A SECTORIAL ANALYSIS OF THE ECONOMIC IMPACT OF COVID-19 ON PORTUGUESE FIRMS

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Nova Economics Club is the Economics club at Nova School of Business and Economics. Since 2012, its focus is to create a bridge between the theory learnt in classes with the work performed by economists on a daily basis.

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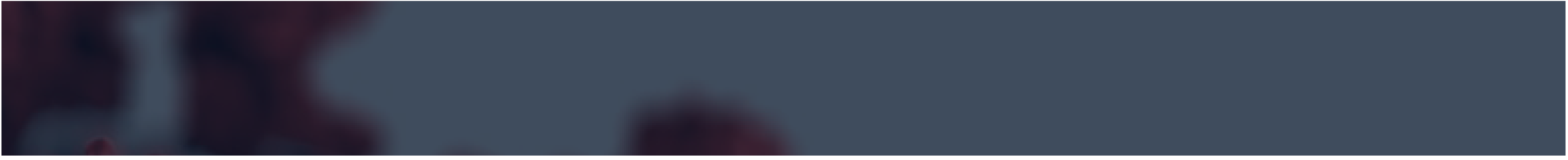

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Abstract: This paper aims at exploring the impact that the period of economic inactivity resulting from the COVID-19 lockdown measures had on different sectors of the Portuguese economy. It focuses on three main aspects: the pre-pandemic situation of each sector (2014-18), difficulties reported by firms during the month of April (during the State of Emergency and a period of strict lockdown), and the measures and policies announced by the government to aid firms. The results of this analysis reveal that firms reporting to remain in operation, the reduction in the workforce was mostly due to employee-side complications rather than managerial decisions. The volume of sales and number of firms closing present a huge variation according to the nature of each sector. Countering pre-pandemic trends, in which 'Accommodation & Catering' was the sector that was growing most rapidly in all aspects, this sector was the most harmed by the lockdown. Firms resorting to additional credit were mostly influenced by how hard-hit each sector was, independently of the capital structure of each sector in the years before the virus. Some policy recommendations are made, aiming at restoring consumer confidence and increasing both supply and demand for most affected sector. Other policies aim at fomenting internal tourism and helping small and medium enterprises adapt to an online business model.

Keywords: COVID-19; Portuguese Firms; Sectorial Surveys; Crisis Effects

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Introduction

The year 2020 will forever be associated with COVID-19, the virus that has drastically changed our societies, from social interactions to how people perform their daily duties and jobs. Consensually believed to have originated in the city of Wuhan in China, the date and circumstances of the emergence of this virus are still widely debated. Following the first reported case on the 31st of December 2019, the world watched as China battled to contain this microscopic enemy. China's numbers were worrisome, but still they seemed extremely far away from the Western World. However, in the current globalised world we live in, with millions of people crossing borders on a daily basis, the virus soon became a global problem. This, combined with the highly infectious nature of the virus, allowed COVID-19 to become a global pandemic and reach staggering proportions.

A combination of lockdown measures to fight the pandemic and a general sense of fear from the population left many developed countries with their economies almost completely frozen, Portugal included. Essential goods excluded, firms saw the demand for their products suddenly plummet, many of them opting to cease activity, either temporarily or permanently, and greatly reduce the number of active employees to minimize their expenses. Economic agents suffered deep cuts to their revenues, income, and this public health crisis spilled into the economic nexus.

The pandemic knocked at Portugal's door on the 2nd of March, and since then tens of thousands have been infected, and part of them have lost their lives. The Portuguese Government declared a State of Emergency on March 18th, which persisted until the 2nd of May. Nevertheless, many questions are still to be answered and uncertainty is still vastly present.

It is realistic to say that the actual outcome of the virus will only be known long after it ends. Different approaches have been implemented around the world, like the Swedish path to immunity or, in contrast, the rigid lockdown in Portugal herd. Time has proven that some of these methods are not necessarily effective at certain levels. For example, in spite of the Swedish GDP for the first quarter of 2020 having registered a small positive growth (0.4%[1]), contrarily to most countries, this nation has recorded more COVID-19 deaths than any of the other Nordic countries. With the first economic data now becoming

[1] In Meredith, Sam. "Sweden's Economy Actually Grew in the First Quarter after It Opted against a Full Virus Lockdown."

available, both public and private institutions must study carefully the needs of each sector so a path to recovery can finally start to be designed.

Nova Economics Club was founded in 2012 in response to the Economic Adjustment Programme, with the intent to contribute in any way possible in a time of crisis. Once more, Portugal heads towards facing unprecedented hardships, and once more Nova Economics Club has decided to contribute to the research being conducted in order to better understand the economic consequences of this corona-crisis.

The main intent of this paper is to analyse the difficulties reported by Portuguese firms during the month of April, a month characterised by the State of Emergency and an almost complete lockdown. For that, it starts by looking at the yet scarce information available about the economic effects of the pandemic and presents a **Literature Review** on the matter. After that, it explores in the **Data & Methodology** the specificities of the data from *Statistics Portugal (Instituto Nacional de Estatística - INE)* and how the analysis was conducted across different sectors of the Portuguese economy, in order to better understand how the pandemic affected each branch of activity, considering their own specificities. In this section, it also dives further into pre-pandemic trends in each sector, in an attempt to isolate corona-specific effects from other previously existing tendencies when compared to more recent data. Finally, by associating specific implemented policies with firms' responses, the ultimate objective is to, in the **Results**, get a full well-rounded view of what helped or harmed Portuguese companies, be its previously underlying conditions, the nature of their activity, or government policies.

Literature Review

As time goes on and Portugal becomes further from the first peak of the COVID-19 pandemic, its effects on the national economy are starting to become evident. Papers and articles have been developed during the past months in order to study the current situation and better understand how to best handle the crisis.

"O COVID-19 e a Economia Portuguesa" by Pedro Duarte Silva (from GPEARI), concludes that regarding the Portuguese GDP for the second quarter of 2020, the most pressing determinants to negatively affect GDP were spill overs from China, disruptions of several value chains due to supply shortages, drastic reduction of all activities related to the movement of people (whether at a professional level or in tourism), significant reduction in confidence levels (both for entrepreneurs and consumers) and high losses in the capital markets. This shock will result in strong impacts in terms of production (with declines in

production and closure of companies), employment (with an increase in unemployment) and productivity (due to disturbances in production and employment). At the level of public finances, the pressure on the health system, as well as the functioning of automatic stabilizers and the establishment of support packages for citizens and companies, will have a strong impact on the budget balance, either by a high increase of public expenditure, or by significant drops in tax and contribution revenues.

From the same institution, Nuno Tavares and Gabriel Osório de Barros, in *"COVID-19 - Capacidade das empresas para assegurar o pagamento das remunerações numa situação de paragem total da atividade"*, use a cash-buffer as a variable of interest, which is the time (expressed in number of months) during which companies would be able to meet their monthly wage charges, assuming that the only available resource this purpose would be their availabilities (bank deposits and cash). The distribution of the variable is strongly skewed on the left, indicating a strong prevalence of companies with reduced capacity (in number of months) to meet their wage costs using only their cash or bank deposits. Specifically, 25% of companies would not have sufficient resources to cover more than one month's wages. In a scenario of total stop, the average company in the sectors considered would have sufficient funds to cover approximately 2 ½ months of wages. Considering now the distribution of the variable by size, it is concluded that the largest companies are those that have the least capacity to meet the costs of wages using amounts in cash or bank deposits. The sector with the lowest capacity to cope with wage costs using available resources is the 'Accommodation & Catering', precisely one of the most exposed to the containment measures adopted. In this sector, 50% of companies would not have the resources to insure much more than 1 month of wage costs. In the opposite situation, the sector best prepared to deal with wage charges using their most liquid assets would be 'Commerce', since 50% of companies would be able to ensure approximately 4 months of payment of wages using such funds.

In *"Os Modelos Input-Output, a Estrutura Setorial Das Economias e o Impacto Da Crise Da COVID 19"* (GEE) the authors study the Input-Output model. They divide products into essential and non-essential (the criterion was subjective) and lowered the final demand (i.e., final consumption and investment) of non-essential products, in a year by 50%. The goal is not to guess the future, but only to unveil trends. Portugal would be the 27th country, out of a total of 44, to suffer most from the designed shock, which consists of a diversion of demand for essential goods. Regarding export variation, Portugal would clearly be very affected by this variable (12th place). The most affected product would be the consumption of non-residents in the territory, followed by wholesale trade, since

World Input-Output Database (WIOD) estimates that a significant portion of international trade results from wholesale trade margins. If the balance of the impact of exports and imports were analysed, these would continue to be the products that would contribute the most towards the deterioration of the trade balance, with one exception: motor vehicles. Indeed, although this is one of the main Portuguese export products, the truth is that Portugal still imports more cars (including components) than it exports. Naturally, the collapse of this sector, seen all over the world, ends up reducing Portuguese imports considerably more than its exports. As for the main products which, translated into import economies, contributed most to mitigate the deterioration of the trade balance in Portugal, the spotlight falls upon the unprocessed minerals, chemicals, and, curiously, thirdly, motor vehicles.

In *"The impact of COVID-19 on European household expectations"*, by Gene Ambrocio (from the Bank of Finland), the author states that the pandemic has led to a universal and significant decline in household sentiment over the last two months. In relative terms, the drop-in sentiment parallels the global crisis episode for the euro area, although the recent decline has occurred at a much quicker pace. It presents the correlations between the changes in household sentiment, disagreement, and uncertainty from the January to April surveys of this year against the number of confirmed cases and deaths (per 100,000 population), as well as the index of the stringency of containment measures as of the end of March and the economic stimulus index across European countries. The stringency of containment measures appears to be most correlated with changes in household expectations. In particular, countries with more stringent containment measures are associated with larger drops in consumer sentiment and more disagreement across households. Paradoxically, more confirmed deaths are correlated with smaller drops in sentiment. Furthermore, more confirmed cases and deaths are also correlated with milder increases in disagreement. On the other hand, disagreement is increasing in the stringency of containment measures and the intensity of economic stimulus which, in turn, suggests that these policy responses may have affected households differently. Finally, household uncertainty is only weakly positively correlated with the number of deaths.

"Tracking the COVID-19 crisis through the lens of 1.4 billion transactions", by Vasco Carvalho et al., studies 1.4 billion transactions in Spain, in which there is evidence of a large, abrupt, and persistent decline in expenditure in the period immediately following the 14th of March 2020 (the nationwide lockdown by the Spanish Government). For an average day in this period, aggregate (nominal) expenditure in Spain would be roughly half as low (-49%) as the same day one year before (in 2019). There is also evidence for stockpiling

behaviour in the days immediately preceding the lockdown. During this brief period, at its maximum, year-on-year daily expenditure growth was 20 percentage points above of the mean growth observed in the first two months of 2020. Neither the massive spending fall nor the stockpiling behaviour happen uniformly across sectors, forms of trade, or even geographic units. A considerable substitution from offline to online purchases after the lockdown was also observable. Both online and offline expenditure fell, but the former dropped substantially less, resulting in a large and stable increase in the market share of online expenditure, which grew by about 50%. There is substantial heterogeneity across categories of expenditure during the lockdown period. Consistent with the nature of the lockdown (which allows only essential market interactions), it was found that expenditure in commodities related to basic necessities (such as foodstuffs and healthcare/pharmacy products), or that cater to goods with very low demand elasticity (such as tobacco), more than doubled during the lockdown period, relative to the same period in the previous year. In contrast, expenditure on goods and services with higher demand elasticities (related to food and entertainment away from one's residence, fashion, or personal services) has all but vanished. This gives rise to a large reallocation in expenditure across categories of goods and services. Moreover, the sales of the best performing sectors (all essential and/or goods with low demand elasticity) witnessed a very substantial increase in the first week of the lockdown (and in anticipation to it), and have stabilized since at approximately the same level that one would expect in the absence of a pandemic. The stark difference is the absolute collapse of sectors that either are incompatible with the social-distancing rules of the lockdown measures (like bars and restaurants, or massages), or are classified as non-essential goods (like fashion and luxury goods).

In *"Consumer responses to the COVID-19 crisis"* (from the University of Copenhagen), similarly to the article above, the authors studied bank account transactions in Denmark from 760,000 individuals. They estimate that card spending dropped by around 25% in response to the crisis. Before the 11th of March shutdown, daily spending was on average 2% higher in 2020 than on the 2019 reference day. After the shutdown, consumers spent 23% less than in the reference period. Under the assumption that the year-on-year growth from 2019 to 2020 would have remained constant absent the crisis, the difference between these two numbers is the causal effect of the crisis on total spending. Spending responses to the shutdown vary widely across categories: spending in grocery shops and pharmacies is moderately elevated relative to the counterfactual, whereas spending on restaurant meals, travel, retail, personal services, fuel, and entertainment exhibit pronounced decreases. Spending responses are closely linked to the restrictions on mobility and activity imposed by the government to prevent the spread of the virus. Considering an 'open' sector where supply was totally unconstrained by government interventions (e.g. supermarkets, pharmacies, online retail), a 'constrained' sector where government interventions had some effect on supply (e.g. offline retail where malls were shut down but high-street shops allowed to remain open), and a 'closed' sector where the shutdown led to a near-complete elimination of supply (e.g. travel, restaurants, hairdressers, dentists), the paper finds these three sectors to vary differently: the estimated spending responses are around 10% for the open sector, -40% for the constrained sector, and almost -70% for the closed sector. It is unsurprising that spending on goods and services produced in the closed sector falls: with supply effectively cut off, spending is bound to decline. The modest increase in spending in the open sector (which accounts for around half of the economy) is noteworthy, however, because it suggests a limited role for negative spill overs of supply shocks through the demand side, at least within the relatively short timeframe covered by our analysis.

In "Measuring Sectoral Supply and Demand Shocks during COVID-19", written by Pedro Brinca, João B. Duarte and Miguel Faria e Castro, it is estimated Bayesian SVARs on the growth rates of hours worked and real wages for each major sector of the US economy. They found that two-thirds of the fall in the growth rate of hours worked in March and April 2020 could be attributed to negative labor supply shocks.

The Leisure and Hospitality sector experienced historically large negative supply and demand shocks. The Information sector and the Retail Trade sector experienced negligible supply shocks.

It is also shown that the size of the estimated supply shocks correlates with other measures, such as the fraction of jobs in each sector that can be performed from home. Leisure and Hospitality, the sector with the smallest share of jobs that can be performed from home, was precisely the sector that was hit the hardest by a negative labor supply shock. Sectors where such share is higher endured smaller labor supply shocks, such as the Information sector.

Data & Methodology

The aim of this project was to compare the situation of different sectors before and during the corona-crisis. In order to do so, two main databases were used: Firstly, in order to analyse firms' performance during the time they were affected by the pandemic, the main source used were the Fast and Exceptional Enterprise Surveys conducted by the INE in partnership with the Bank of Portugal (BoP). These surveys were conducted on a weekly basis, and this project uses four surveys between the 6th of April and the 1st of May. The sample size of these surveys was constant (8883 firms), and so was its distribution across size and sector of activity. Nevertheless, the number of firms who actually responded to the survey varies between 4793 and 5837, depending on the week.

The second database used was also from Statistics Portugal, and it presents data from all registered firms in Portugal between the years of 2014 and 2018. This was considered to be a good reference period to analyse what the situation was in each sector prior to the pandemic. The choice of INE's database over other databases, such as the Bank of Portugal's Sector Tables, was deliberately made. By using the same source for both the surveys and the data prior to the pandemic, the risk of differences in methodology in data collection was minimised to allow for maximum possible comparability.

In order to further guarantee comparability between the surveys and the designed benchmark, the data from INE's databases was aggregated in the same way the surveys were[2].

The most appropriate indicators from INE's database were chosen in order to be comparable with the questions made in the survey. For instance, yearly growth of the number of firms and yearly growth of employment in each sector of activity were used to compare with the questions made on the survey of which firms were forced to shut down and the percentage of employees that a firm had to dismiss.

Nevertheless, there are some limitations to this analysis. The way the surveys aggregated firms according to sector of activity leaves out firms whose main activity is classified under section A of CAE Rev.3, related with agriculture, forestry and fishing. Thus, there is no way to get a picture of the whole economy, as it leaves out an important part of the rural economy. Furthermore, the aggregation within 'Other services' is excessively broad. Sections M, N, P, Q, R and S encompass a wide variety of service activities. These include services as different as education, health, arts and entertainment, or administrative activities, which differ in nature and thus were not symmetrically affected by the COVID pandemic. It is, therefore, not very informative to analyse how the aggregation 'Other services' was impacted. Moreover, some questions on the surveys changed from one week to the next, which impeded a constant analysis across all surveys. Finally, due to its very nature, surveys are not completely reliable. The information provided is based on

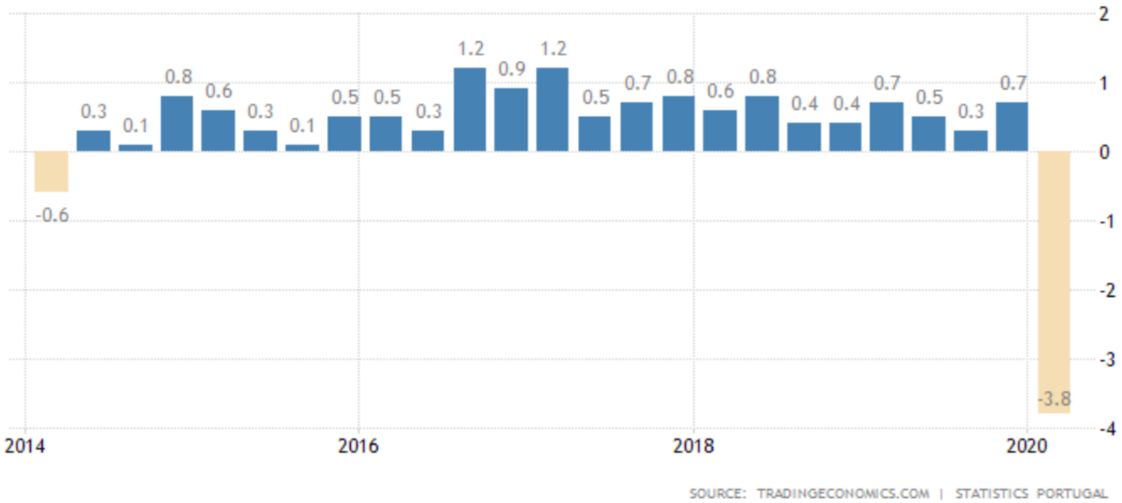
[2] *Table 1* in Appendix

estimates and values reported by the firms, rather than concrete methodological accounting indicators. Therefore, there is an unavoidable risk that firms over or underestimate the impact the pandemic has had on their business.

The general Portuguese paradigm from 2014 to 2018

In general terms, the Portuguese economy had been growing for 23 consecutive quarters, since the second quarter of 2014. Maximum year-on-year growth was attained on the third quarter of 2016 and the first quarter of 2017, with a growth of 1.2%. Minimum growth was verified on the third quarters of 2014 and 2015, with a value of 0.1%. The first quarter of 2020 is marked by a drastic plummet of 3.8% in GDP due to the lockdown and an almost complete freeze of the economy.

Figure 1: Quarterly GDP Growth between 2014 and the first quarter of 2020



Based on the data collected from INE's databases, it was possible to analyse the situation for different sectors of the Portuguese economy from 2014 to 2018, which this paper considers to be a good reference for the pre-pandemic economic situation within the country. It establishes a good starting point from which to analyse the impact that the pandemic had on the Portuguese economy and initiate discussion on whether the current economic outlook for each specific sector is due to the public health crisis or a consequence of previous trends. Due to the way the sectors were aggregated, with different aggregations having different sizes, it is more relevant to look at relative rather than absolute changes.

The performance of each sector was evaluated through three main lenses. Looking at the emergence of new firms and businesses within each sector provides a useful insight regarding the number of firms closing during the lockdown period, and whether those closures were due to the pandemic or some previous occurence. Furthermore, it is also important to verify if there were previous tendencies for certain sectors to decrease its labor. Finally, as the pandemic has naturally affected firm's sales volume, it is relevant to also compare which sectors were verifying larger increases in their volume of sales prior to the corona-crisis.

In all these aspects, the sector 'Accommodation & Catering' was the one which performed best. Its average yearly growth in number of firms, employment, and sales volume, 7.7%, 8.2% and 12.8% respectively, was consistently above average (3.4%, 4.3% and 5.3%). This can attributed to a booming tourism industry in Portugal in recent years.

'Information & Communication' also had above-average yearly growths in number of firms and labor, 6.6% and 6.8%. These likely reflect an ongoing digital transformation which has not yet translated to increased sales volume, as the growth in sales in this sector was below average, at 3.4%.

'Industry & Energy' and 'Commerce' were the two most stagnated sectors, constantly performing below average in all regards. In fact, the number of firms in 'Commerce' in fact shrank on average by -0.5% every year.

Nevertheless, through a graphical analysis, one can see that in general most sectors were expanding, and there were no clear signs of deceleration to this growth prior to the pandemic.

Figure 2: Growth in number of firms

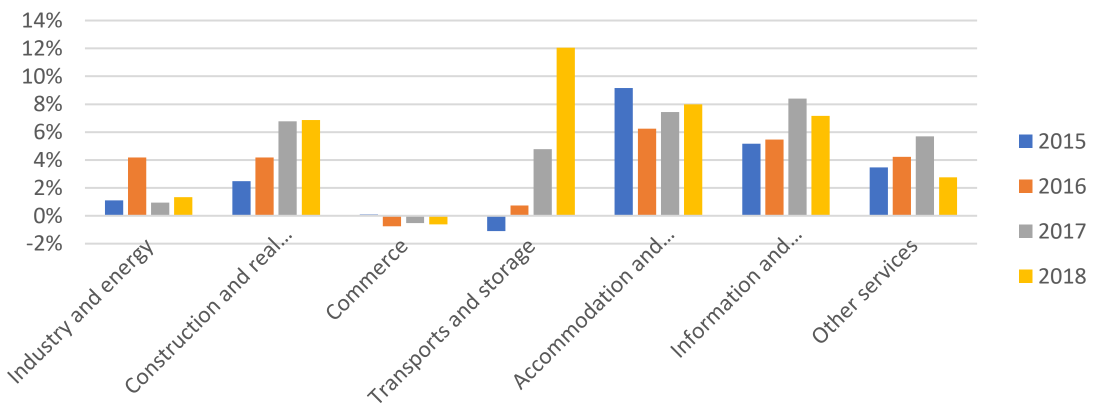


Figure 3: Employment growth

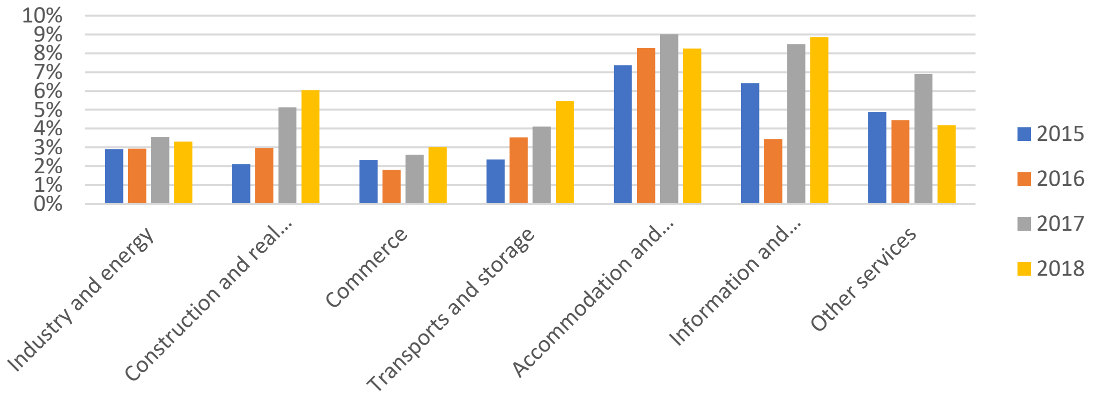
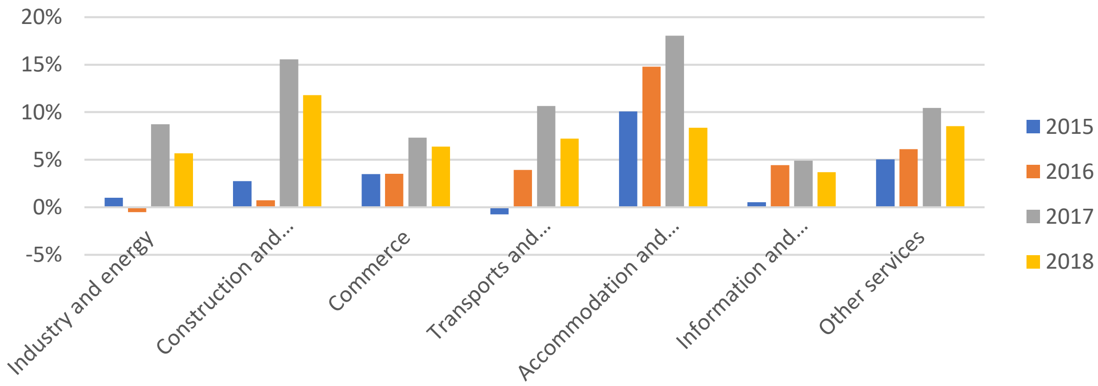


Figure 4: Sales growth



Next, it is interesting to characterise the typical capital structure of firms in each sector to understand which types of firms are traditionally more willing to incur in debt.

Figure 5: Equity as a Percentage of Total Assets *per* Market Sector

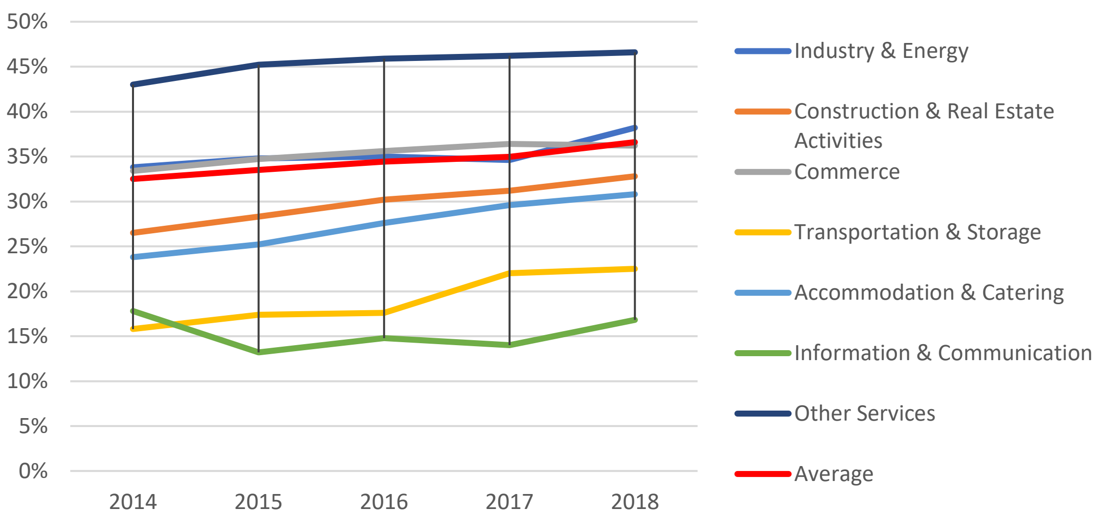
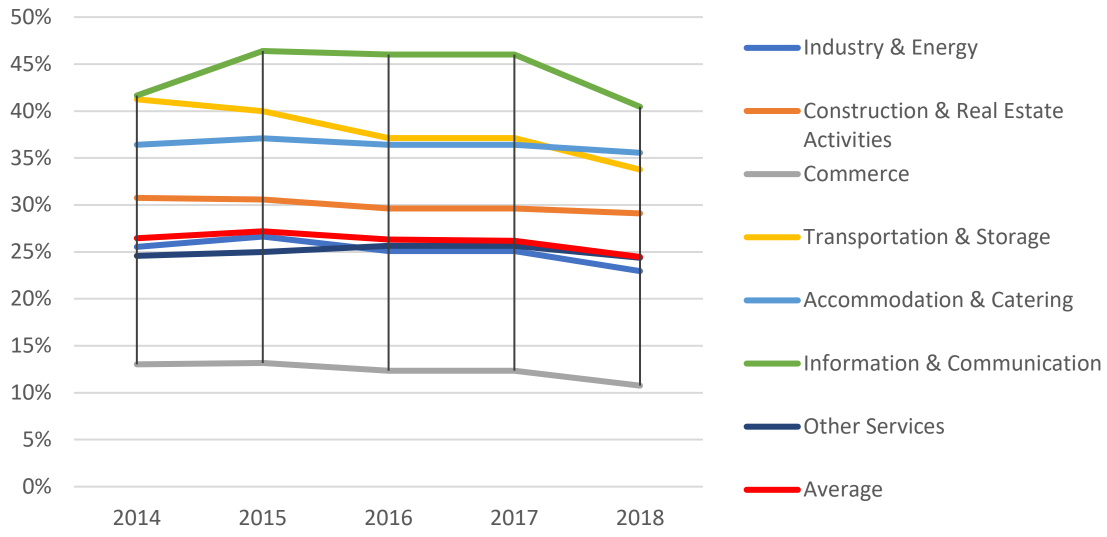


Figure 6: Non-Current Financing as a Percentage of Total Assets *per* Market Sector



'Information & Communication' is clearly the sector most reliant on debt rather than equity. Throughout the period 2014-18, its equity equalled only around 15% of assets, while its long-term debt was consistently above 40% of assets. On the other side of the spectrum (ignoring 'Other Services' since, as previously stated, it is not a very informative aggregation), the sectors 'Commerce' and 'Industry & Energy' were the ones that relied the most on equity, with values consistently around 35%. In 2018, 'Industry & Energy' overtook 'Commerce' and became the sector most reliant on equity (38% against 36%). However, the 'Industry & Energy' sector's reliance on long-term debt was not that far from the average levels of the Portuguese economy. In fact, in 2018 the average percentage of non-current financing was 24.5%, and this sector had a value of 23%. The 'Commerce' sector, on the other hand, was indeed the least reliant on long-term debt, with levels between 10% and 15%, but with a higher percentage of current liabilities than 'Industry & Energy', which is only natural given the nature of its activity. In fact, current liabilities with suppliers represented 23% of Commerce's assets in 2018, almost 13 percentage points more than 'Industry & Energy'. All sectors, excluding 'Information & Communication', verified an upwards trend in the share of equity on their capital structure between 2014 and 2018. There was also a generalised downward trend in the reliance on long-term debt, although this was less noticeable. 'Transportation & Storage' was the one sector where this decrease was most noticeable, with its non-current financing decreasing by 7.4 percentage points.

The entrepreneurial feeling regarding the pandemic crisis

Having in mind INE's surveys regarding the pandemic's impact on the Portuguese productive structure, this paper looks at the evolution of key performance indicators as a way of understanding how firms feel about the effects of the crisis and the necessary steps towards minimizing such consequences.

Concerning how firms feel about their current **capability of continuing to work**, there seems to be a generalized constant behaviour throughout the surveys of a high intention of continuing with their normal plan of action, with between 84% and 91% of the responding firms in most sectors reporting to remain in business. It is not surprising, however, that only around 40% of the companies within the 'Accommodation & Catering' sector report their willingness to remain in operation, and around 55% of them expressed the necessity to close temporarily. The 'Construction & Real Estate Activities' and the 'Information & Communication' sectors seem to be in a close first place in terms of reporting to having continued their normal daily activities throughout the month of April with around 90% of the firms reporting to remain in operation and only around 10% reporting having closed temporarily.

Figure 7: Firms Declaring to Remain in Operation

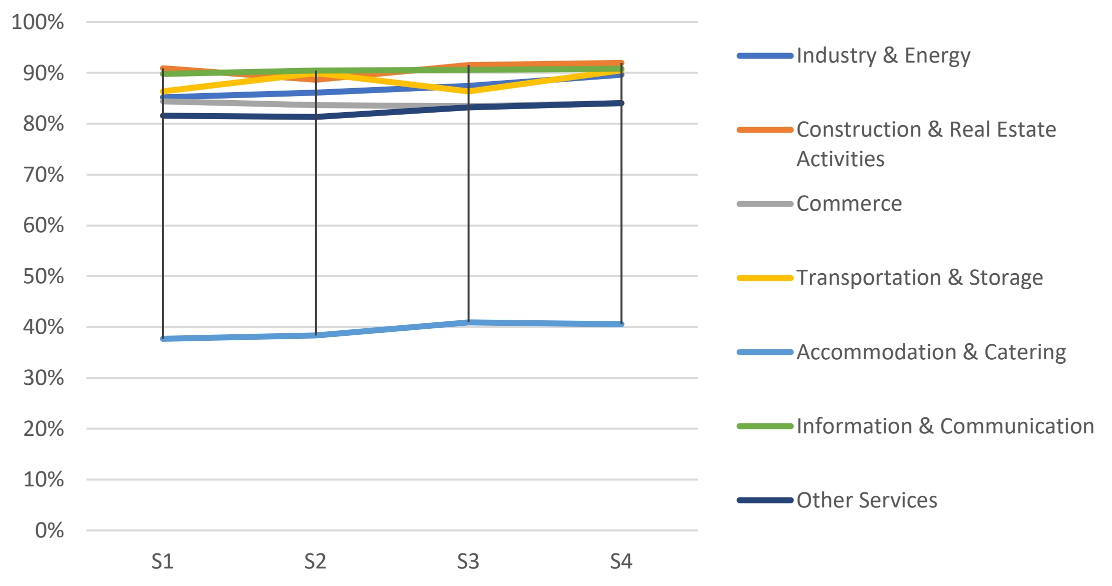
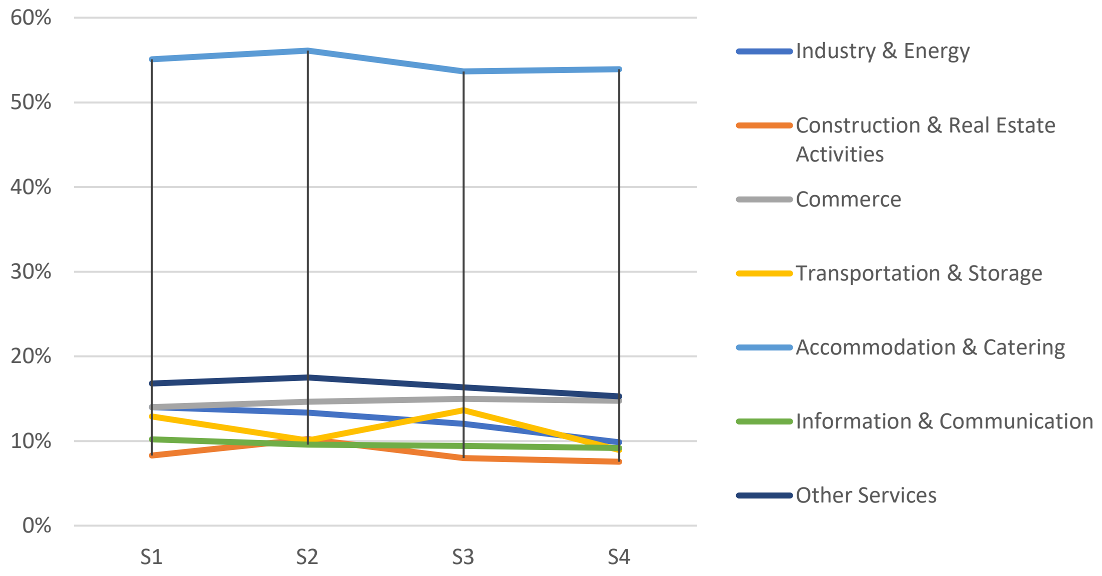


Figure 8: Firms Declaring to Closing Temporarily



Regardless of their continuation in activity, firms might have felt the need to adapt to this new reality and either modify or diversify their activity. An example of the former can be the case of breweries that channelled their production towards distributing alcohol for cleaning purposes, and of the latter can be restaurants turning their attention to take-away services. Once again, the 'Accommodation & Catering' sector reports having the hardest time, with 8% of those companies declaring to totally **modify** their activities. Conversely, firms in the 'Transportation & Storage' sector do not deem it as necessary to totally modify their activity. On another note, a much greater percentage of firms in all sectors have reported to partially modify their activities in order to face the pandemic. In this section, the spotlight falls upon the 'Information & Communication' as top partial-modifier, with around 35% of those inquired, and the 'Accommodation & Catering' as the sector with less firms reporting the need to partially modify their activities, with around 20% of respondents. The 'Industry & Energy' sector is the one in which most firms reported not to modify their activity, around 56%, whereas firms in the 'Information & Communication' sector showed the most necessity to modify their activity during the pandemic.

Similarly, to the inquiry regarding the need for modifying their activity, the 'Accommodation & Catering' sector is once again the segment with a higher pressure to totally **diversify** their production process. This is evident by the 9% of respondents expressing this position, while for the other sectors this value was around 2% to 3% and the 'Construction & Real Estate Activities' at a minimum of 1%. This picture is slightly changed when considering partial diversification since now the main advocates for this stance are now the 'Commerce' and 'Information & Communication' sectors with 25% of their firms reporting this need. The 'Industry & Energy' sector now takes the lower end of the question with only 9% partially diversifying their activities. This then translates into 50% of the firms in it not seeing the necessity for diversifying their activities, while the other sectors attain values between 30% and 40%.

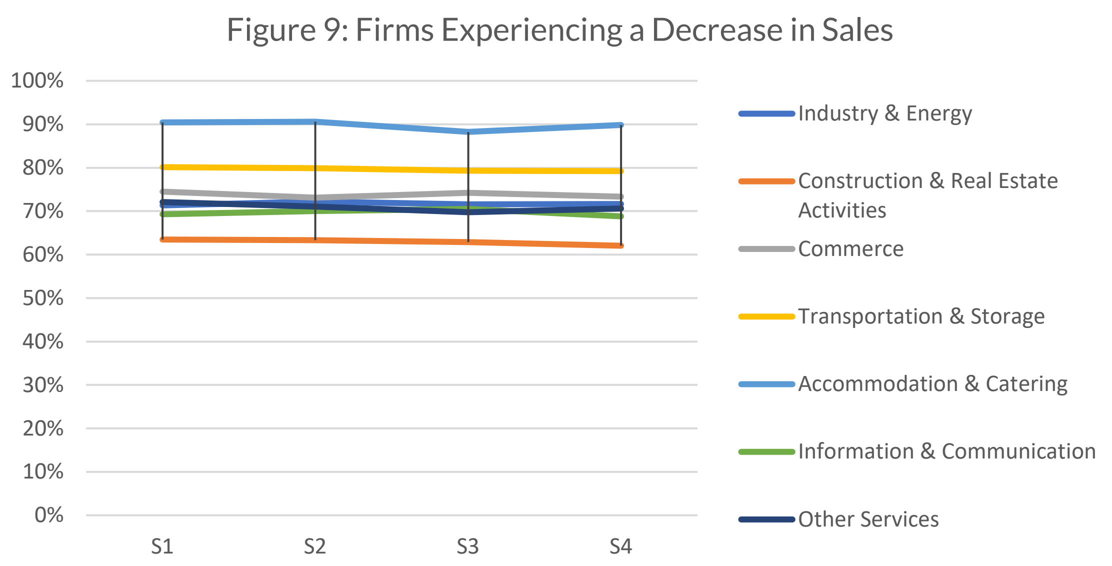
As a second step in this analysis it is important to understand the **most impactful reasons behind firms having to close** during this period. The survey assessed several possible causes such as COVID-19 related restrictions, lack of employees, problems in the supply chain and absence of clients. Considering the current crisis, it would be expectable for COVID-19 related restrictions, such as restrictions imposed by the State of Emergency, to have a high impact on the closure of most firms and, indeed, this is the case with at least 60% of the respondents in the majority of sectors indicating such a justification as highly impactful on their decision process. The absence of clients was another variable with a high impact on the closure of firms in all sectors. The sector that declared most difficulties with lack of costumers constantly throughout the surveys was the 'Commerce' segment, having values from 85% to 87% in the study. The 'Commerce' sector reported above average number of firms reporting disruption in the supply chains to be a cause for closing. This is mostly due to the nature of the sector, highly reliant on a smooth supply chain.

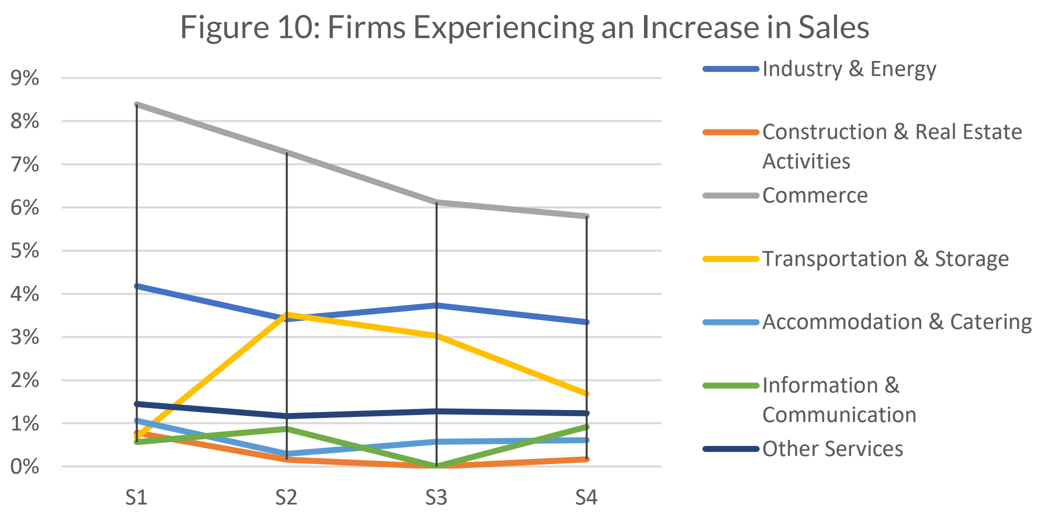
When studying the impact on businesses, it is evident that in all sectors a decrease in **sales** was reported. In fact, the majority of companies felt negatively impacted. The most affected is 'Accommodation & Catering', with 90% of companies reporting a decrease in the sales. Only 1% of the companies believe they experienced a rise in sales, although that increase was, in general, of more than 75%.

In 'Transportation & Storage', 80% of the inquired companies stated having experienced decreased sales. Through the weeks, several companies in the sector also reported no impact on sales (15% of the companies questioned). The least impacted were the 'Construction & Real Estate Activities'. Furthermore, this sector was where most firms reported no impact on sales, keeping constant results through the surveys, going from 19% to 25% of companies not being impacted.

Few companies declared having experienced an increase in sales. However, 'Commerce' stands out with the highest values. Starting out with 8% of the companies inquired facing a growth, slightly decreasing through the weeks. The result can be justified by the race to supermarkets, on the beginning of the month of April. Few companies in 'Transportation &

Storage' also faced an increase in sales, especially on the second week, with nearly 4% of companies reporting this.





As expected, during the pandemic, the majority of respondents felt, in each sector, a decrease in the **number of employees**, as demonstrated in the graph. Once again, the 'Accommodation & Catering' sector seems to have suffered the most, having nearly 80% of firms reporting a decrease in employees, whilst the 'Information & Communication' sector was where least firms reported this event, reaching the 37% to 41%, possibly due to the possibility of working from home. Of the previous firms, 66% of them in the 'Accommodation & Catering' sector reported having a decrease of more than 75%, whereas in the 'Construction & Real Estate Activities' only 14% of firms reported a decrease in employees greater than 75%. On the other hand, since, in most cases, there was a huge shrinkage on the need for labor, only about 1% of the respondent firms in each sector reported having an increase in the number of employees. According to the previous data, the sector that seems to be more stable, in terms of number of employees, is the 'Information & Communication' since 53% of firms experienced no impact on the number of employees.

Figure 11: Firms Experiencing a Decrease in the Number of Employees

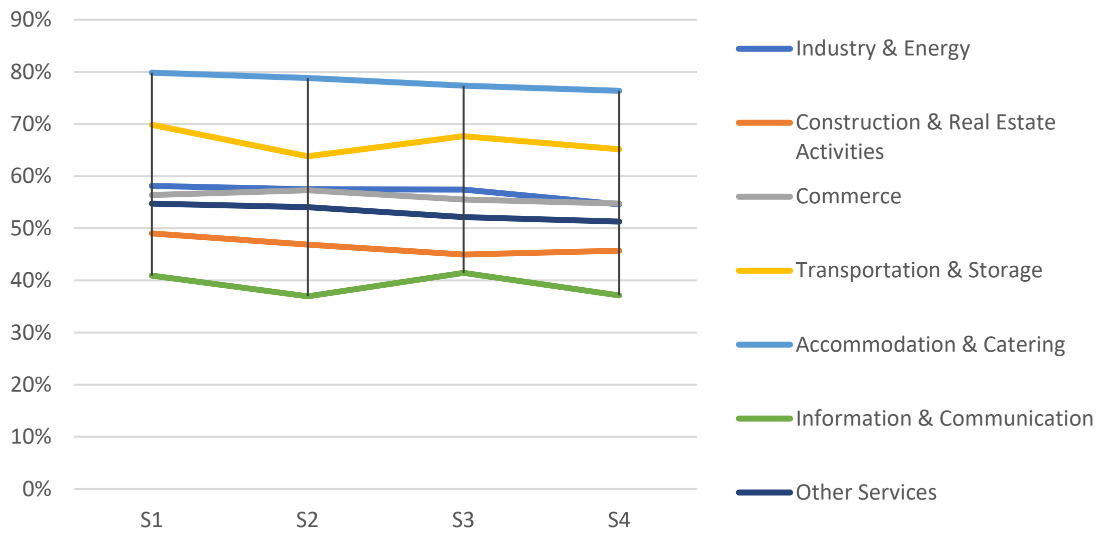


Figure 12: Firms Experiencing a Decrease of more than 75% in the Number of Employees

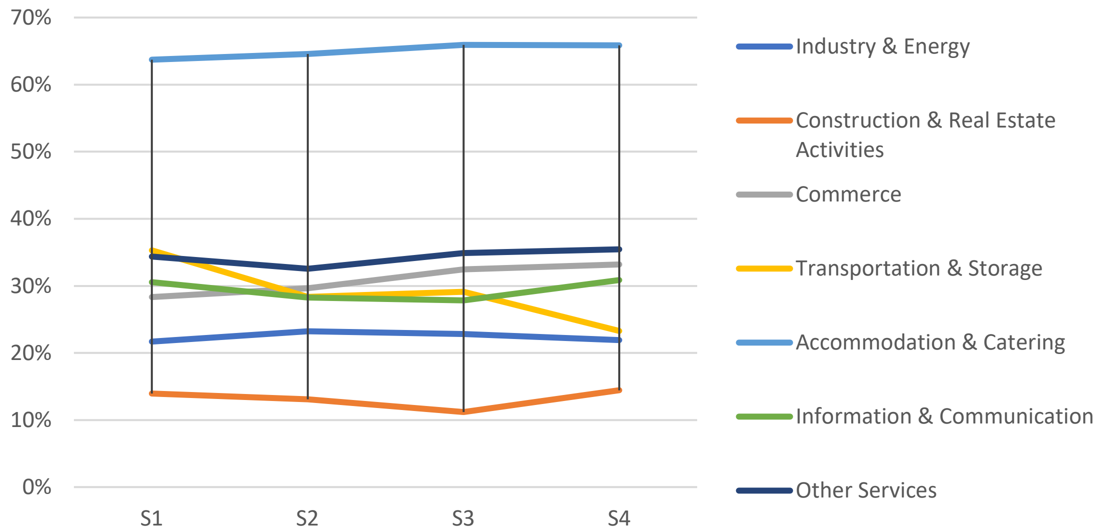
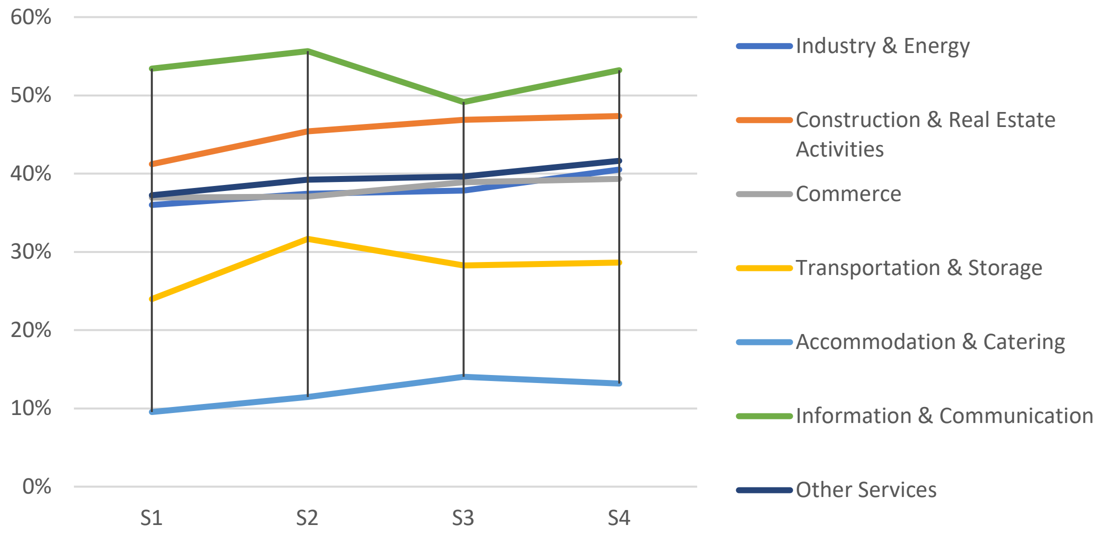


Figure 13: Firms Experiencing no Impact on the Number of Employees



As the surveys progressed, it became noticeable that the major reduction in working employees was due to COVID-19 related factors. It has been previously stated that the 'Accommodation & Catering' sector is the one reporting to being most affected in terms of a reduction in the number of employees. It stands out that 90% and 81% of respondents, in the first and fourth surveys respectively, in that sector pointed simplified layoff as the **reason why they reduced their number of active workers**. The behaviour was similar in 'Transportation & Storage', 'Commerce', and 'Information & Communication' (with 47% to 52% of the companies inquired reducing their number of employees because of simplified layoff). 'Construction & Real Estate Activities' was the sector that relied the least on the reduction of workers due to this factor. The non-renovation of short-term contracts was common in some sectors. 'Accommodation & Catering' had the greatest number of firms stating this as reason for reducing employees, reaching more than 10% on the last week inquired (April 20-24). Other sectors followed this high trend, in the same week, but with lower intensity. Another issue that had a big weight for companies was the absence of employees due to the State of Emergency as a reason for the cut in the number of workers. The most affected sector proved to be the 'Industry & Energy', followed by 'Construction & Real Estate Activities', and 'Information & Communication'. It is important to note that other factors (that are not specified on the surveys), among them firing, may also explain firms' decision to reduce the number of employees, especially on the 'Transportation & Storage' sector.

Figure 14: Simplified Layoff as main reason for the Reduction in the Number of Employees

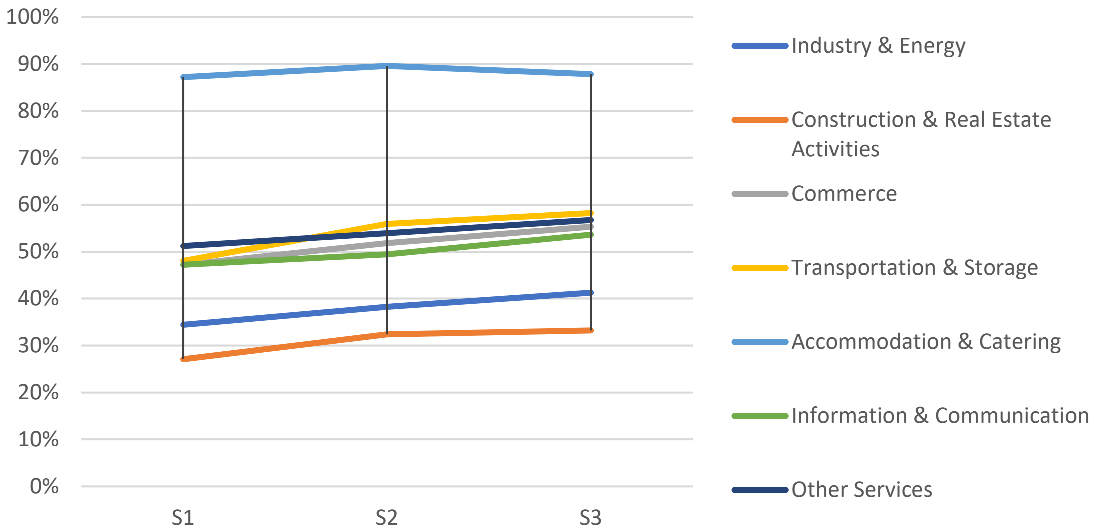
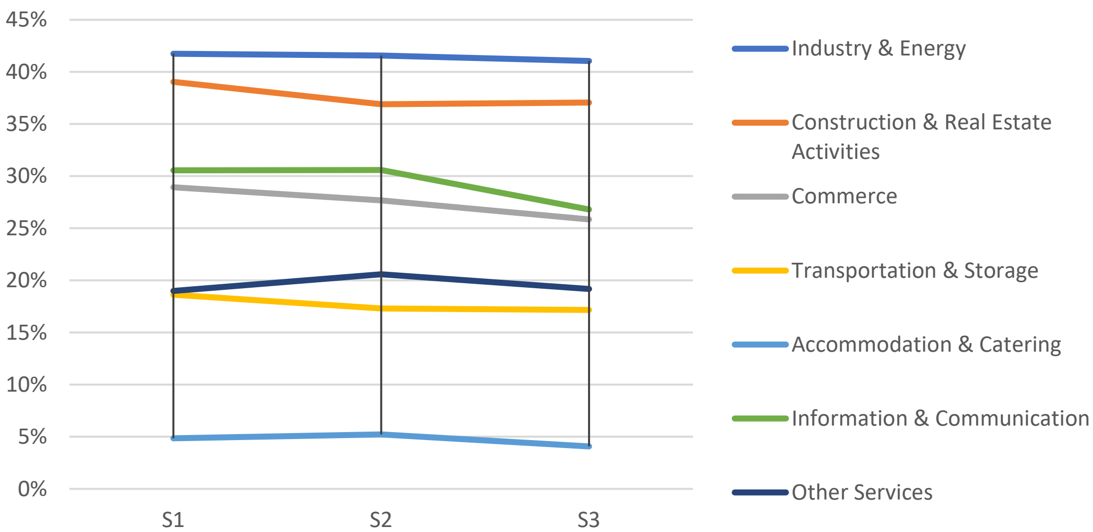


Figure 15: Absences Due to the Emergency State as a Reason for the Reduction in the Number of Employees



All sectors seem to report a similar increase in the percentage of responding firms that have **benefited from delays on loan repayments**, with the 'Industry & Energy' and the 'Information & Communication' sectors reporting to be on the lead and at the end of this generalized tendency. This resonates with the fact that the number of firms planning to benefit from this liquidity measure reduces for all sectors from the first to the fourth weeks, with the 'Accommodation & Catering' sector always presenting the highest percentage. However, the most prevalent piece of information is that most firms, that is, between 32% of the 'Accommodation & Catering' and 61% of the 'Information & Communication' sectors in week four, approximately, report their intention of not benefiting from this repayment delay, with this percentage presenting a somewhat parabolic behaviour during the whole period. There were still some companies reporting not being eligible, only ranging between a maximum of 5% and ending with 6%, approximately. The 'Transportation & Storage' sector is the one where more firms reported not being eligible for loan-payment delays, starting with 4.79% on the second week and reaching the fourth survey with 6.25%. Non-surprisingly, the sector that has until now been repeatedly identified as the most debilitated, 'Accommodation & Catering', was the one within which the least number of firms reported not even being eligible for this type of financial assistance.

Figure 16: Firms Reporting to Having Benefited from Loan-Payment Delays

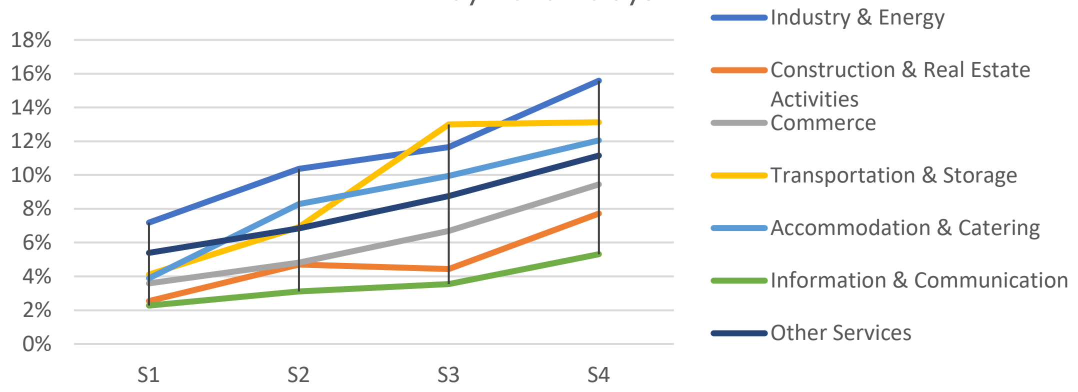
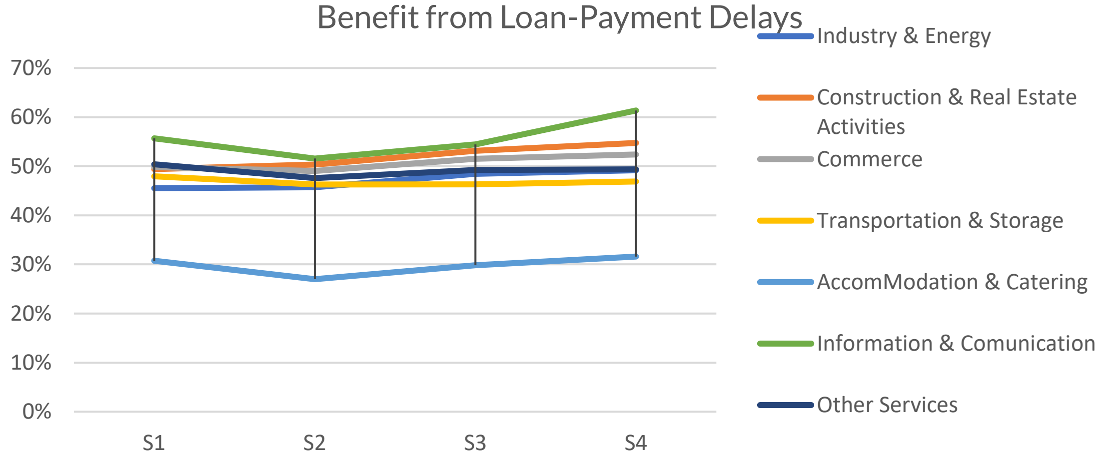


Figure 17: Firms Reporting to not Have Benefit nor Planning to Benefit from Loan-Payment Delays



This was not the only mechanism available to provide liquidity to the greatest number of firms possible. These could also **contract new loans** to try to accommodate for their cash needs. The truth, however, is that the percentage of firms in all sectors reporting to benefit from this option increased but did not surpass a maximum 5%, which corresponded to the 'Accommodation & Catering' sector, except for the 'Information & Communication sector that, after a small increase, reached week four with 0% of the firms in that week taking advantage of this measure. Although there seems to be a significant part of the sample that is planning on using this financial help, which is particularly relevant for the sector with a greater significance in this area, the 'Accommodation & Catering' with a starting and end values of 37% and 27%, respectively, most have the bigger part of their firms not pretending to get new credit. Nonetheless, it is once again observable that at most 5% of the firms in one of the given sectors report not to be eligible for this liquidity aid throughout the whole period.

Figure 18 : Firms Reporting to Having Benefited from New Loans

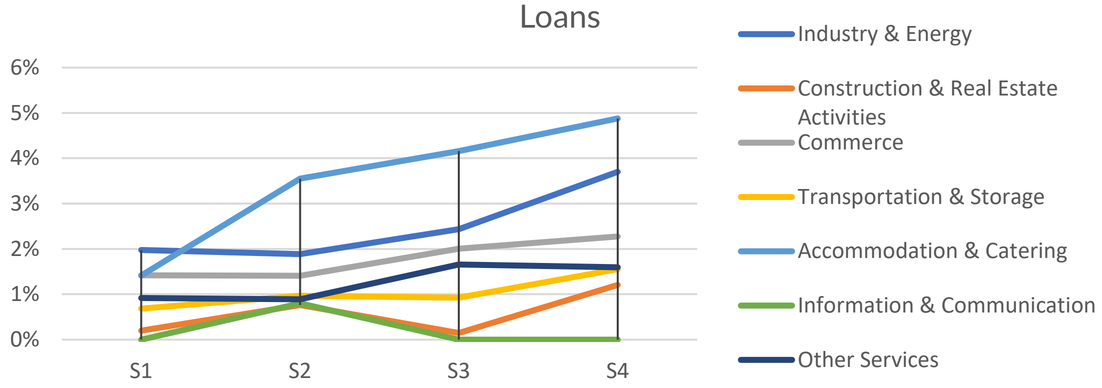
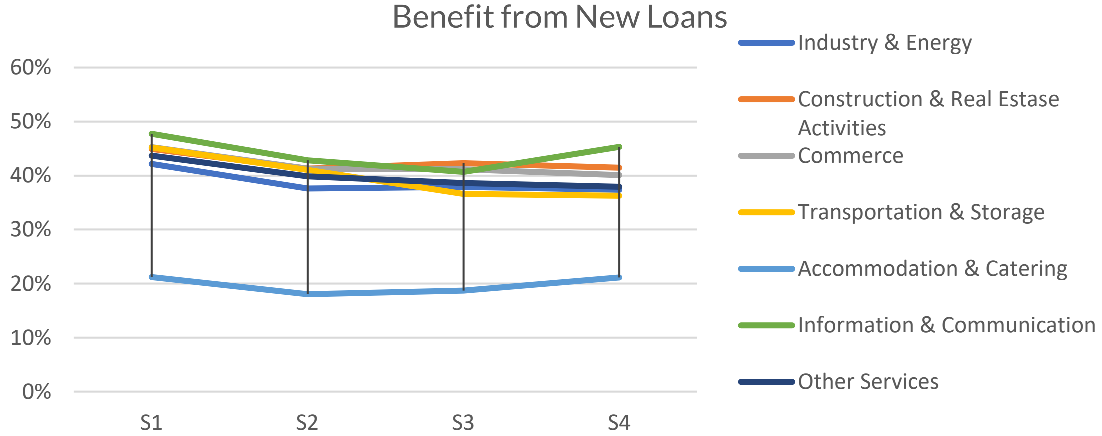


Figure 19 : Firms Reporting to not Have Benefit nor Planning to Benefit from New Loans



The last analysed aiding mechanism for Portuguese firms is the **suspension of their fiscal obligations**. There was a clear increase in the percentage of firms benefitting from this aid in all sectors, pushing all of them to values above 10% and below 25% in the last week. Once again there a general decrease in the intention to benefit from such measures as time passes, but now it becomes relevant to point out that there was a big chunk of firms still under this designation, namely in the 'Accommodation & Catering' sector, which starts with 43% of its firms and ends with 34%, approximately. Nonetheless, for the other sectors, most firms do not pretend to be helped through this mechanism, and there is, once again, only a small part that reports being illegible for such an option (at most 5% during the whole period and for all firms).

Figure 20: Firms Reporting to Having Benefited from Suspension of Tax Payments

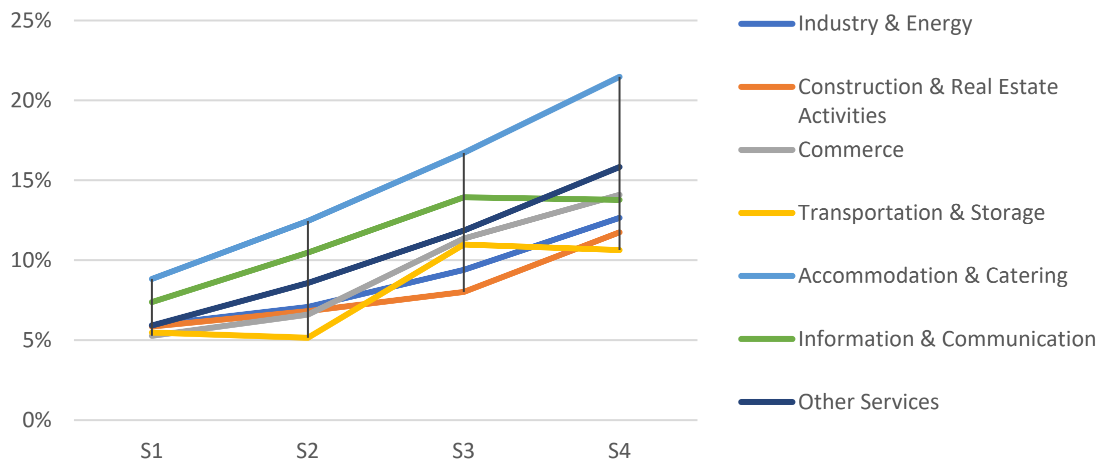
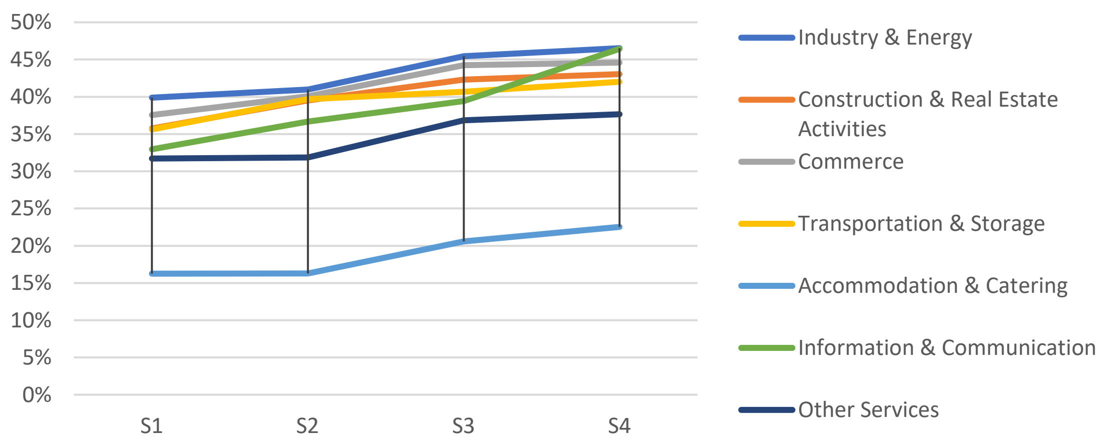


Figure 21: Firms Reporting to not Have Benefit nor Planning to Benefit from Suspension of Tax Payments



Without any external help, some firms might suffer to the point of not **being able to** survive for more than just a couple of months, this was pointed out by the INE's survey as it shows that firms have different survivability periods.

The 'Accommodation & Catering' sector seems to have the greatest number of firms reporting not being able to survive for a month, reaching values around 14% in the first two surveys and 16% in the latest week, additionally, this sector appears to be the one where the least amount of respondents (6%) report being able to survive for more than six months, whereas other sectors report around 15% to 20% and 26% in the case of the 'Information & Communication' sector.

Figure 22: Firms Reporting to Being Able to Survive on their Own for Less than a Month

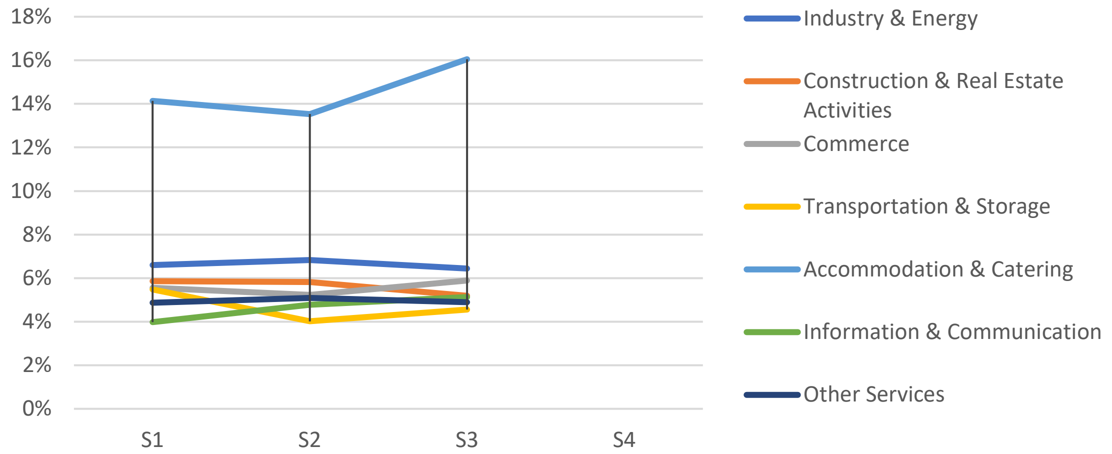
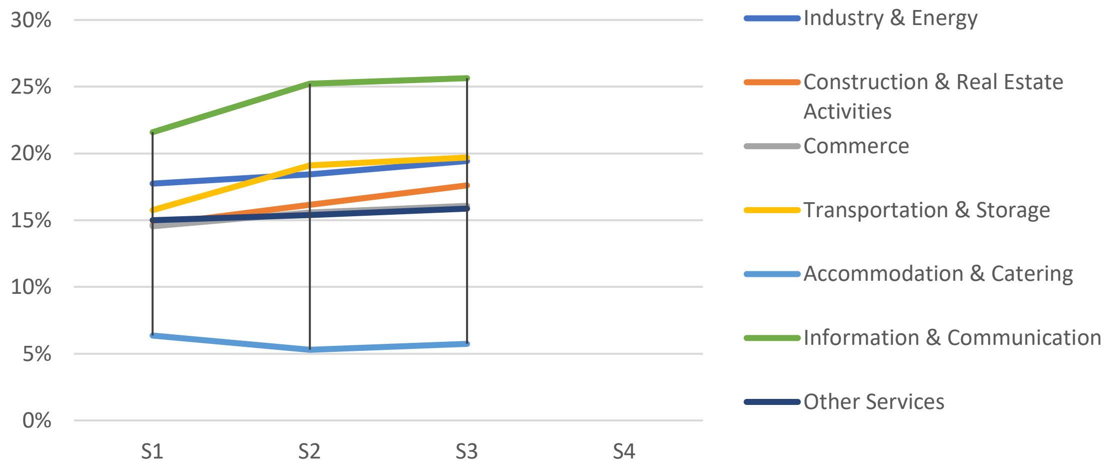
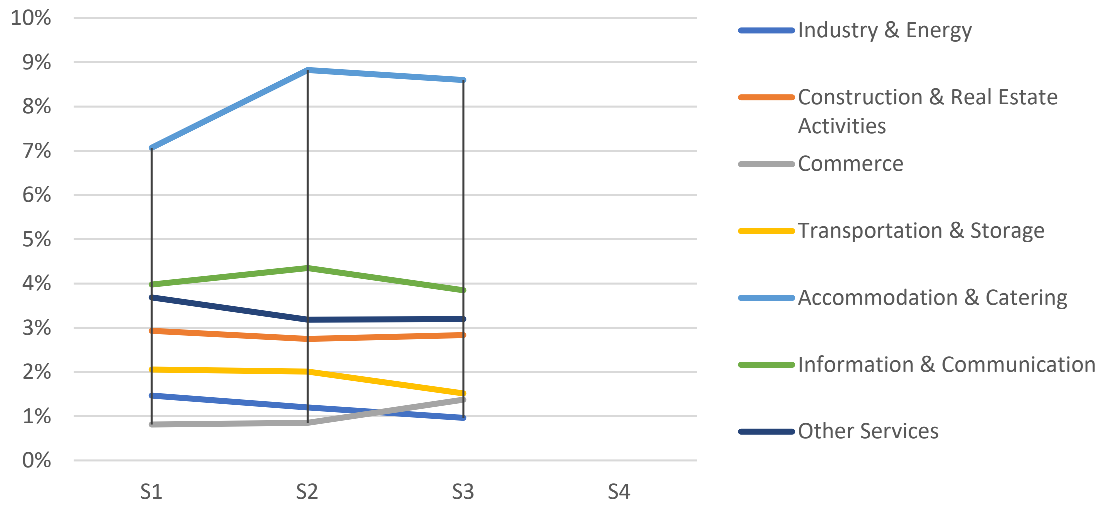


Figure 23: Firms Reporting to Being Able to Survive on their Own for More than Six Months



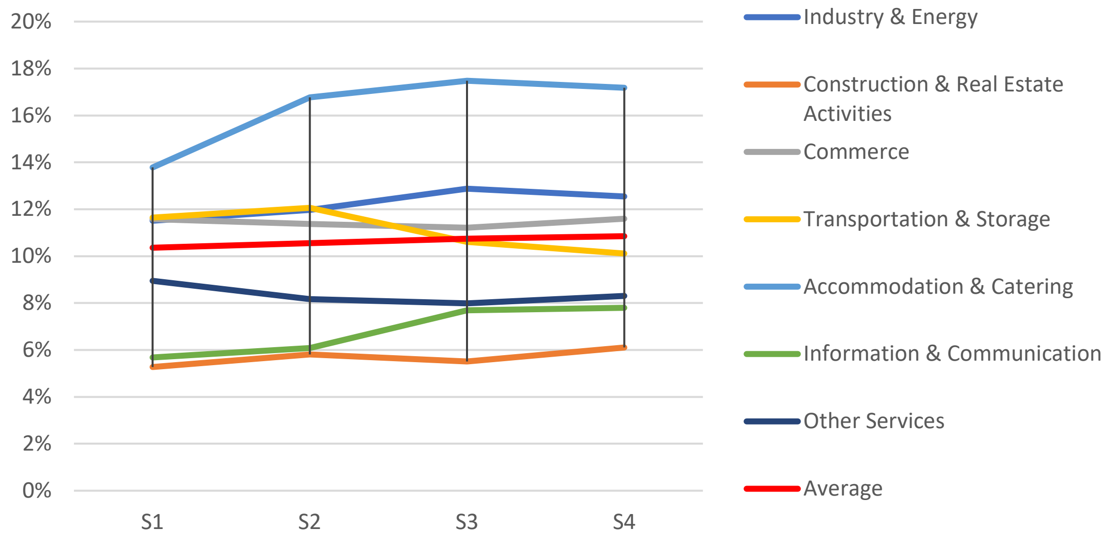
Regarding **prices**, generally all sectors reported keeping prices rather stable. On average, 75% of firms reported that there would be no price alterations in any of the weeks (again, keep in mind that around 17% of firms did not reply to this question). Overall, only around 0.2% of firms reported to drastically increase prices, and 2% of firms a drastic reduction (no precise value of the change in prices was provided in the surveys). The 'Transportation & Storage' sector was the one where most firms reported a drastic increase in prices, but this value was merely between 0.5% and 0.7% of firms. In 'Accommodation & Catering', however, the number of firms reporting drastic reduction in prices was well above average, with the share of firms varying between 7% and 9%.

Figure 24: Firms Reporting to Decrease their Prices a Lot



In general terms, not many firms reported increasing their **access to credit**. Weekly average values of firms reporting an increase in credit was constantly 11% (it must be stated, however, that every week 13% of firms in the survey did not reply to this question). The sector that increased the most their credit acquisition was clearly 'Accommodation & Catering', with the percentage of firms increasing the most, from 14% to almost 18%. This could be explained by the €60 million credit line that the government provided to micro firms in tourism, in which the main applicants were precisely restaurants and local accommodation establishments. On the opposite side of the spectrum, 'Construction & Real Estate Activities' (between 5% and 6%) and 'Information & Communication' (between 6% and 8%) resorted the least to an increase in credit. Generally, however, there was an upward trend for the share of firms resorting to increased credit, with 'Transportation & Storage' being the exception.

Figure 25 : Firms Reporting to Having Increased Credit Resources



Almost all sectors reported getting **worse credit conditions** from Financial Institutions. The 'Transportation & Storage' sector, in the first survey, reported 0% of firms getting worse credit conditions. On the second survey it jumped to 11%. No firm from the 'Information & Communication' sector reported getting worse credit conditions throughout the surveys. Regarding the remaining sectors, between 9% to 20% of the firms reported having gotten worse credit conditions from these providers. At some point, all sectors had firms reporting to have gotten worse credit conditions from Suppliers. The 'Accommodation & Catering' sector was the most affected, where between 12% to 18% experienced getting worse credit conditions from Suppliers. The 'Transportation & Storage' sector transmitted only one week of getting worse credit conditions, with only 4% of the firms sharing that opinion. The 'Information & Communication' sector, in the first three surveys, stated getting worse conditions, but the number had a decreasing trend and in the fourth survey 0% of the firms reported worse conditions. Regarding the other sectors, between 6% to 13% of the companies reported having worse credit conditions from Suppliers. Concerning the contraction of credit under worse conditions from other sources, the 'Accommodation & Catering' sector was the most impacted, where in the first survey 13% of the firms reported such a situation, while in the last survey only 5% did so. The 'Information & Communication' sector peaked in the second survey (7%), and in the rest of the surveys it has 0%. The 'Transportation & Storage' sector had zero firms reporting to get worse credit conditions from other sources. It is evident that the 'Accommodation & Catering' sector is the one where more firms reported to have gotten worse credit conditions from all sources, mainly due to being one of the most affected sectors by the confinement measures, as most restaurants, accommodation and tourism were hardly hit.

Figure 27 : Firms Reporting to Having Gotten Worse Credit Conditions from Financial Institutions

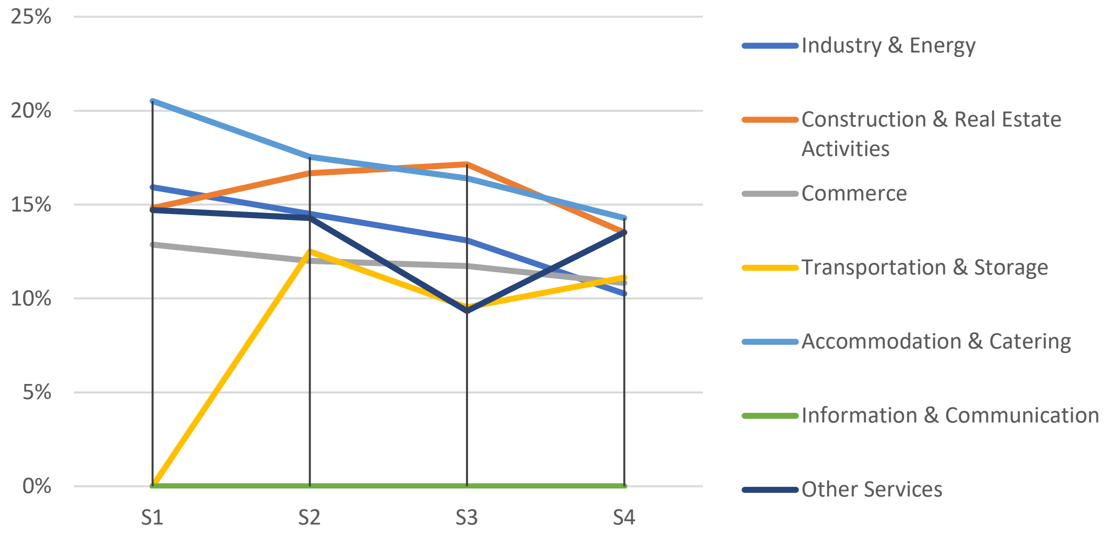
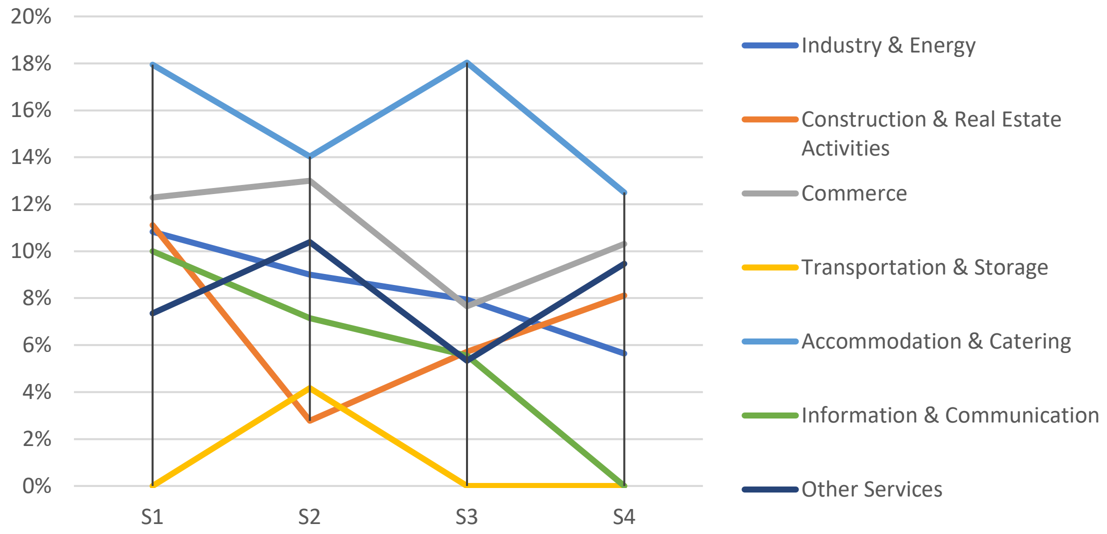


Figure 28 : Firms Reporting to Having Gotten Worse Credit Conditions from Suppliers



Regarding firms reporting to having gotten **better credit conditions** from Financial Institutions, the 'Information & Communication' sector is one of the sectors that got better credit conditions, with 20% of the firms reporting it in the first survey, and constantly increasing until 41% in the last survey. The 'Accommodation & Catering' sector had ranged between 25% to 34%. All sectors except the Other Services sector increased its percentages from the first to the last survey. The 'Accommodation & Catering' sector had the highest percentage of firms reporting to having gotten better credit conditions from

Suppliers, ranging between 26% and 19% of firms. The other sectors had a similar behaviour, with values ranging between 3% and 12%.

The 'Accommodation & Catering' sector had also the highest percentage of firms reporting to having gotten better credit conditions from Other Sources, starting with 21%, decreasing to 14%, then to 13% and rising to 18% in the last survey. The 'Construction & Real Estate Activities' had 11% in the first survey and constantly decreased until 5%. The 'Information & Communication' sector had a small peak in the third survey, going from 0% to 6% and then ultimately decreasing again to 0%. All other sectors had between 0% and 4%.

Figure 29 : Firms Reporting to Having Gotten Better Credit Conditions from Financial Institutions

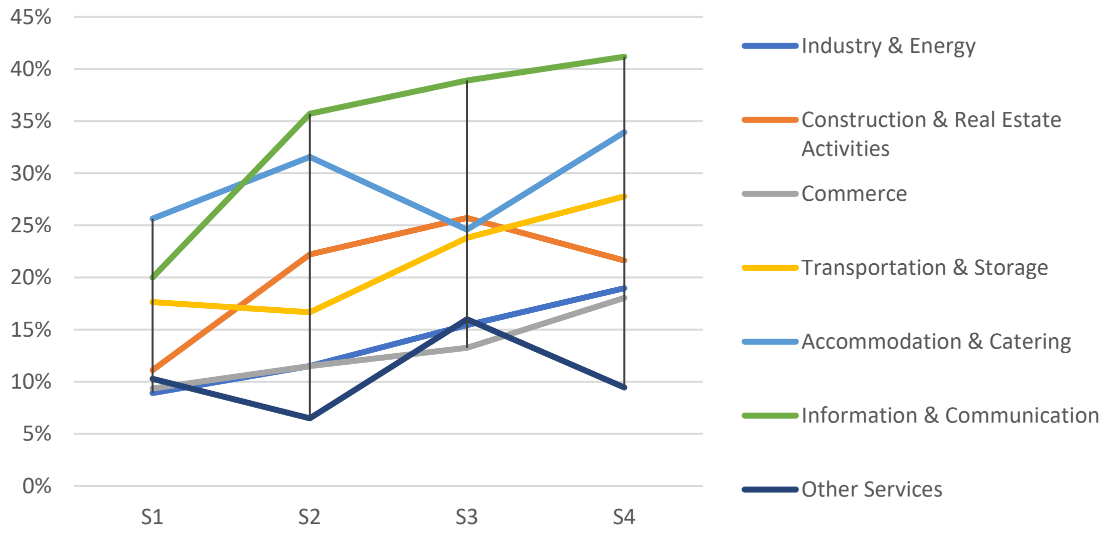
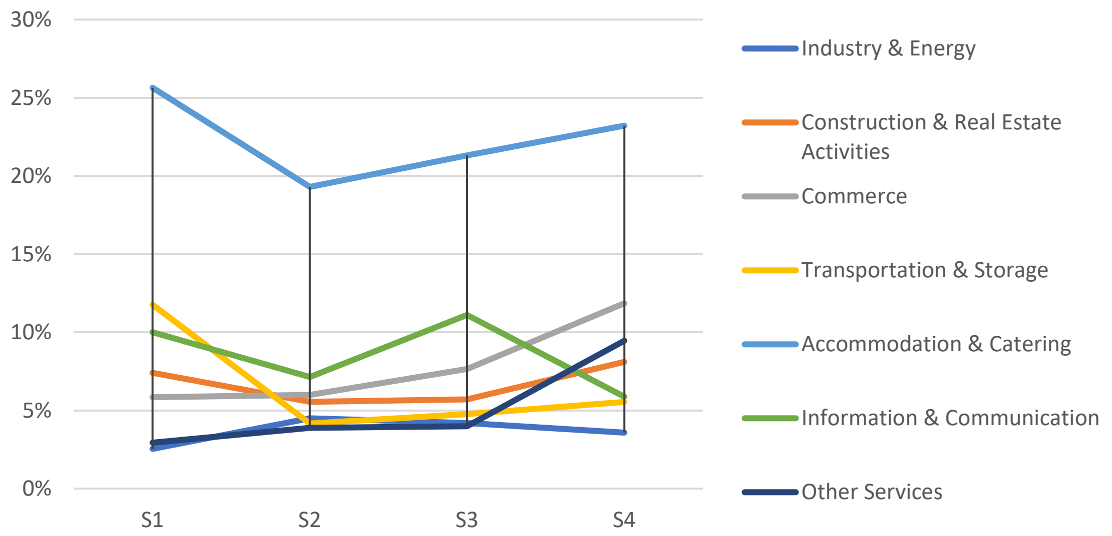


Figure 30 : Firms Reporting to Having Gotten Better Credit Conditions from Suppliers



In most cases, the **reason for firms not to increase credit was consensual**. For almost all sectors, around 77% of firms stated they did not increase credit because they simply did not intend to. Only in the case of 'Accommodation & Catering', between 34% and 41% of firms (depending on the week, with larger percentages generally being verified in later weeks) stated that they intended to resort to credit but for some reason were not able to. Around 10% of firms in this sector stated they wanted to increase their credit lines but were not able to do so due to unfavourable conditions, while another 5% said the reason was the lack of financiers.

Results

Reasons for closing

From 2014 to 2018, the Portuguese economy saw a big growth in the tourism sector. This variation created a dependence of the country's economy on this activity and those linked to it. The increasing relative importance of the sector justified the relevance of the cushioning for the pandemic effects on such a field. In fact, the State of Emergency did not make it mandatory for 'Accommodation & Catering' firms to close completely, but services rendered by these establishments, such as restaurants, pools, and spas, were forced to shut down[3]. The lockdown brought limitations in the circulation of people, and the possibility of becoming a contagion site made many firms in this sector report having daily cancelations and no new bookings right from the start of March. Most companies opted for decreasing prices as strategy to attract new customers, but demand did not respond as intended. For this reason, a big number of firms closed their doors, with only 40% of companies remaining in activity.

Conversely, the 'Information & Communication' sector also had a great increase throughout the years. Due to its nature, this sector was able to remain as one of the most stable during this pandemic. On the one hand, it was able to remain open through the possibility of most employees working from home. On the other hand, precisely because of the stronger need for accomplishing tasks from a remote location, these firms became a strategic tool for the economy as a whole to survive the crisis, which meant that no firms reported from this sector to have closed because of COVID-19 restrictions. It served to help other sectors minimize the amount of closures, except for the aforementioned 'Accommodation & Catering'. The particularity of the latter, so

[3] In Portuguese Government. "EstamosON - Informação Oficial COVID19."

dependent of the physical presence of its customers, resonated as well with the differences to the other sectors in terms of temporary interruption of daily activities. It saw 55% of its companies report a temporary closure situation by the end of April, while other sectors reported values only between 9% and 15%.

As another possible coping mechanism to survive this pandemic, some firms in all sectors saw the need to alter their functioning procedures by either diversifying or modifying their activities. Firms could not ignore the consumer fear of going out shopping, even for the most basic and necessary goods, and thus several local establishments in the 'Commerce' sector got motivated to adapt. Most people started avoiding large commercial spaces and opted for going to their local shops for essential goods, which remained open throughout the state of emergency. However, modifications and diversifications did not stop here and the 'Information & Communication' saw this opportunity to partially modify their activity, maybe to be able to sustain the increase in demand, while the 'Transportation & Storage' had no firms reporting to diversify or modify their activity.

One of the most impactful consequences of this crisis are the limitations to circulation, which lead, in some cases, to a lack of clients. This remains as one of the most important reasons on why some firms closed or started struggling to sustain themselves. It is especially present in the 'Commerce' sector with around 85% to 87% firms reporting it as having a high impact on their decision to close. Since this sector includes a lot of firms in Portugal, many of which do not sell essential goods, demand rapidly decreased. However, as mentioned by the Portuguese minister of the Economy Pedro Siza Viera, the local commerce establishments saw an increase in their activity since many clients started consuming locally in order to remain safe while purchasing essential goods[4]. The 'Industry & Energy' sector too had all closing firms reporting to have problems with clients until the second week, but ultimately faced a decrease in the number of respondents with this opinion until the last survey.

Nonetheless, in the absence of aiding policies, many firms could not survive on their own facing this crisis. This is particularly true in the 'Accommodation & Catering' sector, where more firms reported not being able to survive for more than a month, which concurs with the general tendency of the sector for being the most sensitive to the pandemic, whereas the 'Information & Communication' sector is the one where more firms can

[4] In TSF. "Consumo No Comércio Local "está a Aumentar Bastante Significativamente"."

sustain themselves for more than six months, since it is the most stable sector dealing with COVID-19.

Reduction in Personnel

The State of Emergency and the drop in confidence from consumers led to consequences concerning the number of employees.

Regarding firms experiencing a decrease in the number of employees, the 'Accommodation & Catering' sector was the most impacted. This result is not surprising bearing in mind that it is the sector most affected by the confinement and State of Emergency measures that directly impeded tourism, closed restaurants, and abruptly decreased the demand for hotels. This sector benefited a lot from the affirmation of Portugal as a tourist destination with prominence which meant, as expected, it had a high employment growth between 2015 and 2018, and in fact, it was the sector with the highest growth between those years. So, it is evident that the 'Accommodation & Catering' sector is highly dependent on the tourism situation in Portugal. Unsurprisingly, the sector is also the one that reports the higher number of firms reducing the number of employees in more than 75%.

In the 'Transportation & Storage' sector the high reduction of employees can be explained by the high drop in the demand, particularly for passenger's transportation, as the demand for public transportation, air travel and other modes of transportation decreased a lot[5].

The 'Construction & Real Estate Activities' activities reported very few companies with an abrupt reduction in workers, being one of the most difficult sectors in which to work remotely. This might be explained by the fact that, even though the demand for real estate activities decreased, most of construction companies kept working on projects that started before the State of Emergency.

Similarly, to the previous sector, the 'Industry & Energy' sector had also a low abrupt decrease in employees, and it also suffers from the difficulty to work remotely, which might be explained by the fact that it is a relatively essential sector.

The 'Information & Communication' sector, due to its great capacity for remote activities and adaptation, is not as affected as the other sectors. Naturally, it is the sector where more firms report no impact in the number of employees. As one of the sectors with the highest employment growth between 2015 and 2018, it contrasts with the

[5] In Lusa. "Transportes têm quebra na procura até 90%."

‘Accommodation & Catering’ sector, which also benefited from an increase, but is suffering more from the pandemic.

These results are confirmed by “Measuring Sectoral Supply and Demand Shocks during COVID-19”, that concluded that the size of the estimated labor supply shocks correlates with other measures, such as the fraction of jobs in each sector that can be performed from home. The ‘Accommodation & Catering’ is the sector with the smallest share of jobs that can be performed from home and was precisely the sector that was hit the hardest by a negative labor supply shock. Sectors where such share is higher endured smaller labor supply shocks, such as the ‘Information & Communication’ sector.

As observed, the main reason for the reduction of the number of employees was not the same for every sector, with the main reasons being simplified layoff and employees’ absences. These are contrasting in nature, since the former indicates that the reason for the reduction in the number of employees was a firm’s choice, while the latter is an employee-side decision.

Beginning with firms that declared that simplified layoff was the main reason for the reduction in their workforce, this is, as expected, highly correlated with the number of firms reporting to close temporarily. Comparing the percentage of firms in each sector reporting to have closed temporarily with the percentage of firms in each sector stating simplified layoff as the main reason for the reduction in workforce yields a coefficient of correlation of 0.90. As such, struggling sectors which were forced to close temporarily either due to lockdown restrictions or drop in demand, were the ones where the reduction in employees was a firm managerial choice rather than a choice made by employees. There is no surprise in this conclusion, as temporary closure was one of the prerequisites for applying for simplified layoff, since the 20th of March, and firms wish to reduce costs.

Conversely, sectors in which a higher percentage of firms remained in operation were the ones in which most reported absences of employees as the main reason for the reduction, with an associated coefficient of correlation of 0.76, i.e. when firms remained in operation, the main reason for reduction in workforce was on the side of the employees and not the employer. As seen before, ‘Industry & Energy’ was the sector that most reported employee-absences during the month of April. A possible explanation is that this sector was the one that also most firms stated they did not modify/diversify their activity. There are numerous reasons for employees to not be able to go to work. For one, they may be in quarantine or socially isolating themselves due to having been in contact with an infected person. Alternatively, since schools closed since mid-March, they could have no one to take care of their children. Whatever the reason, if an employee is forced to stay home and its sector does not adapt its activity, the employee cannot work remotely and is simply marked as absent.

This idea is reinforced with the Social Security support for workers in prophylactic isolation. This measure by the Social Security covered 100% of the wages of a worker who had to self-isolate due to the pandemic (when mandated by the Health Authority), or take care of a relative self-isolating, without the possibility of going to work or to work remotely[6].

Sales and Prices

Despite the sector 'Accommodation & Catering' being the one in which the highest percentage of firms reported a decrease in sales, it would be unfair not to mention the other sectors, since this decrease in sales was a general occurrence for all sectors of the Portuguese economy. This goes against pre-pandemic trends, in which all sector had seen constant positive sales growth at least since at least since from 2015 to 2016. In fact, the sector 'Accommodation & Catering' was the one with highest recorded pre-pandemic growth in sales volume.

The decrease in sales for 'Accommodation & Catering' is easily justifiable. The closure of borders and air traffic greatly reduced tourism. Lockdown measures forced restaurants to close. 79% of touristic accommodations in Portugal reported that the pandemic caused a great number of cancellations in reservations for the dates between March and August[7].

Despite the increase by 14% in energy consumption from households, firms decreased their energy consumption by 12%. In total, electricity consumption fell by 14% in April. Gasoline and diesel verified a 25% and 18% decrease in demand as fewer people commuted. Diminished air traffic reduced consumption of jet fuel by 35%, while refuelling of naval transports fell by 28%[8]. These all help explain the reduction in the sales of 'Industry & Energy' sector.

The fact that 80% of real estate firms report that customers backed out of the deals explains the reduction in sales for 'Construction & Real Estate Activities'. In total, the estimate is for a 30% to 40% of reduction in the sector's activity.

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[6] In Social Security. "COVID-19 - Perguntas Frequentes - Seg-Social.Pt."
[7] In Jornal de Notícias. "Quase 80% Das Imobiliárias Diz Que Clientes Desistem Dos Negócios - JN."
[8] In Ribeiro, Sara. "Consumo de Energia Nas Famílias Aumentou 14%. Nas Empresas Baixou 12%."

Regardless of being at a much softer pace, some firms experienced an increase in sales. In the case of 'Commerce', more than 8% of firms in the sector reported an increase in the first survey (from the 6th to the 10th of April). This variation can be justified by the race to supermarkets, as consumers began hoarding essential goods, that took place at the start of lockdown, softening in the following weeks. People felt unsafe and uncertain of essential goods supply, which translated in overconsumption. Along the weeks, the trend disappeared, and the government was able to assure a balanced consumption and the supply of these goods. The gradual decrease in the number of firms in 'Commerce' reporting increased sales volume coincides with a government dispatch on the 6th of April requesting distributors to take measures against hoarding, with the risk of being forced to close down if they could not assure the smooth constant supply of essential goods for everyone[9].

The hoarding behavior for essential goods in the first days of the lockdown that led to an increase in sales for the Commerce sector is also confirmed in *"Tracking the COVID-19 crisis through the lens of 1.4 billion transactions"*. Even though it tracks transactions in Denmark, the stockpilling for essential goods was seen in most countries. As the transactions for essential goods increased, spending on restaurant meals, travel, retail, personal services, fuel, and entertainment exhibit pronounced decreases.

The other sectors also reported little percentages of companies experiencing an increase in sales, which can be said to be punctual trends faced by a small number of companies, that can hardly be correctly justified, since the sector's trend shows the exact opposite, in the same period.

When it comes to changes in prices, it is possible to state that they are kept balanced, with no sudden variation. The percentage of firms, in all sectors, that reported an increase in prices, does not even reach 1%, meaning that it is hard to find a valid reasoning for this.

Regarding the decrease in prices, the trend intensifies among sectors. 'Accommodation & Catering' faced decreases between 7% - 9%, which can be explained by the need to decrease prices (or adhere to promotions) in order to attempt to decrease demand, especially on tourism services. In other sectors, such as 'Information & Communication', other services and 'Construction & Real Estate Activities', the movements were similar (among 3% - 4%). This could also be an attempt by the many companies to increase demand and minimize the negative impact on sales. Despite the huge drop in demand, not many

[9] In Lusa. "Covid-19: Governo Recomenda a Estabelecimentos Que Dissuadam 'Açambarcamento.'"

firms in the sector 'Industry & Energy' reported a decrease in prices. This is most likely due to the strict regulation on energy prices.

Credit and other Policies

The State of Emergency had been declared and companies worried about their cash necessities and how to fulfil their financial obligations towards suppliers, creditors and the fiscal authorities. To help firms reconcile the sudden stop in revenues with these liquidity concerns, the Portuguese Government announced on March 26th the possibility for firms to ask for delays on loan repayments[10]. The idea was for companies that saw their revenues drastically decrease due to the pandemic crisis to be able to postpone either their loan repayments and the corresponding interest or just the principal's repayment, allowing for firms to redirect that liquidity towards paying salaries and other primary responsibilities. The need for liquidity seemed such an important concern that, on the next day, the Government announced a credit line for both the 'Industry & Energy' and the 'Accommodation & Catering' sectors as another measure to prevent and minimize the upcoming economic crisis. This measure seemed so important that, on April 10th, it was announced that the COVID-19 credit lines were extended to all sectors of activity[11].

Regarding firms reporting to having benefited from loan-payment delays, by analysing the surveys, most sectors registered an increasing trend between the first and the fourth surveys. This could be explained both by bureaucratic processes and due to an adjustment and dissemination period, among other possible explanations. Related to the former, these measures were announced on March 26th and they have 5 working days after the request is filed to be either accepted or denied. If the client does not fulfil the requirements to benefit from the moratorium, the institution has 3 working days to communicate to the client[12]. This might explain why the percentage of firms reporting to having benefited from the moratorium increased throughout the month of April. In other words, even though it only took 5 days for the request to be evaluated, a lot of them might not have been accepted right at the start due to non-compliance with the necessary bureaucracy, which might have delayed the process even further. Regarding the latter, there could have been an adjustment period after the announcement of the measure that could have led to this

[10] In Moreira, António Vasconcelos, and Maria Teixeira Alves. "Governo Aprova Moratória de Seis Meses Para Famílias e Empresas."
[11] In Silvares, Mónica. "Linhas de Crédito Covid-19 Alargadas a Todos Os Setores de Atividade. Empréstimos Podem Ser a Seis Anos."
[12] In Teixeira, Fernanda. "Tudo o Que Precisa de Saber Sobre as Moratórias de Crédito."

delay in the increase of the application of the benefit. The idea here is that some firms might have taken some time to better understand the procedures, know how everything worked and make sure that they were eligible for taking that help, which might have made them apply and be accepted for the moratorium with this attrition period.

The sector that had the most firms increasing their credit resources was the ‘Accommodation & Catering’, whereas the ‘Construction & Real Estate Activities’ and the ‘Information & Communication’ sectors appeared to have the least number of firms reporting this need. These values go accordingly with the previous questions since these are the sectors that are most relevant in this analysis, the ‘Accommodation & Catering’ sector being the one with greater hardships while the other two seem to be the most stable. A possible explanation for these values could be the fact that, as mentioned before, the ‘Accommodation & Catering’ sector is the one that is able to survive for the least amount of time whereas the ‘Information & Communication’ and the ‘Construction & Real Estate Activities’ sectors are the ones that are able to survive the longest, representing, respectively, a greater and lesser need of credit, which might be explained by the fact that these sectored are also the ones with the highest percentage of firms operating. Comparing with the scenario in the years 2014-18, there seems to be no correlation between the sectors that most resorted to credit and the sectors that had a capital structure more reliant on debt before the pandemic.

It is also no surprise that the ‘Accommodation & Catering’ sector is the one that is able to survive for the least amount of time. Not only because the demand for the sector was negatively affected by the pandemic but also, as concluded in ”COVID-19 - Capacidade das empresas para assegurar o pagamento das remunerações numa situação de paragem total da atividade”, the sector with the lowest capacity to cope with wage costs using available resources in case of is the ‘Accommodation & Catering’.

Given the financial autonomy of the several sectors and the current pandemic state, one would expect that the credit conditions for new loans would be somewhat skewed towards more beneficial conditions to the firms, even if these values refer to any kind of loan, making it understandable that some loans might be taken with worse conditions. However, the percentage of firms reporting better conditions seems only slightly higher than those stating worse conditions. This would not be surprising in sectors that reported to be able to survive longer without any help, since these could more easily be denied access to the line of credit, but for other sectors seems kind of counter intuitive. Such happens in the ‘Information & Communication’ sector: it is the sector where more firms survive on their own for more than six months, but it is also the sector who have gotten only better or similar credit conditions from Financial Institutions.

On the contrary, the 'Accommodation & Catering' sector follows our reasoning: it is the sector with the highest percentage of firms not being able to survive on their own for less than a month, and it got more firms reporting to have gotten better credit conditions from financial institutions than worse.

Future Steps

Policies Already in Place

Ever since the start of the COVID-19 pandemic, the Portuguese government has taken measures in order to attenuate the damages of the crisis. Throughout these past months, most policies were created in order to help firms sustain themselves and help their economic activity.[13]

As mentioned before, the moratoriums and the credit lines were some of the policies that many firms decided to opt for. However, policies have also included: simplified layoff, through which firms only pay 30% of two thirds of the employee's wages; and the deferral of taxes from March up until May, soothing enterprises' monthly payments to a third of their usual amount, paying the remaining 2/3 in the months between July and September.

Lastly, the government has also encouraged the widespread implementation to work-from-home habits whenever possible. In this last one, firms and schools were given temporary access to online tools, which were previously premium or restricted services, in order to prevent these activities to cease.

Policy Suggestions

As the surveys conducted by INE show, 'Accommodation & Catering' was clearly the hardest-hit sector by the pandemic. Although the current existing government aiding mechanisms help in terms of liquidity, this cannot be seen as a long-term solution. Restaurants must quickly be able to survive on their own once more, and this requires both demand and supply to return to pre-pandemic levels, and one of the main obstacles is consumer confidence. People are still sceptical about the safety of going out and restaurants will never recuperate if people do not feel it is safe to go out to eat. Naturally,

[13] In Portuguese Government. "EstamosON - Informação Oficial COVID19."

there are government guidelines in terms of hygiene and sanitation that restaurants must follow as lockdown measures are eased. However, since consumers do not know whether a given restaurant actually follows the sanitation guidelines, it becomes a case of adverse selection. Consumers do not have all the information regarding the safety of a given establishment and, when in doubt, may be cautious and end up not going to a restaurant at all. A possible solution to this problem could be a "seal of guarantee" awarded to restaurants that followed safety regulation, similarly to what is currently happening with hotels. This would serve as a signal for consumers to distinguish restaurants which are sanitarily safe from those that are not. This measure would further incentivise all restaurants to follow all necessary hygienic procedures. For this to work, however, the seal would need to be credible and so, it would need to be awarded by a government health authority following credible and frequently revised inspection procedures.

Another measure to aid restaurants could be to allow them to increase capacity. Currently, restaurants are restricted to serving up to two thirds of their maximum capacity. A solution to this would be to temporarily allow restaurants to freely occupy sidewalks in the public domain for them to increase their capacity. According to Portuguese law, restaurants can only occupy up to 50% of the width of the pavement. This measure would allow restaurants to increase their capacity while respecting social distancing rules, as well as helping these establishments in their search for ways to make consumers feel more comfortable and confident when benefiting from their services. This has already been applied in Vilnius, Lithuania[14], where the City Hall allowed restaurants to freely occupy the streets without the need for a license.

As 'Accommodation & Catering' is closely linked with tourism, it is also important to reflect on the best strategy to promote it. Despite the European Union's efforts to reopen internal borders and negotiations to establish air bridges with countries such as the UK, the most likely scenario is that this summer, tourists will not be as confident in making holiday plans abroad as they previously were. This is further aggravated by the recent spike (as of June 2020) in the number of cases in Portugal, which has deteriorated the country's safety perception abroad, despite being the first European country to receive the 'Safe Travels' certificate from the World Travel & Tourism Council amidst the current pandemic[15]. For these reasons, *Turismo de Portugal* could remake its usual marketing strategy of promoting

[14] In Santos, Luís J. "Lituânia Inspira a Europa: Vilnius Transforma-Se Em Cidade-Esplanada Para Apoiar Cafés e Restaurantes."

[15] In Público. "Portugal foi o primeiro país europeu a receber o selo "Safe Travels"."

Portugal abroad and redirect it to fomenting internal tourism. Fortunately, this tendency seems to already have started in the mainstream media, but there is still a long way to go.

Another measure to further stimulate domestic internal tourism could be to facilitate the purchase of railway passes from *Comboios de Portugal*. Some special promotions already exist, such as *'Comboio do Conhecimento'* which attribute free passes for University students to travel across the Portuguese intra-rail network[16]. The generalization of such passes, or at least increasing the supply of affordable passes for the general population, would greatly facilitate internal tourism this summer.

Nonetheless, the country cannot focus solely on the gains from sporadic vacation travels and making sure that the public transportation networks are able to satisfy consumers' need is ever more pressing. These services are now required to limit their maximum capacity per vehicle, meaning that they need more vehicles to transport the same amount of people. Thus, public transport companies, namely in the bus sector, could turn to other private service providers in order to use their current excess capacity. These private companies, usually turned to private bus rental, have been struck by a sharp decrease in demand and most probably will stay at excess capacity for some time while consumers regain the necessary confidence to return to their group trips. This measure would not only help service provision but also support social distancing in the public transportation networks.

The internet has grown even more important during the pandemic crisis with companies seeing themselves forced to turning to a remote provision of products and services. However, it is also true that the Portuguese business fabric is composed by a huge number of Small and Medium Enterprises (SME) (99.9% in 2018, according to INE). This means that it is possible that a part of these companies has not yet implemented an online business model and could benefit from either partnerships or funds to interact with website and/or e-commerce platform providers and cope with this growing necessity.

All-in-all, information is key. For Portuguese commerce to go back to what it was prior to the pandemic crisis, or even better, it is important that authorities are transparent and release clear and unbiased information on the evolution of the disease. This is fundamental to improve consumer confidence and guarantee that the public can adapt to COVID-19 as best as they can, preventing further hits on consumption and investment.

[16] In CP – Comboios de Portugal. http://www.comboio-conhecimento.pt

Conclusions

By studying and analysing the structures of sectors between 2014 and 2018, policies implemented as response to the pandemic, and the situations reported by firms during the month of April in surveys conducted by INE in partnership with the Bank of Portugal, we found four main results: For companies that reported to remain in operation, the reduction in the workforce was mainly due to problems on the side of employees and not to managerial decisions. The volume of sales and the number of companies closing depends mainly on the nature of each sector. Contrasting with pre-pandemic trends, in which 'Accommodation & Catering' was the sector that was growing most rapidly in all aspects, this sector was the hardest hit by the lockdown. Firms resorting to additional credit were mostly influenced by how hard-hit each sector was, independently of the capital structure of each sector in the years before the virus.

Summing all the results and studying all the policies already applied, some suggestions were made in order to try to reduce the long-term impact of the pandemic on sectors such as "Accommodation & Catering", that was greatly affected. Among others mentioned above, it was recommended measures that would incentive the growth of confidence in the consumers in this area, and consequently the demand. The implementation of a quality certification and allowing restauration establishments to increase outdoors capacity are examples of ideas that could potentially meet the objective.

Little is still known about the pandemic itself, which brings a high uncertainty of the effects it will have on the economy. With this paper, the different impacts the pandemic had on the different sectors of the Portuguese economy were analysed. However, this study is just a starting point to what still needs to be examined.

The behaviour of the different sectors throughout the deconfinement, for instance, is an important topic to be considered, since it can give an idea of which sectors will be able to recover at a faster pace. This could help governments and institutions to decide, more effectively and fairly, on policies and financial aids to implement.

Another analysis considered to be important is to see how the sectors affected the most about the pandemic were impacted depending on the firm's size. There could be the case that inside the same industry larger enterprises were able to stay stable, in contrast with the micro firms. As Portugal is highly characterized by micro-companies, it is necessary to deliver the right support to this segment.

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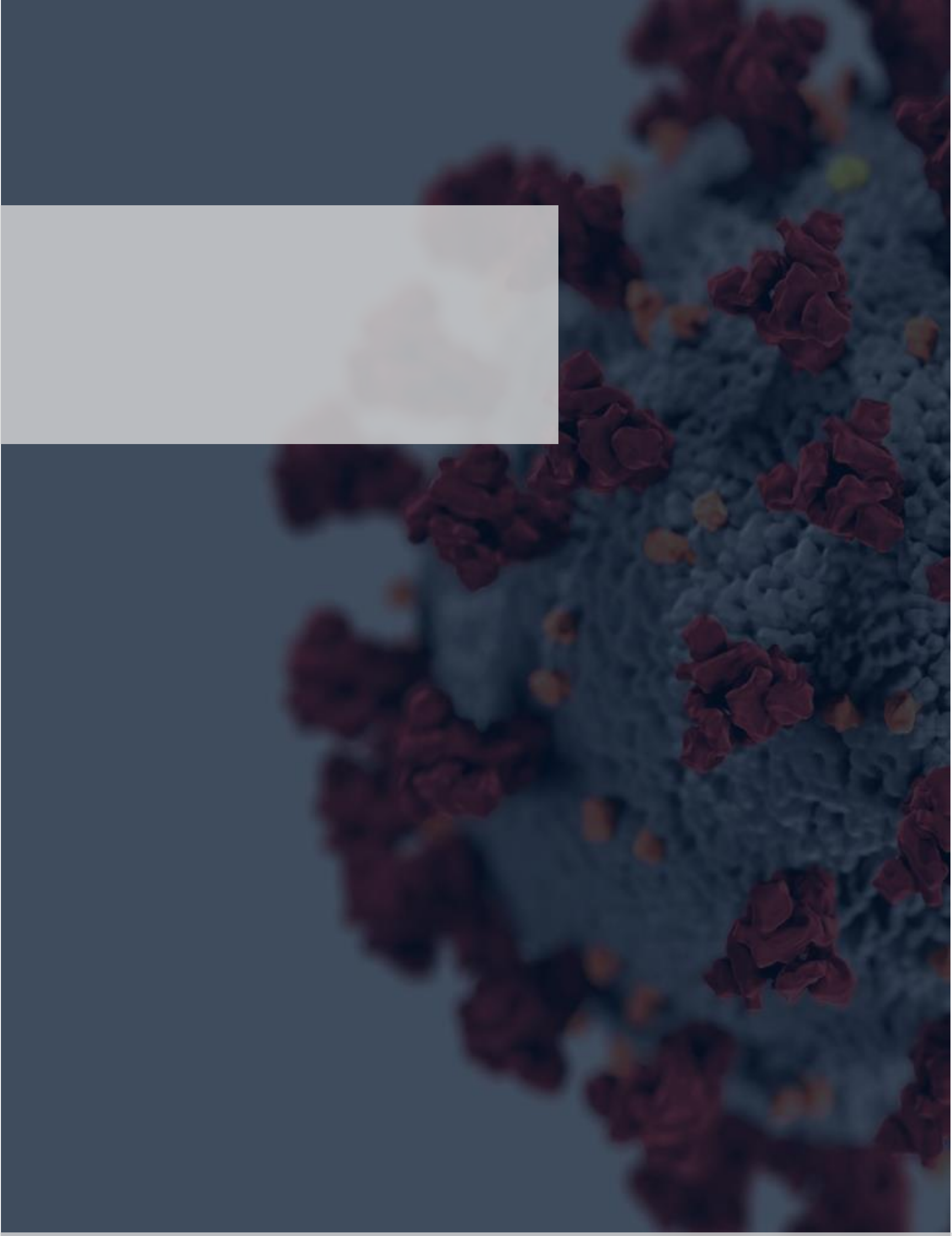
Appendix

Fast and Exceptional Enterprise Survey	2014 – 2018 INE Database
Industry & Energy	Sections B to E of CAE Rev.3
Construction & Real Estate Activities	Sections F and L of CAE Rev.3
Commerce	Section G of CAE Rev.3
Transportation & Storage	Section H of CAE Rev.3
Accommodation & Catering	Section I of CAE Rev.3
Information & Communication	Section J of CAE Rev.3
Other Services	Sections M, N, P, Q, R and S of CAE Rev.3

Table 1 - Correspondence between the aggregate sectors of both databases



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