How does ‘quick commerce’ change (or not) urban freight and city policies?

Laetitia Dablanc
• Urban studies, geography and urban planning
• Warehouses, innovations, new trends in consumption and impacts on city logistics
• New methods to collect urban freight data

Results available online:
• E-book on warehouse geography in the US
• Observatory of ecommerce mobilities
• Survey reports on gig workers for instant delivery platforms in Paris, 2016 to 2022
• Logistics real estate and relationships with urban form, macro analyses

We are hiring: two three-year post-doc positions starting January 2023
Quick-commerce for grocery

- A service providing ultra-fast delivery of groceries bought online
- Based on a network of small fulfillment centers (‘dark stores’) from which deliveries are made by bikes, mopeds, cars, vans...
- Use of employees as well as gig workers
- At a cross-road today
  - financial challenges
  - political challenges
- A market niche
  - 5% of online groceries in Chinese cities in 2021 (Zaugg, 2021)
Number of newspaper articles in Europe about “quick commerce” and “dark stores”

- Search from the Europress database

Logistics City Chair, Creusé et al., 2022
Amsterdam... as seen by local newspaper NRC Handelsblad
Worldwide development

Slide credit: H. Buldeo Rai, Logistics City Chair
Originated from Asia and well established in China

Dark stores by Missfresh

Warestores by Hema Fresh

Slide credit: H. Buldeo Rai, Logistics City Chair
Number of companies exploded in 2021

- Gopuff revenue in 2021: $1 bil (three times more than in 2020)
- 10 million app downloads
- Gorillas revenue in 2021: $220 mil
- Getir Turkish dark stores: average of 500 orders a day

Figure credit: H. Buldeo Rai, 2022 from Skrovan, 2022
$4 billion invested in *quick commerce* by VC in 2021

Global venture capital investments in ultrafast grocery delivery

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment (m)</th>
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<tbody>
<tr>
<td>2016</td>
<td>$21 million</td>
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<tr>
<td>2017</td>
<td>450</td>
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<tr>
<td>2018</td>
<td>110</td>
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<td>2019</td>
<td>790</td>
</tr>
<tr>
<td>2020</td>
<td>430</td>
</tr>
<tr>
<td>2021</td>
<td>3,980</td>
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</table>

Slide credit: Quartz, data from Pitchbook, 2022
Performance and financial indicators

**SOME HANDS -FR**

Édition 7 - Mai 2022

- **Performance**
  - 37% > 20 min (Vs. 26% W17)
  - 69 NPS (Vs. 67 WoW)
  - 27,959 Orders (-18% WoW)
  - 26.4 AOV (Vs. 26 in Apr)
  - 2.0 OPH (Vs. 1.9 W17)
  - 4.6% Tx Incident (Vs. 4 W17)

Figure credit: H. Buldeo Rai, Logistics City Chair, from Gorillas

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**Fast Delivery, Quick Losses**

Fridge No More’s costs per average order, September 2021

- **Cost per category**
  - Price paid by customer
    - Goods
    - Write-offs
    - Payment processing
    - Packaging
    - Delivery
    - Warehouse
    - Loss per order *

Note: Excludes sales and marketing, administrative expenses and other overhead costs
Source: Fridge No More investor presentation
Challenges

- Data on Gorillas, Getir, Zapp, Flink: transactions peaked in January 2022 and have declined since then (ABN Amro)
- VC, investors more reluctant
- Government backlashes and economic situations (Turkey, China)
- Lay-offs, mergers, market retreats
- A sound business model is possible (Genelot, 2022) if:
  - a few more deliveries/staff
  - a slightly higher delivery price paid by consumers
  - a more optimized sourcing
  - less expenses in advertisement
- Advantages: more revenue/m2 and less product waste than supermarkets
How to become profitable? Simulation for Paris quick commerce

↓ Number of deliveries per staff (productivity)

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<tr>
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<th>10</th>
<th>15</th>
<th>20</th>
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<td>-28 663 €</td>
<td>16 437 €</td>
<td>61 538 €</td>
<td>106 639 €</td>
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</table>

- Blue: observed for one example
- Red: not profitable
- Yellow: dark store profitable (without centralized costs)
- Green: entire company profitable (without advertisement costs)
- Grey: entire company profitable ((with advertisement costs)

↑ Number of delivery staff

Logistics City Chair, Creusé et al., 2022
Strategies

Acquisitions

Partnerships

More services

Delivered in 10 minutes? Bananas!

gopuff EXPANDS SERVICES

Slide credit: H. Buldeo Rai, Logistics City Chair
Gopuff in Soho, NYC

A warehouse AND a coffee-shop AND a click&collect area

M. Schorung, Logistics City Chair, March 2022
Dark stores in New York City (110 by Feb 2022)

JoKr

Fridge No More (gone today)

M. Schorung and L. Dablanc, March 2022
Gopuff in Los Angeles: use of BevMo! stores
Market penetration (used at least twice)

- 1.5% of households in France
- 3% of households in the Paris region
- 11.5% of households in the City of Paris
Dark stores in Paris: 80 by Jan 2022

APUR, 2022
• 69 dark stores identified in April 2022 with use of societe.com

• Huge competition for spaces: rental prices can go up to 400€/sq m/y

• (twice as much as urban warehouses)
Store or warehouse?

- Between 200 m² and 400 m²
- 2,000 SKUs, one-third from local producers
- Limited infrastructure requirements
- Five to fifteen employees
- Target upscale markets but do not necessarily need upscale locations
- Serve neighbourhoods in ten to twenty minutes within a two-km radius
- Use of two-wheelers including electric mopeds and cargo-bikes
- Equipment and vehicles are generally provided to delivery drivers

Frichti in Paris 11th

Slide credit: H. Buldeo Rai, Logistics City Chair
Need for a **network of warehouses**: example of Paris neighborhoods

*Paris*

- Sentier
- Vitry-sur-Seine
- Bastille
- Batignolles
- Champs-Élysées
- Colombes – Argenteuil
- Courbevoie
- Beaugrenelle
- Belleville – Les Lilas
- Boulogne – Billancourt
- La Garenne – Colombes
- Les Oberlins
- Montmartre
Up to one departure or arrival every two minutes

Transport intensity of dark stores on week days

Transport intensity of dark stores on weekend days

Logistics City Chair, field observations February and June 2022, Buldeo Rai & Schorung, 2022
Transport and land use intensity of *dark stores*, observations from Getir in Paris 11th district, February 2022

- Regular supplies of about five pallets
- About 11 to 13 delivery vehicles occupy on-street parking spaces
- 1.3 deliveries per departure during the week and 1.5 during the weekend

Slide credit: H. Buldeo Rai, Logistics City Chair, Buldeo Rai & Schorung, 2022
Opposition from city authorities

- Paris: forty dark stores threatened of closure for lack of petition to change land use destination from ‘commerce’ to ‘warehouse’
- One-year ban in residential areas of Amsterdam and Rotterdam, The Netherlands
- A Dutch judge in June 2022 has concluded Gorilla dark store in an Amsterdam mixed-use neighborhood is a warehouse not a store
- Ban on new openings in Madrid and Barcelona, Spain
- New York survey: 81% operate outside warehousing zoning (BetaNYC civic group, March 2022)
Backlash from local residents on noise, aesthetics, safety

Instagram page in Amsterdam

My Bodega Online initiative in New York

Online Town Hall meeting in Paris

Slide credit: H. Buldeo Rai, Logistics City Chair
A City of Paris app organizes community identification of unauthorized *quick commerce* warehouses

- « How to *signal* a non-authorized ‘dark store’ »
- (Previous version: « How to *denounce* a non-authorized’ dark store’ »)
Traffic and curb management, clean vehicles

• Use of bikes, e-bikes, mopeds and e-mopeds
• Bikes have a competitive advantage as they can use bike lanes
• Rental services of e-bikes and e-mopeds (ex. Bizebike)
• An opportunity for introducing e-mopeds (lagging behind in Europe)

Creusé et al., 2022, Logistics City Chair
- Delivery Workers Zone
- Delivery Preparation Zone
- Picking and Order Preparation Zone

Fire Safety Guidelines, Paris dark store, April 2022
Logistics City Chair, Creusé et al., 2022
Livability of cities

• Paradox of the ‘15 minute city’
• Closed façades generating a sense of deprivation of city life (and sense of danger)
• More generally: quick commerce favors a mode of consumption that is contrary to what cities represent
• 2020 New York City law: cash must be accepted by local stores
  - Exemptions for online ordering
• Opportunistic use of vacant retail space in immigrant neighborhoods
• But also increased sourcing of local products
Conclusion

• Part of the grocery service provision in cities
• Frontiers between local warehouses and stores increasingly blurred
• Wider issues for cities
  - vehicle impacts (noise, emissions)
  - curb management for new delivery vehicles
  - Urban traffic management challenged by increased variety of delivery vehicles