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# **Being Master Chefs to Fight Against COVID-19**

**Presented by:**

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# What Are These People Doing?



Source: SCMP

Instagram [Log in](#) [Open App](#)

#quarantinebaking

A screenshot of an Instagram search results page for the hashtag #quarantinebaking. The header shows the Instagram logo, a 'Log in' button, and an 'Open App' button. Below the header, the hashtag #quarantinebaking is displayed. On the right side, there is a circular profile picture of a person and the text '292,200 posts'. Below the search bar, there is a grid of images showing various baked goods like cakes and cookies.

Instagram [Log in](#) [Open App](#)

#quarantinecooking

A screenshot of an Instagram search results page for the hashtag #quarantinecooking. The header shows the Instagram logo, a 'Log in' button, and an 'Open App' button. Below the header, the hashtag #quarantinecooking is displayed. On the right side, there is a circular profile picture of a person and the text '700,102 posts'. Below the search bar, there is a grid of images showing various cooked meals like stir-fries, soups, and casseroles.

Top posts

A grid of nine images showing various dishes from the top posts of the #quarantinecooking hashtag. The dishes include a variety of Asian-inspired meals like noodle bowls, stir-fries, and soups.

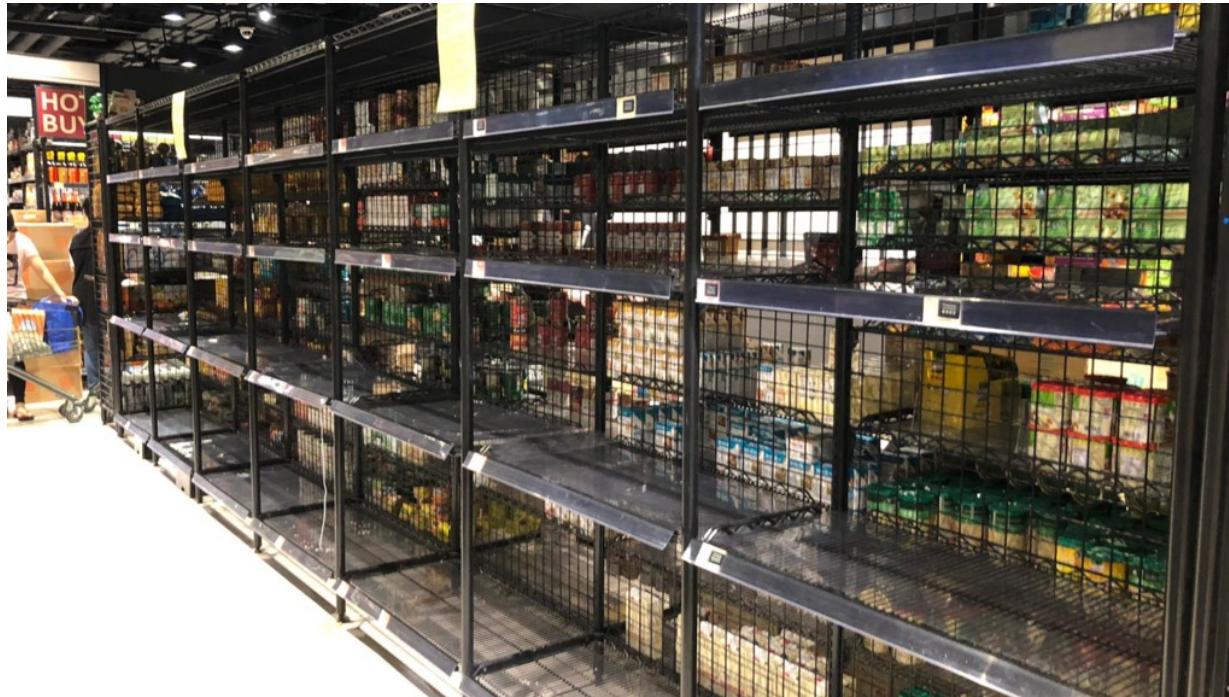
700,102 posts

A grid of nine images showing various dishes from the top posts of the #quarantinecooking hashtag. The dishes include a variety of Asian-inspired meals like noodle bowls, stir-fries, and soups.A grid of nine images showing various dishes from the top posts of the #quarantinecooking hashtag. The dishes include a variety of Asian-inspired meals like noodle bowls, stir-fries, and soups.A grid of nine images showing various dishes from the top posts of the #quarantinecooking hashtag. The dishes include a variety of Asian-inspired meals like noodle bowls, stir-fries, and soups.A grid of nine images showing various dishes from the top posts of the #quarantinecooking hashtag. The dishes include a variety of Asian-inspired meals like noodle bowls, stir-fries, and soups.

Source: Instagram

# What Had Happened?

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Source: HKET



Source: Hong Kong Living



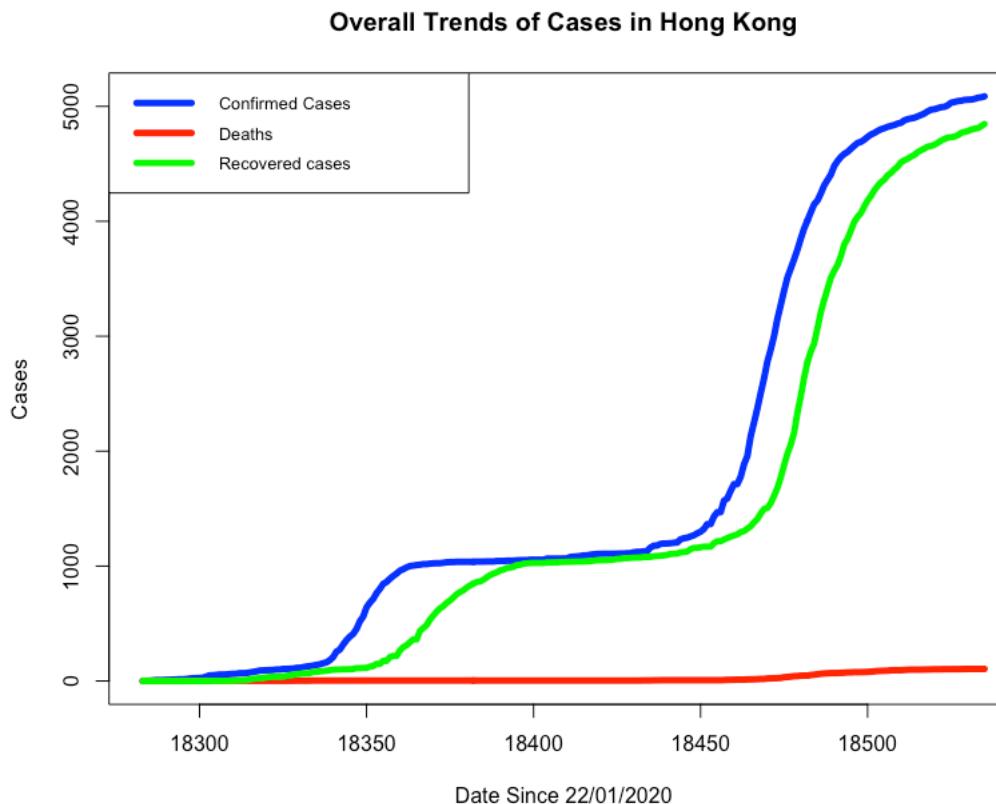
# Agenda

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1. Introduction
2. Visualisation about the Overall Trends of Cases in Hong Kong
  - Understand the severeness caused by COVID-19
3. Correlation among COVID-19
  - What we are doing under the pandemic?
  - How the wholesale price being affected?
  - Why COVID-19 is not the primary factor?
4. Forecasting about the Number of Confirmed Cases
  - When is the next outbreak?
5. Conclusion

# Understand the Severeness Caused by COVID-19

## Past 9 Months Situation



## Key Drivers

### Number of Cases

The number of confirmed cases, deaths, recovered cases **increase as time passes**.

### Increment of Death Rate

The number of deaths **increase very slow**. The increment for rate of deaths was not as fast as the growth in the number of confirmed cases.

### The Outbreak was under Control Once

In the middle of the graph, the line of cumulative cases became horizontal. In about April to July, **the pandemic should be under control**. The cases increase afterwards.

# Derivative under the Novel Coronavirus

## Cooking Video Trend

### Burgeoning chefs indulge on tasty treats at home

Daily views of recipe videos related to desserts



Source: Global YouTube views, 1/1/2020 – 5/7/2020

YouTube Culture & Trends

A change in living behavior would lead to an **increase in demand** of food items

Source: YouTube Culture & Trends

## Evolution of Master Chefs

### Circumstances become critical

Work from home to maintain social distancing and avoid being infected



### Find something to kill time

Watch videos to kill time. Cooking video was the most popular over the months.



### Become Master Chefs

Went over the kitchen and explore their talent in cooking.



The wholesale price should also **experience some effects** due to the better lifestyle

# Does the Wholesale Price Change under the Pandemic?

## Objective

$$H_0: \Delta = 0 \quad vs \quad H_1: \Delta \neq 0$$

## Analysis

Apply Wilcoxon Signed-Rank test to compares the median of different types of food category to the previous year.

## Strategy

Reject null hypothesis if test statistic  $|T_0| = \frac{|R^+ - E(R^+)| - 0.5}{\sqrt{Var(R^+)}}$  falls into the critical region  $z_{1-\alpha/2}$ .

## Outcome

All the p-values are less than  $\alpha = 0.05$  except “Vegetables”.

All the wholesale prices of different food categories, except “Vegetables”, have changed.

# COVID-19 was NOT the Primary Factor Affects the Wholesale Prices

Change in the  
Number of  
Confirmed  
Cases

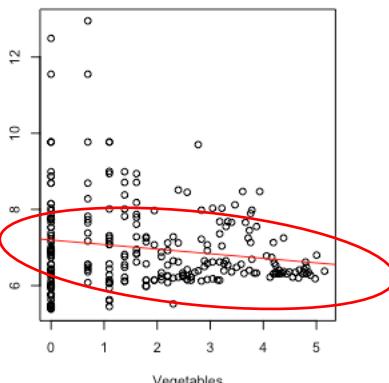
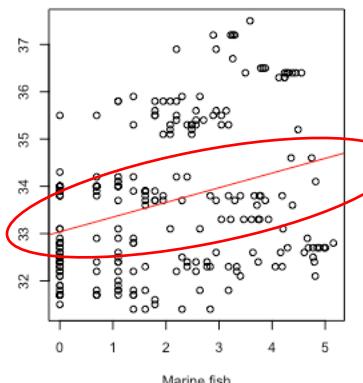
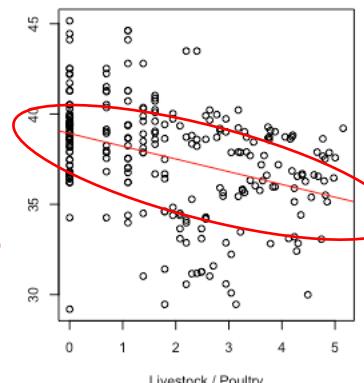
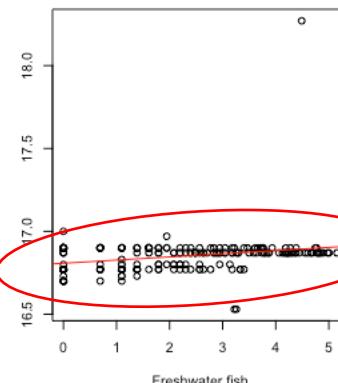
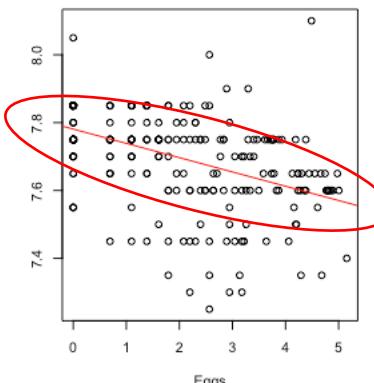


Change in the  
Wholesale  
Prices

The slope of the coefficient  
were very small

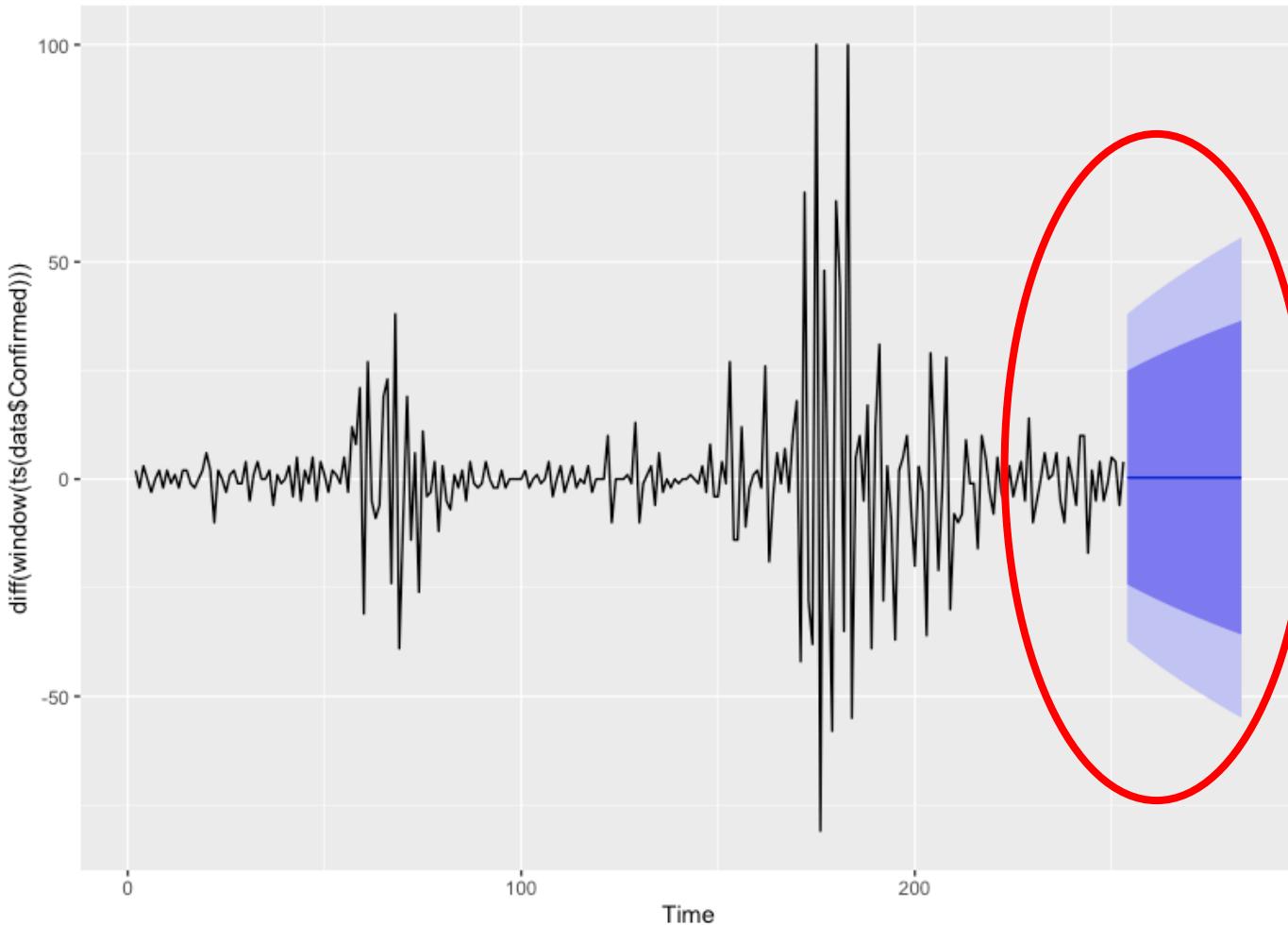
Coefficient of determination  
was at most 22%

Variable error terms



# The Next Outbreak

Forecasts from Simple exponential smoothing



Utilise exponential smoothing method to forecast about the number of confirmed cases in the next 30 days.

There may be more than 50 new patients confirm with COVID-19. There is a **possible of the next outbreak in the coming month.**

There may be another fake news come out in the future.

# The Pandemic is NOT Overed

The pandemic is not overed yet,  
while more and more disinformation may come out in the future!



- The number of patients **increase as time passes**
- More and more **people become Master Chefs** while staying at home
- **The wholesale prices changed** compared to last year
- The number of cases **is not the primary factor** affects the wholesale prices
- There **may be another outbreak** in the next 30 days

## Possible actions to tackle with fake news



- **Fact Check!**
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- **Check the reliability** of the news
- **Think twice** before following the instruction from websites



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**Thank You for Your Attention  
to the Presentation**