

The Dutch economy during Covid-19

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The economic effects of the second wave

- ▶ **Not only lockdown measures hurt the economy, also the behavioural response of consumers towards the virus**
- ▶ **As people self-isolate, they spend less physically in sectors that remained open during the lockdown**
- ▶ **After the surge of the virus in mid-September, physical transactions have dropped**
- ▶ **This could be due to the behaviour response of consumers toward the virus...**
- ▶ **... but also because second-round effects come into play**

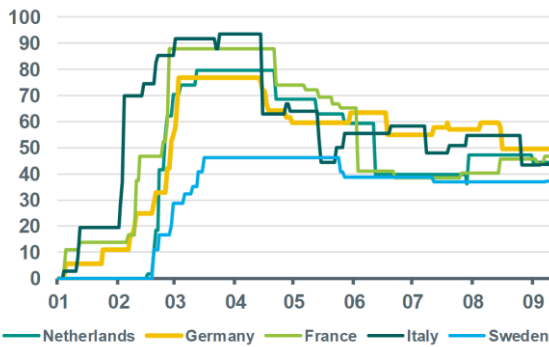
“It’s the virus, stupid”

Lockdowns in the wake of the Covid-19 virus have pushed economies around the world, including the Netherlands, into severe recessions. The left figure below shows the overall government response index for several European countries, measured by stringency, over time.¹ In general, economists assume that the strictness of the lockdown directly corresponds with the loss of GDP. While this may be true, it is not the full story. For example, Sweden which implemented relatively mild measures compared to other European countries, also experienced a sharp decline in Q2 (-8.3% q-o-q). But GDP in the Netherlands, which implemented measures comparable to most other European countries in terms of timing and severity, dropped by approximately the same amount as Sweden (8.5% q-o-q). While the lockdown measures may hurt the economy directly, the severity of the virus outbreak itself has damaging effects as well. This is also seen in the right graph below, which shows the correlation between the severity of the virus outbreak (measured by hospitalizations) and the drop in total transactions by ABN AMRO card holders in the Netherlands.

¹ This government response index proxies the strictness of the lockdown policy over time by country. See: <https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker>

Stringency index

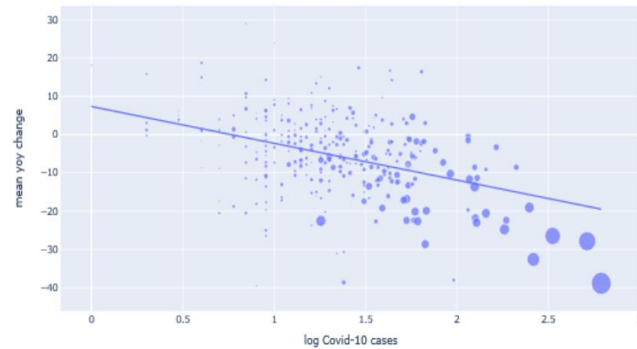
Government response index proxies the strictness of the lockdown policy



Source: Oxford

Outbreak correlates with drop in transactions

Vertical axis; average yoy drop in total transactions between 14 March and 16 April; horizontal axis; logarithm of cumulative hospitalized Covid-19 cases up to 16 April



Source: ABN AMRO - size of the circle indicates the population size of the municipality

Recent papers using high-frequency transaction data show that the effect of the fear of the virus actually explain a large part of the drop in economic activity.² While it is hard from a methodological standpoint to argue that the effect of the virus is bigger than the lockdown effect in the Netherlands, we do find a significant effect of the virus on the Dutch economy.

'Open' spending categories are also hit

Total transactions (physical and online); total 'open' sectors and 'closed' sectors, yoy change



Source: ABN AMRO

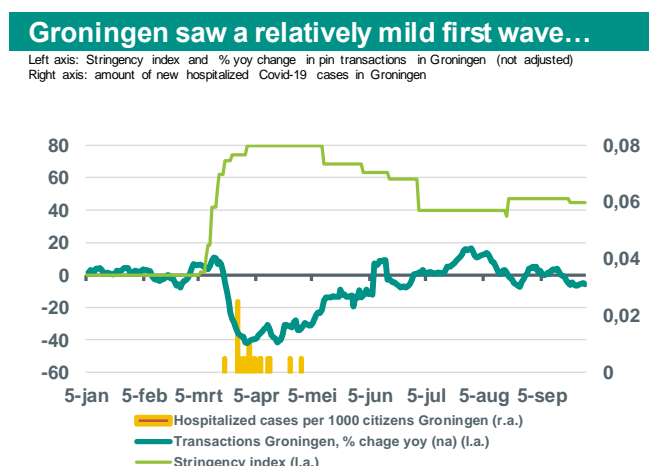
The graph above makes a distinction between sectors that had to close during the lockdown (such as: restaurants, wellness facilities, entertainment businesses, bars, hairdressers) and all other sectors that were allowed to stay open. It is clear that transactions not only fell for these sectors that were forced to close down but that spending categories that were able to continue also faced a severe dip during April and May.

By comparing all Dutch municipalities in panel regressions³, we [find](#) that the amount of Covid-19 cases in a Dutch municipality has a negative and statistically significant effect on the volume of local physical transactions by consumers. In other words,

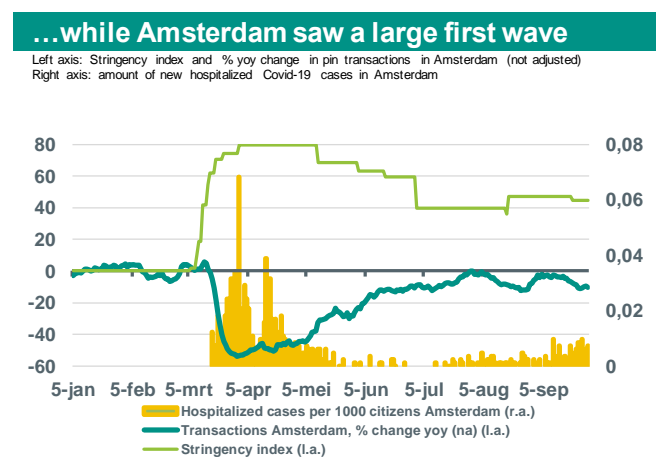
² Recent papers using high-frequency transaction data show that the effect of the fear of the virus may actually explain a large part of the drop in economic activity. A [paper](#) using mobility data in the US shows a decline in mobility in all states since the start of the pandemic, even those without major lockdown measures. Their findings show that state-level emergency declarations account for about 55% of the decline between the first week of March and the second week of April, with the remaining 45% of the decline is attributable to secular trends that they interpret as the private (residual to policy) response to the pandemic. This result is confirmed by another [paper](#) looking into cellular phone record data in the US. The authors argue that although overall consumer traffic fell by 60%, legal restrictions explain a decline of only 7%. Another [paper](#) looking at transaction data in China argues that in the 20 cities that received the highest inflow of Wuhan residents (the epicentre of the Covid-19 outbreak), consumption decreased by 12% more than in other cities in their sample. For cities reporting zero cases (as of late March), the decrease in offline consumption was 13%.

³ This academic publication was made in cooperation with King's College London

municipalities in the Netherlands that have seen a large Covid-19 outbreak have struggled more in economic terms than municipalities that seen few or no Covid-19 cases. In our models we have corrected for municipality-specific effects, such as population density and the volume of bars/restaurants. This effect is shown in the two graphs below for Groningen and Amsterdam, which illustrates the total volume of pin transactions. While Groningen saw a relatively mild first wave of Covid-19 cases, Amsterdam experienced a large outbreak. In Amsterdam, total transactions dropped by 55%, whereas in Groningen transactions bottomed out at around 40% below the level of the previous year. Note that in Amsterdam, transactions did not return to positive levels at the end of the lockdown, while Groningen recovered quite rapidly. This effect cannot be explained by lockdown measures, because in the Netherlands the lockdown was imposed for all municipalities on the same date and with the same stringency. Our findings imply that if the spread of the virus surges, consumers start spending less, even when they are not restricted by lockdown measures.



Source: ABN AMRO



Source: ABN AMRO

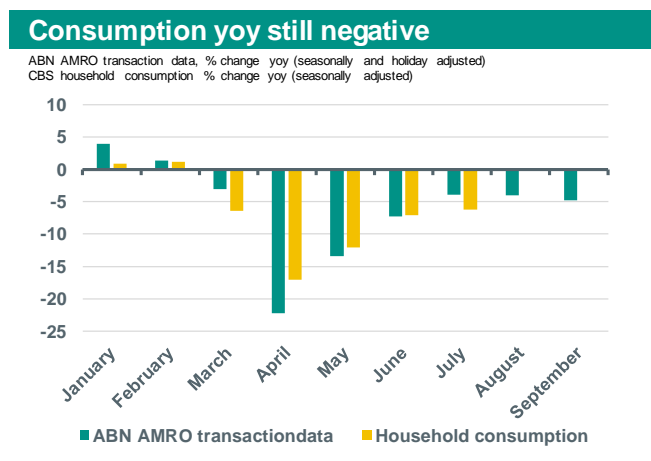
Why do people refrain from spending?

There is a measurable effect in the decline of spending which cannot be attributed to lockdown measures. It is difficult to discern the reason why people start to spend less when the virus outbreak surges. Possibly people stay at home voluntarily (reason 1). It could be fear of getting the virus, or it could be due to the fact that a considerable part of the population gets sick, or is afraid of having the virus (while showing few or no symptoms) and opts not to go outside in order to prevent further spread. Another possible reason is that people don't want to spend their money (reason 2). The local virus outbreak adds to negative sentiment or reminds people that tough economic times are imminent, which prompts them to increase their precautionary savings. Also, people could have experienced a negative income shock because of losing their job.

We think reason 1 may have been the dominant factor at play during the first wave of covid -19. We find that Covid-19 is strongly negatively related to the frequency of supermarket visits by municipality, indicating that people are more afraid to go outside when there is larger virus outbreak in their local area. Groceries are necessity goods and we therefore do not see a decline in total spending, only a decline in the number of visits, which implies that people spend more during each visit to a supermarket. In addition, consumers living in badly-affected areas order more groceries online, most likely to prevent having to leave the house to buy groceries in person. Digging further into this notion of 'fear', we investigated whether this fear is rational, i.e. caused by the intensity of the local outbreak, or whether it is irrational, i.e. more related to the perception of how big the outbreak is rather than the real local numbers. By performing panel regressions, we found that supermarket visits are not correlated to the virus outbreak on a provincial level, but only on a local level. This led us to conclude that it is mainly rational fear driving consumer behaviour. In other words, not everyone in Brabant (the epicentre of the first Covid-19 wave) was afraid to go outside. It was mainly consumers in municipalities in Brabant that were hit particularly hard by the virus that stayed inside.

Difficult to distinguish the effect of the virus and the effect of the social distancing society

Most of the lockdown measures were eased on 1 July. However, consumption did not recover to the levels seen before the Covid-19 outbreak. The graph below shows that official CBS household consumption data (available up until July) was still negative in June and July. Our transaction data (including all transactions, offline and online by cardholders) also show a year-on-year decline until September. This effect can be attributed to the continuing lingering Covid-19 cases but to the restrictions related to social distancing. But how to disentangle the virus effect from the official government measures? That is a difficult exercise, as behaviour towards the virus is firstly dynamic and secondly impacted by the government response to the virus. Indeed, people’s perception of the virus may change through time as people get used to the new situation. Moreover, strict (local) government measures may diminish the fear, as people may feel the government is in control and are more confident to continue to spend. Alternatively, government intervention may reinforce people’s fear as they grow anxious in interpreting the strictness of the lockdown measures as a signalling function of how bad things are. So far, there is little research into this interaction between the perception of the virus and government measures, so we cannot draw hard conclusions. However we can take a clue from the hard transaction data of the last two weeks, when the Netherlands began experiencing a second wave of Covid-19 cases.



Source: ABN AMRO

The second wave

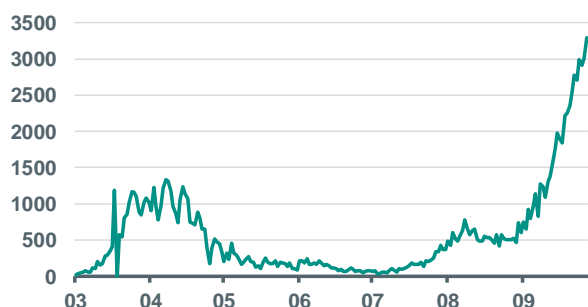
As illustrated by the below graph, the Netherlands entered a second wave of Covid-19 in mid-September. Around 3,000 new cases are currently emerging on a daily basis. Although we only have limited data – at the time of writing it has been two weeks since the second wave began – we see a small preliminary economic effect of the virus. The total transactions (seasonally and holiday adjusted data) dropped by 8% in the last two weeks of September, compared to an average decline of 4% yoy in July and August. Physical (offline) consumption dropped to negative territory for the first time since June. While in July and August, people increased their spending by more than 1.5% yoy with their bank cards, in mid-September this dropped to -2% yoy. To put this figure into context: during the third week of March (the first lockdown week) physical transactions dropped by 21%. What is interesting to see is that online transactions were hit hard in the last two weeks – an overall drop of 14% – while online expenditure surged in March and April (+9% yoy).⁴ This suggests that people are not only motivated by fear or restricting themselves from going outside, but an overall tendency to spend less.⁵

⁴ Note that our category ‘online transactions’ includes all transactions made using iDEAL

⁵ Moreover, we may now see the effect of frontloading in the beginning of the year. We wrote in our [publication](#) in April that people brought forward certain expenditures during the lockdown. These were mostly durable goods, such as electronics, home and garden interior purchases (mainly purchased online). We already said that given that these goods have a lifespan of over a year, consumption in the second half of 2020 may slump.

Second wave in the Netherlands

Amount of new confirmed daily Covid-19 cases in the Netherlands



Source: WHO

During the second wave, municipalities that are hit hard again face a larger economic contraction

In order to investigate the economic effects of the second wave on different municipalities, we created four categories: (1) big municipalities that are hit hard by the second wave (such as Amsterdam), (2) big municipalities that are less impacted by the second wave (such as Apeldoorn), (3) smaller municipalities that are hit hard by the second wave (such as Bergeijk) and (4) smaller municipalities that are barely hit by the second wave (such as Someren) (see appendix for a full list of all categories). These categories were created according to the new number of positive Covid-19 cases reported by each municipality during the month of September.⁶

The second wave

| | Big municipalities barely hit | Big municipalities hit hard | Small municipalities barely hit | Small municipalities hit hard |
|--------|-------------------------------|-----------------------------|---------------------------------|-------------------------------|
| 20-jul | 10,26 | 3,56 | 19,96 | 8,26 |
| 27-jul | 11,45 | 5,25 | 20,43 | 17,07 |
| 3-aug | 15,47 | 0,67 | 18,15 | 15,79 |
| 10-aug | 10,40 | -2,28 | 18,86 | 10,97 |
| 17-aug | 0,65 | -6,70 | 13,64 | 5,46 |
| 24-aug | 7,68 | -0,99 | 14,27 | 10,59 |
| 31-aug | 6,40 | -0,68 | 14,62 | 12,99 |
| 7-sep | 6,51 | -0,30 | 24,83 | 10,13 |
| 14-sep | 2,31 | -6,58 | 17,07 | 6,65 |
| 21-sep | 2,74 | -6,06 | 15,23 | 4,91 |

Source: physical pin transactions data ABN AMRO Group Economics, this data is nominal and not corrected for seasonality, inflation or other trends in pin transactions

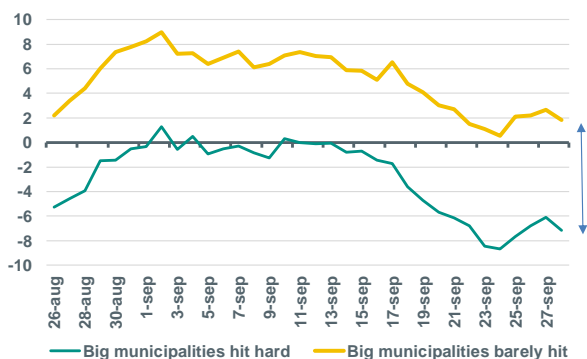
When we compare the four different categories in the table above, we see a significant difference between transactions in municipalities that have been hit hard by the virus and municipalities that saw a smaller number of Covid-19 cases. Pin transactions in hard hit big municipalities have dropped to around -6% yoy in the second week of September. For comparable municipalities, but those that were barely hit by the virus, we see that pin transactions remained positive (around 2.5% yoy). In the week of 28 September, when the government announced further measures, also the transactions in less hit big municipalities start to drop. This is mostly because in these municipalities bars and restaurants comprise a larger part of the total economic activity. But as the virus spread rapidly in the last two weeks, did transactions in the categories diverge? The two graphs below show the development of daily transactions in the last month. Big municipalities seems to diverge somewhat mid-September. This divergence is much more pronounced for smaller municipalities; the difference between hard hit and barely hit is around 10% yoy. As government measures did not change up to 28 September, the divergence shown in the graphs can only be attributed to the direct economic effect of the virus. During the last two weeks of September, categories

⁶ Note: these are not hospitalized Covid-19 cases, as we used for investigating the first wave, but new cases confirmed by testing.

that provide non-necessities and rely on having multiple people physically together were especially hard hit. The most pronounced drop was in transactions in public transport, cinemas and museums (see also the heatmap).

Divergence starts to appear...

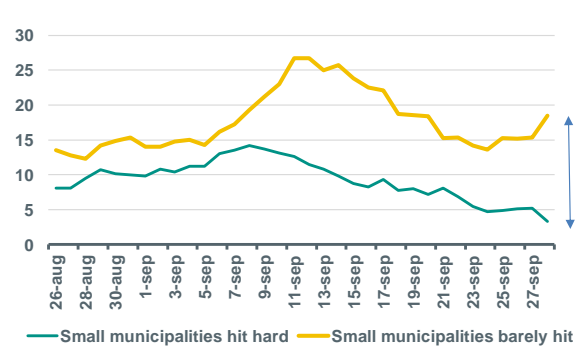
ABN AMRO physical pin transaction data, % change yoy, not adjusted



Source: ABN AMRO

...and is greater in smaller municipalities

ABN AMRO physical pin transaction data, % change yoy, not adjusted



Source: ABN AMRO

Spending categories that did not face stricter government measures also took a hit

On 28 September the government announced extra measures. In the weeks before, some spending categories already dropped, such as entertainment and wellness. The strongest drop was seen in the subcategories public transport, cinemas and museums. What is interesting to see is that while the transport and travel sectors did not face any further measures, they did experience a sharp drop in transactions in the week of 28 September (-45% yoy and -15% yoy respectively). We have already mentioned that stricter government measures could cause consumers to be more careful in general, as they interpret the strictness of the lockdown measures as how serious the virus outbreak is. The government announced that bars and restaurants had to close before 10 pm on 28 September. Since then we seen transactions drop in this category (-5.3% yoy), the biggest drop since the week of 8 June. The combination of the revival of the virus and the stricture measures are directly seen in the transaction data.

| Week van | Lockdown imposed | | | | | | | | | | | | | | Start second wave | | | |
|-----------------------------|------------------|-------|--------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|--------|-------------------|--------|--------|--------|
| | 1-jun | 8-jun | 15-jun | 22-jun | 29-jun | 6-jul | 13-jul | 20-jul | 27-jul | 3-aug | 10-aug | 17-aug | 24-aug | 31-aug | 7-sep | 14-sep | 21-sep | 28-sep |
| Groceries (online) | 226,8 | 238,5 | 199,3 | 224,2 | 208,0 | 202,8 | 227,0 | 221,5 | 212,9 | 209,8 | 201,1 | 173,5 | 194,1 | 176,1 | 188,1 | 180,0 | 185,7 | 168,0 |
| Electronics | 44,3 | 18,6 | 21,6 | 24,9 | 24,4 | 13,5 | 13,1 | 9,8 | 20,8 | 14,5 | 16,1 | 15,5 | 25,7 | 0,0 | 23,7 | 11,7 | 11,3 | 16,7 |
| Groceries (offline) | 21,5 | 22,6 | 17,6 | 18,4 | 15,8 | 19,5 | 19,7 | 14,2 | 25,3 | 29,1 | 24,9 | 12,6 | 13,4 | 14,9 | 17,4 | 13,1 | 14,6 | 13,3 |
| House and garden maintenanc | 57,9 | 31,0 | 32,5 | 38,8 | 33,1 | 34,3 | 24,9 | 46,2 | 23,9 | 18,7 | 2,7 | 19,6 | 32,7 | 28,2 | 29,9 | 20,9 | 18,7 | 22,1 |
| Others* | 61,2 | 52,1 | 34,9 | 53,2 | 39,2 | 37,8 | 34,7 | 51,3 | 57,8 | 57,0 | 45,9 | 40,1 | 64,1 | 41,6 | 41,2 | 29,8 | 41,6 | 44,6 |
| Total** | -0,6 | 1,7 | -3,7 | 1,5 | 2,8 | 2,8 | 1,4 | 3,8 | 6,8 | 4,3 | 2,4 | -4,5 | 8,6 | 7,3 | 4,2 | -1,3 | -0,4 | -1,0 |
| Wellness | 0,5 | 0,2 | 1,7 | -1,9 | -1,3 | 1,6 | 1,8 | 5,8 | 9,3 | 9,9 | 5,9 | -1,2 | 8,1 | 7,7 | 7,2 | 2,5 | 3,0 | 4,7 |
| Transport | -18,7 | -9,7 | -10,2 | -4,8 | -7,3 | -2,8 | -3,5 | -2,0 | -1,1 | -1,9 | -2,1 | -7,3 | -6,7 | -3,7 | -4,7 | -8,5 | -8,8 | -14,6 |
| Appearance*** | -1,4 | -3,8 | -9,0 | -3,7 | -9,0 | -3,8 | -0,8 | 4,4 | 5,1 | -1,4 | -8,4 | -8,6 | 22,2 | 0,1 | -1,7 | -18,3 | -2,5 | -8,8 |
| Bars/restaurants*** | 1,3 | -9,3 | -1,2 | 5,7 | 3,9 | 9,6 | 13,1 | 15,0 | 16,0 | 14,8 | 20,6 | 9,5 | 8,5 | 17,5 | 13,2 | 13,6 | 8,3 | -5,3 |
| Travel | -65,5 | -63,1 | -50,1 | -40,7 | -31,1 | -24,6 | -23,2 | -24,9 | -23,8 | -24,6 | -25,0 | -27,1 | -25,2 | -29,4 | -27,8 | -33,4 | -37,8 | -44,6 |
| Entertainment | -65,2 | -64,0 | -55,0 | -57,4 | -21,3 | -17,8 | -18,4 | -14,7 | -21,0 | -34,5 | -27,5 | -30,1 | -14,4 | -25,7 | -25,4 | -28,9 | -38,5 | -50,9 |

*Books, toys, etc; **Total pintransactions, online payments and cash withdrawals; ***Online and offline; Source: transactionsdata ABN AMRO Group Economics, this data is nominal and not corrected for seasonality, holidays, inflation or other trends in pintransactions

The second half of 2020 will see a mild recovery

Clearly, if the government refrains from imposing a second nationwide lockdown (as we saw during the first wave), the economic impact of the second wave will be less damaging. That said, given the demonstratable effect of the virus, in combination with slightly stricter government measures, the second wave cannot be ignored from an economic perspective. In addition, there will be economic losses due to second-round effects. We are starting to see higher unemployment, tighter financial conditions, postponement of corporate investments and increasing bankruptcies, which will continue to dampen economic growth going forward. As these second-round effects unfold, people will rein in their spending as indicated by the drop in total online spending over the last couple of weeks.

All in all, we expect a mild recovery in the second half of this year. The third quarter of 2020 will see a revival estimated at about 3.5% to 4% qoq, as the Covid-19 crisis peaked in Q2 when the economy ground to a virtual standstill during the lockdown (the economy shrank by 8.5% qoq in Q2). Given that the Netherlands has seen one of the mildest Q2 drops in comparison with other eurozone countries, combined with one of the highest levels of Covid-19 cases per 1000 people in September, the Q3 figure will be among the worst in the eurozone. Due to the resurgence of the virus, Q4 growth will also be meagre (our expectation is between 1% and 1.5% qoq). On balance, we expect the Dutch economy to decline by 5.2% in 2020. In 2021, we forecast 2.9% growth, which implies that the Netherlands is still far from a full recovery to pre-Covid-19 GDP levels.

Appendix

List of municipalities by category and the average amount of people in each municipality that contracted the Covid-19 virus in the month of September (per 1000 people).

| Smaller municipalities hit by the second wave | | Big municipalities hit hard by the second wave | |
|--|------|---|------|
| Schiedam | 3,61 | The Hague | 4,81 |
| Bergeijk | 4,78 | Groningen | 2,82 |
| Eersel | 3,47 | Eindhoven | 1,80 |
| Zuidplas | 3,53 | Amsterdam | 5,51 |
| Barendrecht | 3,57 | Wageningen | 2,47 |
| Lansingerland | 2,74 | Rotterdam | 4,25 |
| Capelle aan den IJssel | 2,70 | Nijmegen | 3,74 |
| Alblasserdam | 2,68 | Delft | 4,81 |
| Vlaardingenv | 2,41 | Leiden | 3,65 |
| Hoeksche Waard | 2,25 | Almere | 2,13 |
| Smaller municipalities barely hit by the second wave | | Big municipalities less impacted by the second wave | |
| Ooststellingwerf | 0,04 | Apeldoorn | 0,84 |
| Urk | 0,05 | Deventer | 0,76 |
| Pekela | 0,08 | Assen | 0,61 |
| Someren | 0,10 | Heerenveen | 0,51 |
| Voerendaal | 0,16 | Enkhuzen | 0,59 |
| Hellendoorn | 0,14 | Medemblik | 0,33 |
| Valkenburg aan de Geul | 0,12 | Harlingen | 0,32 |
| Roerdalen | 0,15 | Enschede | 0,76 |
| Kapelle | 0,24 | Hoogeveen | 0,16 |
| Vaals | 0,30 | Hardenberg | 0,26 |
| Scherpenzeel | 0,30 | Den Helder | 0,34 |

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