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Contents

Projections for the portuguese economy: 2020-23 | 5

- 1 Introduction | 7
- 2 External environment and technical assumptions of the projections | 8
- 3 The Portuguese economy in 2020-23 | 10
- 4 Conclusion | 17

Box 1 • Developments in economic activity in the third and fourth quarters | 18

Box 2 • EU funds in 2020-23 | 20

Box 3 • Alternative scenarios for the Portuguese economy | 22

II Special Issue | 25

Firm Growth and Covid-19 | 27

The impact of the pandemic on private consumption: evidence from card spending data | 41

I Projections for the portuguese economy: 2020-23

Box 1 Developments in economic activity in the third and fourth quarters

Box 2 EU funds in 2020-23

Box 3 Alternative scenarios for the Portuguese economy

1 Introduction

The COVID-19 pandemic had a profound effect on economic activity in 2020 in Portugal and around the world. The measures to contain the public health crisis and the cautious attitude of economic agents led to an unprecedented fall in GDP in the first half of the year. The projections presented assume that the restrictions will be gradually lifted from the first quarter of 2021, although activity will be affected up to the start of 2022, when an effective medical solution will be fully implemented. Monetary, fiscal and prudential policies played a decisive role in mitigating the crisis and will continue to do so in the recovery.

Accordingly, an 8.1% decline in GDP is projected in 2020, followed by growth of 3.9% in 2021, 4.5% in 2022 and 2.4% in 2023 (Table I.1.1). Activity will return to pre-pandemic levels at the end of 2022. The recovery in activity is reflected in an improvement in the labour market, with employment expected to increase and the unemployment rate to fall from the middle of next year.

	Weigths		Dece	mber E	B 2020		October EB 2020 June EB 2020			2020
	2019	2019	2020 (^{。)} 2021 ^{(p}	^{o)} 2022 ^{(p}) 2023 ^(p)	2020 ^(p)	2020 ^{(p}	^{")} 2021 (^{p)} 2022 ^(p)
Gross domestic product	100	2.2	-8.1	3.9	4.5	2.4	-8.1	-9.5	5.2	3.8
Private consumption	63.9	2.4	-6.8	3.9	3.3	1.9	-6.2	-8.9	7.7	3.0
Public consumption	16.9	0.7	0.4	4.9	0.4	0.7	1.2	0.6	0.7	0.8
Gross fixed capital formation	18.2	5.4	-2.8	4.4	5.2	2.0	-4.7	-11.1	5.0	4.5
Domestic demand	99.8	2.7	-5.6	3.9	3.1	1.8	-5.0	-8.2	6.0	2.9
Exports	43.5	3.5	-20.1	9.2	12.9	6.7	-19.5	-25.3	11.5	11.2
Imports	43.3	4.7	-14.4	8.8	9.1	5.1	-12.4	-22.4	13.5	8.5
Contribution to GDP growth, net of imports (in p.p.) (a)										
Domestic demand		1.5	-2.6	2.6	1.5	0.8	-2.6	-3.2	3.3	1.4
Exports of goods		0.2	-0.7	1.5	0.4	0.3	-0.9	-0.9	0.9	0.4
Exports of services		0.5	-4.8	-0.2	2.6	1.3	-4.6	-5.3	1.0	2.0
Employment (number of persons) ^(b)		0.8	-2.3	0.0	1.3	0.9	-2.8	-4.5	2.0	1.5
Employment (hours worked) (b)		1.2	-10.8	7.3	2.9	0.9	-10.8	-7.6	5.4	1.5
Unemployment rate ^(c)		6.5	7.2	8.8	8.1	7.4	7.5	10.1	8.9	7.6
Current and capital account (% of GDP)		0.9	-0.6	0.5	2.3	2.7	-0.6	0.3	0.3	0.3
Goods and services account (% of GDP)		0.4	-1.6	-1.9	-0.5	0.1	-1.9	-0.5	-1.3	-0.5
Harmonised index of consumer prices		0.3	-0.2	0.3	0.9	1.1	0.0	0.1	0.8	1.1
Energy goods		-1.7	-5.3	-2.0	0.9	0.5	-4.9	-5.7	1.4	2.4
Excluding energy goods		0.5	0.3	0.6	0.9	1.1	0.4	0.7	0.8	1.0

Table I.1.1 • Projections of Banco de Portugal for 2020-23 | Year-on-year percentage change, unless otherwise stated

Sources: Banco de Portugal and Statistics Portugal. | Notes: (p) – projected, p.p. – percentage points. For each aggregate, this table shows the projection corresponding to the most likely value, conditional on the set of assumptions considered. (a) The demand aggregates net of imports are obtained by subtracting an estimate of the imports needed to meet each component. The import content calculations were based on 2017 data. For more information on the methodology underlying this calculation, see the Box "Update of the import content of global demand for the Portuguese economy" in the March 2019 issue of the *Economic Bulletin*. (b) According to the national accounts concept. (c) In percentage of labour force.

In the first half of 2020, activity fell by 17.3% in cumulative terms from the end of 2019. In the third quarter, activity recovered quickly and sharply after the gradual lifting of containment measures, with GDP growing by 13.3% quarter on quarter. This recovery was faster than anticipated and benefited from the materialisation of postponed spending during the lockdown period and the recovery of most productive activities. The recovery trend was reversed in the fourth quarter with the implementation of new containment measures in Portugal and among the main trading

partners (Box 1). Activity is projected to decline 1.8% in the fourth quarter compared to the previous quarter. The pandemic has an asymmetric effect on economic activity, with a more negative impact on the sectors most affected by social distancing measures. This heterogeneity is also visible in the comparison of firms with different growth dynamics before the pandemic (Special Issue I).

Inflation shows a gradual and contained increase over the projection horizon, reaching 1.1% in 2023, in a context of prevalence of slack in the economy and maintenance of inflation expectations at low-levels.

In 2020 the Portuguese economy recorded a net borrowing position. The decline in the current and capital account balance was driven by the behaviour of the goods and services account and, in particular, by the decline in the tourism-related services surplus. From 2021 to 2023, the current and capital account balance will be positive again, reflecting the improved goods and services account and the increase in inflows of European funds, in particular from Next Generation EU (NGEU) (Box 2).

Benchmarking against the Eurosystem's most recent projections, the Portuguese economy will grow faster than the euro area over 2022-23, reflecting a return to the gradual process of real convergence. Over this period, Portuguese exports should grow faster than the euro area's.

The outlook for the Portuguese economy is surrounded by considerable pandemic-related uncertainty and the implementation of an effective large-scale medical solution in the short term. The economic agents' response to the public health protection measures and the impact of the support measures also involve uncertainties. To illustrate the risks – both upside and downside – of the projection presented, Box 3 considers two alternative scenarios for the behaviour of the Portuguese economy.

2 External environment and technical assumptions of the projections

E Recovery of global economic activity over the projection horizon

After the 9.4% decline in the first half of 2020 from the end of 2019, global economic activity recovered during the summer months. In the third quarter, global GDP grew faster than expected (7.3% quarter on quarter). The resurgence in the number of COVID-19 cases, in particular among the advanced economies, led to containment measures being reintroduced, restricting activity among the sectors most affected as well as economic agents' confidence. The indicators available for the euro area suggest these factors had a negative impact on activity in the fourth quarter (Box 1).

This projection exercise assumes that the containment measures will be maintained or reimposed up to the end of the first quarter of 2021 and lifted gradually thereafter. Despite these developments, until a medical solution is successfully implemented – at the start of 2022 –, the virus will continue to affect economic agents' behaviours and activity.

The assumptions for the projection's external environment imply a gradual recovery of the global economy. After a 3.5% fall in 2020, global GDP will grow by 5.6% in 2021 and by 3.7% on average over the following two years (Table I.2.1). In the euro area, economic activity fell by 7.3% in 2020 and will increase by 3.9% in 2021 and by around 3% on average in 2022-23. The differing speeds at which different countries are expected to recover reflect, among other factors, the size within the productive structure of the sectors most affected by social distancing and the reach and duration of the economic policy response.

Global trade fell by 9.5% in 2020 and will grow by 7.1% in 2021 and by 4.0% on average over the next two years. The recovery of trade is expected to depend on international tourism and transport flows, and a reorganisation of global production chains. External demand for Portuguese goods and services fell by 12.6% in 2020 and will grow by 7.1% in 2021 and by 4.7% on average over 2022-23. From 2021 onwards, it is assumed that trade between the EU and the United Kingdom will be governed by the most-favoured-nation clause established under the World Trade Organisation, which means higher barriers to trade between the two regions and contributes to a downward revision in external demand for Portuguese goods and services.

Maintenance of favourable financial conditions over the projection horizon

The outlook for the oil market indicates a moderate recovery of demand and lower production cuts, which should involve limited price increases. Based on the technical assumptions, the average price of oil was USD 42 per barrel in 2020, increasing gradually to USD 47 in 2023.

Global financial conditions, and in particular the conditions in the euro area, will continue to be favourable, in a context of an accommodative monetary policy stance and measures to support liquidity. Valuations in the equity markets are high in historical terms, after the recovery seen since the end of March, and public debt yields are at low levels. In the euro area, the spreads on sovereign debt yields in periphery markets are close to historical lows.

According to the exercise's technical assumptions, the 3-month EURIBOR remained at -0.4% in 2020 and will fall to -0.5% in the three following years. The implicit interest rate on public debt is expected to fall over the projection horizon, from 2.6% in 2019 to 1.8% in 2023, which reflects the assumption that interest rates on new issues will remain low. Regarding the foreign exchange market, the exercise assumes an appreciation of the euro in nominal effective terms and against the dollar, respectively 3.2% and 1.8% in 2020 and 2.0% and 3.9% in 2021.

			EB De	cembe	r 2020	Revisio	Revisions compared to EB June 2020			
		2019	2020	2021	2022	2023	2019	2020	2021	2022
International environment										
World GDP	tva	2.7	-3.5	5.6	3.9	3.4	0.0	1.0	-0.4	0.1
Euro area GDP	tva	1.3	-7.3	3.9	4.2	2.1	0.1	1.4	-1.3	0.9
World trade	tva	0.6	-9.5	7.1	4.3	3.6	-0.1	3.2	-0.8	-0.2
External demand	tva	1.7	-12.6	7.1	5.6	3.7	0.1	2.5	-2.3	-0.1
Oil prices in dollars	vma	64.0	41.6	44.0	45.7	46.9	0.0	5.5	6.8	4.9
Oil prices in euros	vma	57.2	36.5	37.2	38.6	39.7	0.0	3.5	2.8	1.0
Monetary and financial conditions										
Short-term interest rate (3-month EURIBOR)	%	-0.4	-0.4	-0.5	-0.5	-0.5	0.0	-0.1	-0.1	-0.1
Implicit interest rate in public debt	%	2.6	2.3	2.0	1.9	1.8	0.0	-0.4	-0.7	-0.9
Effective exchange rate index	yoy	-1.5	3.2	2.0	0.0	0.0	0.1	3.5	1.9	0.0
Euro-dollar exchange rate	aav	1.12	1.14	1.18	1.18	1.18	0.0	4.6	9.3	9.3

Table I.2.1 Projection assumptions

Source: Eurosystem (Banco de Portugal calculations). | Notes: Technical and external environment assumptions as well as projections for euro area GDP and inflation coincide with those in the Eurosystem's projection exercise released on 10 December (see "Eurosystem staff macroeconomic projections for the euro area", December 2020). Technical assumptions include information available up to 18 November. An increase in the exchange rate corresponds to an appreciation of the euro. The revision in the euro-dollar exchange rate is presented in percentage. The technical assumption for bilateral exchange rates assumes that the average levels observed in the two weeks prior to the cut-off date will remain stable over the projection horizon. The technical assumption for oil prices is based on futures markets. Developments in the 3-month Euribor rate are based on expectations implied in futures contracts. The implicit interest rate on public debt is computed as the ratio of interest expenditure for the year to the simple average of the stock of debt at the end of the same year and at the end of the preceding year. The implicit rate includes an assumption for the interest rate associated with new issuances. yoy – year-on-year rate of change, aav – annual average value.

Public finances affected by the pandemic mitigation measures

The fiscal assumptions incorporate the measures approved in the 2021 State Budget. Public consumption should increase by 0.4% in real terms in 2020, reflecting the growth in healthcare spending and the increase in public employment. These effects are mitigated by the reduction of general government activity during the periods of lockdown, including a decline in the number of hours worked.

For 2021, real public consumption growth is forecast at 4.9%. This acceleration reflects public services returning to normal operations. Final consumption expenditure linked to the pandemic will remain close to that of the previous year. Over the projection horizon, the absence of new measures and the reversal of the pandemic-related effects in 2022 will result in a more moderate growth in public consumption.

Public investment displays high growth rates up to 2023. The acceleration in 2020 results from acquisitions in the health sector and a greater inflow of European funds. In the following years, besides the spending on the "Escola Digital" (Digital Schooling) Programme (with a one-off effect in 2021), developments in public investment reflect the expected profile of inflows from the European Recovery and Resilience Facility (Box 2).

Aside from the aforementioned fiscal policy measures, the current projection incorporates the reduction in the Personal Income Tax withholding rates, the reduction of VAT on electricity, the "IVAucher" programme, the newly created extraordinary income support for workers and a new extraordinary pension update. Firm support measures, including the "Extraordinary Support for Progressive Resumption of Activity" and the "Extraordinary Incentive for the Normalisation of Activity", will remain in 2021. The budgetary impact of the stimulus measures should stand at 1.4% of GDP in 2021, which is lower than estimated for 2020 (2.7% of GDP).

In the other euro area countries, the fiscal impact of measures in response to the pandemic differed widely. In the euro area, the European Commission estimates that these measures correspond to 4.2% of GDP in 2020. The next years will see a gradual reversal of the measures (in 2021, they will represent 2.4% of GDP) and a less detrimental effect of automatic stabilisers on the public finances.

3 The Portuguese economy in 2020-23

Gradual recovery of economic activity in 2021-23

The Portuguese economy should decline by 8.1% in 2020. After a 17.3% fall in the first half from the end of 2019, the economy recovered rapidly in the third quarter (growing by 13.3% quarter on quarter). However, the arrival of a second wave resulted in the reversal of the recovery trend. Accordingly, a 1.8% quarter-on-quarter decline in activity is projected for the fourth quarter. These developments are corroborated by the high-frequency indicators available up to November (Box 1).

The decline in activity in 2020 reflected falls in domestic demand and exports, in particular the strongly negative contribution from services exports (-4.8 p.p.), driven by tourism-related services (Table I.1.1).

The current projection for GDP in 2020 is unchanged from that published in the October Economic Bulletin, due to the combined effects of two opposing factors. On the one hand, the recovery in the third quarter was faster than expected, reflecting more favourable developments in private

consumption and exports. On the other hand, the evolution of the pandemic and the adoption of new containment measures led to a downward revision of economic activity in the fourth quarter. This downward revision was also observed in the euro area (the GDP quarter-on-quarter rate of change is -2.2% in the Eurosystem's projections for December, compared to growth of 3.1% in the projections released in September).

For 2021-23, the Portuguese economy is expected to recover, with the pandemic gradually coming under control, with uncertainty subsiding, and with support from economic policy measures. In 2021 GDP will grow by 3.9%, followed by growth of 4.5% in 2022 and 2.4% in 2023. The projection for 2021 was revised downwards from the June Economic Bulletin, reflecting the negative impact of the evolution of the pandemic in the fourth quarter of 2020, which is assumed to continue into the first quarter of 2021. With the reduction of the containment measures in Portugal and its main trading partners, activity is expected to accelerate in subsequent quarters. GDP will recover gradually, with sector-specific differences, as activities related to tourism, culture and entertainment will recover more slowly. GDP should return to pre-pandemic levels at the end of 2022.

The decline in GDP in 2020 greatly exceeded the falls recorded in the past, with the recovery projected to be faster than that observed after the recession in 2011-13 (Chart I.3.1). The projected recovery benefited from the impact of monetary and fiscal policy decisions in response to the crisis. Over the next few years, European fund inflows will also increase, in particular those related to Next Generation EU (Box 2). The rapid recovery in investment contrasts with previous recessive episodes. Exports' expected recovery is slower than that observed after previous recessions, due to the behaviour of tourism exports.



Chart I.3.1 • GDP and main components in periods of recession and subsequent recovery | Index T=100

Sources: Banco de Portugal and Statistics Portugal. | Notes: The year T + 1 stands for the 1st year of each cycle in which GDP decreases in annual terms (recession year).

The GDP profile in Portugal in 2020-23 is relatively similar to that projected for the euro area by the Eurosystem (Chart I.3.2). The fall in GDP in 2020 was slightly larger in Portugal, partly due

to the greater importance of the sectors most affected by the pandemic for the Portuguese economy, including sectors linked to tourism. The sharper decline in exports in Portugal in 2020 was partly offset by a lower reduction in private consumption and GFCF, particularly in the case of construction. For 2022-23, growth is expected to be slightly faster in Portugal, reflecting the recovery in tourism.





Sources: Banco de Portugal and ECB. | Note: (p) - projected.

Gradual improvement in labour market conditions

Employment is projected to fall by 2.3% in 2020, which is a smaller decline than would be expected given the relationship between employment and activity observed over previous recessions. This mitigated reaction reflected the impact of the measures supporting firms, in particular, the simplified 'layoff' scheme and the support for self-employed workers. As a result, productivity per worker fell by 5.9% in 2020. For 2021-23, employment is expected to recover gradually and productivity per worker is expected to increase. The slow recovery of employment results from the expected developments for the sectors most exposed to personal contact, including accommodation, food, travel and recreational services. Accordingly, employment is expected to return to pre-pandemic levels only at the end of the projection horizon.

Employment measured in hours worked should fall by 10.8% in 2020, reflecting the increase in the employed population absent from work, in particular in the second quarter of the year. For 2021, a reversal of this effect is expected, with growth reaching 7.3%.

The unemployment rate increased from 6.5% in 2019 to 7.2% in 2020. Aside from the measures supporting employment and the use of remote working, developments in the unemployment rate were mitigated in the first half of the year by the increase in inactivity. With the reduction in restrictions on activity, the number of individuals that moved from inactivity to unemployment increased sharply, resulting in an increase of around 2 p.p. in the unemployment rate in the third quarter. Over the

next few quarters, the upward trend in the unemployment rate is projected to continue. Firms' hiring decisions will continue to be conditional on the existence of underutilised resources and the uncertainty over the demand outlook. Thus, the unemployment rate is projected to reach 8.8% in 2021 and then fall in the following years, to 8.1% in 2022 and 7.4% in 2023, remaining above that observed at the end of 2019. This more persistent effect is the result of the most affected sectors being labour-intensive and a degree of mismatch between the qualifications needed and those available, arising from the reallocation of production inputs between sectors. Even so, the unemployment rate will remain far below that observed in the 2011-13 crisis.

The interruption of input accumulation during the crisis, namely the rupture of employment relationships and the slower growth in investment, as well as the reallocation of resources, are expected to result in the economy's potential output over the projection horizon remaining below the trend projected before the pandemic outbreak. The efficient utilisation of EU funds in productive investment and support for the reallocation of employment will be critical to offset these effects.

The reduction in private consumption and the increase in the saving rate will be reversed

Private consumption, the main component of demand, will fall by 6.8% in 2020 and then grow by 3.9%, 3.3% and 1.9% in 2021-23 (Chart I.3.3). At the end of 2022, private consumption will approach the level observed before the pandemic crisis.

The characteristics of the current crisis have prevented the usual smooth behaviour of household spending. In the first half of 2020, households sharply reduced their consumption expenditure (by -15.4% in cumulative terms from the end of 2019). The initial shock had very different effects on the basket of goods and services consumed, with an increase in the consumption of essential goods and a fall in spending on durable goods and services, in particular those services that required social interaction (Special Issue II). As restrictions were gradually lifted, private consumption in the third quarter increased by 12.8% in quarter-on-quarter terms. Purchasing of durable goods recovered more quickly (surpassing the pre-crisis level), while the improvement was slower in services. In the fourth quarter the recovery of private consumption was reversed, with a projected quarter-on-quarter decline significantly smaller than that recorded in the second quarter.

The impact on household income in 2020 was cushioned by the governmental measures, including the credit moratoria. The saving rate in the first half of the year stood at 14.3% of disposable income, an increase of 6.9 p.p. from the end of 2019, with a partial reversal in the second half of the year.

With the lifting of the containment measures and uncertainty about the pandemic subsiding, private consumption will resume its recovery trend in 2021. The gradual improvement in the labour market and in income and the maintenance of favourable financing conditions support the recovery in households' consumption. A differentiated recovery is anticipated, with consumption of services exposed to personal contact expected to recover more slowly. The maintenance of some degree of uncertainty and the unemployment rate remaining above the pre-pandemic level suggest that the saving rate will stay above that observed in 2019 over the horizon, although with a decreasing trend (Chart 1.3.3).



Chart I.3.3 • Private consumption, disposable income and saving rate | Rate of change in percentage and in percentage of disposable income

Sources: Banco de Portugal and Statistics Portugal. | Note: (p) – projected.

Recovery of investment with inflows of European funds and with measures supporting firms

In 2020 GFCF is estimated to decline by 2.8% (Table I.3.1). For 2021-23 it is projected to grow by 3.9% on average, which implies that this aggregate will reach the end of the projection horizon above its 2019 level. The fall in investment in 2020 was below that observed in previous recessions. GFCF fell less in Portugal than in most European countries, reflecting the growth of the construction sector.

Residential GFCF will remain resilient over the horizon. Contributing to the behaviour of this component were favourable financial conditions, the attractiveness of this asset as an investment for savings and the continuation of demand from non-residents in certain segments. Public investment growth should remain dynamic over the horizon, benefiting from the expected increase in inflows of European funds (Section 2).

In contrast, corporate investment fell in 2020. Over the projection horizon, corporate investment is expected to recover, accompanying the recovery in demand. The recovery in corporate investment is supported by (i) the measures supporting firms' financial situation, (ii) monetary policy measures that contribute to favourable financing conditions, (iii) the European funds, in particular those under the Recovery and Resilience Plan, and (iv) dynamic public investment. However, the behaviour of corporate investment will be conditioned by the deterioration of the financial situation of some firms and the uncertainty regarding changes in consumption patterns and their persistence.

Table I.3.1 Gross fixed capital formation and contributions by institutional sector | Rate of change in percentage and percentage points

	2019	2020 ^(p)	2021 ^(p)	2022 ^(p)	2023 ^(p)
GFCF – Annual rate of change (in %)	5.4	-2.8	4.4	5.2	2.0
Contributions to the annual rate of change of GFCF (in p.p.): Public GFCF Residential GFCF Corporate GFCF	0.4 0.0 5.0	2.0 0.2 -5.0	2.8 0.3 1.3	2.1 0.3 2.8	0.4 0.2 1.4

Sources: Banco de Portugal and Statistics Portugal. | Note: (p) – projected.

Slower recovery of exports due to the behaviour of tourism flows

Exports of goods and services fell by 20.1% in 2020 and are expected to recover over the remaining horizon, with growth of 9.2% in 2021, 12.9% in 2022 and 6.7% in 2023 (Table I.1.1). The pre-crisis

level will be reached at the beginning of 2023, reflecting the slower recovery of tourism and related services. Tourism exports represented 8.6% of GDP in 2019, the fourth highest share in the euro area.

In 2020 the intra-annual profile of exports was marked by the evolution of the pandemic. After a 41.2% cumulative drop in the first half from the end of 2019, exports recovered sharply in the third quarter, reflecting the behaviour of the goods component (Box 1). For the fourth quarter, the recovery path is expected to be reversed, due to the reintroduction of containment measures in several countries. The impact should be contained in the case of goods, while a sharp fall is expected in services.

In 2020 exports made a contribution (net of import content) of -5.5 p.p. to the 8.1% decrease in GDP. Tourism exports recorded the sharpest fall (56,6%) among all the GDP components and accounted for half of the reduction in total exports. Goods exports fell by 8.4% in 2020.

The assumption that the pandemic will be under relative control among Portugal's main trading partners from the second quarter of 2021 onwards implies a positive growth in the external demand for Portuguese goods and services in 2021-23 (Section 2). Goods exports are expected to increase by 13.6% in 2021 – surpassing the 2019 level – and decelerate in 2022 and 2023 (growing by 5.5% and 3.6% respectively). In contrast, the slower lifting of social distancing measures, and the continued uncertainty will delay the recovery in services exports, in particular tourism flows and related services. The contribution made by the tourism component to the change in total exports will be marginally negative in 2021 (-0.8 p.p.), increasing to 7.4 p.p. in 2022 and standing at 3.2 p.p. in 2023. The possibility of a decline in business travel over the next few years constitutes a downside risk for developments in services-exporting sectors. At the end of the horizon, tourism exports are expected to remain below 2019 levels.

E Imports follow global demand developments

Goods and services imports are projected to fall by 14.4% in 2020 and grow by 8.8% in 2021, 9.1% in 2022 and 5.1% in 2023. These developments reflect the recovery in weighted global demand, assuming an elasticity slightly below the historical average. The relationship between the two variables in previous recessive periods and the more structural trend of falling elasticity support this assumption.

As with exports, goods imports recover more quickly than services imports, which continue to depend on the performance of tourism. Goods imports' large share of total imports (81% in 2019) results in a faster recovery path for total imports compared to exports, reaching pre-crisis levels in mid-2022.

External deficit in 2020 and surpluses in 2021-23 with the inflow of European funds and the resumption of tourism

The current and capital account balance turned negative in 2020 (-0.6% of GDP), interrupting the sequence of external surpluses observed since the previous crisis (Chart I.3.4). From 2021 onwards, this account will record a surplus again, reaching 2.7% of GDP at the end of the projection horizon.

The Portuguese economy's net borrowing position in 2020 resulted from the deterioration of the goods and services account balance, to -1.6% of GDP (0.4% in 2019). This change was determined by a negative volume effect from the contraction of tourism flows, partly offset by a positive terms of trade effect linked to the sharp fall in oil prices. In contrast, an increased surplus from

the income and capital account balances is projected for 2020 (reaching 1% of GDP, compared to 0.5% in 2019), benefiting from the inflow of European funds from the Multiannual Financial Framework 2014-20.



Chart I.3.4 • Current and capital account | In percentage of GDP

Sources: Banco de Portugal and Statistics Portugal. | Note: (p) – projected.

The pandemic's greater impact on services implies an additional deterioration of the goods and services account in 2021. In the following years, this account will improve with the fading out of the pandemic's effects and the recovery of the tourism sector, with a 0.1% balance projected for the end of the projection horizon.

The surplus from the income and capital account balances will increase to 2.6% on average over 2021-23. The inflow of European funds will play a key role in the behaviour of the Portuguese economy's net lending position over the horizon. With the transition between Multiannual Financial Frameworks, Portugal is expected to receive an amount of EU funds equivalent to 3.7% of GDP on average over 2021-23 (Box 2). This share is higher than that of previous years (1.8% on average over 2016-19), reflecting a greater pace of inflows under the current financial framework (2014-20), as it enters its final phase of programming, and the transfers under the new instrument in response to the pandemic crisis (NGEU).

In 2021 the capital account balance will also be influenced by the reimbursement of € 1.088 billion by the European Financial Stability Facility paid by Portugal under the Economic and Financial Assistance Programme. Additionally, developments in the primary income account balance will benefit from the declining trend in public debt interest payments.

Inflation will remain contained

Inflation, measured by the annual rate of change in the HICP, is expected to stand at -0.2% in 2020, increasing to 0.3% in 2021, 0.9% in 2022 and 1.1% in 2023 (Table I.1.1). Compared to projections for the euro area, developments in prices are more moderate in Portugal. The differential *vis-à-vis* the euro area will become more negative in 2021 (-0.7 p.p., after -0.4 p.p. in 2020), averaging -0.3 p.p. over 2022-23. The projection for inflation was revised downwards, reflecting the data already observed for the current year and the downward revision of the assumptions for oil prices.

The pandemic crisis combines supply-side and demand-side shocks, with opposing effects on prices. Notwithstanding the high dispersion in consumer price developments in 2020, average inflation observed up to October (-0.1%) indicates that the negative effects of the fall in demand have prevailed. For 2020, inflation excluding energy is estimated at 0.3% (after 0.5% in 2019). This decline arises from the slowdown in services prices and the sharper fall in non-energy industrial goods prices. In contrast, food prices accelerated in 2020. The energy goods aggregate recorded a sharp fall (-5.3%, after -1.7% in 2019), reflecting the decline in oil prices.

The downside pressures on prices will continue into 2021, reflecting the slack in the economy and contained demand, in particular in the sectors linked to tourism. Inflation excluding energy increases slightly to 0.6%. The 2% reduction in energy prices in 2021 reflects the reduction of VAT on electricity announced in the 2021 State Budget, partly offset by the marginal increase in oil prices. Over 2022-23, the gradual fading out of these effects, the recovery of external prices and the continued oil price increase contribute to the acceleration of consumer prices. However, the expected contained wage growth over the entire projection horizon – reflecting the labour market slack – prevents a stronger recovery in prices.

According to the projections, the GDP deflator increased by 2.6% in 2020, reflecting terms of trade gains, associated with the decline in oil prices, and the increase in the public consumption deflator, as a result of the reduction in hours worked. The reversal of these effects is reflected in a near-zero growth in 2021. In the subsequent years, GDP deflator is expected to growth 1.2% in 2022 and 1.4% in 2023.

4 Conclusion

In 2020 economic activity in Portugal and the rest of the world was strongly affected by the propagation of the virus, its containment measures and its impact on the behaviour of economic agents. The economic losses varied across countries and sectors of activity. The policy response – monetary, fiscal and prudential – is unprecedented in its magnitude, celerity and coordination and was decisive in mitigating the damage of the crisis.

The economic outlook remains highly uncertain, and is highly conditional on the evolution of the disease and the swiftness of large-scale vaccination. Although a recovery in economic activity is projected in 2021, its pace will be affected by the impact of the crisis on productive capacity and the required reallocation of resources between firms and between sectors. Higher public and private sector debt and credit risk will pose major challenges to the Portuguese economy over the coming years. National and supranational policy actions will continue to play a key role in the recovery and resilience of the Portuguese economy, and should promote the rebound in investment and the adequate allocation of resources.

Box 1 • Developments in economic activity in the third and fourth quarters

The COVID-19 pandemic caused an unprecedented contraction in activity in the first half of 2020 (a drop of 17.3% in cumulative terms compared with the end of 2019). The gradual lifting of containment measures from May onwards and strong public policy support contributed to a rapid recovery in the third quarter (quarter-on-quarter rate of change of 13.3%). The worsening public health situation in Portugal in the fourth quarter required the implementation of additional containment measures, interrupting the economic recovery.

The containment measures introduced in the fourth quarter have been selective, thus avoiding general lockdown like that implemented in March and April. The measures are more restrictive in the regions most affected by the pandemic, and include compulsory teleworking and a curfew between 23:00 and 05:00 (with tighter restrictions on movements during weekends and on public holidays). Keeping schools and kindergartens open is one of the major differences versus the previous state of emergency, thus mitigating the effects on the economy.

The pandemic shock caused a sharper fall in services that involve personal contact. Heterogeneity remained during the recovery, with some differences being accentuated (Chart C1.1 – Panel A). In the third quarter, Industry GVA moved closer to pre-crisis levels (year-on-year rate of change of -2.4% following -23% in the second quarter) and Construction GVA maintained its growth trend, increasing 5.1% following 4% in the previous quarter. In contrast, the recovery was slower in the services subsectors most affected by the need for social distancing (trade, accommodation and food services), which stood 9.8% below the previous year level, after a drop of 26.5% in the second quarter.

The pandemic also affected expenditure components unequally in the third quarter (Chart C1.1 – Panel B). Private consumption fell by 4.3% in year-on-year terms following a 14.4% drop in the second quarter. This recovery reflects postponed purchases, especially on durable consumer goods, and the more gradual recovery in non-durable, non-food consumer goods and services. GFCF grew slightly by 0.5% in the third quarter, having fallen by 8.5% in the previous quarter. These developments benefited from robust growth in investment in construction and from the recovery in machinery and transport equipment investment. Exports fell by 15.2% (-39.4% in the second quarter), with a distinct recovery profile between goods and services. Goods exports increased 1.5% in year-on-year terms (-28.9% in the second quarter), reflecting in particular the capital goods component. In contrast, services exports showed limited recovery, falling by 42.4%, after -57.3% in the previous quarter.



Chart C1.1 • Recent developments in economic activity | Year-on-year rate of change

Sources: Banco de Portugal and Statistics Portugal. | Notes: The service exports series in the right-hand chart differs from the one published by Statistics Portugal as it includes the totality of tourism exports (goods and services). Cut-off date of 30 November 2020.

The expected drop in activity for the fourth quarter contrasts with the recovery observed until October. The daily economic indicator for Portugal (DEI) stabilised in October and fell in November (Chart C1.2 – Panel A). These developments are broad based across the euro area. The *Purchasing Managers' Indexes* (PMI) for the euro area point to a reduction in activity resulting from the contraction in services (Chart C1.2 – Panel B). In Portugal, business confidence indicators inverted their recovery path in November (Chart C1.2 – Panel C).

The worsening of the pandemic appears to have affected private consumption and tourism flows immediately (Chart C1.2 – Panel D). The pace of the decline in transaction amounts with Portuguese cards in ATMs and payment terminals (PoS) in Portugal has been accentuated since mid-October (year-on-year reduction of 5.8% from 15 October to the end of November, compared with -0.6% in the preceding six weeks). In November, consumer confidence fell and unemployment expectations increased following a relative stabilisation between June and October. As for tourism exports, transaction amounts with foreign cards in ATMs and PoS terminals in Portugal have fallen around 50% since mid-September, interrupting the growth trend observed since May.

The negative impact on activity observed up to the end of November is clearly smaller than that registered in April. This reflects the relatively less severe containment measures and the learning and adaptation process of economic agents since the first wave of infection (teleworking routines, investment in protective measures and their implementation, greater knowledge of the virus, etc.). In the fourth quarter activity is projected to fall by 1.8% compared to the previous quarter, with GDP standing approximately 8% below the previous year level.

Chart C1.2 • Sectoral perspectives for the evolution of activity and high frequency indicators | Indexes, January 2020 = 100, and year-on-year rates of change





Panel B – Euro area PMI





Sources: Banco de Portugal, European Commission, IHS Markit and SIBS. | Notes: Daily data up to 29 November 2020. High frequency indicators were considered as a 7-day centered moving average. The daily data on transaction amounts in ATM/POS correspond only to withdrawals and purchases with national or foreign cards in Portuguese territory (transactions with national cards represent 91% of the total). For a more detailed description of the Daily indicator for economic activity, see Lourenço and Rua (2020), "The DEI: tracking economic activity daily during the lockdown", *Working Paper* No. 13, Banco de Portugal.

Box 2 • EU funds in 2020-23

With the COVID-19 pandemic, supranational policies gained additional importance, with emphasis on the role of EU funds. Over the projection horizon, Portugal will receive funds from the three major financial envelopes: the multiannual financial frameworks (MFF) 2014-20 and 2021-27 and the new European initiative for economic recovery, Next Generation EU (NGEU), announced at the end of May.

In the case of the multiannual financial frameworks 2014-20 and 2021-27, the estimates presented are centred around the current European Structural and Investment Funds (ESIF) and European Agricultural Guarantee Fund (EAGF). These instruments represented over 90% of EU funds received as accounted for in the current and capital account balance in 2019.

The financial allocation under the 2014-20 MFF is approximately \leq 31 billion, with some \leq 26 billion from the ESIF within the scope of the Portugal 2020 Partnership Agreement. By September 2020, the final beneficiaries had received approximately 62% of the final total planned allocation (56% in the case of the ESIF), with some differentiation between funds. The rate of funds received in Portugal is the ninth highest in the EU (fourth highest of countries with financial allocations equal to or greater than 1% of GDP), despite being short of that observed in previous MFFs at the same phase of the programming period. At the end of the year it is estimated that the rate of funds received will be approximately 68% (about 60% in the case of the ESIF). The remaining \leq 10 billion should be received by 2023, with a greater concentration in 2021 and 2022. There has been a reprogramming of Portugal 2020 funds in response to the pandemic crisis to meet new priorities, albeit conditioned by commitments hitherto made.

The 2021-27 MFF and the NGEU have become the main European policy instruments for economic recovery from the pandemic crisis and long-term challenges, defined according to the environmental, energy and digital transition priorities.

The financial allocation proposed for Portugal within the scope of the MFF 2021-27 is similar to the previous framework, about \leq 30 billion, with variations to specific funds. An important proposal for change is the gradual transition from the so-called N+3 rule to N+2 – the funds allocated in a given year must be used, or a request for payment must be made by the end of the second year – meaning that the total financial envelope allocated to Portugal must be used by 2029. The projection exercise assumes that annual developments in funds received by the final beneficiaries within the MFF 2021-27 framework will have a similar profile to that of the 2014-20 MFF.

In terms of the NGEU, estimates relate to the grants proposed under the Recovery and Resilience Facility (RRF), which is the main element of the NGEU's financial allocation, as well as the reinforcement of the three shared management instruments: (i) REACT-EU, which will reinforce the ERDF and ESF within the scope of Portugal 2020; (ii) Rural Development, which is to reinforce the EAFRD as part of the MFF 2021-27; and (iii) the Just Transition Fund, which aims to support those territories most affected socioeconomically by the transition to climate neutrality within the scope of the MFF 2021-27. These instruments cover almost the entirety of the NGEU grants, corresponding to about 50% of the total package of incentives, which also includes loans and guarantees. The financial envelope of grants allocated to Portugal is estimated to be in the region of \leq 16 billion, with approximately \leq 14 billion associated with the RRF. These amounts must be used by the end of 2026.

The RRF is a new instrument created to finance the implementation of reforms and investments defined in the Recovery and Resilience Plan. The preliminary version was presented by the Government on 15 October, with the final version due to be submitted by 30 April 2021. The exact details of this instrument are yet to be completely defined. It is assumed that the grants received by the final beneficiaries within the scope of the RRF evolve in line with the European Commission's payments proposal, which includes pre-financing

in 2021 of 10% of each Member State's RRF allocation. Furthermore, estimates for the annual evolution of the MFF 2021-27 and the NGEU assume compliance with the schedule drawn up for approval by the European Parliament and ratification by all the Member States, which would allow the implementation of these instruments from the start of 2021.

Over the projection horizon (2020-23), the final beneficiaries in Portugal will receive 3.4% of GDP per year on average in European grants, which is above the average for 1989 to 2019 (2.6% of GDP), estimated to peak in 2022 and 2023. These estimates are above those of the June 2020 Economic Bulletin (2.5% of GDP, on average, for 2020-22), essentially due to the incorporation of the new NGEU instrument.

The EU funds are important for the Portuguese economy's recovery, directly and through the stimulus to the European economy. Given the large sums in question, the use of these funds constitutes a challenge for all the agents involved in the planning, programming, implementation and evaluation processes, and is crucial for the promotion of a sustainable and resilient economy.

Box 3 • Alternative scenarios for the Portuguese economy

The outlook for the Portuguese economy over the next few months will continue to be surrounded by great uncertainty, depending on the evolution of the pandemic, the containment measures in Portugal and in the rest of the world, the economic policy and the economic agents' reaction to these developments. Accordingly, two alternative scenarios to the projection presented in this *Economic Bulletin* (the baseline scenario) have been drawn up: one more moderate and one more severe. These scenarios illustrate the principal risks surrounding the projection presented in this *Economic Bulletin*.

The scenarios presented are part of the common Eurosystem exercise, following assumptions about the evolution of the pandemic and the time of implementation of an effective, large-scale medical solution.

The moderate scenario assumes that infections decrease, after the recent increase, and a medical solution is rolled out from the start of 2021, becoming large-scale by the end of the year. It also includes effective coordination and implementation of the domestic and European policies in response to the pandemic. Portuguese fiscal policy and European support promote economic recovery. In a context of decreasing uncertainty, firms make new investments and households' precautionary saving declines.

The severe scenario assumes greater difficulty in controlling the growth of new cases at the end of 2020 and an increase in new infections in the first quarter of 2021. This requires a reinforcement of containment measures, including the possibility of more rigorous and prolonged lockdowns. An effective medical solution arises in the first half of 2021, but its large-scale roll-out is gradual. This scenario also assumes that the policy-makers react and mitigate the effects of the crisis. In fiscal terms, it is assumed that the support measures implemented are strengthened and extended, and in monetary policy, measures limiting the financial amplification of the crisis are adopted.

The external assumptions are different between the two scenarios. In the moderate scenario, the external environment is more favourable than in the baseline scenario, with greater growth in global activity and trade flows, in particular in the euro area where most of Portugal's main trade partners are. External demand for Portuguese goods and services declines by 12.2% in 2020, increases by 11.5% in 2021 and grows in line with the baseline scenario in 2022-23. The severe scenario assumes a slightly stronger decline in 2020, of 13.3% and a significantly slower recovery in 2021, of 1.1% (Table C3.1).

Table C3.1External demand and GDP in Portugal – baseline scenario and alternativescenarios | Annual rate of change in percentage

	2020	2021	2022	2023
External demand				
Baseline scenario	-12.6	7.1	5.6	3.7
Mild scenario	-12.2	11.5	5.4	4.0
Severe scenario	-13.3	1.1	4.5	5.6
GDP in Portugal				
Baseline scenario	-8.1	3.9	4.5	2.4
Mild scenario	-8.0	5.9	4.8	2.0
Severe scenario	-8.2	1.3	3.1	2.4

In the moderate scenario, the more favourable evolution of the pandemic has a positive effect on agents' confidence, leading to a recovery in private consumption and in investment in the short-term above that underlying the baseline scenario. Exports benefit from more favourable external demand. Accordingly, GDP grows by 5.9% and 4.8% respectively in 2021 and 2022, above the projection of the baseline scenario (3.9% and 4.5%) (Table C3.1). GDP reaches the pre-pandemic level at the start of 2022, almost a year sooner than in the baseline scenario (Chart C3.1). However, even in this more favourable scenario, GDP remains below the level projected in the *Economic Bulletin* of December 2019, before the pandemic outbreak. In 2022, GDP in the moderate scenario is 2% above the baseline scenario, but 3% below that forecast a year ago.

In the severe scenario, the need to impose additional containment measures and the reduction of economic agents' confidence has a negative impact on economic activity. The recovery is weaker and more prolonged, involving an increase in financial frictions, which is reflected in private agents' financing costs. The labour market is particularly affected in the severe scenario, with the unemployment rate reaching 10% in 2021. Alongside the more unfavourable developments in external demand, a more negative impact may also be seen on the global value chains and global trade in services. This scenario involves a slower recovery in private consumption, investment and exports than anticipated in the baseline scenario, particularly with regard to tourism exports. GDP grows by 1.3% in 2021, 3.1% in 2022 and in 2023 it converges to a growth rate close to that of the baseline scenario. At the end of the projection horizon, GDP remains around 2% below that of the end of 2019.

The alternative scenarios illustrate the significant risks – upside and downside – of the projection set forth in this *Economic Bulletin*. The materialisation of these risks will continue to depend on the evolution of the pandemic and the short-term implementation of an effective large-scale medical solution.



Chart C3.1 • GDP in Portugal – baseline scenario and alternative scenarios | Index 2019=100

II Special Issue

Firm Growth and Covid-19

The impact of the pandemic on private consumption: evidence from card spending data

Firm Growth and Covid-19

Introduction

The outbreak of the Covid-19 pandemic took the world by surprise and deeply affected virtually everyone's lives. It has also been an important shock to the economic structure of societies. Some businesses were not allowed to remain open due to health regulations. Others, even if legally allowed to continue their trade, saw demand decline.

There is a great variety of firms in the economy from small shops, to large manufacturing establishments, to firms providing professional services. Each firm plays a distinct role in the economy and potentially could have been affected by the pandemic differently. One specific dimension along which firms differ is their growth rates. Some firms are expanding rapidly and driving the growth of the economy, while others are shrinking and potentially closing (Garcia-Macia, Hsieh and Klenow, 2019). If the growing firms are more productive than the shrinking ones then this will also tend to improve productivity (Foster, Haltiwanger and Syverson, 2008; Hsieh and Klenow, 2009). In this context, the objective of this article is to study how the impact of the pandemic has differed across firms with different recent growth histories. Has the pandemic disproportionately affected high growth-firms in a way that is likely to hamper growth and the reallocation of resources, or is it reinforcing it?

A survey conducted in Portugal during April–July 2020 is used together with administrative data on firms' previous experience to conduct the analysis. Portuguese firms were hard hit by the Covid-19 pandemic; more than half of all surveyed firms reported a decline in sales of at least 25% in the first week of April. Most of them experienced similar declines throughout the rest of April, while only 12% saw their situation improve and 15% saw it worsen. Employment levels also decreased, though quantitatively less so compared with sales. Over time both sales and employment partially recovered.

To assess how the effects of the pandemic on firms differed with their pre-pandemic growth rates, firms are sorted according to their growth experiences between 2015 and 2018. The results point to high-growth firms being more likely to have experienced a decline in sales throughout the April-July period. These results are not driven by a particular sector, and there is evidence that the effects of the pandemic were particularly large for high-growth firms that were young and highly leveraged. Encouragingly, when the analysis is restricted to June-July, it emerges that these higher-growth firms had reduced the gap to their peers.

The use of government-provided support is also examined. Around half of the surveyed firms used at least one of the four policies analyzed: public credit lines, debt moratorium, deferred tax payments and the simplified layoff scheme. Moreover, higher-growth firms were more likely to use government credit and the moratorium. Furthermore, firms also increased their access to private credit: 21% of them increased their debt, with high-growth firms being more likely to do so. In terms of operational changes, many firms changed their production and distribution, and made use of teleworking in order to cope with the effects of the pandemic. Thirty-six percent of firms reported changing their production and 22% changed their distribution. At the end of April, 26% of firms had more than a quarter of their staff teleworking.

Data and context

The first case of Covid-19 in Portugal was reported on March 2. In mid-March, the government announced that all schools would close, and this was effectively the start of the country's "lockdown."

The government imposed a state of emergency shortly after, under which all nonessential businesses closed, and teleworking was required whenever possible. In early May, the government allowed some businesses to start reopening and the scope of reopening gradually expanded throughout May. Regarding the disease itself, the first death was reported on March 16; daily deaths increased until early April and then declined until mid-June.

This article uses two different data sets to describe the impact of the pandemic on firms and their responses to the crisis. The first data set is the Inquérito Rápido e Excecional às Empresas-Covid-19 (IREE). This was a survey conducted by the Instituto Nacional de Estatística (INE) and Banco de Portugal between April and July. In this survey, 8,883 non-farm non-financial firms were surveyed about the impact of the pandemic on their businesses. In April the interviews were weekly and, from May until mid-July, firms were contacted every two weeks. Firms were asked by how much their sales and employment changed relative to their expectations for a non-pandemic scenario. To make the replies to the survey easier, firms were asked to report these changes in bins. For example, whether their sales declined between 25–50% rather than, say, 33%. Moreover, they were asked about their use of four government-provided support policies: i) a paid furlough scheme (layoff simplificado); ii) a bank debt moratorium; iii) government-provided credit lines; and iv) the deferral of tax obligations.¹ Firms were also asked about a number of other aspects of their operations and plans for the future. It should be noted that while the sample is fairly representative of the sales of the sectors that were surveyed (excluding agriculture and finance), the sample is not representative of other dimensions of the population of firms.² Also, due to the small number of observations, the mining and utilities sectors are dropped.

The second data set is the *Informação Empresarial Simplificada* (IES). This is an annual data set that provides information on the universe of Portuguese firms' balance sheets. For instance, there is information on firms' sales, employment and cost of inputs. The most recent data available in IES comes from 2018. The analysis uses data from the last few years in the sample to compute, for example, the growth rate of firms in the pre-pandemic periods. After merging the two data sets, a sample of around 7,000 firms is used for the analysis.

Evolution of the shock

This section gives an overall description of the impact of the Covid-19 shock on Portuguese firms. The analysis will focus on how sales and employment changed over the course of the pandemic, both for the full economy and sector by sector.

Chart 1 reports the share of firms whose sales declined by more than 25% relative to expected sales in a non-pandemic scenario. It contains data for every week of the IREE survey, from early April until mid-July, for nine different non-farm non-financial sectors and the aggregate (Total). The impact of the pandemic seems to decrease over time. That is, the fraction of firms that report a deep decline in sales goes down over the course of the survey. Take the aggregate of the overall economy (Total, yellow line). In the first week of April, 60% of firms reported a decline in sales greater than 25%. This fraction decreases to 31% in early July. This is consistent with the initial severe lockdown and subsequent reopening. Another key feature is the heterogeneity in experiences across sectors. In early April, 91% of the firms in accommodation and food services (ACC) reported a decline in sales deeper than 25%. In contrast, only 43% of firms in the real estate sector were in the same situation.

^{1.} For more information regarding the IREE survey and the policies that were adopted during this period, see Manteu, Monteiro and Sequeira (2020). Note that the questions in the survey varied from round to round and so did the firms responding, so the exact sample for the analysis depends on the topic.

^{2.} See Manteu, Monteiro and Sequeira (2020) for further discussion of the composition of the sample.



Chart 1 • Share of firms whose sales declined by more than 25% over time, by sector | Percentage

Source: Inquérito Rápido e Excecional às Empresas – COVID-19. | Notes: This figure presents the share of firms whose sales declined by more than 25% during the various weeks of the IREE survey for different sectors of the economy. The sectors are: Manufacturing (MAN), Construction (CON), Wholesale and retail trade (RET), Transportation and storage (TRN), Accommodation and food services (ACC), Information and communication (COM), Real Estate (RES), Professional and scientific and technical activities (PST) and Other industries (OTH). The figure also reports the behavior in the aggregate (Total).

Chart 2 considers how the impact of the pandemic evolved over April at the level of individual firms. It plots the shares of firms who sales deteriorated, stayed the same, or increased in this month. For example, if a firm's sales were down 40% at the start of April and remained at that level at the end of the month then it is in the 'stayed the same' category. If that firm's sales were down by 60% at the end of April then it would be in the 'deteriorated' category. The results show at the firm level the impact of the pandemic in April was persistent: the situation at 73% of firms stayed the same in this month.





Source: Inquérito Rápido e Excecional às Empresas – COVID-19 | Notes: This figure presents the share of firms that had their sales level deteriorate, stay the same or improve throughout April, the first month of the IREE survey.

Chart 3 reports the share of firms whose employment declined by more than 25% relative to a nonpandemic scenario. Here, employment is the number of workers actively working; it does not include paid furlough (*layoff simplificado*) contracts. First, we observe a declining trend over time. Initially, more firms cut their number of workers and, eventually, they started bringing them back to work or even hiring. In early April, 38% of all surveyed firms reported having more than 25% fewer workers than expected. In early July, this number had decreased to only 10%. Note also that these numbers are somewhat lower than the corresponding figures for the pandemic impact on sales. In other words, even though the quantitative impact on sales was deeper, firms opted to keep some of their workers on the job. A possible reason for this is that some aspects of a firm's operations cannot be scaled with sales (e.g. a shop needs an attendant whether it is sells ≤ 100 or ≤ 1000 worth of goods). If hours declined in a similar way to employment, then this would imply that labor productivity declined. Moreover, there is a significant variation in the impact on employment across sectors. Once again, the accommodation and food services (ACC) sector was the hardest hit by the pandemic. In the first week of the survey, almost 80% of firms in this sector reported cutting their employment by more than 25%. In early July, this number was still at 38%. Juxtapose this with the construction sector: 30% of construction firms reported a similar cut in employment in April, but only 4% did so in July.



Chart 3 • Share of firms whose employment declined by more than 25% over time, by sector | Percentage

Source: Inquérito Rápido e Excecional às Empresas – COVID-19 | Notes: This figure presents the share of firms whose employment declined by more than 25% during the various weeks of the IREE survey for different sectors of the economy. Employment is the number of people actively working, which excludes people with employment contracts who are not working for any reason. The sectors are: Manufacturing (MAN), Construction (CON), Wholesale and retail trade (RET), Transportation and storage (TRN), Accommodation and food services (ACC), Information and communication (COM), Real Estate (RES), Professional and scientific and technical activities (PST) and Other industries (OTH). The figure also reports the behavior in the aggregate (Total).

Relationship with growth

The question to address in this section is whether the pandemic disproportionately affected highgrowth firms. This is important for understanding the impact of the pandemic because of the particular role that these firms play in the economy. They are the firms that resources are being reallocated to in a way that can affect aggregate productivity, and are also the firms driving aggregate growth.

This analysis requires firms to be sorted by their pre-pandemic sales growth rates reported in the IES data for 2016 to 2018. Specifically, within each sector, firms in the IREE sample are sorted into four sales growth quartiles. The 25% of firms with slowest growth are in quartile one (Q1) up to the 25% of firms with the fastest growth in quartile four (Q4). The focus is on growth quartiles within sectors since there are differences in average growth rates across sectors.

Table 1 presents some statistics about firms in each growth quartile. On average, faster growing firms are younger: 24 years old in the top quartile compared with 29–31 years old in the lower growth quartiles. Note that the sample is restricted to firms aged at least 5 years because data going back to 2015 is used to sort by sales growth. Firm size is increasing in growth over the first three quartiles, while the highest growth firms are smaller than those in quartile three. The IREE sample is weighted towards relatively large firms, as average employment and average sales are 97 and €14.8 million, respectively, even in the lowest growth quartile.³ For production inputs, higher-growth firms tend to be less labor intensive (measured by total employee expenses to sales ratio). Regarding financial position, leverage (liabilities to assets) is highest in the tails of the growth distribution, although the differences are not large.

	Q1	Q2	Q3	Q4
Mean				
Age	31	31	29	24
Sales (m€)	14.8	25.6	31.1	26.8
Employment	97	147	174	139
Employee expenses to sales	0.32	0.26	0.23	0.22
Liabilities to assets	0.67	0.56	0.58	0.62
Standard deviation				
Age	17	18	17	15
Sales (m€)	82.6	203.2	163.0	128.7
Employment	428	566	990	568
Employee expenses to sales	0.63	0.37	0.21	0.24
Liabilities to assets	1.37	0.47	0.66	0.31

Table 1 • Sample characteristics by growth quartile

Source: Inquérito Rápido e Excecional às Empresas – COVID-19. | Notes: Age, sales and employment, liabilities to assets and employee expenses to sales are all taken from IES 2018. Two years are added to age to give 2020 ages. Growth quartiles are determined by average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.

The first step of the analysis is to assess whether high-growth firms were more likely to have experienced contractions in sales and employment during the pandemic. To do this, run the following ordinary least squares regression:

$y_i = \beta_0 + \beta_1' Growth_i + \beta_2' Sector_i + \beta_3' X_i + \varepsilon_i,$

where y_i is a binary variable equal to one if firm *i*'s sales or employment contracted at some point during the pandemic (relative to what they would have expected in its absence), *Growth_i* is a vector of dummy variables for whether firm *i* is in growth quartiles two, three or four in its sector (quartile one is the omitted category), *Sector_i* is a vector containing control variables for firm age, sales and whether or not a firm was located in Lisbon.⁴ The control for Lisbon is included because high-growth firms are more likely to be located there. The control variables are measured using data from IES for 2018. The coefficients on *Growth_i* in this regression tell us whether firms with different growth levels were more or less likely to experience a decline in sales or employment, while the other variables control for other differences between firms to get a better measure of the correlation between growth and these outcomes.

^{3.} To put size and age in context, the average age, sales and employment for firms in IES that meet the sample criteria for the analysis are 19, €1.4m and 11, respectively.

^{4.} A logit regression can be used instead of OLS and the results are qualitatively the same.

The results of this analysis are presented in Table 2, columns (1) and (2). To keep the focus on the main results, only the coefficients on the growth quartiles are reported. The main message is that higher-growth firms were more likely to experience a decline in sales (column 1) and employment (column 2). Firms in the third growth quartile were 2.2 percentage points more likely to experience a decline in sales and 3.4 percentage points more likely to experience a decline in employment than the slowest growing firms. The differences were larger for the fastest growing firms, at 3.5 and 4.2 percentage points respectively.

	Sales	Employment
	(1)	(2)
Growth Q2	0.008	0.011
	(0.012)	(0.016)
Growth Q3	0.022*	0.034**
	(0.012)	(0.016)
Growth Q4	0.035***	0.042***
	(0.012)	(0.016)
Sector FE	Yes	Yes
Controls	Yes	Yes
Observations	6436	6556
R2	0.026	0.052

Table 2 • Contractions in sales and employment by growth quartile

Sources: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada. | Notes: This table reports the β_1 coefficients from the regression. These are coefficients on dummy variables for whether a firm is in the second, third or fourth quartile of its industry's growth distribution. The first quartile is the omitted category. Growth quartiles are determined by average annual growth rates for sales from 2015 to 2018 in IES. The dependent variable is a binary variable indicating whether a firm's sales (column 1) or employment (column 2) contracted at some point during the IREE survey. Employment is the number of people actively working, which excludes people with employment contracts who are not working for any reason. The control variables are firm age, sales in 2018, and whether the firm is located in Lisbon. Standard errors are in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels respectively.

To analyze changes in sales in more detail, Chart 4 presents their distribution for each growth quartile. In this figure, a firm's decline in sales is the maximum that it reported in the IREE survey between April and July. This allows the timing of the impact of the pandemic to differ across firms and captures the trough of the shock at the firm level. Relative to the regression results, this figure provides more detail on the size of the contractions that firms experienced but does not have the controls that the regression provides. The only control is sectoral, since this is embedded in the construction of the growth quartiles.

The fact that higher-growth firms were more likely to experience a decline in sales shows up in the four bars representing the shares of firms whose sales did not decrease (the \ge 0% category). The share of firms in this category is monotonically decreasing as you go up the growth distribution. In the first growth quartile (yellow), 15% of firms had no decline in sales and this decreases to 12% for quartile four (green). Amongst firms with a decline in sales, they were larger for firms in the tails of the growth distribution. Specifically, firms in both the first and fourth growth quartiles were more likely to have declines greater than 50%. Thus, not only were higher-growth firms more likely to experience a decline in sales, but they suffered bigger declines as well.

To better understand the exposure of firms to large sales shocks across the growth distribution, next break down the sample along other dimensions. First, let's consider whether the results are driven by particular sectors. Chart 5 presents the share of firms in each sector by growth quartile whose sales declined by more than 50%. In the aggregate we saw that firms in growth quartiles one and four were most exposed to these shocks. The results by sector show that this is not driven by a small number of sectors, but is a broad trend. The first growth quartile suffered disproportionately

in the manufacturing, wholesale and retail trade, information and communication, professional activities and other sectors. The shock to high-growth firms is relatively large in the manufacturing, construction, accommodation and food services, information and communication, real estate and professional activities sectors.



Chart 4 • Distribution of maximum sales decline by growth quartile | Percentage

Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada | Notes: This figure presents the distribution of the maximum decline in sales that firms experienced, by growth quartile. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles. The maximum decline in sales is the largest decline that a firm reports in the IREE survey.

The second dimension to consider is age. There is evidence that younger firms have greater ability to innovate than older firms (e.g. Acemoglu et al, 2018; Akcigit and Kerr, 2018), so the pandemic may have larger effects on aggregate growth if it disproportionately affects high-growth young firms. The data provide some evidence of this. Chart 6 provides the share of firms in each growth quartile by age quartile which experienced a decline in sales of at least 50%. On average younger firms were slightly more likely to experience a large decline in sales, with 49% of firms aged 5–17 in this category, compared to 45–48% of firms in the older age quartiles. More importantly though, it is precisely young firms in the top growth quartile who were most likely (at 52%) to experience a large decline in sales.





Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada. | Notes: This figure presents the share of firms with a decline in sales of at least 50% during the IREE survey, by sector and growth quartile. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles. The sectors are: Manufacturing (MAN), Construction (CON), Wholesale and retail trade (RET), Transportation and storage (TRN), Accommodation and food services (ACC), Information and communication (COM), Real Estate (RES), Professional and scientific and technical activities (PST) and Other industries (OTH).





Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada. | Notes: This figure presents the share of firms with a decline in sales of at least 50% during the IREE survey, by age quartile and growth quartile. The bounds on the age quartiles are in the horizontal axis title. Age is measured in years. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.

Another characteristic of firms that could be related to their growth potential is their leverage. Research suggests that for private U.S. firms leverage is positively related to growth and tighter borrowing constraints can be particularly harmful to high-growth-high-leverage firms during recessions (Dinlersoz et al, 2018). A possible reason for this relationship is that firms with high potential ideas have the ability to expand a lot and need financing to do so. Other research argues that a defining characteristic of successful entrepreneurs is a relatively high willingness to take on risk (Levine and Rubinstein, 2017), which leverage is one indicator of. While it is beyond the scope of this special feature to assess whether leverage is an indicator of growth potential or innovation, the data is consistent with higher-leverage firms suffering more during a downturn. Firms in the top leverage quartile were more likely than other firms to experience a large decline in sales (51% compared to 44-46%).⁵ Interestingly, this was particularly true for firms also in the top growth quartile (54%).



Chart 7 • Share of firms with a sales decline of >50%, by leverage and growth | Percentage

Source: Inquérito Rápido e Excecional às Empresas—COVID-19 and Informação Empresarial Simplificada | Notes: This figure presents the share of firms with a decline in sales of at least 50% during the IREE survey, by leverage (liabilities to assets) quartile and growth quartile. Firms are divided into growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES, and leverage quartiles are determined by 2018 IES.

5. Firms are sorted according to their 2018 leverage (total liabilities to total assets) in IES.

Post-lockdown recovery by growth

A natural follow up question is whether higher-growth firms were able to recover relative to their peers after the economy opened up beginning in May? This question can be addressed in a number of ways. Take the regression specified earlier and change the dependent variable to be whether a firm's sales or employment declined in the last survey that they answered in June or July, relative to what they would have expected in the absence of the pandemic. The regression now tells us whether higher-growth firms were still worse off in June and July vis-à- vis the other growth groups. The results in Table 3 show us that they were not. Higher-growth firms had recovered relative to their peers so that, at the 5% significance level, none of the higher-growth quartiles were more likely to have had a decline in sales or employment than the first quartile. This indicates that these higher-growth firms did recover (relatively) once the lockdown was eased.

	Sales	Employment
	(1)	(2)
Growth Q2	0.005 (0.019)	-0.028* (0.017)
Growth Q3	0.017 (0.019)	0.020 (0.017)
Growth Q4	-0.001 (0.019)	0.026 (0.017)
Sector FE	Yes	Yes
Controls	Yes	Yes
Observations	5091	5271
R ²	0.052	0.067

Table 3 • Contractions in sales and employment by growth quartile, June-July

Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada | Notes: This table reports the β_1 coefficients from the regression. These are coefficients on dummy variables for whether a firm is in the second, third or fourth quartile of its industry's growth distribution. The first quartile is the omitted category. Growth quartiles are determined by average annual growth rates for sales from 2015 to 2018 in IES. The dependent variable is a binary variable indicating whether a firm's sales (column 1) or employment (column 2) declined in the last survey that they answered in June or July. Employment is the number of people actively working, which excludes people with employment contracts who are not working for any reason. The control variables are firm age, sales in 2018, and whether the firm is located in Lisbon. Standard errors are in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels respectively

The analog of Chart 4 for June and July sales is presented in Chart 8. The first thing that jumps out is that the share of firms without a decline in sales is much higher. In each quartile 37–40% of firms had no decline in sales, compared to 12–15% at the worst point of the contraction. This is further evidence of the recovery that occurred. Also notable is that, amongst firms in the top growth quartile, a relatively high share now had no decline in sales. For those firms that did still have depressed sales in June and July, there remains evidence that it was firms in the tails of the growth distribution that were suffering the most. These quartiles have much lower shares of firms with declines of up to 25% and much higher shares with greater declines.

To get a sense of the timing of the evolution of sales for each growth quartile, Chart 9 presents the share of firms in each quartile with a decline in sales of more than 25% for each round of the IREE survey. One can see the dispersion across the growth quartiles was greatest in the first three weeks of April and that it gradually declined as the economy recovered through May, June and July. As an example, the gap between the second and fourth quartiles was 10 percentage points in the first week of April, and this had narrowed to 6 percentage points by July. The figure also confirms that it was firms in the tails of the growth distribution that were most exposed to these large sales shocks, and this has been a persistent feature of the pandemic.



Chart 8 • Distribution of sales decline for June-July by growth quartile | Percentage

Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada. | Notes: This figure presents the distribution of the decline in sales for each firm, in the last survey that they responded to in June or July. The sample is divided into growth quartiles within each sector, with one distribution for each quartile. The four growth quartiles are determined by the average growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.



Chart 9 • Share of firms whose sales declined by more than 25% by growth quartile | Percentage

Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada | Notes: This figure presents the share of firms whose sales declined by more than 25% in each round of the IREE survey, by growth quartile. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.

Government support, credit and operational changes

In this section, attention turns to how firms responded to the pandemic; in particular considering their use of government support policies, changes to their production and distribution, the use of teleworking and whether they increased their use of credit. As before, differences between firms with respect to their growth rates (before the pandemic) will be considered. It should be noted that to the extent that government policies are discussed, the aim is to describe which firms used them rather than to evaluate them. That is, the exercise is positive, not normative. Moreover, the reader should keep in mind that the sample is not representative of all Portuguese firms as it does not include the agriculture, mining, utilities and financial sectors, and is biased towards larger firms.

To start, focus on the use of the four government support policies discussed earlier. The analysis considers the share of firms in each growth quartile which made use of these policies, with the results in Chart 10. Overall the policies were widely used with 51% of firms using at least one of them. Thirty-six percent of firms used the simplified layoff, 21% used the loan moratorium, 14% took up government credit lines and 25% deferred their tax payments. There was variation in the firms using each policy, as only 4% of firms used all four. The simplified layoff policy had stronger uptake amongst firms in the tails of the growth distribution. To understand this, it helps to remember the eligibility criteria for using this policy. Firms could qualify by being forced to close by the pandemic or experiencing a decline in sales of 40% relative to the previous two months. Returning to Chart 4, it was firms in the tails of the growth distribution which were most likely to experience large declines in sales, which matches up with them being most likely to use the simplified layoff policy. For the moratorium and government credit lines we see that higher-growth firms were more likely to use both policies. This correlates with the fact that higher-growth firms were more likely to experience a decline in sales. For the tax suspension policy, there is no clear relationship with firm growth.





Source: Inquérito Rápido e Excecional às Empresas—COVID-19 and Informação Empresarial Simplificada. | Notes: This figure presents the share of firms using four government support policies, by growth quartile. A firm is classified as having used a particular policy if it reports using that policy at least once during the course of the IREE survey. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.

Aside from using government support, some firms could also access private credit lines to help them through the pandemic. Overall 21% of firms reported increasing their use of credit from banks or other sources in April or May. By growth quartile, there is a clear pattern that higher-growth firms were more likely to increase their use of credit (Chart 11). Firms in the top growth quartile were 34% more likely to increase their use of credit than firms in the bottom quartile. Again, this correlates with the fact that higher-growth firms were more likely to suffer declines in sales. If we look at the use of private credit by sector (Chart 12), at least 10% of firms in each sector increased their use of credit and the propensity to do this was highest for firms in the hardest hit sector, namely accommodation and food services.

The final aspect of firms' responses to cope with the pandemic is whether they changed their operations. With the pandemic affecting supply chains, the type of products that consumers demand, and the way that they can be accessed and consumed, the pandemic had the potential to significantly affect the way that firms operated their businesses during the peak of the pandemic. The IREE survey investigated this by asking firms in the middle two weeks of April whether, due to the pandemic, firms were modifying or diversifying their production, or altering or reinforcing their

distribution channels (e.g. selling online or providing takeaway service). The share of firms who made such changes was large (Chart 11). Thirty-one percent of firms reported diversifying or modifying their production and 22% reported changing their distribution methods. Higher-growth firms were slightly more likely to make changes to their production, while for changes to distribution firms in the lowest growth quartile were least likely to make changes. Across sectors (Chart 12), the propensity to make production changes was fairly even with 29–38% of firms making such changes in all sectors except transportation, in which the rate was lower. There was more heterogeneity in changes to distribution. Firms in wholesale and retail trade, accommodation and food services, and information and communication were most likely to make such changes (with rates of 29–31%), while these changes were much less common in manufacturing, construction and transportation.





Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada | Notes: This figure presents the share of firms who: increased their use of bank or other credit as a result of the pandemic; modified or diversified their production; and altered or reinforced their distribution channels. These questions were only asked in some weeks of the IREE survey, so the sample is restricted accordingly. Firms were asked about credit in April and May. Questions about changes to production and distributions were in the middle two weeks of April. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.



Chart 12 • Share of firms increasing their credit and changing their products and distribution by sector | Percentage

Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada | Notes: This figure presents the share of firms in each sector which: increased their use of bank or other credit as a result of the pandemic; modified or diversified their production; and altered or reinforced their distribution channels. These questions were only asked in some weeks of the IREE survey, so the sample is restricted accordingly. Firms were asked about credit in April and May. Questions about changes to production and distribution were in the middle two weeks of April. The sectors are: Manufacturing (MAN), Construction (CON), Wholesale and retail trade (RET), Transportation and storage (TRN), Accommodation and food services (ACC), Information and communication (COM), Real Estate (RES), Professional and scientific and technical activities (PST) and Other industries (OTH).

Teleworking was another prominent change to the operations of many firms during the pandemic and the IREE asked firms about this from the last week of April onwards. Chart 13 presents the share of firms with more than 25% of employees in teleworking for each relevant period of the survey for each sector. While there were some firms in all sectors who made use of teleworking at this level, as expected there is significant heterogeneity. Teleworking was most common in information and communication, real estate, professional activities and other industries with 37–79% of firms in these sectors placing over 25% of employees in teleworking. The other main feature of this figure is that teleworking was a persistent response to the pandemic. For the total sample 26% of firms had more than 25% of employees in teleworking by pre-pandemic growth quartiles rather than sectors. The main result is that the highest growth firms were most likely to use teleworking in April, May and early June, but the difference tapers off after that.



Chart 13 • Share of firms with more than 25% of employees in teleworking by sector

Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada | Notes: This figure presents the share of firms with more than 25% of their active employees in teleworking for different sectors of the economy from the last week of April onwards. Firms were not asked about teleworking prior to this. The sectors are: Manufacturing (MAN), Construction (CON), Wholesale and retail trade (RET), Transportation and storage (TRN), Accommodation and food services (ACC), Information and communication (COM), Real Estate (RES), Professional and scientific and technical activities (PST) and Other industries (OTH). The figure also reports the behavior in the aggregate (Total).



Chart 14 • Share of firms with at least 25% of employees in teleworking by growth quartile

Source: Inquérito Rápido e Excecional às Empresas – COVID-19 and Informação Empresarial Simplificada | Notes: This figure presents the share of firms with at least 25% of employees in teleworking for each growth quartile from the last week of April onwards. Firms were not asked about teleworking prior to this. Firms are divided into four growth quartiles within each sector determined by their average annual growth rates for sales from 2015 to 2018 in IES. Q1, Q2, Q3 and Q4 denote the four growth quartiles.

Conclusions

Covid-19 has been a large shock to countries around the world and Portugal has been no exception. This article studies the impact of this shock on Portuguese firms with particular focus on how high-versus low-growth firms have been affected.

For the aggregate trends, the main findings are that the shock to firms was large and sustained throughout April. Around 60% of firms in the sample experienced a decline in sales of more than 25%. It was also disruptive, with 31% of firms making changes to their production, 22% changing their distribution process, and 26% of firms placing more than a quarter of their staff in teleworking as of the end of April. The shock has eased from May onwards, however as of early July 31% of firms still had sales more than 25% below what they would have expected absent Covid-19. The accommodation and food services sector has been hardest hit, with close to 90% of firms experiencing a sales decline of over 25% in April, and this was still true for 75% of firms in early July.

The analysis of firms by growth rate has shown that higher-growth firms suffered more from the Covid-19 shock, and this was particularly the case for young and highly leveraged firms. Firms in the top growth quartile were 3.5 percentage points more likely to experience a decline in sales than firms in the bottom growth quartile. Encouragingly, they have recovered relative to their peers in the subsequent months, with no significant difference remaining as of early July. In response to these shocks, higher-growth firms were more likely to use government support in the form of simplified layoff, the debt moratorium and government credit lines, have been more likely to tap private credit sources, and made greater use of teleworking.

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The impact of the pandemic on private consumption: evidence from card spending data

Introduction

The pandemic resulted in a significant and abrupt fall in real private consumption in the second quarter of 2020 and a recovery in the third quarter (quarter-on-quarter rates of change of -13% and 12.8%). An analysis based on monthly data of payments with Portuguese bank cards shows that the initial shock had very different effects on the basket of goods and services consumed, with spending on food increasing (by around 25% from March to April 2020 on average, compared to the same period of the year before) and with purchases of durable goods and services declining (35.4% and 59% respectively in April), particularly in the case of services that require social interaction. In the subsequent period, spending on durable goods recovered, surpassing the levels of the previous year in September (17.1%), but the improvement in services was more gradual (year-onyear change of -8.6% in September). Spending behaviour varied by consumer group, with more unfavourable developments over the period in the case of individuals with higher average spending (changes of -35.9% in April and -0.4% in September) compared to low-consumption individuals (changes of -21.8% and 8.8% in April and September respectively). The regional impact varied also, with the Lisbon Metropolitan Area registering a larger initial reduction and a subsequent smaller recovery (falls of 41.7% and 5.2% in April and September respectively, compared to changes for the country as a whole of -33.4% and 1.9% in the same months).

Data

The database analysed was provided by the interbank services provider SIBS (*Sociedade Interbancária de Serviços*) and covers all purchases made through the physical Multibanco terminal network (point of sale (POS) terminals and ATMs) with cards issued in Portugal. In 2019, this network accounted for 85% of payment systems operations in Portugal, such that this dataset covers the overwhelming majority of purchases with cards carried out by Portuguese consumers.¹ The sample, which only includes Portuguese card operations, is the best proxy for the national accounts' private consumption concept.

The data group together individual transactions into monthly observations by merchant activity (using the NACE nomenclature), by municipality (total of 308 municipalities) and by quartile of average card expenditure. The municipalities correspond to the place of highest usage of the card over the previous 12 months. The analysis looks at three consumption groups: Group A – high consumption, given by the fourth quartile of average card expenditure at national level over the previous 12 months; Group B – medium-high consumption, given by the third quartile and Group CD – average/low consumption, aggregating the 50% of cards with the lowest consumption. As might be expected, the large majority of spending belongs to Groups A and B (67.7% and 20.7% in 2019 respectively) with a much smaller

The other operations relate to cheques, bills of exchange, direct debits and transfers (12%) and operations on other networks (3%). In value terms, card
transactions represent around 25% of all payment systems operations. Transfers account for around 50%, direct debits 5% and cheques 18%. However,
many of these operations relate to firms' payment activity, and therefore are beyond the scope of this analysis.

amount accounted for by Group CD (11.5% in 2019). The share of consumers in the various groups (A, B and CD) correspond to monetary expenditure shares of 64%, 23% and 13% respectively, from the Household Expenditure Survey data. The percentage of monetary income for these groups is 57%, 25% and 18% respectively. Therefore, these consumption groups proxy income classes.

Part of the card transactions included in the database relate to business-to-business activity and not to private consumption expenditure. In order to minimise this problem, only payments associated with retail trade and services activities were considered in the sample analysed. These sectors represent around 90% of all card payments in 2019.

The database used has two limitations for assessing private consumption: it does not include data on cash withdrawals or online purchases. These two payment methods evolved in opposite directions during the pandemic, with the former falling and the second rising in importance. This type of substitution between payment methods may be asymmetric across sectors, constituting another potential limitation of the analysis.

Developments in card payments closely track residents' private consumption, the reference aggregate (Chart 1). The correlation between a long series and private consumption, from 2002 to 2019, is close to 80%. This behavioural similarity occurs despite the fact that spending on cards represents only 38% of the value of private consumption. In particular, card payments are expected to capture the most cyclical part of consumption, as part of the remaining spending includes direct debits and bank transfers, normally associated with payment of services whose expenditure is typically more stable.





Sources: Statistics Portugal and SIBS (Banco de Portugal calculations). | Notes: Series not seasonally or calendar effects adjusted. Comparatively to the long series of card payments, the sample used in this Special Issue excludes online commerce and considers only payments associated with retail trade and service activities.

Description of card payments' developments

The fall in private consumption during the pandemic was much greater than suggested by its usual drivers, in particular, by disposable income. Private consumption fell by 13.5% year-on-year, while real disposable income fell by around 2%, which translated into a sharp increase in the household saving rate in the second quarter (to 19.1%, compared to 7% on average for 2019). This indicates the importance of explanatory factors directly associated with the pandemic, such as concerns over health, reflected in the fear of contagion and consequent desire for social distancing, which could differ between population groups. Restrictions on personal mobility and several economic activities during the lockdown period also influenced consumption.

In March, the total value of Portuguese card payments fell by 13.3% year-on-year (except where indicated, all rates of change in this text are year-on-year) (Chart 2). This decline was sharpest in April, reaching 33.4%. The following months saw progressively smaller falls. In August and September, the value of payments even surpassed the previous year's level, by 3.0% and 1.9% respectively. The frequency of purchases fell during the lockdown: the number of payments fell more significantly than total spending and the average amount of each purchase increased. In September 2020, the frequency of shopping trips by individuals had already returned to normal.



Chart 2 • Payments with Portuguese cards – total value, number and average amount | Yearon-year percentage change

The pandemic implied a significant change to the basket consumed by individuals in this period. There is evidence of a substitution of in-person shopping for online shopping but this is likely to have had a limited effect on small businesses and on services in general. The analysis starts by differentiating spending behaviour in three large categories: durable goods, non-durable goods and services (Table 1). The total spent declined across all these components in April but the decrease was particularly marked in services (59%, compared to 35.4% and 12.1% for durable and non-durable goods respectively). In the following months, expenses recovered across all consumption categories. In the case of durable and non-durable goods, the values in September 2020 stood above those of a year earlier. In contrast, the rate of change for services in September was still negative (-8.6%).

Spending on non-durable goods showed greater resilience, reflecting the impact of an increase in demand for food (Table 1 and Chart 3). Food purchases increased substantially (25.4% on average in March to April), especially in smaller-sized establishments. Aside from the substitution of restaurant trips for home-cooked meals, the increased spending on food in February and March is likely to have been inflated by hoarding behaviour. The number of purchases in large-format stores declined (12% on average in March to April), probably due to fears of crowds and restrictions on mobility, unlike smaller-format establishments, which are likely to have benefited from the advantages of proximity. Accordingly, average spending per purchase in supermarkets and hypermarkets rose significantly in March and April (by around 39% on average), surpassing the levels of the Christmas peak. The average spending per purchase fell in the following months but remained relatively high up to September.

Consumption of products from pharmacies and parapharmacies increased (by 40.6% and 5.7% in March and April respectively), which is likely to have partly reflected the demand for disinfectants

Source: SIBS (Banco de Portugal calculations).

and personal protection equipment. This contrasts with developments in health services, where card payments declined in April (by 79.6%), recovering sharply in the following months. In the other nondurable goods, there was a sharp fall in spending on clothing and footwear, perfumes and cosmetics, reaching 95% in April. Spending in this sector recovered over the following months but in September it remained 4.4% below its level of a year earlier, which could be the result of lower demand, associated to more housebound individuals, and capacity restrictions of the establishments.

	Weight		Yea	ar-on-y	ear pe	rcenta	ige cha	ange, 2	2020	
	2019	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
Total	100	9.3	12.5	-13.3	-33.4	-19.2	-7.5	-0.8	3.0	1.9
Durable goods	12.1	11.9	13.7	-25.0	-35.4	-1.5	22.1	17.9	15.8	17.1
Non-durable goods	46.6	8.2	14.0	4.7	-12.1	-3.5	0.3	5.9	5.4	7.2
Services	41.3	9.8	10.7	-31.8	-59.0	-38.3	-25.5	-13.5	-2.3	-8.6
Of which:										
Food items	26.5	13.2	20.2	27.5	23.3	27.5	15.5	21.2	16.4	16.1
Super and Hypermarkets	23.8	12.8	19.8	24.0	19.2	25.1	13.3	19.4	15.5	14.0
Grocery stores and mini-markets	1.1	17.9	24.0	61.7	60.0	44.6	32.2	34.6	24.4	34.1
Traditional trade in food	1.5	16.8	24.2	56.8	57.7	51.5	36.9	38.6	24.7	37.7
Pharmacies and parapharmacies	2.8	6.3	12.4	40.6	5.7	-4.5	6.0	9.1	10.3	12.4
Health	2.9	11.5	9.1	-37.7	-79.6	-36.1	11.4	7.6	11.5	17.9
Passenger transport, vehicle rental	0.7	-4.3	4.3	-37.9	-76.5	-60.9	-46.0	-40.1	-30.4	-35.6
Petrol Stations	5.8	9.5	9.0	-20.6	-49.8	-30.3	-14.8	-6.8	-5.8	-0.2
Hotels and accommodation	1.1	8.4	32.8	-52.4	-92.6	-78.4	-33.8	3.8	36.5	25.4
Restaurants	9.2	4.4	11.0	-56.5	-81.7	-61.4	-32.1	-10.6	-1.4	-3.1
Leisure, culture and sport	1.9	11.3	3.1	-68.1	-95.5	-91.0	-73.5	-71.3	-61.0	-55.8
ICT equipment; office machinery and equipment	1.6	8.3	11.0	-33.6	-60.3	-28.3	6.3	9.0	9.9	11.5
Vehicles and accessories	3.7	12.8	12.0	-20.0	-54.1	-29.3	8.5	11.8	8.6	13.8
Sports and recreational equipment	1.6	7.5	12.8	-43.6	-75.3	-27.3	12.2	16.4	11.4	10.3
Clothing, footwear, perfume and cosmetics	5.7	3.5	8.7	-63.2	-95.4	-71.0	-27.6	-15.9	-7.7	-4.4

Table 1 • Payments with Portuguese cards by type of good/service – total value | Year-on-yearpercentage change

Source: SIBS (Banco de Portugal calculations). | Notes: Durable goods include expenditure on information and communication technology (ICT) equipment, office machinery and equipment, optical and photographic equipment, decor and home equipment, building materials and doit-yourself supplies, household appliances, sports, recreation and leisure supplies, games, toys and childcare articles, books and records, vehicles and accessories. Non-durable goods include expenditure on food (e.g. super and hypermarkets, grocery stores, butchers, fish shops, among others), non-food retail trade in non-specialized stores, clothing and footwear, perfume and cosmetics, pharmacies and parapharmacies, and petrol stations. The expenditure in super and hypermarkets is included in the food component. The database under analysis does not allow the distinction by type of goods acquired in this type of stores. It is possible to acquire another type of goods in these establishments, including some durable ones, but the sale of food products is dominant in this activity.

Chart 3 • Payments with Portuguese cards by type of good/service – April and September 2020 | Year-on-year percentage change



Source: SIBS (Banco de Portugal calculations). | Note: For the pharmacy and parapharmacy sector, the year-on-year rates of change shown refer to the months of March and September 2020.

Spending on durable goods fell substantially during the months of lockdown and recovered relatively quickly in the months thereafter, reaching a level in September that was 17.1% above the one of the previous year. The pandemic brought changes to families' lives that are likely to have stimulated consumption of some durable goods. The rapid rebound of purchases of information and communication technology (ICT) equipment and office machinery and equipment (growing by 11.5% in September) should be viewed in the light of the investment that households had to make to allow teleworking and remote schooling. Purchases of sports and recreation equipment also recovered strongly (by 10.3% in September), reflecting the greater amount of time spent at home.

Certain services sectors were practically closed during the state of emergency, with decreases of in-person transactions of almost 100%. These include accommodation, restaurants, leisure, culture and sport sectors. In the accommodation sector, the amounts of Portuguese card payments recovered strongly in August and September (by 36.5% and 25.4% respectively), suggesting that the Portuguese substituted holidays abroad for holidays within Portugal.

Restaurants also recovered in recent months. In September, card spending in these establishments was around 3% below that observed for the same month a year prior. This is a notable recovery given the capacity restrictions associated to the social distancing rules. Note that this recovery could be overstated due to the greater use of cards instead of cash payments, a trend that intensified during the pandemic and that could have been more significant in this sector. In contrast, the amounts spent on leisure, culture and sport activities in September stood more than 55% below the same period of 2019, due to the fact that many of these services remained closed or with significant capacity restrictions.

The lockdown also resulted in a sharp fall in payments for transport services and fuel purchases in April. In the case of the former, despite some subsequent rallying, spending was nevertheless 35.6% down year-on-year in September, reflecting the persistence of infection fears and the increase in teleworking. In contrast, the use of one's own car for transport seems to have recovered more quickly, given the behaviour of payments to petrol stations (changes of -49.8% and -0.2% respectively in April and September). Part of this recovery is explained by the trend in fuel prices (-19.2% and -15.6% in April and September respectively). This greater use of individual transport is also reflected in the resumption of car purchases, which have been increasing since June (13.8% growth in September).

Changes to consumption patterns during the pandemic, linked to the severity of the shock by activity sector, are unprecedented in comparison with previous recessions, but are common to several countries. The same conclusions are shared by Carvalho et al. (2020) for Spain, Bounie et al. (2020) for France, Hacioglu et al. (2020) for the United Kingdom, Bachas et al. (2020) for the United States, Andersen et al. (2020) for Denmark and Chen, Qian and Wen (2020) for China. The results obtained also corroborate the evidence presented by Carvalho, Peralta and Santos (2020a) for Portugal, using data from the same source up to April 2020.

Impact by consumption groups

Results show that the lowest consumption group was the one that reduced total monthly payments the least in April (21.8%) and was the one that recovered the most up to September (Table 2). Contrastingly, the largest negative impact seen in the amounts spent by the highest consumption group. Thus, in the data available, the highest consumption group contributed -24.1 p.p. to the change in total card spending in April, while the contribution made by the other two groups was -6.7 p.p. and -2.6 p.p. respectively. In September, the contribution made by the highest consumption group was close to zero and in the case of the other groups, it was around 1 p.p..

This outcome is unsurprising given the differences in consumption structure between the three groups – with the highest consumption group showing a higher expenditure share in services – but

suggests that health concerns were a key driver of the reduction in total consumption expenditure. Policies in support of employment and income are likely to have played a key role in containing the decline in total spending.

	Weight		Ye	ar-on-y	/ear pe	ercenta	age cha	ange, 2	.020	
	2019	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
Total	100	9.3	12.5	-13.3	-33.4	-19.2	-7.5	-0.8	3.0	1.9
Group A – high consumption	67.7	10.1	12.2	-14.1	-35.9	-23.2	-10.7	-3.9	0.7	-0.4
Group B – medium-high consumption	20.7	7.3	12.2	-11.3	-32.0	-15.3	-2.5	3.6	6.4	5.5
Group CD – average/low consumption	11.5	8.4	14.9	-12.1	-21.8	-2.2	2.5	11.2	11.8	8.8
By type of good/service										
Group A – high consumption	100									
Durable goods	12.6	12.2	13.3	-24.2	-39.2	-8.9	15.6	12.1	10.3	12.6
Non-durable goods	42.8	8.3	13.2	4.4	-14.6	-7.0	-1.6	3.0	3.3	6.0
Services	44.7	11.3	11.0	-30.7	-57.7	-39.8	-27.6	-14.8	-3.5	-9.9
Group B – medium-high consumption	100									
Durable goods	11.9	10.9	14.1	-26.7	-35.9	3.4	26.8	22.8	19.0	19.4
Non-durable goods	51.6	7.1	13.9	7.2	-10.8	-0.6	4.4	10.2	9.2	11.1
Services	36.5	6.4	9.4	-33.6	-62.2	-36.8	-22.4	-12.1	-0.7	-6.9
Group CD – average/low consumption	100									
Durable goods	9.4	11.8	15.7	-27.7	-4.8	50.8	62.6	54.1	51.2	46.8
Non-durable goods	60.2	9.6	17.2	2.1	-3.6	7.1	1.8	11.5	7.9	6.2
Services	30.4	5.2	10.5	-36.6	-62.5	-29.0	-14.9	-3.7	6.4	0.4

Table 2 •	Payments with	Portuguese	cards by	consumption	group -	total value	ue Y	/ear-on
year percer	ntage change							

Source: SIBS (Banco de Portugal calculations).

The evidence that the decreases in expenditure in response to the pandemic were larger among higher income consumer groups is common to other research studies that tackle this question, irrespective of the measure used. Some studies for other countries use the postcodes of the consumer's residence as a proxy for their income due to lack of data (Chetty et al. (2020) for the United States or Carvalho et al. (2020b) for Spain), while other studies use individuals' effective income before the pandemic (Bachas et al. (2020) for the United States and Eichenbaum et al. (2020) for Portugal). For France, Bounie et al. (2020) characterise consumers according to their position in the distribution of total pre-pandemic expenditure.

An explanation for this phenomenon, put forward by Chetty et al. (2020), is based on the fact that the individuals with higher incomes tend to spend more time at home and work remotely with greater frequency. In Portugal, in recent months remote work prevailed among individuals with higher education, who work in certain segments of the services sector and live in the Lisbon Metropolitan Area (*Área Metropolitana de Lisboa*, henceforth A. M. Lisboa), characteristics that are linked to higher income (Banco de Portugal, 2020). Also, Chetty et al. (2020) and Eichenbaum et al. (2020) present evidence that the larger decrease in spending by higher-income households, in particular on services that require greater personal interaction, is due to contagion fears and not to a loss of purchasing power.

A stylised fact of the Portuguese economy is that households with higher incomes save more (Alves and Cardoso (2010)). Accordingly, the more negative developments in spending by the high consumption group indicates that the significant increase in aggregate saving in the second quarter is likely to have been associated largely with the behaviour of these individuals.

The usual consumption basket for each group of consumers may help explaining the different behaviour identified above (Table 2). Thus the greater decline in spending by the high consumption group is associated to a composition effect related to the higher share of services and durable goods in their consumption. In contrast, spending on non-durable goods – particularly food, where total expenditure increased over the period – has a higher weight in the low consumption group's basket.

Furthermore, spending trends in these goods and services categories also varied among consumption groups over the period (Table 2). In April, the decline in durable and non-durable goods spending was much more modest in the lowest consumption group, while the reduction in services expenditure was similar across the three groups (at around 60%). In September, there was a marked recovery in the amounts spent by the lowest consumption group on durable goods and services. By contrast, in the two highest consumption groups, spending on services remained below that observed in September 2019 (9.9% and 6.9% respectively).

The smaller decline in spending on non-durable goods in the lowest consumption group in April is associated with the more marked increases in spending on essential goods, in particular on food and pharmacies and parapharmacies items. In the case of durable goods, the smaller reduction in spending among the low consumption group versus the others in April results from the more favourable developments in spending on household appliances, decor and home equipment, building material and DIY products. This group's strong growth in spending on durable goods in September 2020 reflects purchases of the aforementioned products but also ICT equipment, office material and cars. The more marked increase in spending by the low consumption group on cars (and also on fuels) seems to indicate that these are the consumers likely to have substituted travelling on public transport for using their own car.

Regarding services, the weaker recovery in spending by the high consumption group in September is generalised to the main services, but key among them due to their weight are accommodation, restaurants and health services. Spending among this group of individuals recovers more slowly in these sectors, which are more dependent on close personal contact, possibly indicating greater contagion fears. This is coherent with Eichenbaum et al. (2020), who provide evidence that in the context of the pandemic, older and higher-income individuals in Portugal cut their spending by more in relative terms.

Regional impact

By NUTS II regions, differences may also be found in the pandemic's effects on consumption expenditure (Table 3). The A. M. Lisboa registered the largest decrease in card payments in April (41.7%). In the other regions, spending declined less than the national average, with the more modest decrease taking place in the Alentejo (21.7%). The recovery also varied, with all regions showing positive rates of change in September except from A. M. Lisboa (-5.2%). Note that Lisbon maintained stricter containment measures for longer, and the consumption of services has a higher weight in this region.

	Weight									
	2019	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
Total	100	9.3	12.5	-13.3	-33.4	-19.2	-7.5	-0.8	3.0	1.9
Alentejo	5.5	9.1	12.8	-6.1	-21.7	-8.0	2.7	8.3	11.8	10.8
Algarve	5.1	8.9	13.0	-10.3	-31.3	-19.5	-6.6	-0.2	4.3	2.4
R. A. Açores	2.1	10.4	12.6	-9.6	-30.5	-16.7	-4.2	2.0	3.5	4.2
Centro	24.3	9.9	13.4	-10.5	-28.6	-13.8	-2.2	3.8	6.8	6.5
A. M. Lisboa	32.2	7.9	11.7	-17.8	-41.7	-28.9	-15.7	-8.1	-3.4	-5.2
R. A. Madeira	1.9	10.6	13.0	-7.9	-32.6	-13.9	-4.0	1.7	4.0	2.7
Norte	29.0	10.3	12.5	-12.9	-31.1	-15.7	-5.1	1.5	4.7	4.0

Table 3 • Payments with Portuguese cards by NUTS II regions – total value | Year-on-yearpercentage change

Source: SIBS (Banco de Portugal calculations). | Notes: NUTS II refers to the second level of the Nomenclature of Territorial Units for Statistics, 2013. The region corresponds to the place of greatest use of each card in the previous 12 months.

Spending also varied by municipality in the period under review, which can be linked to differences in median income (Chart 4). In certain urban municipalities in Lisbon and Oporto, the values of payments in April fell strongly and continued to show negative rates of change in September. By contrast, the municipalities least affected were some more rural regions in the country's interior. These findings are consistent with those presented by Hacioglu et al. (2020) for the United Kingdom: the country's capital city was the area most affected by the sharp fall in consumption in April and there are significant differences between the different regions at a detailed level. Chart 4 shows the year-on-year rate of change for payments in April and September 2020 versus the median income for each municipality in 2018. The correlation between median income levels and the changes in spending for each municipality is negative and statistically significant (correlation coefficient of around -35% for both months).

Chart 4 • Payments with Portuguese cards by municipality in April and September 2020 and median income of the municipality in 2018 | Year-on-year percentage change and euros



Sources: SIBS and Statistics Portugal - Income statistics at local level - 2018 (Banco de Portugal calculations). | Note: Gross reported income less personal income paid tax by tax household in 2018.

As urban municipalities most affected by the pandemic tend to have a higher median income, the set of 20% of municipalities with the highest median income performed more unfavourably than the others in the decline and in the recovery (Chart 5). The decline in spending in the municipalities with higher median income reached 38.8% in April. The recovery in September varies also, with the higher

income quintile showing an incomplete recovery (-2.4%) and the other municipalities recovering to a level clearly above that of a year before (8.7%). Accordingly, in contrast with the results of Carvalho et al. (2020b) for Spain, there is evidence for Portugal that the higher income regions adjusted their spending in a different way than the others. This finding is important for employment and income support policies, given the economic repercussions that this spending cut, together with the decline in international tourism, may have on the most affected regions.



Chart 5 • Payments with Portuguese cards by percentile of median income of the municipalities | Year-on-year percentage change

Final remarks

The pandemic shock had an impact on the basket of goods and services consumed by Portuguese households. According to card payments data, consumption of food increased at the peak of the pandemic crisis (by 26.1% on average in the period from March to May). Durable goods – purchases of which may be postponed more easily due to their nature – fell sharply but also made a marked recovery (changes of -35.4% in April and 17.1% in September). In the services sectors, which require social interaction and for which postponing of consumption is difficult, expenditure fell strongly and the recovery has been slower (declines of 59% in April and 8.6% in September).

In regional terms, the impact of the shock was greater in the Lisbon Metropolitan Area, which recorded a larger decline at first and a weaker recovery thereafter (falls of 41.7% and 5.2% in April and September respectively, compared to changes of -33.4% and 1.9% in the same months at the national level). The containment measures were stricter for longer in this region and the services sector weight is relatively larger compared to that of the other regions. The evidence also shows that the higher income municipalities behaved more unfavourably than the remainder.

An interesting economic analysis is the one stemming from the different consumer groups. The decline in spending was larger in the highest consumption group and the subsequent recovery was slower (changes of -35.9% and -0.4% respectively in April and September), which is likely to have been driven by fears of the disease and more frequent teleworking, as well as reflecting the consumption structure of this group. The sharp increase in aggregate saving in the second quarter was likely due

Sources: SIBS and Statistics Portugal - Income statistics at local level - 2018 (Banco de Portugal calculations). | Notes: Gross reported income less personal income paid tax by tax household in 2018. The upper quintile includes the municipalities above the 80th percentile of the distribution, i.e. the 20% of municipalities with higher median income in 2018.

to this group of consumers, which traditionally account for the largest share of household saving. This suggests that the loss of income may not be the most important reason behind the decline in aggregate consumption. The shock's smaller impact on card spending by the lowest consumption group (with changes of -21.8% and 8.8% respectively in April and September) reflects, on the one hand, their relatively larger share of spending on essential goods, and, on the other hand, more favourable spending developments, in particular on durable goods. This points to the effectiveness of the measures of income protection and support to the more vulnerable households in the recent period.

As regards future prospects, a sustained recovery in private consumption requires a medical solution for the disease, allowing confidence to return, but also the maintenance of support measures for the groups most exposed to the shock's economic damage. The sectorial and regional outlook for activity is expected to continue to differ until the pandemic is under control, which advises a targeted approach to the policies supporting firms and households.

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