

Apps, backed by 'dark kitchens', are changing food delivery

Even though the platform attack is hobbled by poor economics, restaurants are under threat – especially during a pandemic.

In 2004, Matt Maloney and Mike Evans were working in Chicago as web developers for apartment.com, a platform that allows people to find rental flats online. The pair often worked late enough to order takeaway. "We were frustrated by the lack of dinner options as well as the pain in the ass of calling restaurants and reading our credit cards," Maloney recalled in an interview in 2014. "That's when I heard the screeching wheels in my head: Why wasn't there something like (apartment.com) for food delivery?"¹ So appeared Grubhub, which now boasts 24 million regular users who can order from 300,000 restaurants in 4,000 US cities and London.²

Grubhub is part of the world's booming online-food-delivery industry that is expected to record global sales worth US\$136 billion in 2020, a 27% increase from 2019. Grubhub's competitors in the US include DoorDash and Uber Eats. In Europe, the UK-based Deliveroo and Just Eat Takeaway.com of the Netherlands are prominent. Alibaba's Ele.me and Tencent-backed Meituan-Dianping dominate China while iFood does likewise in Brazil. Swiggy and Zomato hold sway in India. Altogether the platforms have 1.2 billion patrons who like the convenience, speed, vast choices offered, ratings, reviews, recommendations and ease of paying via an app – especially of late when food delivery was one of the few luxuries people could enjoy during the lockdown phase of the coronavirus pandemic.³


Platforms have proliferated because they think they can deliver meals to homes faster and cheaper than can restaurants, especially as they gather more data on diners. The industry's emergence has given rise to 'dark' or 'ghost' kitchens or 'virtual restaurants', the name for commercial premises that prepare meals for platforms. Even as they are targeted for disruption, food providers can see advantages in cooperating with platforms. They offer restaurants a cost-effective route to an online presence (compared with setting up a website themselves), widen their customer reach, provide them with data on their patrons and deliver orders in a streamlined fashion.

So spectacularly has online-food delivery taken hold that UBS in 2018 issued a report titled, "Is the kitchen dead?" that judged food delivery as a "mega trend" that might make home cooking a rare practice by 2030.⁴ For this to be true, however, the food-delivery industry will need to sort the tough economics that govern food delivery so the food preparers can flourish as much as the dominant platforms are bound to thrive.

Running a restaurant has always been a low-margin activity, even in buoyant economic times, because it is hampered by poor economies of scale (when higher output lowers fixed costs per unit of production). Cooked meals are hard to mass-produce efficiently because different ingredients need to be on hand, components and dishes have various cooking times and meals are typically made just in time to be consumed. The appearance of platforms only made running a restaurant tougher (as have the coronavirus restrictions and economic blow). Any online orders are subject to a platform commission that can range from 15% to 35% and be raised at any time. Other drawbacks for eateries include that platforms can alter their algorithms at whim to shut out restaurants.⁵ Platforms are gaining the customer relationship, can force restaurants to discount and, sometimes, make them bear the costs of deliveries gone wrong.⁶ On top of that, delivery fees limit what restaurants can charge diners. To no one's surprise, restaurant margins are falling. Many had closed pre-covid-19. Many are likely to never reopen. Those that do could struggle even when life returns to normal.

Even as they grind down restaurants, established platforms in many countries (but less so China) are struggling to overcome some weaknesses of their economic model.⁷ The first is that the food platforms rely on restaurants that are inefficient at producing à la carte meals. Dark kitchens, to be sure, have helped boost the efficiency of cooking for online delivery but only to a point. Another challenge is that delivery has poor economies of scale because each order is different and has a unique delivery address – China's high density (that means riders can deliver many more meals in one trip) and lower rider costs make this less of a handicap for its leading platforms. A third pitfall of the platform model is the food-delivery industry has low 'barriers to entry' – hence all the fresh, often loss-leading, rivals chasing the industry's riches (though diners have enjoyed subsidised meals). Other chinks are that platforms have no hold over their users, which means they must constantly promote themselves, and food delivery relies on gig labour but giganomics is coming under scrutiny for paying workers poorly.

The result is that an industry shakeout has started. Some money-losing platforms have vanished while others are in mergers and



takeovers to ensure they are among the survivors that dominate this promising industry. Perhaps the biggest question to be settled is how the tussle within the industry between eateries and aggregators will play out so that both can find sustainable frameworks (when diners might not have it as good). The likely outcome for the industry is that a few prominent platforms have so many users they can operate a high-volume, low-fees model that allows restaurants to be profitable enough. But there is much to play out in the meantime.⁸

Just to clarify, food delivery is an old concept. For all the gains of online ordering, ordering by phone is still a big segment. Many eateries will survive without much of a platform presence because people will still want to dine out and restaurants provide an ambience not found in homes. The barriers to entry protecting the platforms might rise once the industry has consolidated. The established food platforms are already profitable enough. It's just that the tight margins for many food-delivery businesses reflect the challenging economics underpinning an industry that might only be at the start of the restructuring needed to become viable over the longer term.

GHOST ECONOMICS

In 2015, the US broadcaster NBC 4 decided to investigate the top-rated restaurants in New York featured on Grubhub and Seamless, a food platform founded in 1999 that merged with Grubhub in 2013. To the surprise of the reporters, they found out that the city's health department had yet to inspect 10% of the restaurants, which meant these eateries lacked licences. The reporters discovered that some of these eateries were places with no diners. Their only purpose was for food providers to prepare meals. Thus the world became aware of an effort by platforms to improve the economics of their businesses.⁹

Ghost or dark kitchens, which exist to fill online orders, and virtual restaurants, which are parts of restaurants dedicated to online, are now found the world over because by reducing fixed costs they improve the economies of scale of the online-food delivery. Shadow eateries can rent cheaper premises, often in prime delivery areas. They can accommodate many cuisines in one place, buy the most-efficient equipment, add storage facilities and better bargain with suppliers to reduce costs. They don't need seating, bathrooms, tables, utensils, waiters, space for ambience, and so on.

Dark eateries are destined to proliferate due to their favourable economics. Many websites tout for restaurants to operate as virtual ones or encourage chefs to start ghost kitchens. Many platforms now operate networks of dark kitchens. Deliveroo in the UK, for instance, launched its dark-kitchen arm Deliveroo Editions in 2017, the same year India's Swiggy set up The Bowl Company. Uber Eats, which was founded in 2014, has helped start about 4,000 virtual restaurants since 2017.¹⁰

But platforms are making less progress overcoming the other weaknesses of their business models. Low barriers to entry mean anyone with a website, a kitchen and a bike can engage in online food delivery, as have established fast-food chains such as McDonald's to hold onto sales. Newcomers such as DoorDash in the US have capital and are willing to subsidise their quest for market share. Grubhub's profits plunged in 2019 as DoorDash's blitz lowered Grubhub's margins and prised away customers.¹¹ Grubhub-only customers have fallen from 87% of users to 24% in recent years,¹² a drop that prompted the company to describe online diners as "promiscuous".¹³

The platforms (and restaurants) find delivery a struggle profitwise. Grubhub in 2019 admitted that delivery would never be lucrative because it is "point to point" and can never achieve "hub and spoke efficiencies".¹⁴ One handicap with delivery is that the less dense a suburb, the less potential for drivers to achieve any sort of economies of scale when picking up and delivering meals. Yet the less-dense suburbs are where live the families who place large orders.

To emphasise how challenging are the economics of delivery for restaurants and platforms, Deliveroo and Uber Eats in the UK offer an option whereby customers can pick up their food to avoid delivery costs. But the feature upset their drivers. More significantly, it argues against their existence. Rather than use a platform, people could just call the restaurant, then go fetch their meal.

For platforms, their challenges have led to an industry shakeout. Some have disappeared. Munchery in the US and Australia's health-based 5.4 vanished in 2019 as, perhaps surprisingly, did Amazon Restaurants in the US.¹⁵ Mergers and takeovers are underway as companies search for economies of scale. Takeaway.com of the Netherlands in 2018, for instance, swooped on Delivery Hero's German business for US\$1.1 billion and in 2020 paid 6 billion euros for Just Eat to create the Just Eat Takeaway.com giant in Europe. Amazon is part of a group spending US\$575 million to buy a 16% stake in the UK's Deliveroo. Uber Technologies is mooted to be poised to buy Grubhub, which, with its Uber Eats subsidiary, would give it 55% market share in the US.¹⁶

Whatever the struggles of platforms, they enjoy better economics than restaurants, even pre-covid-19. Restaurants felt vulnerable before the pandemic because the aggregators were squeezing their margins by charging high fees while amassing data on their customers. The Restaurant & Catering Industry Association of Australia says the arrival of platforms slashed average restaurant margins from 10% to between 2% and 4% before the virus.¹⁷ In time with enough data, platforms could suggest alternative restaurants to their users, perhaps with a discount inducement, or they could push people to order from their dark kitchens.

Restaurants have counterattacked when possible. They have pushed back on fees to platforms, restricted online menu choices to the most profitable dishes, opted for self-delivery and offered discounts if people phone them rather than use a platform. Restaurant chains sometimes have played off the delivery services against each other – for instance, McDonald's uses DoorDash and Uber Eats but smaller chains and standalone restaurants lack the muscle to negotiate better terms with platforms. In India, restaurants have organised boycotts of platforms.¹⁸

But ultimately, platforms need restaurants. So the platforms that end up dominating the expanding industry are likely to end up charging fees per order that are low enough to ensure that eateries are profitable. And these platforms are likely to be profitable businesses as long as people prefer to make a few clicks on their mobiles rather than trouble themselves to call a restaurant and get their credit cards out of their wallets, as Grubhub's founders saw. The pandemic only strengthened the habit.

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1 Inc.com. 'How I did it: Matt Maloney of Grubhub and Seamless.' November 2014. inc.com/magazine/201411/liz-welch/how-i-did-it-matt-maloney-of-grubhub-and-seamless.html. As Grubhub owns Seamless it can trace its history to Seamless's founding in 1999.

2 Grubhub website. 'About us'. about.grubhub.com/about-us/what-is-grubhub/default.aspx. Figures are for 2019. The dollar amount includes people ordering via restaurant websites when no platform earns a commission.

3 Platform-based food ordering and delivery was responsible for US\$54 billion of this thanks to their 539 million users. Online ordering and delivery via app just edged restaurant-to-consumer delivery in revenue terms though 631 million people order via app (when platforms get a cut) or through a restaurant website where the restaurant ensures delivery. Statista. 'Online good delivery. Worldwide'. statista.com/outlook/374/100/online-food-delivery/worldwide

4 UBS. 'Is the kitchen dead?' 18 June 2018. ubs.com/global/en/investment-bank/in-focus/2018/dead-kitchen.html

5 See 'How Uber ate my restaurants.' 3 September 2019. The Australian Financial Review. afr.com/technology/how-uber-ate-my-restaurants-20190821-p52jeu

6 The Australian and Competition and Consumer Commission in 2019 ruled that Uber Eats contracts with restaurants were unfair and needed to be amended because it made restaurants responsible for delivery. See ACCC. 'Uber Eats amends its contracts.' 17 July 2019. accc.gov.au/media-release/uber-eats-amends-its-contracts

7 See The Wall Street Journal. 'America is stuck at home, but food delivery companies still struggle to profit.' 13 May 2020. wsj.com/articles/uber-technologies-makes-takeover-approach-to-grubhub-11589296216?mod=hp_lead_pos5

8 See 'We must stand up to Uber Eats or all our geese are cooked.' Mark Calabro, co-founder of HungryHungry and convenor of a crisis meeting for the hospitality industry in Melbourne in September. The Australian Financial Review. 2 September 2019. afr.com/technology/we-must-stand-up-to-uber-eats-or-all-our-geese-are-cooked-20190902-p52mze

9 NBC 4. 'I-Team: Restaurants use false identities on food delivery websites.' 10 November 2015. The other surprise was that some of the unlicensed restaurants were operating

under multiple unregistered names with multiple contact details as a way to increase the odds of someone clicking and ordering. nbcnewyork.com/news/local/seamless-restaurant-grubhub-fake-eatery-unregulated-kitchen-investigation-i-team-new-york-city/2013699/

10 See Uber Eats for restaurants. ubereats.com/restaurant/en-GB/signup. 'The rise of the virtual restaurant.' The New York Times. 14 August 2019. nytimes.com/2019/08/14/technology/uber-eats-ghost-kitchens.html

11 Grubhub reported net income for the third quarter of US\$1. 0 million compared with US\$22.7 million for the third quarter of 2018. Yet revenue rose 30% to US\$322.1 million over the period. 'Grubhub reports third quarter 2019 results.' 28 October 2019. investors.grubhub.com/investors/press-releases/press-release-details/2019/Grubhub-Reports-Third-Quarter-2019-Results/default.aspx

12 The Fly. 'Cowan cautious on Grubhub citing customer loyalty decline.' 5 December 2019. thefly.com/landingPageNews.php?id=3002537

13 Grubhub. 'Letter to shareholders.' 28 October 2019. Page 3. sec.gov/Archives/edgar/data/1594109/000156459019038140/grub-ex992_85.htm

14 Grubhub said it didn't think "that a company can generate significant profits on just the logistics component of the business". Letter to shareholders. Op cit. Page 5.

15 See amazon.com/restaurants/legacy. Amazon must see some value in the food-delivery industry because it was willing to spend US\$575 million to buy a minority stake in Deliveroo.

16 The Wall Street Journal. 'Uber Technologies makes takeover approach to Grubhub.' 12 May 2020. wsj.com/articles/uber-technologies-makes-takeover-approach-to-grubhub-11589296216?mod=hp_lead_pos5

17 Svpartners, an Australian accountancy and advisory firm. 'Trends in the hospitality industry.' Figures are for the 2017-2018 financial year. svpartners.com.au/trends-hospitality-industry/

18 See 'India's restaurants rebel against food delivery apps.' 29 August 2019. nytimes.com/2019/08/29/technology/india-restaurants-logout-delivery-zomato.html

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