Assessing the impact of Covid-19 on Innovate UK award holders

Survey evidence Wave 5 – August 2022:

Report prepared by:

Stephen Roper (Enterprise Research Centre and University of Warwick)
Tim Vorley (Innovation Caucus and Oxford Brookes University)

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Research commissioned by the Economics and Insights team at Innovate UK

About the Enterprise Research Centre

The Enterprise Research Centre is an independent research centre which focusses on SME growth and productivity. ERC is a partnership between Warwick Business School, Aston Business School, Queen's University School of Management, Leeds University Business School and University College Cork. The Centre is funded by the Economic and Social Research Council (ESRC); Department for Business, Energy & Industrial Strategy (BEIS); Innovate UK, the British Business Bank and the Intellectual Property Office. The support of the funders is acknowledged. The views expressed in this report are those of the authors and do not necessarily represent those of Innovate UK or the other funders.

About the Innovation Caucus

The Innovation Caucus supports sustainable innovation-led growth by promoting engagement between the social sciences and the innovation ecosystem. Our members are leading academics from across the social science community, who are engaged in different aspects of innovation research. We connect the social sciences, Innovate UK and the Economic and Social Research Council (ESRC), by providing research insights to inform policy and practice. Professor Tim Vorley is the Academic Lead. The initiative is funded and co-developed by the ESRC and Innovate UK, part of UK Research and Innovation (UKRI). The support of the funders is acknowledged. The views expressed in this piece are those of the authors and do not necessarily represent those of the funders.

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EXECUTIVE SUMMARY

This is the fifth in a series of benchmark reports on the impact of Covid-19 crisis on the status of Innovate UK award holders. Analysis is based on an on-line survey of 215 Innovate UK award holders conducted between 25th May 2022 and 14th June 2022. We compare results from the fifth survey to results from the earlier waves of the survey conducted in June 2020, October 2020, February 2021 and November 2021. This online survey is being followed up with qualitative interviews to explore the key issues identified

FINANCE AND OPERATIONS

Firms reported continued disruption to supply chains (82 per cent), with around three-quarters of respondents also reporting disruption to workforce mental health. Notably few firms saw the situation in any aspect 'improving' although around 1:5 firms had noted some recovery in overall levels of demand for goods and services.

In June 2022, one of the key findings was that 23 per cent of firms regarded their liquidity as 'critical' with a further 47 per cent indicating that liquidity is 'under pressure'. There is some indication that liquidity may be more critical in micro-businesses.

The increasing costs of doing business – energy and materials particularly – have received significant recent attention. Around a quarter of firms in the survey indicated that rising energy and input prices were a 'critical' issue for their liquidity; another 50 per cent of firms said they had been 'somewhat affected' by rising costs.

One other potential impact on liquidity has been the need to repay Covid-19 loans or grants. The majority of firms indicated that grant/loan repayment was a factor in putting more pressure on cashflow and liquidity (59 per cent). Few firms (6 per cent) indicated that repayments had had any impact on how the business was financed.

Around half of respondents had tried to reduce costs over the three-months prior to the survey, with a quarter seeking to raise revenues. 1:6 firms surveyed had extended their borrowing during the same period.

Revenue changes over the three months prior to the survey were relatively balanced between those firms increasing sales and those experiencing continued challenges. The implication is that continuing liquidity pressures are driven from the cost rather than the revenue side for many firms suggesting the importance of the 'cost of doing business' crisis.

R&D AND INNOVATION ACTIVITY

63 per cent of respondents indicating that R&D activities are 'core/central' to the firm. A further 23 per cent of firms indicated that R&D activities are an 'important' aspect of their business.
51 per cent said that they were experiencing continued disruption of their R&D activities in the three months prior to the survey.

Around a third of firms were reducing and re-prioritizing some R&D activities, and around 1:10 had either stopped some or all of their R&D. More positively around 1:5 firms had increased their R&D activity in the three months prior to the survey suggesting some potential for recovery.

On balance, more firms were planning to increase (rather than reduce) their R&D investment over the next year. 15 per cent of firms were planning to increase investment by more than 50 per cent compared to 13 per cent intending to reduce it by a similar proportion.

Collaboration is often a key element of an R&D and innovation project. Cooperation with other groups has remained broadly stable during 2022 although there is evidence that a substantial proportion of firms are restructuring their collaborations, either increasing or reducing levels of engagement. 28 per cent of firms were collaborating more with universities than before 2022; 22 per cent were collaborating less.

Asked what the main barriers were for collaborating with universities firms identified issues of the costs of collaboration (53 per cent) and a lack of available funding (61 per cent) as the most common challenges. IP issues were also identified as very important by 41 per cent of firms.

48 per cent of firms are anticipating an increase in R&D spend over the next year. Investment intentions for marketing and developing external markets were marginally stronger for those for R&D and innovation.

Asked more specifically about their Innovate UK supported projects, most IUK projects were either progressing but delayed or progressing on time. Around 1:6 projects were either at a halt or paused.

OUTLOOK & FUTURE CHALLENGES

Looking forward to the next year, supply chains and access to finance were seen as 'worsening' by the highest percentages of firms. Echoing results seen elsewhere demand for products and services was seen as continuing to strengthen. For around a third of firms' cash flow was also seen as worsening over the next year.

Labour costs (65 per cent), materials inflation (58 per cent) and fuel and energy costs (41.5 per cent) were seen as the main influences on firms' cashflow over the next year. Brexit uncertainty was also seen as having a major effect on liquidity by 37 per cent of firms.

Asked what types of support from IUK would be most useful in the next few months, innovation grants were seen as 'very useful' by 92 per cent of respondents, followed by grants for R&D (66 per cent) and collaboration (63 per cent). Loans were seen as 'very useful' by around 40 per cent of firms, although 33 per cent states loans were not useful. Innovation advice was seen as 'somewhat useful' or 'very useful' by only around a three fifth of firms.

LONGITUDINAL PERSPECTIVE

In terms of the impact of the pandemic on disruption, we see broadly similar levels of disruption throughout the period since June 2020 in terms of the availability of finance. For staffing availability, R&D capacity, and demand for goods and services disruption was worse during 2020 but improved during 2021 and 2022. Levels of disruption of supply chains, however, are now greater than previously perhaps reflecting the combined impact of Covid-19 disruption and other international events – this remains a persistent challenge of innovating firms.

23 per cent of firms are still reporting cash flow as critical. This is a broadly similar level to November 2021 and higher than that during late 2020 and 2021, perhaps reflecting the longer-term and cumulative impacts of the pandemic. The proportions of companies indicating that their cashflow is 'pretty normal' or 'positive' has increased steadily through 2021 and 2022. These two groups now account for around a third of all firms.

Firms approaches to dealing with limited liquidity during the pandemic have remained relatively similar through 2020-22. Reducing costs has been the main coping mechanism followed by trying to maximise revenues.

Improving trend in levels of collaboration noted in November 2021 continued into 2022 across all types of collaborators. As of June 2022, more firms were planning to increase R&D collaboration with all types of partners than reduce it over the next year.

Perhaps more worrying is a slight increase in the percentage of firms stopping or reducing their R&D spend in the current period. The current percentage – 46 per cent – is marginally higher than that in any of the three previous surveys. This is also reflected in a slight increase in the proportion of firms stopping or reducing the scale of their IUK projects.

1. BACKGROUND

This is the fifth in a series of benchmark reports on the impact of Covid-19 crisis on the status of Innovate UK award holders. The analysis focuses on the impact of the crisis over the last three months and firms' plans for the next year. Both firm level and project-level effects are considered. Data was derived from extensive survey work with IUK award holders.

The dynamic nature of the Covid-19 crisis and its impacts means that it is important to take into account the specific timing of the survey. Analysis is based on an on-line survey of 215 Innovate UK award holders conducted between 25th May 2022 and 14th June 2022. The on-line survey was distributed by Innovate UK but individual respondents' information has been treated as confidential to the research team.

We compare results from the fifth survey to results from the earlier waves of the survey conducted in June 2020, October 2020, February 2021 and November 2021. The comparison provides an indication of the changing pressures on firms during the Covid-19 crisis and how this has impacted their investments, collaboration and plans for R&D and innovation.

In the data presented in this report we distinguish between firms in terms of sizeband (micro (1-9 employees), small (20-50 employee), medium (50-249 employees) and large (250+ employees)) and three broadly defined sectors 'Manufacturing' which includes the primary and energy sectors (SIC 1-43), 'Hospitality' which includes hospitality, transport, and finance (SIC 45-68), and 'Business services' which includes most knowledge intensive service activities including R&D services (SIC 69-99).

In May/June 2022 firms continue to experience significant disruption due to Covid-19. Notably 82 per cent reported supply chain issues and 75 per cent issues with workforce mental health. Around 1:4 firms also still regard liquidity as 'critical'. Another half of all firms remain 'under pressure'. Rising costs are a critical issue for around 1:4 firms. Over half of firms have sought to reduce costs over the last three months. 59 per cent of firms suggested that the need to pay back Covid-19 loans was increasing the pressure on cash flow.

These pressures on liquidity and cash flow are impacting on firms' investments (and prospective investments) in R&D and innovation and collaboration with universities. However, around a half of firms are still planning to increase their investment in R&D and innovation over the next year.

The remainder of this report is divided into the following sections:

- Section 2 FINANCE AND OPERATIONS
- Section 3 R&D AND INNOVATION ACTIVITY
- Section 4 OUTLOOK & FUTURE CHALLENGES
- Section 5 LONGITUDINAL PERSPECTIVE
- Section 6 NEXT STEPS

2. FINANCE AND OPERATIONS

Covid-19 has caused disruption to many firms over the last three months both directly and indirectly through the impact on customers and suppliers. In the survey IUK award holders were asked how the continuing effects of the pandemic had impacted their business (Table 2.1). Two new items were included in the Wave 5 survey reflecting workforce mental health and restricted component supply. Firms reported continued disruption to supply chains (82 per cent), with around three-quarters of respondents also reporting disruption due to workforce mental health. Notably few firms saw the situation in any aspect 'improving' although around 1:5 firms had noted some recovery in overall demand.

Table 2.1: Effects of Covid-19 on IUK grant holders, % firms

	Improved	Unaffected	Disrupted	All
Staffing availability	6.3	41.6	52.1	100.0
Cash flow	6.0	30.7	63.3	100.0
Production capacity	3.7	40.9	55.5	100.0
R&D capacity	10.1	39.4	50.5	100.0
Supply chains	1.1	17.3	81.6	100.0
Availability of loan/equity finance	9.9	36.2	53.9	100.0
Demand for products and/ or services	20.3	28.9	50.8	100.0
Business Development	10.9	29.0	60.1	100.0
Ability to network with other firms	4.3	46.2	49.5	100.0
Mental health of workforce	0..0	25.0	75.0	100.0
Restricted component supply	11.1	44.4	44.5	100.0

As part of the survey respondents were asked questions about the general state of liquidity within their firm (Table 2.2). 23 per cent of firms regard their liquidity as 'critical' with a further 47 per cent indicating that liquidity is 'under pressure'. There is some indication that liquidity may be more critical in micro-businesses but some care needs to be taken with this due to the relatively small sample sizes (Table 2.2).

The increasing costs of doing business – energy and materials particularly – have received significant recent attention. Firms were asked whether increasing costs had had a significant impact on their liquidity in the three months prior to the survey (Table 2.3). Around a quarter of firms in the survey indicated that rising energy and input prices were a 'critical' issue for their liquidity; another 50 per cent of firms said they had been 'somewhat affected' by rising costs.

Around half of respondents had tried to reduce costs over the three-months prior to the survey, with a quarter seeking to raise revenues This will be a focus of the deep dives to be undertaken as a next step. 1:6 firms surveyed had extended their borrowing during the same period.

Table 2.2: State of liquidity within the business, % firms

	Micro	Small	Medium	Large	All firms	Manuf etc.	Hospitality	Business	All firms
	N=132	N=60	N=15	N=8	N=215	N=56	N=46	N=113	N=215
Critical due to costs and lack of revenue	28.7	16.1	0.0	0.0	22.7	18.9	33.3	20.2	22.7
Under pressure but manageable	48.4	48.2	20.0	66.7	47.4	52.8	40.5	47.5	47.4
Pretty normal and stable	11.5	21.4	40.0	33.3	16.5	17.0	14.3	17.2	16.5
Cashflow is positive	11.5	14.3	40.0	0.0	13.4	11.3	11.9	15.2	13.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.3: The costs of doing business, % firms

	Micro	Small	Medium	Large	All firms	Manuf etc.	Hospitality	Business	All firms
	N=132	N=60	N=15	N=8	N=215	N=56	N=46	N=113	N=215
Rising costs have been a critical issue for us	27.1	17.5	8.3	50.0	23.9	29.6	19.1	22.8	23.9
Rising costs have somewhat affected us	45.9	52.6	83.3	33.3	49.8	59.3	42.9	47.5	49.8
Increasing costs have not really impacted us	27.1	29.8	8.3	16.7	26.4	11.1	38.1	29.7	26.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

One other potential impact on liquidity over the last few months has been the need to repay loans or grants received from the government during the worst of the Covid-19 pandemic. Firms were therefore asked in the survey whether the need for repayments was impacting liquidity (Table 2.4). The majority of firms indicated that grant/loan repayment was a factor in putting more pressure on cashflow and liquidity (59 per cent). Few firms (6 per cent) indicated that repayments had had any impact on how the business was financed.

Table 2.4: Liquidity impacts of loan/grant repayment, % firms

	Micro	Small	Medium	Large	All firms	Manuf etc.	Hospitality	Business	All firms
	N=132	N=60	N=15	N=8	N=215	N=56	N=46	N=113	N=215
Put more pressure on cash flow and liquidity	63.2	57.1	33.3	0.0	58.6	60.7	64.3	53.5	58.6
Lead to changes in the financing of the business	7.0	5.7	0.0	0.0	6.1	3.6	3.6	9.3	6.1
No significant effect	29.8	37.1	66.7	100.0	35.4	35.7	32.1	37.2	35.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Revenue changes over the three months prior to the survey were relatively balanced between those firms increasing sales and those experiencing continued challenges (Table 2.5). Around 1:5 firms experienced no change in revenues in the three months prior to the survey. The implication is that continuing liquidity pressures are driven from the cost rather than the revenue side for many firms suggesting the importance of the 'cost of doing business' crisis.

Table 2.5: Revenue changes over the last three months

	Micro	Small	Medium	Large	All firms	Manuf etc.	Hospitality	Business	All firms
	N=132	N=60	N=15	N=8	N=215	N=56	N=46	N=113	N=215
Revenue reduced to zero	4.9	1.7	0.0	0.0	3.5	3.7	2.3	3.9	3.5
Reduced by more than 50%	13.8	3.5	0.0	0.0	9.6	3.7	11.6	11.8	9.6
Reduced by up to 50%	5.7	3.5	8.3	0.0	5.0	5.6	4.7	4.9	5.0
Reduced by up to 25%	9.8	17.2	0.0	0.0	11.1	13.0	9.3	10.8	11.1
Reduced by up to 10%	7.3	5.2	16.7	50.0	8.5	13.0	7.0	6.9	8.5
No change	25.2	20.7	16.7	0.0	22.6	22.2	25.6	21.6	22.6
Increased by up to 10%	9.8	20.7	25.0	33.3	14.6	18.5	14.0	12.8	14.6
Increased by up to 25%	1.6	8.6	16.7	0.0	4.5	3.7	11.6	2.0	4.5
Increased by up to 50%	0.8	5.2	0.0	0.0	2.0	0.0	2.3	2.9	2.0
Increased by more than 50%	0.8	1.7	16.7	0.0	2.0	1.9	0.0	2.9	2.0
Pre-revenue company	20.3	12.1	0.0	16.7	16.6	14.8	11.6	19.6	16.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

3. R&D AND INNOVATION ACTIVITY

Respondents to this survey are IUK client companies – either current or recent award holders – so for these firms R&D and innovation are central to firms' activities. This is reflected in the survey results with 63 per cent of respondents indicating that R&D activities are 'core/central' to the firm. A further 23 per cent of firms indicated that R&D activities are an 'important' aspect of their business (Table 3.1).

Note however that around 51 per cent said that they were experiencing continued disruption of their R&D activities in the three months prior to the survey (Table 2.1).

Table 3.1: Importance of R&D activities within the firm, % firms

	Micro	Small	Medium	Large	All firms	Manuf etc.	Hospitality	Business	All firms
	N=132	N=60	N=15	N=8	N=215	N=56	N=46	N=113	N=215
R&D activities are core/central to the business	68.5	60.0	40.0	28.6	62.7	60.0	57.8	66.1	62.7
R&D activities are an important aspect of the business	17.7	33.3	33.3	14.3	23.1	23.6	22.2	23.2	23.1
R&D activities add value to the core business	12.3	5.0	13.3	28.6	10.9	14.6	13.3	8.0	10.9
R&D activities represent a limited aspect of the business	1.5	1.7	13.3	28.6	3.3	1.8	6.7	2.7	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

As a result, around a third of firms were reducing and re-prioritizing some R&D activities, and around 1:10 had either stopped some or all of their R&D. More positively around 1:5 firms had increased their R&D activity in the three months prior to the survey suggesting some potential for recovery (Table 3.2).

Table 3.2: Changes in R&D and innovation over last three months, % firms

	Micro	Small	Medium	Large	All firms	Manuf etc.	Hospitality	Business	All firms
	N=132	N=60	N=15	N=8	N=215	N=56	N=46	N=113	N=215
Stopped all R&D activities	6.5	3.4	0.0	0.0	5.0	3.6	4.9	5.7	5.0
Stopped all non-critical/core R&D activities	8.9	3.4	7.7	0.0	6.9	5.4	14.6	4.8	6.9
Reduced & reprioritised some R&D activities	31.7	37.3	38.5	42.9	34.2	37.5	22.0	37.1	34.2
No change	31.7	32.2	38.5	42.9	32.7	37.5	24.4	33.3	32.7
Increased R&D activities	21.1	23.7	15.4	14.3	21.3	16.1	34.2	19.1	21.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

As part of the survey in October 2020 firms were also asked about their plans for investing in R&D and innovation over the next three months (Table 3.3). On balance – and consistent with the earlier evidence – more firms were planning to increase (rather than reduce) their R&D investment over the next year. 15 per cent of firms were planning to increase investment by more than 50 per cent compared to 13 per cent intending to reduce it by a similar proportion.

Collaboration is often a key element of an R&D and innovation project. As part of the survey firms were asked whether they had collaborated more or less with a range of different partners since the start of 2022 (Table 3.4). Cooperation with other groups has remained broadly stable over this period although there is evidence that a substantial proportion of firms are restructuring their collaborations, either increasing or reducing levels of engagement. 28 per cent of firms were collaborating more with universities than before 2022; 22 per cent were collaborating less (Table 3.4).

Asked what the main barriers were for collaborating with universities firms identified issues of the costs of collaboration (53 per cent) and a lack of available funding (61 per cent) as the most common challenges (Table 3.5). IP issues were also identified as very important by 41 per cent of firms.

Table 3.3: Plans for R&D and innovation investment in the next year months

	Micro	Small	Medium	Large	All firms	Manuf etc.	Hospitality	Business	All firms
	N=132	N=60	N=15	N=8	N=215	N=56	N=46	N=113	N=215
Revenue reduced to zero	4.3	0.0	0.0	0.0	2.7	5.8	5.3	0.0	2.7
Reduced by more than 50%	15.5	1.9	0.0	14.3	10.6	7.7	10.5	12.2	10.6
Reduced by up to 50%	5.2	1.9	0.0	0.0	3.7	3.9	5.3	3.1	3.7
Reduced by up to 25%	12.1	0.0	18.2	14.3	9.0	3.9	7.9	12.2	9.0
Reduced by up to 10%	2.6	9.3	9.1	28.6	5.9	5.8	0.0	8.2	5.9
No change	23.3	37.0	27.3	14.3	27.1	28.9	23.7	27.6	27.1
Increased by up to 10%	10.3	14.8	27.3	14.3	12.8	17.3	5.3	13.3	12.8
Increased by up to 25%	12.9	16.7	9.1	0.0	13.3	15.4	18.4	10.2	13.3
Increased by up to 50%	4.3	13.0	0.0	14.3	6.9	3.9	7.9	8.2	6.9
Increased by more than 50%	9.5	5.6	9.1	0.0	8.0	7.7	15.8	5.1	8.0
Total	100	100	100	100	100	100	100	100	100

Table 3.4: Collaboration with universities and other partners over the last three months, % firms

	More	Less	Same	Total
Other businesses within your enterprise group	29.7	11.0	59.4	100.0
Suppliers of equipment, materials, services	33.0	17.9	49.2	100.0
Suppliers of software	16.9	12.8	70.4	100.0
Clients or customers from the private sector	37.8	16.7	45.6	100.0
Clients or customers from the public sector (e.g. local authorities, schools, hospitals)	24.5	25.9	49.6	100.0
Competitors or other businesses in your industry	19.1	13.6	67.3	100.0
Consultants, commercial labs or private R&D institutes	28.1	26.9	45.0	100.0
Universities or other higher education institutions	27.9	22.4	49.7	100.0
Government or public research institutes	21.7	21.1	57.1	100.0

Table 3.5: Barriers to collaboration with universities, % firms

	Very important (1)	Somewhat important (2)	Not very important (3)	Total
Costs of collaboration (1)	52.5	37.3	10.2	100.0
Difficulty identifying partners (2)	29.7	39.5	30.8	100.0
Issues with contracting (3)	27.7	38.8	33.5	100.0
Intellectual property issues (4)	40.9	33.5	25.6	100.0
Lack of suitable expertise (5)	27.1	36.5	36.5	100.0
Delays in undertaking work (6)	37.7	44.3	18.0	100.0
Lack of interest in collaboration (7)	26.0	31.2	42.9	100.0
Lack of available funding (7)	61.1	27.4	11.4	100.0

Firms were also asked as part of the survey about their longer-term investment plans for R&D etc. over the next year (Table 3.6). This suggested a relatively optimistic picture with 48 per cent of firms anticipating an increase in R&D spend over the next 12 months. Interestingly this overall percentage is notably greater than planned increases in investment in university collaboration or collaboration with other partners. Investment intentions for marketing and developing external markets were marginally stronger for those for R&D and innovation (Table 3.5).

Table 3.5: Investment plans for the next 12 months % firms

	Increase	Same	Reduce	Total
Investment on R&D and innovation	48.4	33.5	18.1	100.0
Spending on innovation with universities	22.6	49.3	28.1	100.0
Spending on innovation with other partners	34.7	44.3	21.0	100.0
Investment in marketing and advertising	52.6	30.3	17.1	100.0
Spending on staff or management training	42.3	41.8	15.9	100.0
Investment in machinery or equipment	36.0	40.7	23.3	100.0
Investment in developing international markets	58.2	30.1	11.8	100.0

Asked more specifically about their Innovate UK supported projects, most IUK projects were either progressing but delayed or progressing on time (Table 3.6). More projects were now on-time (47 per cent) or ahead of the planned schedule (4 per cent). Around 1:6 projects were either at a halt or paused (Table 3.6).

Table 3.6: Project status as of May/June 2022, % firms

	Micro	Small	Medium	Large	**All firms**	Manuf etc.	Hospitality	Business	**All firms**
	N=132	N=60	N=15	N=8	**N=215**	N=56	N=46	N=113	**N=215**
Stopped permanently	8.7	10.9	10.0	14.3	**9.6**	7.1	10.5	10.5	**9.6**
Paused	10.7	4.4	0.0	0.0	**7.8**	9.5	10.5	5.8	**7.8**
Progressing but behind	33.0	23.9	50.0	42.9	**31.9**	33.3	34.2	30.2	**31.9**
On-time	41.8	60.9	40.0	42.9	**47.0**	47.6	44.7	47.7	**47.0**
Ahead of the planned schedule	5.8	0.0	0.0	0.0	**3.6**	2.4	0.0	5.8	**3.6**
Total	100	100	100	100	**100**	100	100	100	**100**

4. OUTLOOK & FUTURE CHALLENGES

Looking forward over the next year, the firms surveyed were asked how they saw the prospects for their business (Table 4.1). Supply chains and access to finance were seen as 'worsening' by the highest percentages of firms. Echoing results seen elsewhere demand for products and services was seen as continuing to strengthen. For around a third of firms' cash flow was also seen as worsening over the next year (Table 4.1).

Table 4.1: How do you see the prospects over the next year? % firms

	Improving	Same	Worse	Total
Staff availability	26.9	47.9	25.3	100.0
Cash flow	35.9	31.0	33.2	100.0
Production capacity	36.7	44.0	19.3	100.0
R&D capacity	33.9	45.5	20.6	100.0
Supply chains	15.7	36.1	48.2	100.0
Availability of loan/equity finance	19.0	35.2	45.8	100.0
Demand for products and/ or services	53.1	30.3	16.6	100.0
Business development	49.4	43.9	6.7	100.0
Ability to network with other firms	60.0	40.0	0.0	100.0

This was drawn out further with a follow-up question asking about the main influences on firms' cashflow over the next year (Table 4.2). Labour costs (65 per cent), materials inflation (58 per cent) and fuel and energy costs (41.5 per cent) were all seen as important factors. Brexit uncertainty was also seen as having a major effect on liquidity by 37 per cent of firms (Table 4.2). The impact of these factor

Table 4.2: What will be the main influences on liquidity over the next year? % firms

	Major effect	Minor effect	No effect	Total
Labour costs	64.9	28.2	6.9	100.0
Ukraine conflict	19.9	52.4	27.7	100.0
Fuel and energy costs	41.5	43.6	14.9	100.0
Materials inflation	57.8	28.3	13.9	100.0
Brexit uncertainty	36.9	41.3	21.8	100.0
Covid effects	19.9	56.8	23.3	100.0
Interest rates	27.1	52.4	20.6	100.0
Exchange rates	28.4	51.5	20.1	100.0
Falls in demand	31.2	24.7	25.6	100.0

A final question asked firms what types of support from IUK would be most useful in the next few months (Table 4.3). Innovation grants were seen as 'very useful' by 92 per cent of respondents, followed by grants for R&D (66 per cent) and collaboration (63 per cent). Loans were seen as 'very useful' by around 40 per cent of firms. Innovation advice was seen as 'very useful' by only around a fifth of firms.

Table 4.3: What type of additional financial support from Innovate UK would be most beneficial? % firms

	Very useful	Somewhat useful	Not useful	Total
Innovation Loans	39.6	26.6	33.7	100.0
Proof of concept grants	53.5	20.0	7.4	100.0
R&D grants	66.1	24.7	9.2	100.0
Innovation grants	92.1	7.4	0.5	100.0
Intellectual property advice	32.2	39.2	28.7	100.0
Marketing or export support	36.2	40.8	23.0	100.0
Innovation advice	22.9	43.5	33.5	100.0
Collaboration grants	63.0	29.3	7.7	100.0
Equipment grants	51.2	27.7	21.2	100.0

5. LONGITUDINAL PERSPECTIVE

In this section we compare some aspects of the current situation to prior waves of the survey data undertaken in June 2020, October 2020, February 2021 and November 2021. Not all of the questions were asked in each wave of the questionnaire which reflected the changing issues at each survey period.

In terms of the impact of the pandemic on firms' levels of disruption, we see broadly similar levels of disruption throughout the period since June 2020 in terms of the availability of finance (Table 5.1). For staffing availability, R&D capacity, and demand for goods and services disruption was worse during 2020 but improved during 2021 and 2022. Levels of disruption of supply chains, however, are now greater than previously perhaps reflecting the combined impact of Covid-19 disruption and other international events.

Table 5.1: Impact of Covid-19 over the previous three months, % firms

	Jun-20	Oct-20	Feb-21	Nov-21	Jun-22
(a) Staffing availability					
Improved	1.57	6.76	7.17	5.17	6.3
Unaffected	34.65	45.05	35.86	41.81	41.6
Disrupted	63.78	48.2	56.97	53.02	52.1
Total	100	100	100	100	100.0
(b) R&D capacity					
Improved	2.8	12.4	6.5	7.1	10.1
Unaffected	21.5	33.0	27.6	44.2	39.4
Disrupted	75.7	54.6	65.9	48.7	50.5
Total	100.0	100.0	100.0	100.0	100.0
(c) Supply chains					
Improved	0.9	2.2	0.9	1.5	1.1
Unaffected	27.4	39.2	31.1	27.9	17.3
Disrupted	71.7	58.6	68.0	70.6	81.6
Total	100.0	100.0	100.0	100.0	100.0
(d) Loans/equity finance					
Improved	17.7	21.2	16.0	13.7	9.9
Unaffected	23.7	23.7	30.5	36.9	36.2
Disrupted	58.6	55.1	53.5	49.4	53.9
Total	100.0	100.0	100.0	100.0	100.0
(e) Demand for products and services					
Improved	10.1	19.6	19.9	23.3	20.3
Unaffected	15.9	16.2	20.8	20.1	28.9
Disrupted	74.0	64.2	59.3	56.6	50.8
Total	100.0	100.0	100.0	100.0	100.0

As noted earlier around 23 per cent of firms are still reporting cash flow as critical. This is a broadly similar level to November 2021 and higher than that during late 2020 and 2021, perhaps reflecting the longer-term and cumulative impacts of the pandemic (Table 5.2). The proportions of companies indicating that their cashflow is pretty normal or positive has increased steadily through 2021 and 2022. These two groups account for around a third of all firms.

Firms approaches to dealing with limited liquidity during the pandemic have remained relatively similar through 2020-22. Reducing costs has been the main coping mechanism followed by trying to maximise revenues (Table 5.3).

Table 5.2: Cashflow position over the previous three months (% firms)

	Jun-20	Oct-20	Feb-21	Nov-21	Jun-22
Critical due to costs	21.6	17.0	19.7	24.3	22.7
Under pressure but manageable	57.7	59.8	57.1	53.4	47.4
Pretty normal and stable	16.9	12.7	14.7	15.0	16.5
Cashflow is positive	3.9	10.6	8.5	7.3	13.4
Total	100.0	100.0	100.0	100.0	100.0

Table 5.3: Managing Liquidity over the previous three months (% firms)

	Oct-20	Feb-21	Nov-21	Jun-22
Reduced costs	61.6	58.0	48.1	52.6
Maximised revenue	19.8	19.7	24.6	26.0
Raised investment	21.1	18.6	18.1	18.6
Extend borrowing	27.3	27.4	24.6	14.9

Collaboration was badly impacted during the early periods of the pandemic with lock-downs and limited access to business premises. The improving trend in levels of collaboration noted in November 2021 has continued into 2022 across all types of collaborators. As of June 2022, more firms were planning to increase R&D collaboration with all types of partners than reduce it over the next year (Table 5.4).

Perhaps more worrying is a slight increase in the percentage of firms stopping or reducing their R&D spend in the current period. The current percentage – 46 per cent – is marginally higher than that in any of the three previous surveys (Table 5.5). This is also reflected in a slight increase in the proportion of firms stopping or reducing the scale of their IUK projects (Table 5.6).

Table 5.4: Collaboration over the previous three months (difference in percentage of firms increasing less decreasing)

	Jun-20	Oct-20	Feb-21	Nov-21	Jun-22
Suppliers	-44.6	-14.6	-20.6	14.5	15.1
Business customers	-41.4	-20.3	-17.8	12.0	21.1
Competitors or other firms	-32.4	-38.3	-35.3	-6.7	5.5
Consultants/private labs	-43.4	-14.3	-14.5	-18.6	1.2
Universities	-58.5	-15.2	-23.8	-1.8	5.5
Govt or PRIs	-46.1	-14.0	-20.4	-6.2	0.6

Table 5.5: Changes in R&D activity (% firms)

	Jun-20	Oct-20	Feb-21	Nov-21	Jun-22
Reduced/Stopped	76.2	39.8	43.2	41.6	46.0
No change	15.0	24.5	22.9	30.0	32.7
Increased	8.8	35.7	33.8	28.3	21.3
Total	100.0	100.0	100.0	100.0	100.0

Table 5.6: Status of Innovate UK project at the time of the survey (% firms)

	Jun-20	Oct-20	Feb-21	Nov-21	Jun-22
Stopped permanently	1.3	2.3	1.6	6.1	9.6
Paused	9.6	2.8	0.8	3.7	7.8
Progressing but behind schedule	58.1	44.2	42.7	43.9	31.9
On-time according to plan	30.6	45.1	50.4	40.9	47.0
Ahead of the planned schedule	0.4	5.6	4.5	5.5	3.6
Total	100.0	100.0	100.0	100.0	100.0

6. NEXT STEPS

The online survey provides important real-time insights on the experiences of firms in what is the post-pandemic context, where the economic environment remains challenging. As the preceding discussion demonstrates, firms are navigating the challenges in the wake of Covid-19 in different ways. Further to the survey the Innovation Caucus and ERC are undertaking a qualitative follow-up to explore come of the issue through in-depth consultations with firms, the key areas of focus proposed are:

1. How have firms sought and continue to reduce costs associated with the pursuit of innovation activities in an inflationary post-Brexit economic environment?
    a. What are the primary uncertainties firms are concerned with?
2. How, given the liquidity challenges identified, are the main factors identified playing out with firms and how are they managing the situation?
    a. What does this mean for current and future innovation activity?
    b. Why firms are stopping or reducing their R&D activity, and intentions to recover?
3. Who are firms innovating with and how is this changing?
4. How significant are supply chain challenges on innovation activity, and what are the nature of these challenges?
5. Why does collaboration with universities remain a persistent challenge theme, why are the costs of collaboration prohibitive and what is the awareness of funding available?
6. What are firms looking for in terms of future financial and non-financial support from Innovate UK given the evolving challenges that firms continue to face?

Innovation Caucus

ERC
Enterprise Research Centre

Contact

info@innovationcaucus.co.uk
Oxford Brookes Business School
Headington Campus
Oxford OX3 0BP

www.innovationcaucus.co.uk

UKRI Economic and Social Research Council

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