A picture is worth a thousand words: privacy concerns in pre-owned Markets, a look at Tise

Paris Young Economist Seminar

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Introduction

- Secondhand apparel has become increasingly popular in recent years.
- People have become more aware of the environmental and social benefits of shopping secondhand.

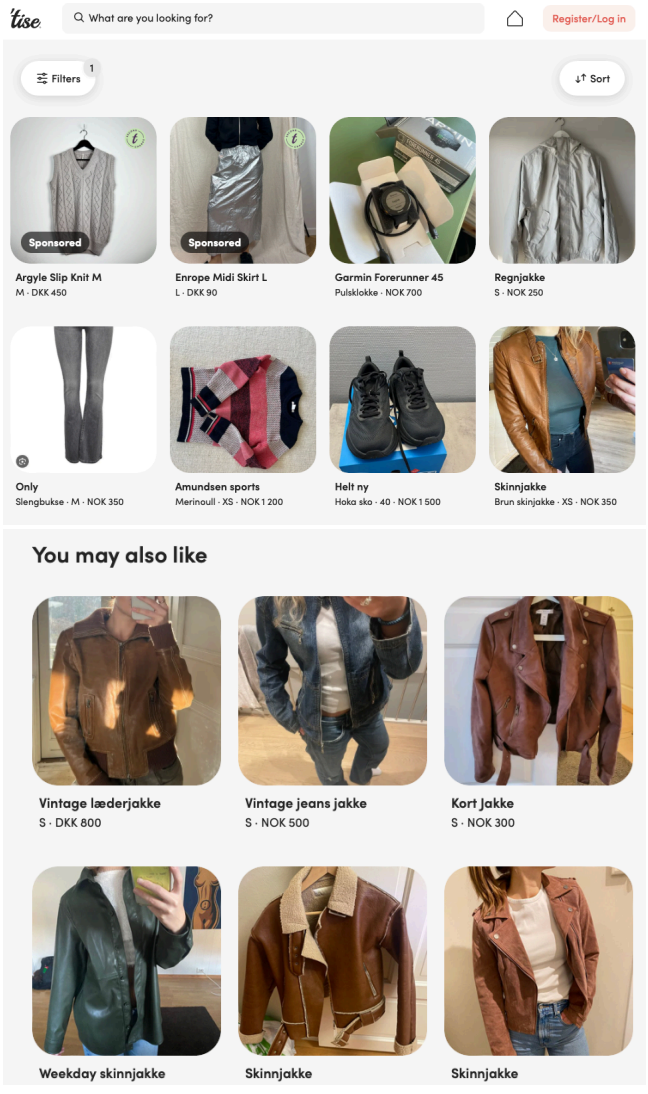
The platform

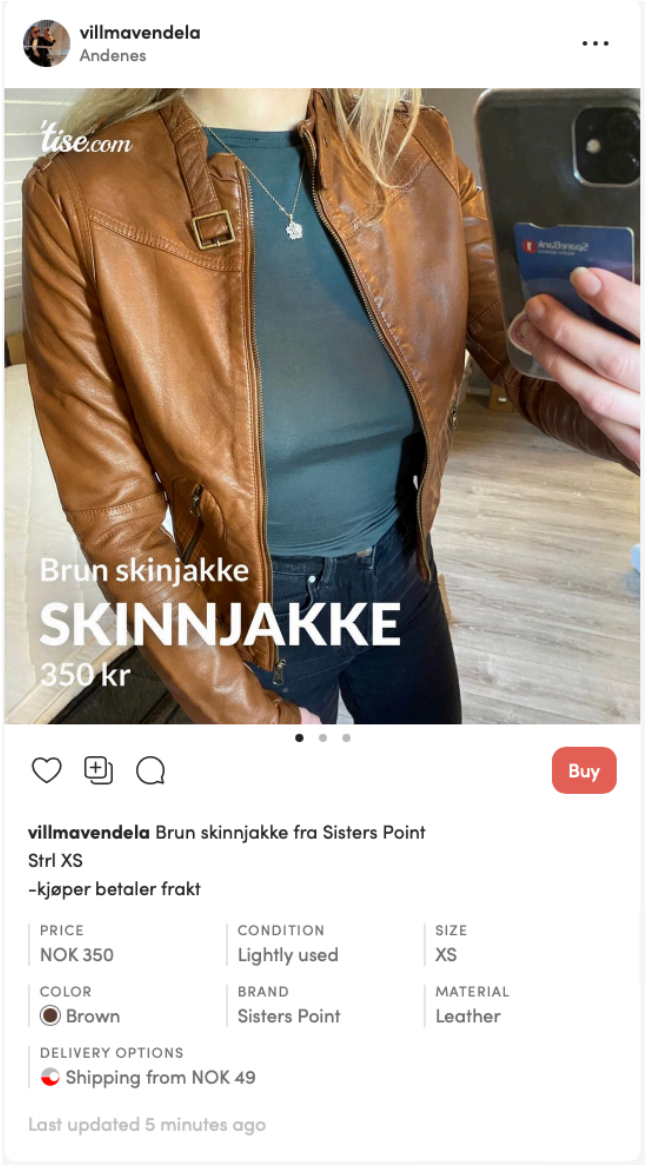
The company is based in **Norway**, and available in **Sweden, Denmark, and Finland**

- A blend of Instagram and Craigslist, targeting second-hand fashion, interiors, and furniture.
- Promoting sustainability through second-hand trade.

The platform is very similar to Vinted, the main European second hand marketplace for fashion.

The platform





The platform

- Monetize Through:
  - → Fee on every item sold, **dynamically calculated** on:
    - Item Price
    - Delivery Method
  - → Memberships (monthly/yearly payment)
  - → Sponsoring
  - → Promoting user products
- Offer Cash back and points

The data I have

- The information of every product posted between January 1^{st} 2016 and November 15^{th} 2023
- The info of every user that has ever posted or purchased an item.
- 4.5 Million Reviews

The data I would love to have

- (Winning) Bids information
- Selected shipping method
  - → Express courier
  - → Locker
  - → Meeting
- Tise Points and Tise Cash used

Questions

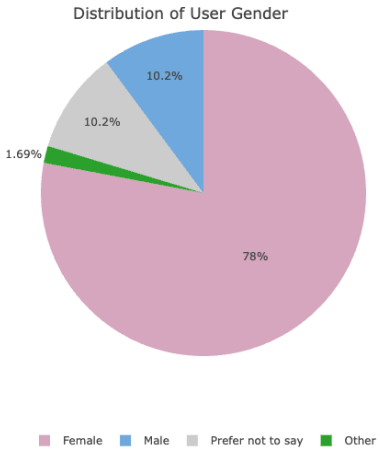
Interesting (to me, at least)

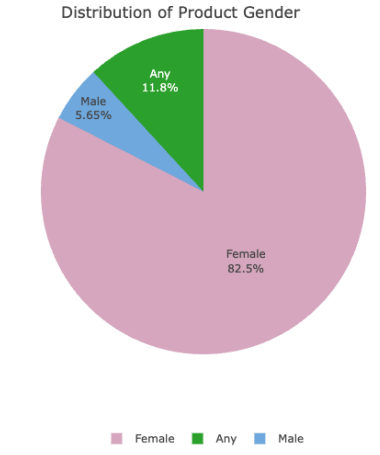
- “Beauty Effect” and privacy concerns in user posting behaviour
- Do second-hand markets/platforms help fast-fashion?
- Brand Value: posting behaviour about brands and brand “Tiers”

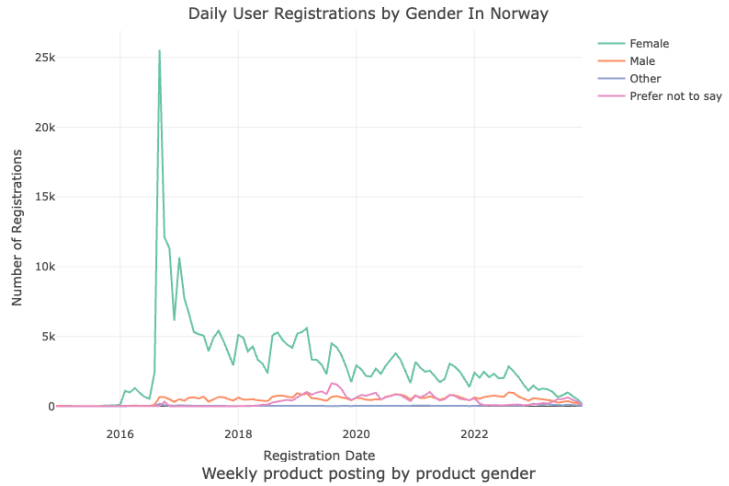
Less interesting:

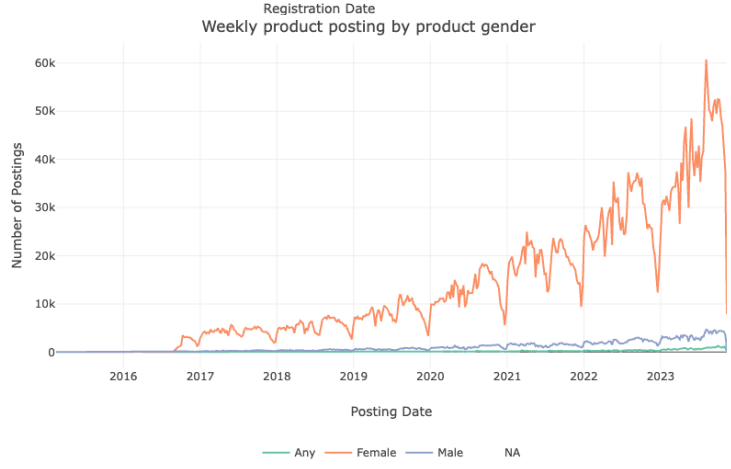
- Differences in platform utilization between genders
- Is second-hand dominated by fast-fashion?

Data Description









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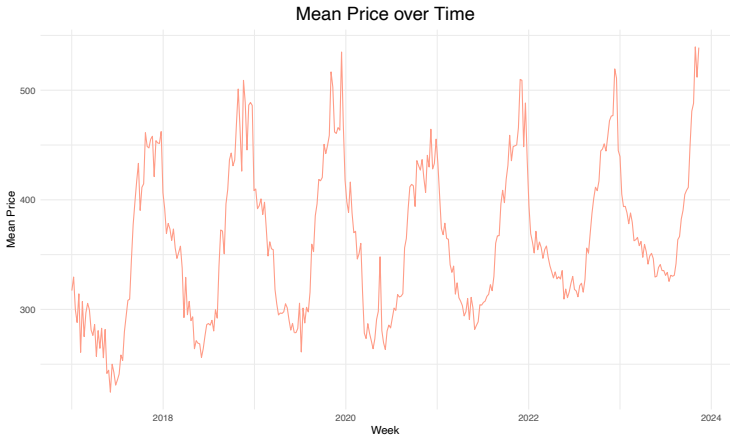

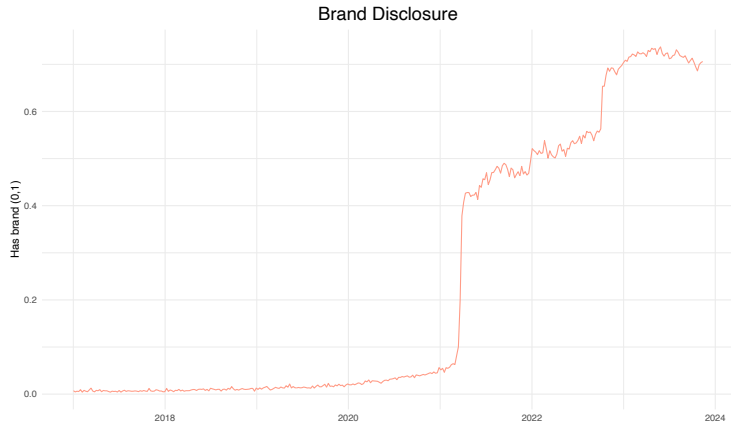

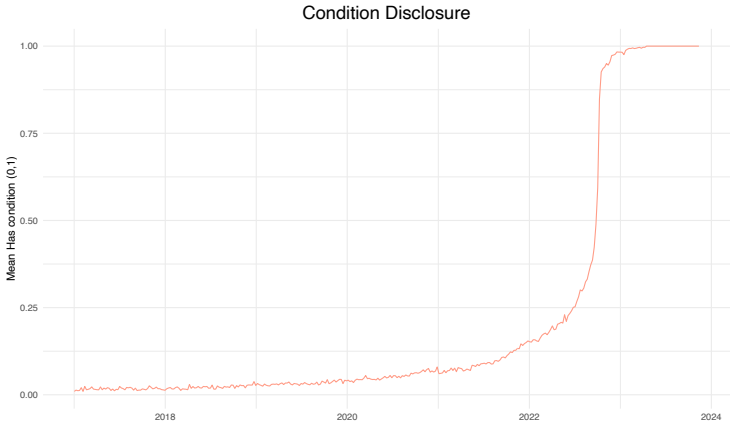

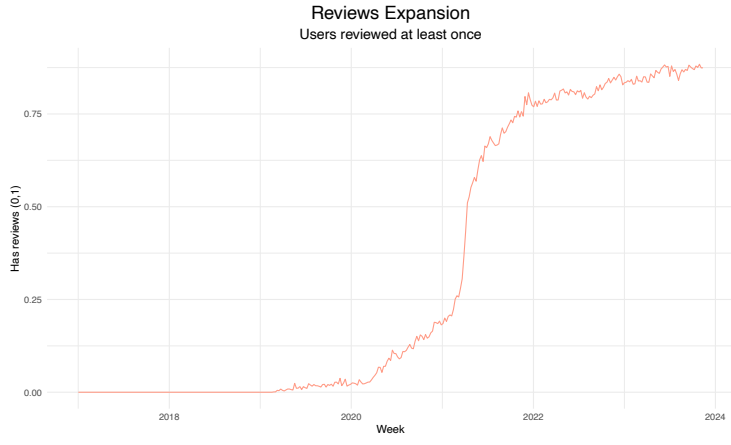

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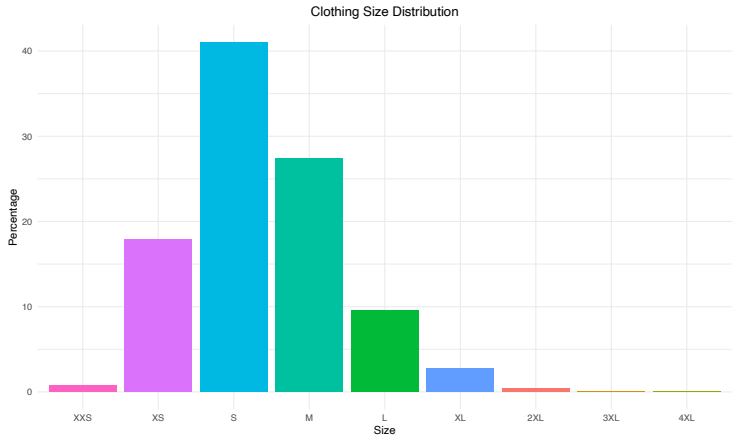

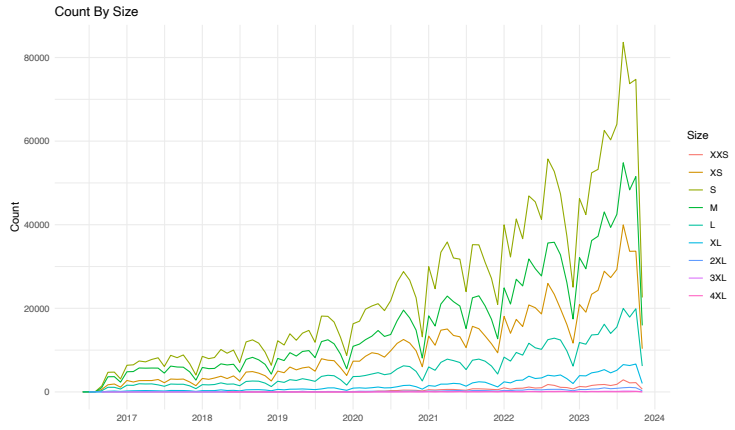

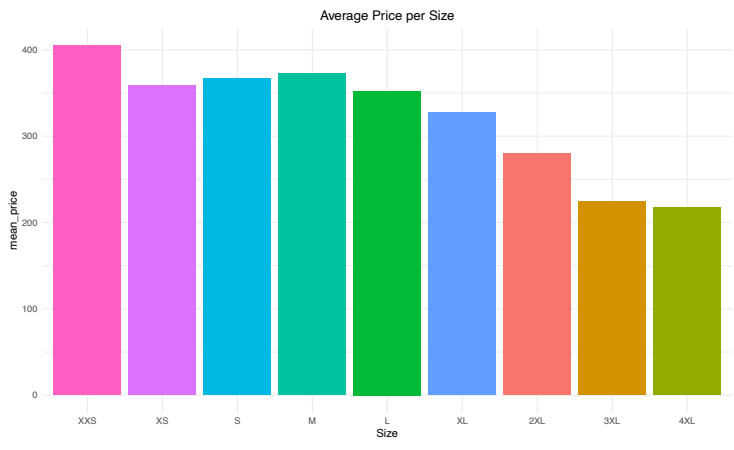

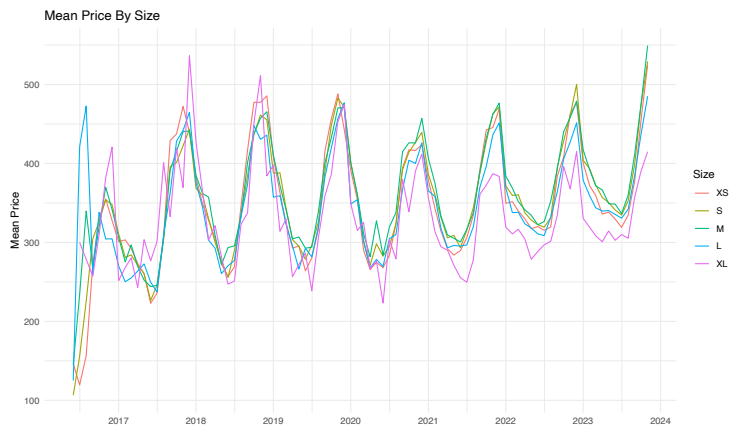

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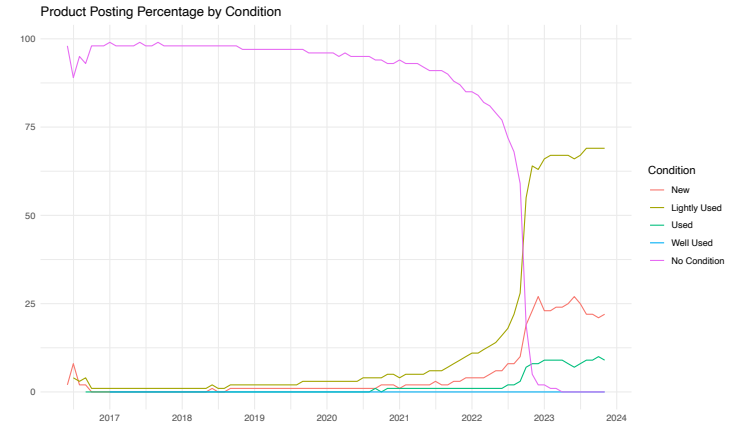

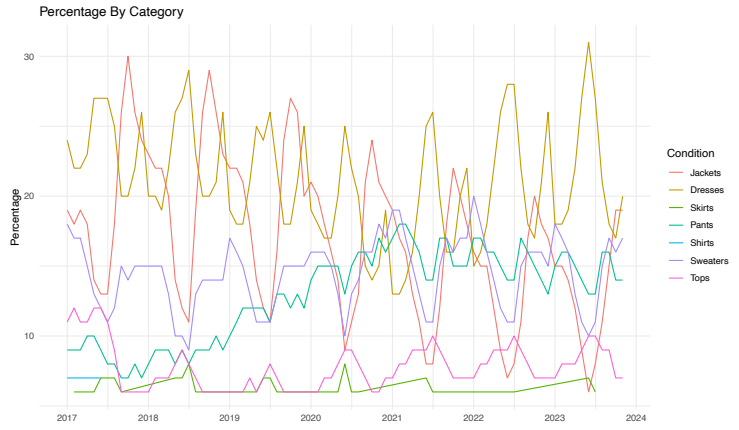

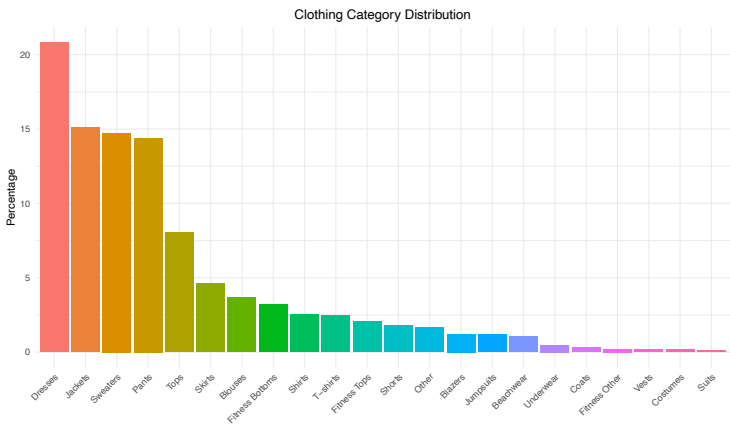

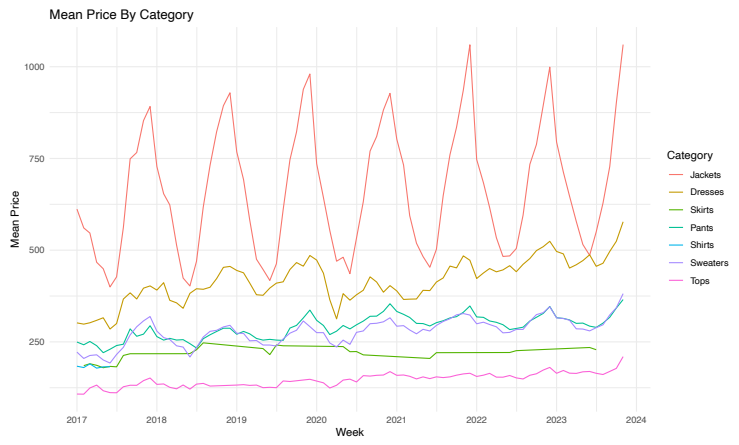

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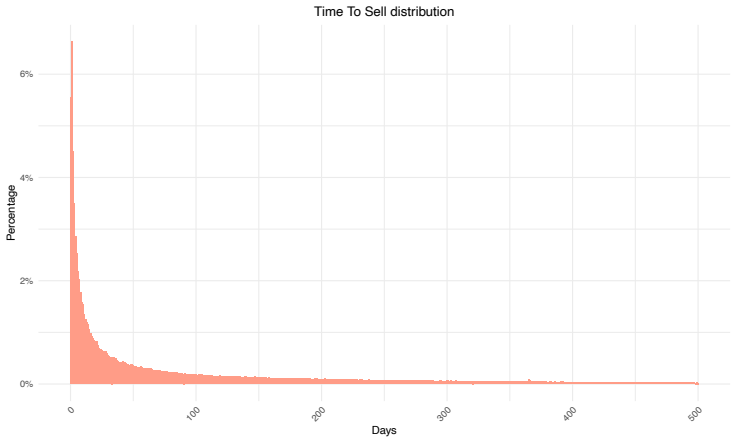
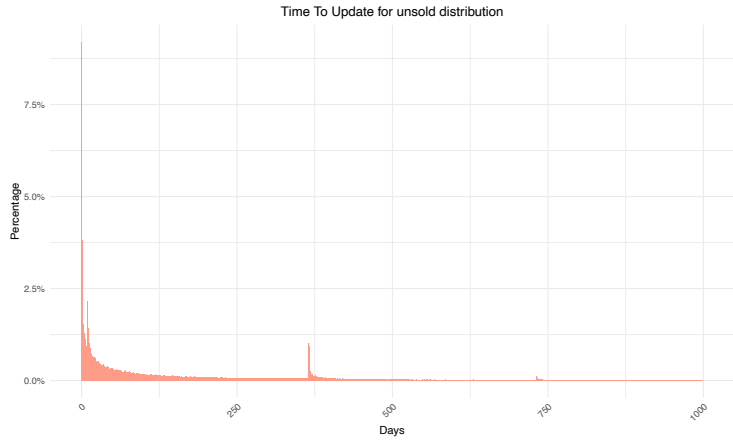
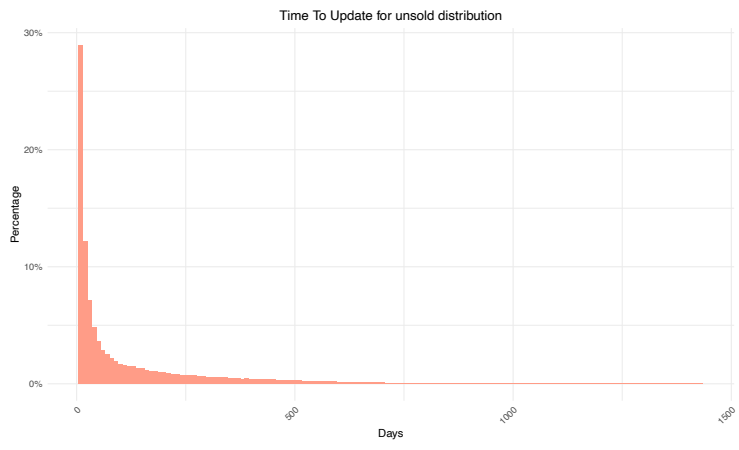






Preliminary Regression model

To estimate the effects on prices:

$$\log(\text{price}) = \theta_i + \gamma_t + \beta_1 \text{person\_self} + \beta_2 \boldsymbol{\chi_{it}} + \epsilon_{it}$$

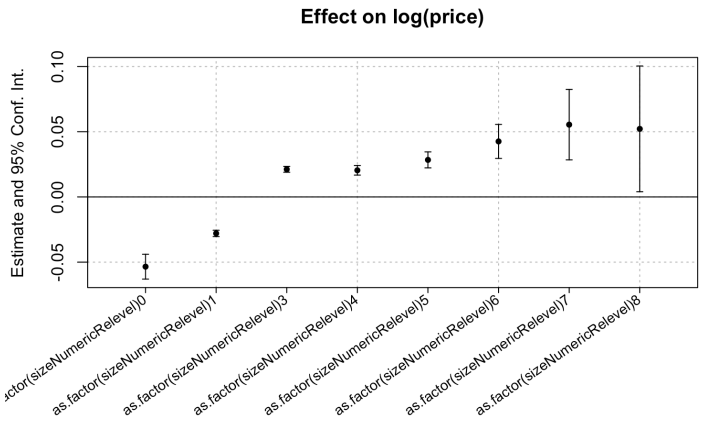
- The set of controls $\beta\chi_{it}$ includes the **User Fixed Effects**, the **Date Fixed Effects** and all the other **controls**.

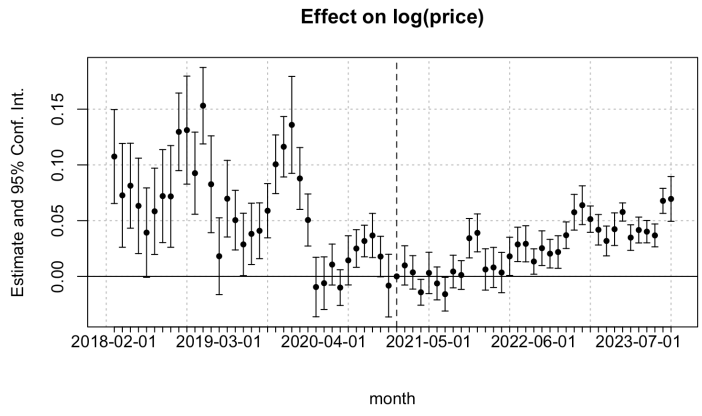
Regression Tables: prices

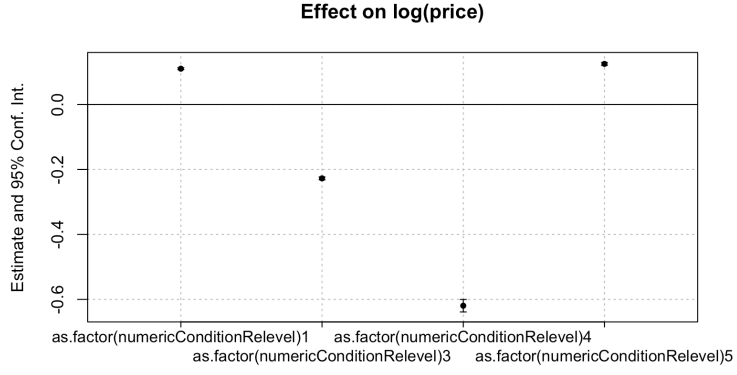
	log(price)	
	Before 2021	After 2021
log(captionLen)	0.3269***	0.2692***
	(0.0017)	(0.0010)
log(titleLen)	0.1387***	0.1447***
	(0.0020)	(0.0011)
person_self	0.0536***	0.0404***
	(0.0027)	(0.0014)
Brand	✓	✓
Category	✓	✓
Condition	✓	✓
Size	✓	✓
Observations	1,258,209	3,183,197
R^2	0.60215	0.64183
Within R^2	0.20969	0.32883
Date fixed effects	✓	✓
User fixed effects	✓	✓

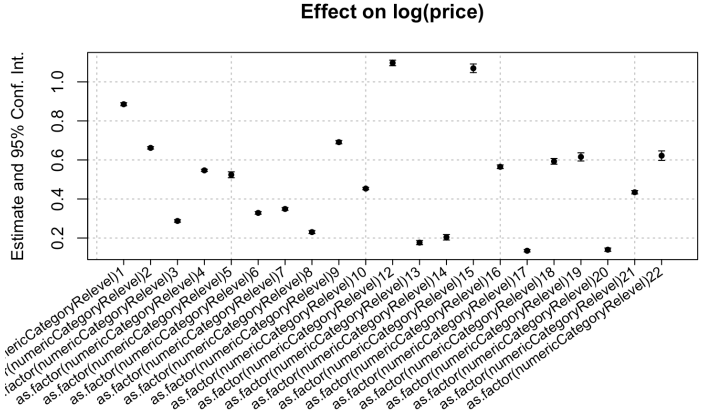
Regression Plots

Coefplots for control variables for prices









Preliminary Regression model

To estimate the selfie posting behaviour:

person_self = $\theta_i + \gamma_t + \beta_1 \log(\text{price}) + \beta_2 ``experience'' + \beta_3 \boldsymbol{\chi_{it}} + \epsilon_{it}$

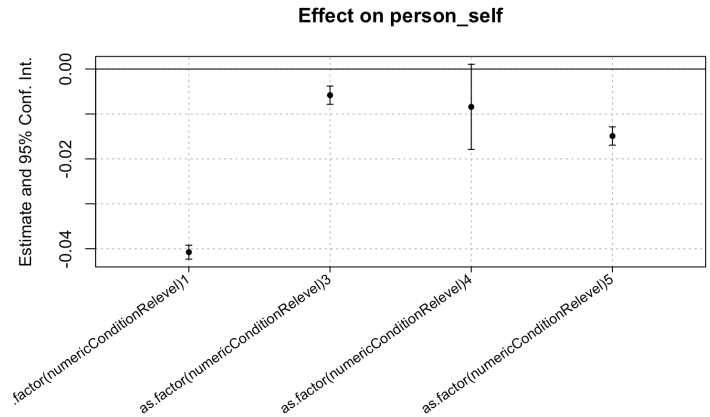
- The set of controls $\beta\chi_{it}$ includes the **User Fixed Effects**, the **Date Fixed Effects** and all the other **controls**.
- Control include:
  - → Category
  - → Condition
  - → Size
- "Experience" is the number of posts published at the time of posting

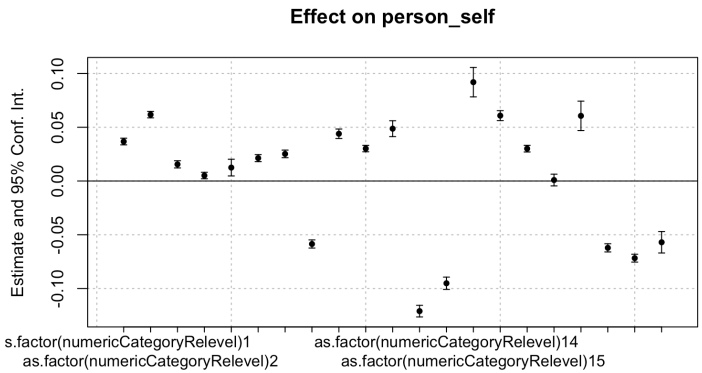
Regression Tables: Posting picture behaviour

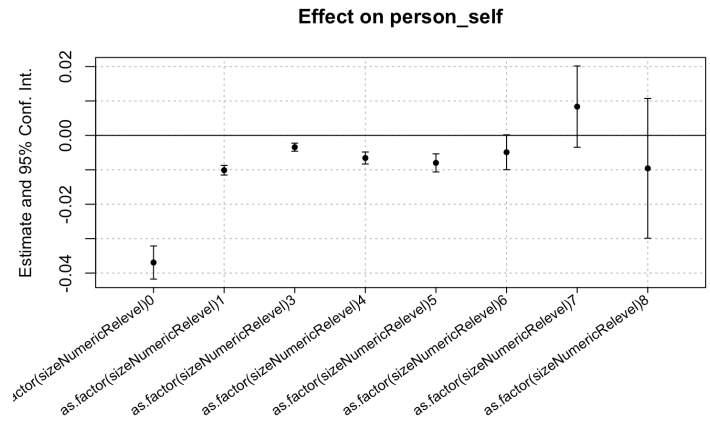
	person_self
	(1)
log(price)	0.0072***
	(0.0004)
log(captionLen)	0.0091***
	(0.0004)
log(titleLen)	-0.0134***
	(0.0006)
Condition	✓
Category	✓
Size	✓
Observations	3,327,954
R^2	0.34001
Within R^2	0.01282
Date fixed effects	✓
User fixed effects	✓

Regression Plots

Coefplots for control variables for posting yourself in the picture

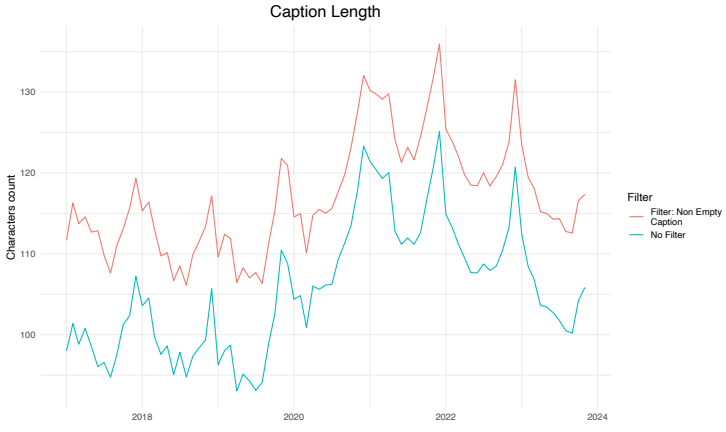






Some other graphs...

Caption length and prices per size and sold status over time



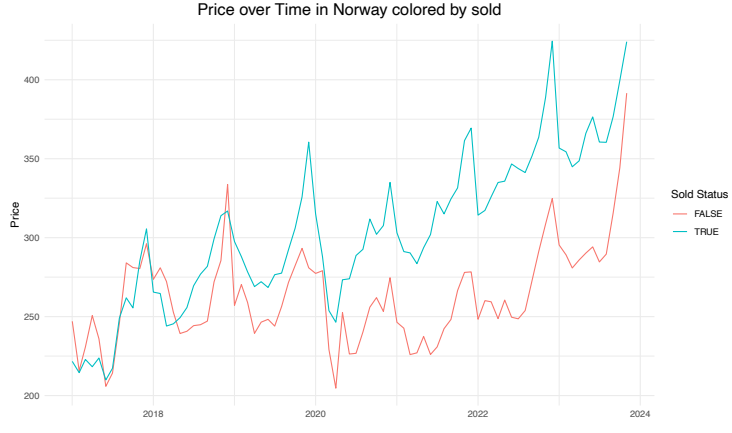
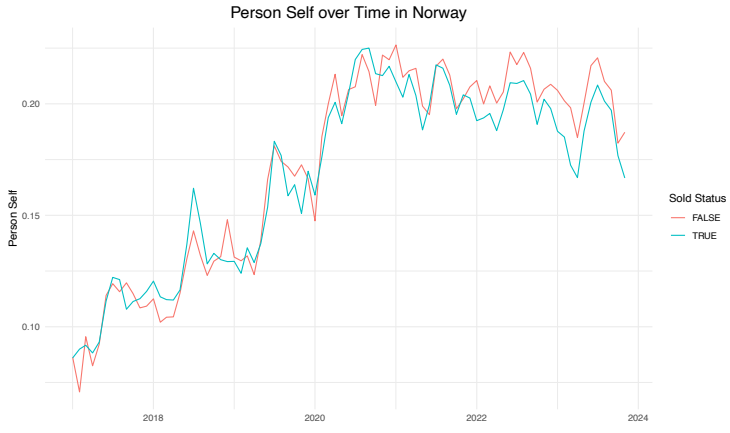
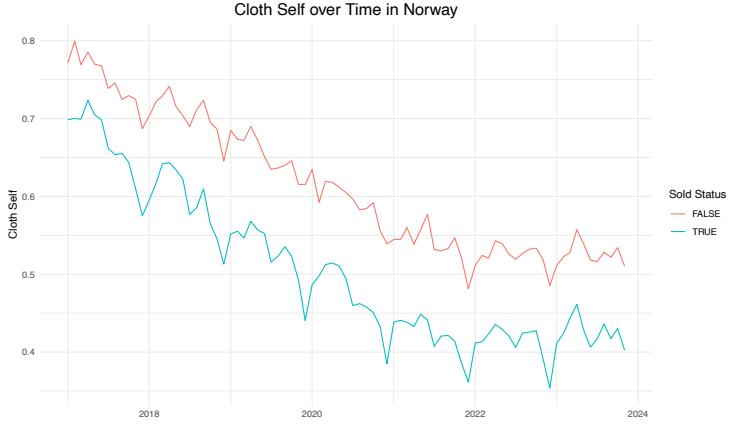


Image posting behaviour

Image posting behaviour over time and sold status





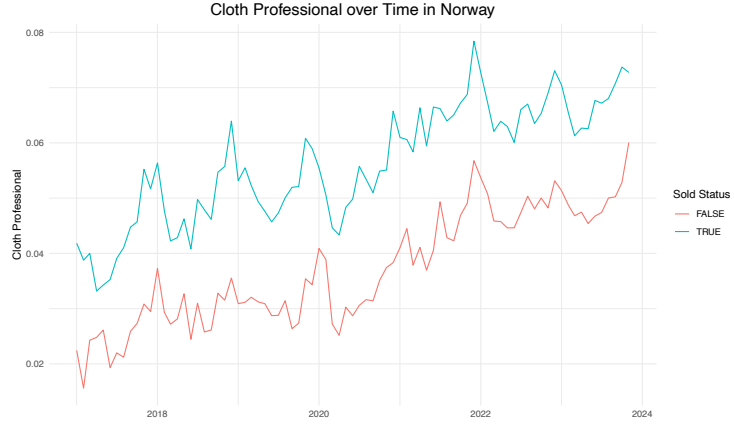
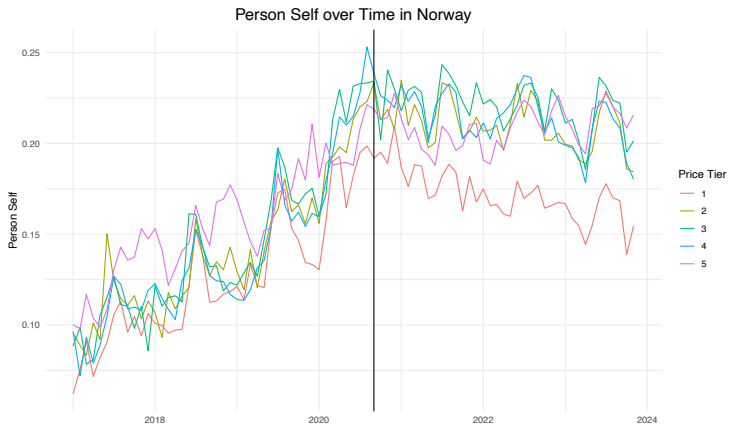
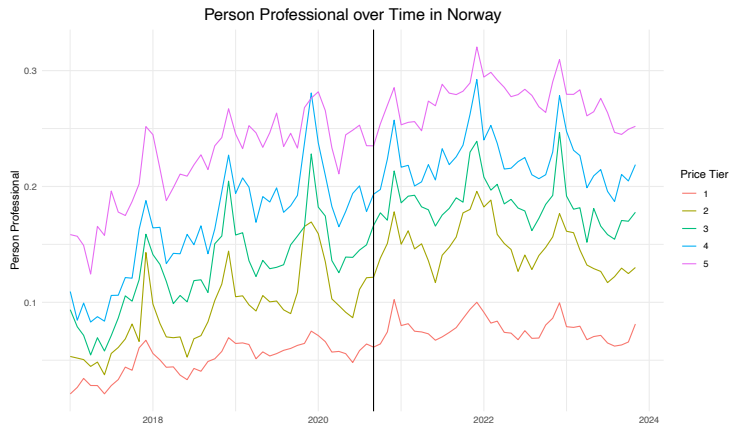
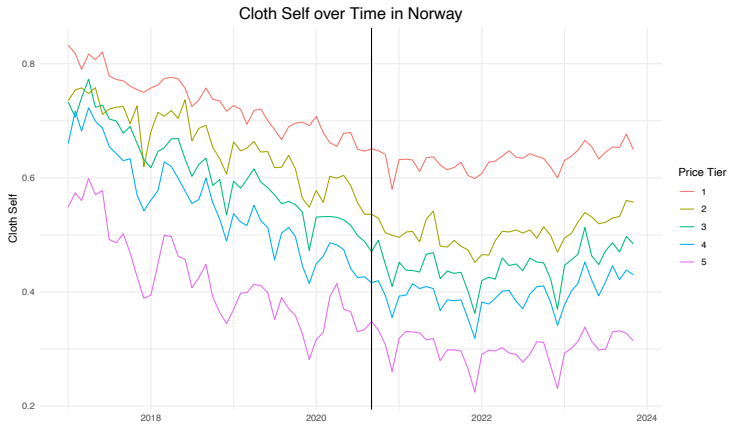


Image posting behaviour

Image posting behaviour over time and price quintile







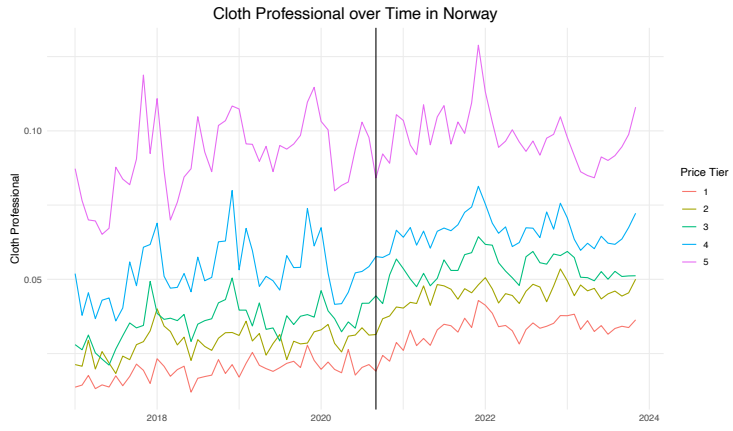
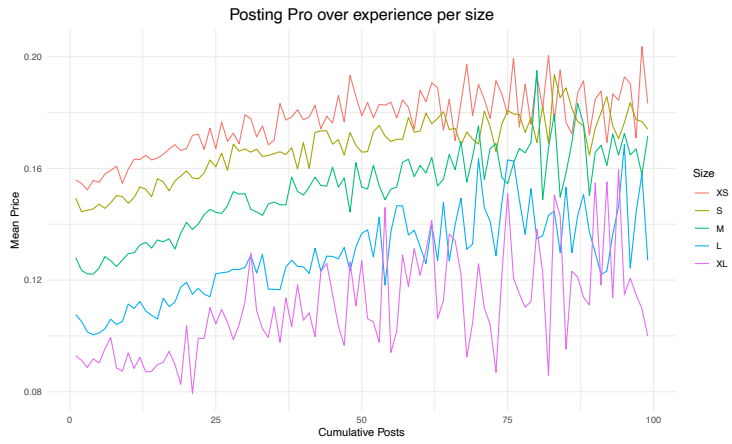
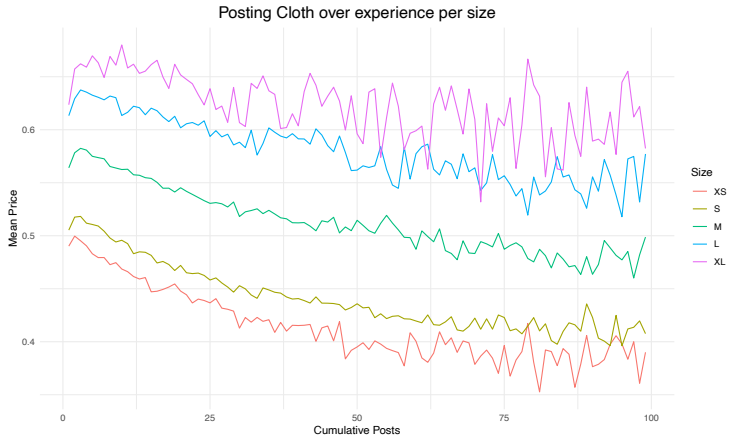
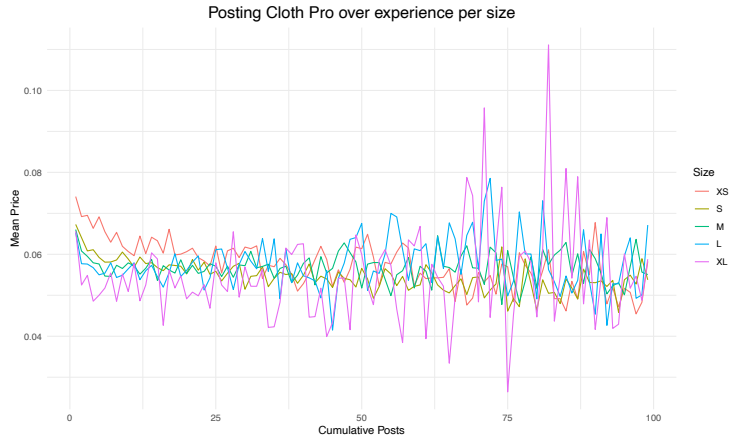


Image posting behaviour

Image posting behaviour over “experience”







The number of cumulative posts is used as “experience”

Recap

Descriptive statistics

- The platform is dominated by female users and products
- The platform changes and introduce compulsory fields over time
- The items size distribution is skewed towards smaller sizes
- Posting categories and prices are seasonal

Recap continued

Recapping regression prices

- Posting a selfie increase the price by 4% after 2021
- Also increasing the caption length by 1%, an effort signal, increases the price by 26%
- Worse condition have lower prices
- “Less competitive” sizes have higher prices

Recap continued

Recapping regression selfie

- An higher price increases the probability of posting a selfie
- Also increasing the caption length by 1%, an effort signal, increases the probability of posting a selfie by 1%
- “Experience” have a positive impact on posting a selfie - up to a point
- Different sizes from the highest represented are less incline to post themselves
- Some categories are more sensitive to posting selfie, for example beachwear

Recap continued

- Prices seem to have an impact on posting behaviour $\rightarrow$ exerting more effort
- Also sizes seem to have an impact in the posting behaviour
- “Experience” definitely shapes some of the picture posting behaviour

Potential Research Questions

- The value of privacy in monetary terms
- Brand value, how changed the product framing after introducing search fields?

Thank you !! ☺