an approach drawing on the evaluation literature on behavioural additionality
- This suggests that policy interventions – such as the furlough wage subsidy and guaranteed loans – work through particular mechanisms which can be captured in a theory of change or logic model
- Using these logic models we can identify early behavioural indicators which should provide the basis for future longer-term effects
- Here we examine the impact of government subsidies on firms' future investment intentions. Investment intentions are a behavioural indicator of future investment and productivity effects

Expectations – investment in times of crisis

- Conceptual arguments are conflicting:
 - *Schumpeterian models suggest lower factor prices in crisis periods should lead to greater investment (Aghion et al. 2012; Schumpeter 1934)*
 - *As risks increase, credit constraints and potentially lower returns may mean that investment is pro-cyclical*

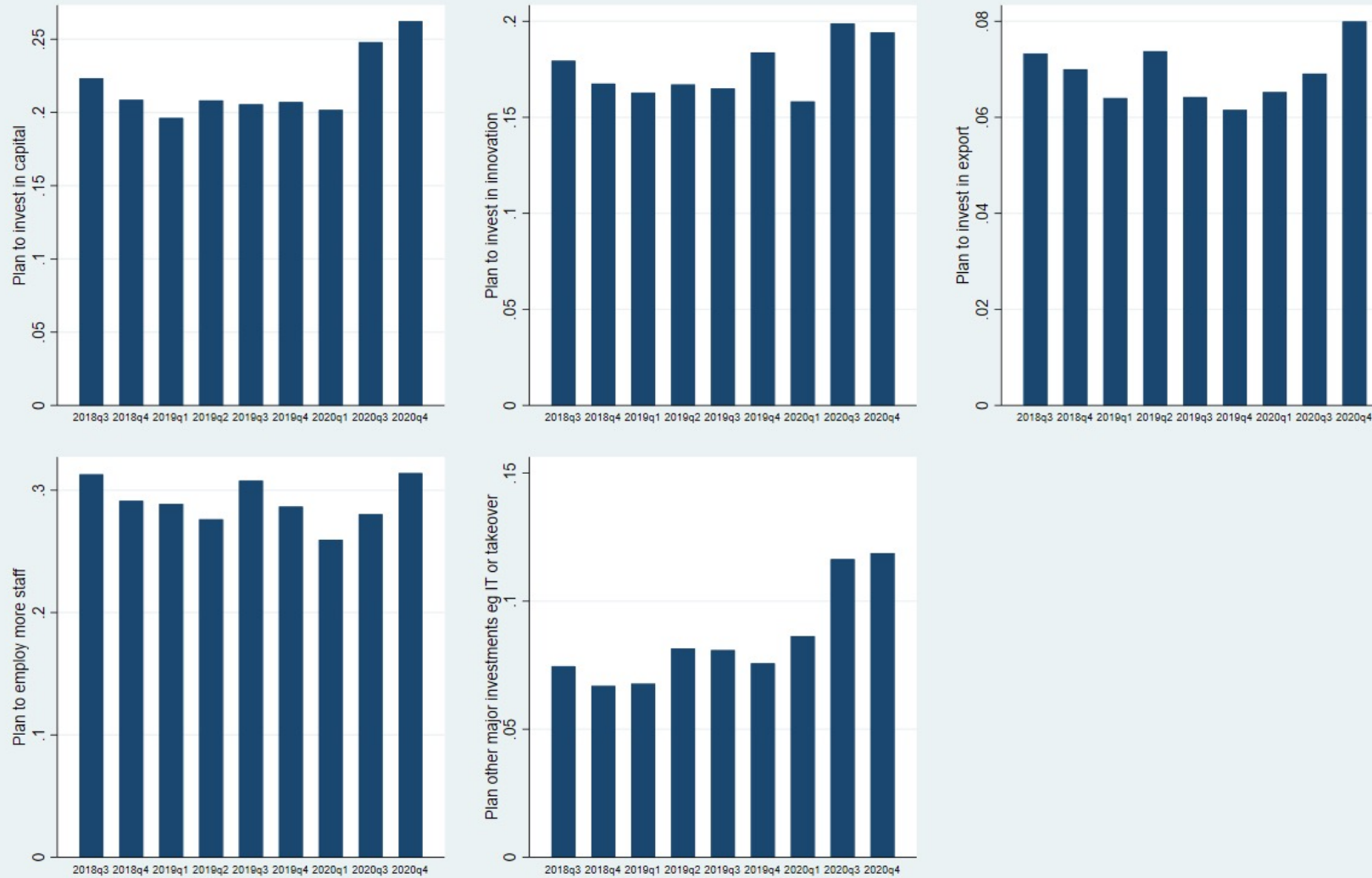
- The empirical evidence suggests the dominance of cash constraints or increased uncertainty and a tendency towards the pro-cyclicality of investment across a range of firms' activities.
 - *Capital equipment (e.g. Driver and Munoz-Bugarin 2019)*
 - *R&D and innovation (e.g. Kabukcuoglu 2019; Campello et al. 2010; López-García et al. 2013)*

COVID-19 support for SMEs

- The ILO have forecast significant rises in global unemployment but also note that ‘sustaining business operations will be particularly difficult for SMEs’ (ILO 2020 p5).
- Policy responses to COVID-19 have varied internationally but many countries have implemented measures to support short-time working and layoffs, tax and rate deferral measures and loan guarantees or direct lending or grant support (OECD 2020).
- Here we consider the impact of three UK government support measures:
 - **Coronavirus Business Interruption Loan Scheme, (CBILS)** delivered by the British Business Bank, to support SMEs by giving access to bank lending and overdrafts. The UK government provides lenders with an 80% guarantee on each loan and did not charges businesses or banks for such guarantee.
 - **Bounce Back Loans (BBLs)** were introduced in May 2020 with a 100% guarantee on each loan. March/April 2020 also saw the introduction of additional support measures for SMEs in the devolved territories.
 - **Coronavirus Job Retention Scheme (‘Furlough’)** wage subsidy scheme was introduced to cover wage costs of employees unable to work.

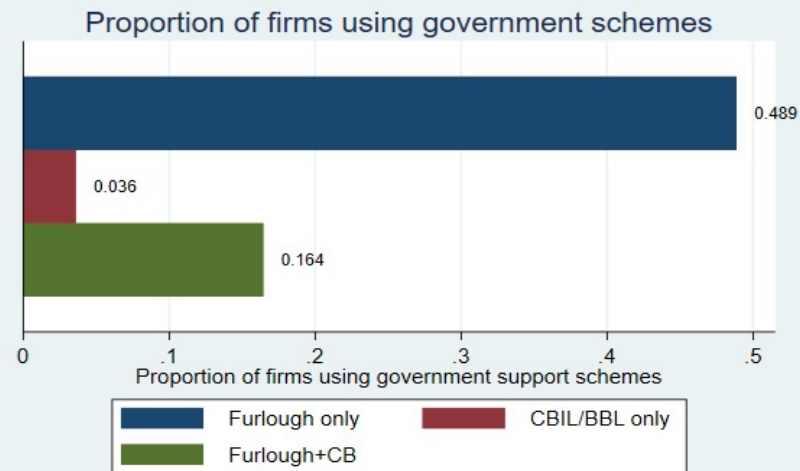
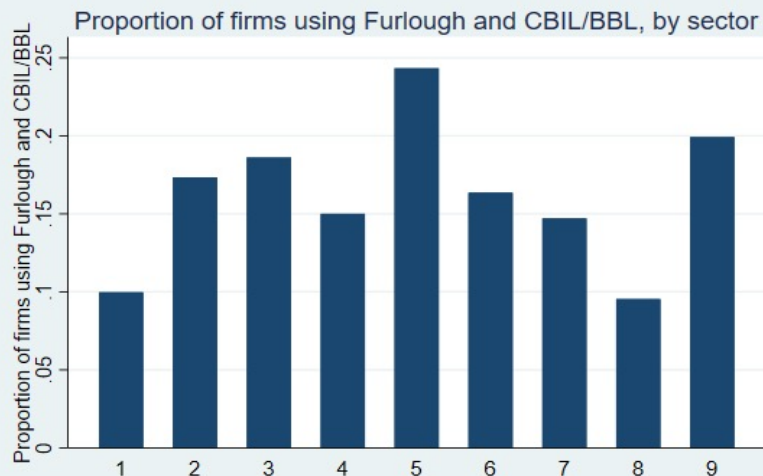
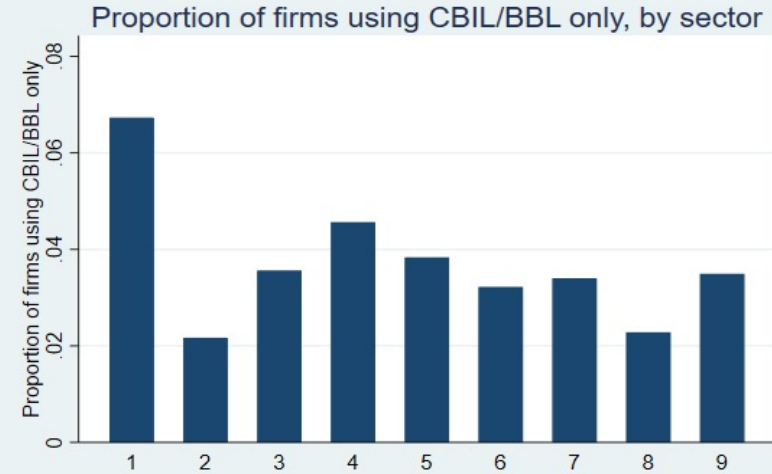
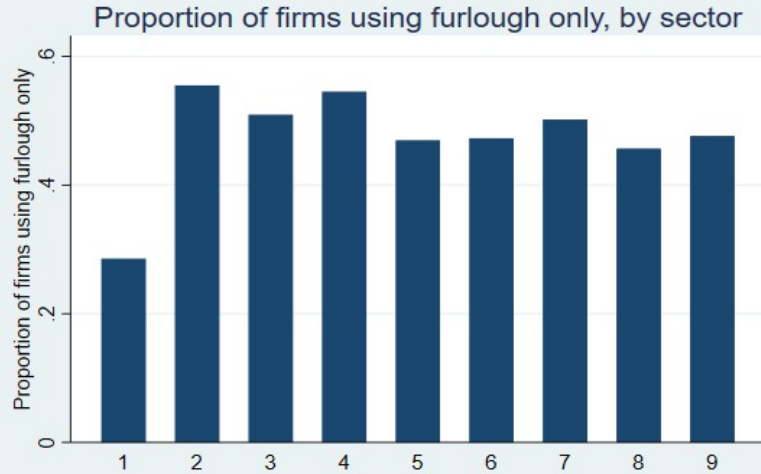
Firms planning future investment

Proportion of firms planning investments: 2018q3 to 2020q4



Key descriptives

Proportion of firms using government support schemes



Illustrative models – investment in capital equipment – pooled estimates (q3 and q4 - n=1433-3839)

VARIABLES		(1)	(2)	(3)	(4)	(5)	(6)
		Furlough only		CBIL/BBL only		Furlough+CB	
		Investment intention	Treatment model	Investment intention	Treatment model	Investment intention	Treatment model
Treatment effects	Furlough only	0.421*** (0.032)					
	CBIL/BBL only			0.355*** (0.063)			
	<u>Furlough+CB</u>					0.172*** (0.049)	
	Size	-0.066*** (0.016)	0.220*** (0.015)	0.055*** (0.017)	-0.016 (0.018)	0.012 (0.018)	0.143*** (0.014)
	North	-0.003	0.056**	0.030	0.033	0.012	0.052*
	Transport, storage communication	(0.033) 0.065*** (0.025)		(0.057) 0.063 (0.044)		(0.053) 0.104** (0.042)	
	Health and social work	0.071** (0.033)		0.017 (0.059)		0.076 (0.056)	
	Other services	0.020 (0.027)		0.077* (0.043)		0.066 (0.041)	
Instruments for treatment	Sector average treatment		0.807*** (0.103)		0.575* (0.319)		0.588*** (0.109)
	Previous use of external finance		0.121*** (0.024)		0.234*** (0.020)		0.357*** (0.018)
	Kho (p)	-1.559		-0.959		-0.516	
	Prob > χ^2	(0.000)		(0.000)		(0.007)	
	Observations	3,839	3,839	1,433	1,433	2,204	2,204

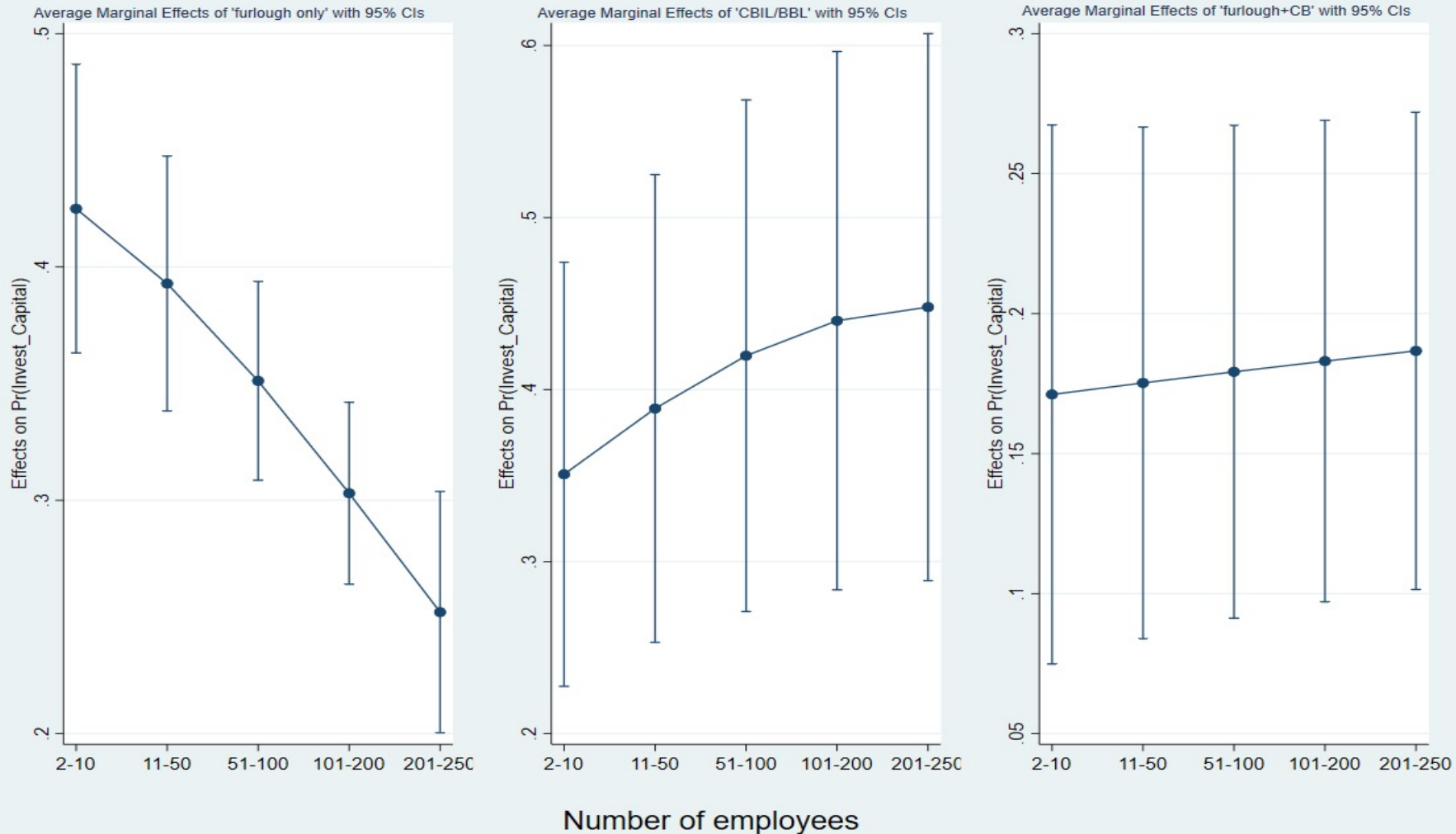
Summary of key results

+ indicates significant positive treatment effect
0 insignificant treatment effect

	Capital equipment	Innovation	Export market development	Increase in workforce	Other major expenditures
<i>Furlough only</i>	+	+	0	+	+
<i>CBIL or BBL only</i>	+	0	+	+	+
<i><u>Furlough+CB</u></i>	+	+	+	+	0

Marginal effects by firm size – for investment in capital equipment

Marginal effects of treatment on the probability that firms intend to invest in capital



Some early conclusions

- We find positive evidence that furlough and CBILS/BBLS are contributing positively to firms' future investment intentions. This effect is largely consistent across a range of future investment priorities
- For furlough at least the size of the treatment effect is notably higher among smaller firms, suggesting stronger additionality in this group. This pattern is less evident in larger firms
- There is little evidence of complementarity between policy measures – where firms receive both measures treatment effects are often smaller. We do not yet fully understand this effect
- These behavioural effects suggest positive longer-term firm-level productivity benefits as investment is sustained. The benefits of policy support may be larger in smaller firms