Impact on UK Industry Sectors caused by the COVID-19 Pandemic

An AMPLYFI study - Part 2

June 2020

Deeper Insight

AMPLYFi

Part 2 – Understanding the impact of COVID-19 on the UK Manufacturing Sector.

In part one of this insight study, figures released by the Office for National Statistics (ONS) were compared to AMPLYFI's analysis of unstructured data. This comparison high-lighted some of the shortcomings arising from insights derived from closed and limited survey responses. In particular, our analysis identified that the UK manufacturing Sector has greater COVID-19 associated risks than ONS data is able to show.

Using AMPLYFI's DataVoyant™ platform, thousands of open-source documents connecting UK manufacturing to the impact of the COVID-19 pandemic were analysed. The corpus included news articles, industry reports, journals, government papers and academic literature. From this diverse and unstructured dataset, DataVoyant™ used a combination of Natural Language Processing and Machine Learning to extract and impartially quantify the significance of each topic and entity discussed across the entire corpus. Figure 1 reveals the top ten high-level topics quantified as the most significant issues, facing UK manufacturing.

Financial Support   Trade Deal

Political Uncertainty   Global Economy

Supply Chain   Social Distancing   Oil Prices

New Orders   Employee Retention

Personal Protective Equipment (PPE)

Figure 1 – High-level issues affecting UK manufacturing during the COVID-19 pandemic

The size of each term indicates its average significance between January and May 2020. Quite clearly, Supply Chain disruption is the most serious issue as manufacturers grapple with this challenge on two fronts, namely maintaining supply of raw materials, and se-curing orders/logistics to successfully move inventory. The short-term swing to negative pricing for WTI crude in late April is a testament to the impact that can be caused when there is limited space to send your product owing to low usage/demand. Oil Prices were identified as the eighth most significant high-level topic impacting UK manufacturing. Depending on manufacturer perspective, low oil prices can be both a threat or opportunity.

Perhaps a surprising addition, given the COVID-19 focus of this analysis, is that potential Trade Deals were still one of the top ten issues for UK manufacturers. Trade deal discus-sion has permeated to all levels of manufacturing conversation showing its perceived importance within the manufacturing industry. The pandemic has, in part, added to the uncertainty surrounding Brexit talks with negotiators unable to meet in person. If the orig-inal deadlines are maintained, as the UK government favours, the likelihood of a No Deal scenario increases.

Figure 2 shows the significance trend for the top three topics from January-May 2020. Supply Chain has been a dominant issue since the beginning of the year when other key topics (PPE and Social Distancing) were not even being discussed. One of the capabilities of DataVoyant™ is to identify and quantify the strength of the connections between topics, locations, companies and people, and show how this has evolved over time. This can help to give context to a topic at any given time. For instance, in January there is a strong link between the topic of Supply Chain and the geographical areas of Wuhan and Hubei. This shows that it is the lockdown of those areas in January, and the anticipated knock-on effect in the UK, that is driving its early significance, particularly amongst manufacturers heavily dependent on Chinese suppliers. In terms of company exposure, the results also indicate that Jaguar Land Rover is more closely associated to this issue than, for example, Rolls-Royce. The links between the significance of the topics surfaced in this study and company specific impacts will be explored in a later edition of this study.
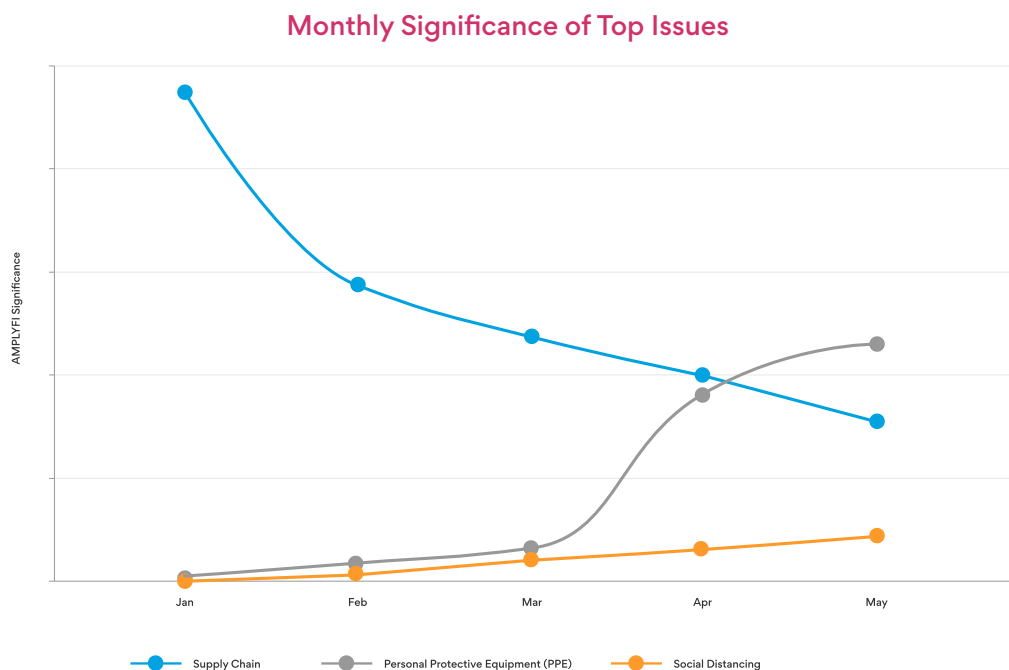
Monthly Significance of Top Issues

Figure 2 Significance trend for Key issues from January to May 2020

Over time the relative significance of the Supply Chain topic has decreased, suggesting that more pressing problems are coming to the forefront, or that at least partial solutions have been found. Additive Manufacturing (3D printing) and Artificial Intelligence (AI) are two technologies that this analysis has found to be closely related to the Supply Chain topic and are helping manufacturers to manage risk. AI is being deployed to optimise supply chain management whilst Additive Manufacturing is giving manufacturers rapid prototyping capability allowing them to swiftly respond to changes in their own supply chain or in consumer demand. The use of additive manufacturing has also encouraged unprecedented levels of collaboration and IP sharing during this extremely difficult period. This has been particularly important for those that have rapidly switched production lines to manufacture new and diverse equipment such as PPE and ventilators.

Whilst the significance of Supply Chain has consistently decreased, two growing concerns within UK manufacturing include PPE and Social Distancing. Manufacturers that were forced to temporarily close in March are looking to come back online, and for that to happen, they will need to fully comply with employee PPE expectations and the governments social distancing rules. In some cases, the full impact of social distancing measures on product cost and output is only now being realised by manufacturers. Indeed, in response to this this, and concerns from other industrial sectors, policy changes to relax the current two metre rule will soon be in effect.

The Financial Support topic was the sixth most significant issue facing the UK Manufacturing Sector. Two of the most popular government backed schemes providing financial support are the Coronavirus Job Retention Scheme (CJRS), that allows employers to furlough staff with costs backed by the UK Government, and the Coronavirus Business Interruption Loan Scheme (CBILS), which offers loans to businesses impacted by COVID-19. These schemes we also identified as part of AMPLYFI's analysis. Figure 3 shows that after its announcement in late-March the significance of CJRS immediately peaked in April. This mirrors ONS data that shows by early-April, over 30% of UK manufacturing workers had been furloughed and since then, the percentage of furloughed workers has remained relatively flat.
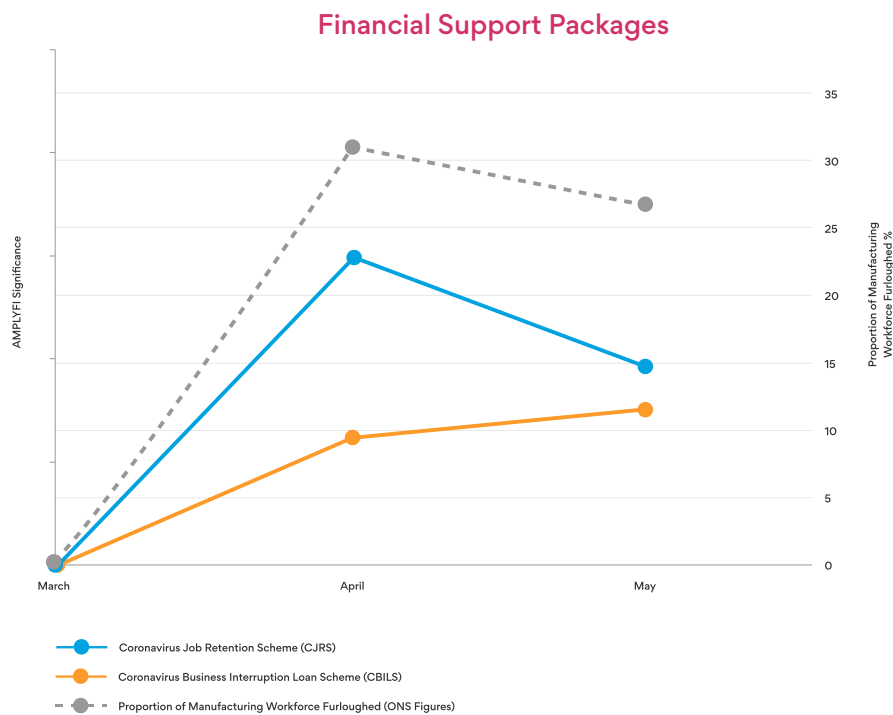
Financial Support Packages

Figure 3 – AMPLYFI significance of the CJRS and CBILS against furloughed manufacturing workforce

AMPLYFI and ONS figures show that the CJRS was successful in delivering swift financial support into the sector. After the initial wave, there has not been a prolonged increase in the AMPLYFI significance rating, or reported uptake. This can be interpreted to show that those who qualified registered immediately, received the support quickly and have continued to use the scheme without incident. The trend associated to the CBILS, on the other hand, does not mirror this.

The significance of the CBILS only grew gradually throughout April and May amid criticism that the scheme offered unattractive personal terms, had low approval rates and some banks had not acted swiftly enough. Shortly after the initial launch, the UK government amended some areas of the scheme before also announcing the related Bounce Back Loan Scheme for smaller businesses. Despite these changes, the CBILS is still seen as an area for the UK government to improve policy.

Government policy decisions are informed by ONS data which can often rely on closed survey responses or limited structured datasets. To augment this, AMPLYFI can unlock a wealth of unstructured textual data held in open-source content across the web. The combination of structured and unstructured data analysis enables the user to gain an unrivalled level of context and depth around any topic. Almost 95% of global data is unstructured, by ignoring this vast pool of knowledge, governments and the private sector will continue to find themselves underprepared when they need to make the right decisions at critical moments.

With a fully implemented solution for unstructured data analytics, the UK government would be able to better understand the challenges of the moment and put policies in place that either meet the biggest need, or target strategic areas that can bring improvements to multiple issues. One strategic insight from this study is the close connection between today's supply chain challenges and future post-Brexit trade deals. The UK Manufacturing Sector is going through a severe shock to its supply chain and is turning to technology to guide it. Can the government gain any early lessons from this technology adoption? And can these solutions be adapted to mitigate any future supply shocks caused by a shifting political landscape? By acting early, the government might be able to alleviate some short-term disruption and put themselves on positive footing to more effectively deal with likely future disruption.