*Sunny K. Bilaney**

Ride-Hailing Industry – A Case for the Profit Split Model

The ride-hailing industry has disrupted the traditional taxi business and achieved astronomical growth in the last decade. However, 2020 was an exceptional year where demand plummeted due to the COVID-19 pandemic. But the industry is expected to swiftly revive. Although the ride-hailing business is a type of platform business model, it is significantly a local industry by nature. In this article, the author analyses the ride-hailing industry, emerging trends in this industry and key value-creating activities/value drivers of the business. This analysis is followed by guidance on a plausible transfer pricing model that aligns with value-creating activities.

1. Introduction

The ride-hailing industry[1] has disrupted the traditional taxi business by effectively matching and optimizing the demand-and-supply equilibrium. Over the years, the market size of the ride-hailing industry has increased, reaching USD 60.5 billion in 2019. But due to the COVID-19 pandemic, which resulted in a lockdown in many parts of the world and health and safety concerns amongst the riders/users, the demand plummeted, with the industry shrinking to USD 52.07 billion in 2020. Despite the COVID-19-induced setback, the market is expected to recover swiftly and reach USD 85.5 billion in 2023 at a CAGR of 18%.[2]

This article first analyses the ride-hailing industry and emerging trends (section 2.), then discusses the value-creating activities or value drivers of the ride-hailing business (section 3.), its revenue model (section 4.) and plausible transfer pricing model (section 5.), and ends with concluding remarks (section 6.).

* **Sunny Kishore Bilaney is a Transfer Pricing and International Tax Professional. He is member of the Institute of Chartered Accountants of India. The author can be reached at sunnykvbilaney@gmail.com.**

1. For the purpose of this article, the author will only cover the ride-hailing business i.e. an on-demand passenger mobility business. The other businesses of ride-hailing companies, such as food delivery, medical delivery or payment wallet or freight business is outside the scope of this article.
2. *See* https://www.wbcsd.org/Overview/News-Insights/WBCSD-insights/Ride-hailing-platforms-will-lead-the-global-EV-transition (accessed 3 May 2021).

2. Overview of the Ride-Hailing Industry and Emerging Trends

2.1. Ride-hailing industry

The concept of ride hailing began in 2000 when Mr Sunil Paul, co-founder of Sidecar, an on-demand peer-to-peer taxi service, applied for patenting his concept of mobile ride hailing over a wireless network. He was granted a US patent in 2002. Mr Paul took almost 9 years to convert his concept to business reality, launching Sidecar in 2011. Unfortunately, Sidecar closed its operations in December 2015.

Although not being the pioneer of the ride-hailing concept, Uber (which began its operations in 2009) was able to truly reinvigorate the ride-hailing business. With strong backing from investors, Uber blitz-scaled its operations by adding a new market. Over the years, a number of players have entered this sector. Some of the prominent players in the ride-hailing industry include Uber, Didi Chuxing, Lyft, Grab, Gett, Ola, Gojek, Bolt and Cabify; among these players, Uber and Didi Chuxing have emerged as leaders.

The global ride-hailing market is valued at USD 52.07 billion in 2020 and is anticipated to reach USD 85.5 billion in 2023 at a CAGR of 18%. It is estimated that the Asia-Pacific market will be the largest for the ride-hailing industry, owing to the fact that 60% of world population is resident in this region. The outbreak of the COVID-19 pandemic in 2020 and consequential lockdowns around the world, coupled with health and safety concerns amongst the riders, meant the demand for ride-hailing services plummeted across the world. With economies gradual reopening, the demand is returning to the market.

Over the last decade, the ride-hailing market has grown exponentially due to the increase in the number of smartphone users, better Internet connectivity, the rising costs of owning vehicles and the preference among millennials and Generation Z to avail themselves of on-demand services rather than owning vehicles. Although, the revenue of ride-hailing companies has ballooned, the profitability is still elusive. None of the ride-hailing companies have made a profit till now and the path to profitability is still unclear. This is mainly due to low customer loyalty because switching to competitors' apps is easy, the lack of or minimal network effects, low barriers to entry, low driver loyalty and a price war amongst competitors to obtain a maximum number of riders.

2.2. Emerging trends

Given that the ride-hailing sector has a fledgling nature, a lot of experimentation is required to improve customer

experience, enhance safety, capture larger market shares and reduce environmental impact. Ride-hailing players are increasingly investing in technology and collaborating with other businesses to gain traction for their service. Some of the emerging trends in this sector are as follows:

- *Autonomous vehicles:* Autonomous vehicles drive themselves with little or no human intervention. These vehicles are designed to reduce accidents caused due to human error and make commuting time more productive as driver intervention is not required. Autonomous vehicles are considered the next big thing in mobility. Many players in the ride-hailing industry are working on autonomous vehicles for their services. For instance, Lyft wants people to be hailing fully driverless cars using its app by 2023.[3] Similarly, Waymo, Google's self-driving company, launched Waymo One, a self-driving ride-hailing service.[4]
- *Electric vehicles:* Companies are taking green initiatives to lower vehicular emission by increasingly adopting electric vehicles. For instance, Uber plans to have 100% electric vehicles by 2040, while Lyft promises to switch to 100% electric vehicles by 2030.[5] Similarly, Ola launched "Mission Electric" to put 10,000 electric vehicles on the road in 12 months.[6]
- *Partnering with other sectors:* The ride-hailing companies are foraying into various industrial sectors such as food delivery, healthcare and the freight business.
- *Safety measures for women and children:* The ride-hailing services have been developing initiatives in the past few years by delivering dozens of innovative safe measures for riders all across the world, such as permitting female passengers to choose the gender of the driver, offering comprehensive details on the driver's training and providing an SOS option in their app.
- *Use of blockchain technology:* Blockchain technology may be integrated with ride-hailing technology to ensure greater screening measures of drivers and higher security standards for them. This has become an urgent need, particularly to ensure the safety of female passengers.
- *Original equipment manufacturers (OEMs) as mobility service providers:* OEMs try to sell as many cars as possible. However, due to a changing demand pattern, i.e. a shift from ownership to on-demand services, increase in traffic, congestion and pollution, many OEMs are leaning toward the trend of ride hailing.

3. Value Creating Activities/Value Drivers in the Ride-Hailing Business

The ride-hailing business is a type of platform business model. A platform business model applies technology to connect users within an ecosystem to exchange and create value. In the case of ride hailing, it connects the riders/users to drivers, i.e. it matches demand to supply. The key value-creating activities/value drivers in the ride-hailing business are as follows.

Platform technology

Platform technology is the heart and soul of the ride-hailing business. Platform technology has two sub-platforms – the rider platform (i.e. the app for the riders) and the driver platform (i.e. the app for the drivers). These two apps are connected by a dispatch system (a system that connects the driver and the rider via their mobile phones). There are various components of a ride-hailing platform that work together to support the trip life cycle. These are as follows:[7]

- *Driver location manager:* This is responsible for maintaining the changing driver locations. It will process the messages emitted by the drivers' apps containing their current locations and update the car location index.
- *Trip dispatcher:* This is responsible for handling the trip requests from users and dispatching a driver in response to those requests, i.e. a matching and dispatching function.
- *Arrival ETA calculator:* This is responsible for calculating the ETA for the driver to reach the rider once the driver has accepted the ride.
- *Pricing technology:* This computes the estimated fare for the ride. The fare depends on the type of vehicle, distance, time, traffic condition, booking pattern, waiting time and demand-supply situation. Further, an important aspect of the ride-hailing business model is the variation in cab fares according to the situation. Whenever the demand increases, the prices per mile are automatically increased. The new price depends on the number of available drivers and the number of requests made by riders who want to travel.
- *Trip recorder:* This records the GPS signals transmitted from the ride when the trip is in progress. These GPS signals will then be recorded in a data store which will be used by subsequent systems, such as the map matcher and pricing calculator. The objective of the trip recorder is to ensure that the car has

3. *See* https://www.bloomberg.com/news/articles/2020-12-16/lyft-wants-people-to-be-hailing-fully-driverless-cars-on-its-app-by-2023 (accessed 3 May 2021).
4. *See* https://techcrunch.com/2020/10/08/waymo-starts-to-open-driverless-ride-hailing-service-to-the-public/ (accessed 3 May 2021).
5. *See* https://auto.economictimes.indiatimes.com/news/aftermarket/uber-promises-100-electric-vehicles-by-2040-commits-800-million-to-help-drivers-switch/78008071 (accessed 3 May 2021).
6. *See* https://www.olacabs.com/media/in/press/ola-launches-mission-electric-to-put-10000-evs-on-the-road-in-12-months (accessed 3 May 2021).
7. To understand the platform technology, the author has substantially relied upon the content provided at https://techtakshila.com/system-design-interview/chapter-3/ (accessed 19 Apr. 2021).

travelled the route suggested by the app, as the price estimate is based on the route determined by the app.

- *Map matcher:* This is responsible for matching the trip on the actual map using algorithms specialized for this purpose.
- *Final fare/price calculator:* This will use the recorded trip information for computing the final price that users have to pay for the trip. It will vary if the route is changed or the waiting time is longer.
- *Payment technology:* Ride-hailing companies offer various payment options to riders, such as direct debit to credit cards or debit cards linked to the app, wallets, bank transfer or cash. These payment options are integrated in the platform technology.

It is essential for these components to work seamlessly to give riders a superior experience. Thus, platform technology is an important intellectual property in the value chain of ride-hailing companies.

Research and development

The ability of ride-hailing companies to compete successfully depends on their ability to continuously work towards adding new offerings, features, improving safety and enhancing user experience. This is possible through continual research and development, which is typically undertaken by the principal entity in the group.

Driver network

Although, the ride-hailing business is a platform business model, it is very much a local industry by nature, as it entirely depends on local drivers for its operations. Ride-hailing companies strive to add more drivers to their networks, as the higher the number of drivers, the lower the waiting time for the riders. As riders see lower waiting times, they will have a higher tendency to use the service, which in turn leads to more rides for the ride-hailing company. However, this is not an easy task, as competition is stiff and driver loyalty is low. Drivers are more concerned about the price that they obtain for the ride and the incentives that the company provides. Most drivers are registered with two or more ride-hailing apps. Accordingly, developing and maintaining the network of drivers is an important value-creating activity in the value chain of ride-hailing companies. These activities are typically undertaken by local subsidiaries of multinational ride-hailing groups, as they have local expertise.

Riders/users network

The ride-hailing business does not involve long-term subscriptions or contracts with riders/users. This makes it different from other subscription-based platform business, such as Amazon Prime, Spotify or Netflix. Since there is no long-term commitment, riders switch between the service providers. Typically, a rider is concerned about the ETA, fare and safety measures. Just like drivers, riders also typically use two or more apps and book a cab based on the ETA and fare. Thus, developing and maintaining the riders/users network is another important value-creating activity in the value chain of ride-hailing companies. These activities are typically undertaken by local subsidiaries of multinational ride-hailing groups, as they have local expertise.

Trademark/Brand name

The quality of service and improved user experience has enabled ride-hailing players to establish trusted brand names in the market. This is another important factor in the value chain of ride-hailing companies. Trademark/brand development and maintaining the brand value at global and local level is critical. Thus, lot of marketing and brand building work is undertaken at global, regional and local level.

Local operational efficiency

The local on-the ground operational team with their market-specific knowledge rapidly launch and scale in the cities, build networks of drivers and users, provide support to drivers and users, liaise with local regulators and undertake marketing and business development activities. Since ride-hailing is significantly a local industry, the operational efficiency of a local team is a critical value driver to launch and scale in a particular market.

Regional or global support function

The regional or global team supports the local teams in finance, treasury, technology, human resource, etc. functions and ensures smooth operations of local subsidiaries.

Thus, the value-creating activities mentioned above can be categorized in (i) product-related activities and intangibles, i.e. platform technology, research and development, trademark (global) and regional/global support function; and (ii) market-related activities and intangibles, i.e. drivers network, riders/users network, local marketing intangibles and local operational team. The analysis of value-creating activities paves the way to a possible transfer pricing model that may be adopted by ride-hailing companies. But before delving into a plausible transfer pricing model, it is important to understand the revenue model of ride-hailing companies.

4. Revenue Model

Ride-hailing companies typically follow a commission-based revenue model where they charge drivers a certain percentage of the amount of the fare as fees for the use of their services by the drivers. In addition to this, ride-hailing companies may also earn money by charging ride cancellation fees to riders.

5. Plausible Transfer Pricing Model – A Case for Profit Split

Ride-hailing companies with a global or regional presence typically operate through subsidiaries in their market jurisdictions. To evaluate a plausible transfer pricing model that aligns with the value-creating activities, it is essential to understand how the value-creating activities

Table 1 – Key value-creating activities and risks		
Key value-creating activities/value drivers	**Principal entity**	**Local subsidiary (market jurisdiction)**
Platform technology	High	N/a*
Research and development	High	N/a
Trademark/brand name	High (global level)	Medium (local level)
Drivers network	Low	High
Riders/users network	Low	High
Local operational efficiency (driver and user support, liaison with regulatory authorities)	N/a	High
Global/regional support function (i.e. finance, treasury, technology, human resource, etc.)	Medium	N/a
Economically significant risks – Both parties assume certain risks emanating from the value-creating activities undertaken		
Technology risk: There is a risk of loss of potential revenues due to inefficiencies arising from obsolete technology	High	Medium (indirectly)
Market risk: Market risk arises for a business due to increased competition and relative pricing pressures, change in demand patterns and needs of customers, inability to develop/penetrate a market, reduction in the drivers or riders network, etc.	High	High
Service liability risk: Risks associated with service failures including non-performance in accordance with generally accepted or regulatory standards or errors in the provision of services.	Medium (indirectly)	High
* N/a = Not applicable.		

are typically split between the principal entity and the local subsidiary in the market jurisdiction. Table 1 provides a summary of the same.

Table 1 shows that both parties contribute to the value-creating activities/intellectual properties and share assumption of economically significant risks. Thus, it appears that in the ride-hailing business both the principal entity and the local subsidiary act as an entrepreneur entity performing key value-creating activities/functions and assuming economically significant risks.

At this point, it is essential to refer to the Revised Guidance on the Application of the Transactional Profit Split Method: Inclusive Framework on BEPS: Action 10. It provides inter alia that where both parties (or more than two parties) to a controlled transaction make unique and valuable contributions to the transaction or share the assumption of economically significant risks, or separately assume closely related risks, a two-sided (or multi-sided) method such as the profit split method may be the more appropriate pricing approach.

Thus, it is essential to analyse whether the contributions, i.e. value-creating activities/functions and risks (*see* Table 1) made by the principal and local subsidiary in the value chain of ride-hailing business, are "unique and valuable" in nature. According to the Revised Guidance on the Application of the Transactional Profit Split Method: Inclusive Framework on BEPS: Action 10, "unique and valuable" contributions are defined as follows:

> Contributions (for instance functions performed, or assets used or contributed) will be defined as "unique and valuable" in cases where (i) they are not comparable to contributions made by uncontrolled parties in comparable circumstances; and (ii) they represent a key source of actual or potential economic benefits in the business operations.[8]

Given the definition of "unique and valuable" contributions, it appears that platform technology, research & development, trademark/brand name, drivers and riders network (which must be massive to take advantage of network effects) and local operational efficiency (as the ride-hailing business, albeit a type of platform business model is very much a local industry) can be considered as unique and valuable contributions. Further, it can be observed from Table 1 that both parties, i.e. the principal entity and the local subsidiary, make unique and valuable contributions.

Thus, the profit split model or the revenue split model (i.e. sharing the commission charged to drivers) may be appropriate for sharing the combined profit/loss (or revenue) generated in the market jurisdiction between the principal entity and the local subsidiary. Such profit/loss (or revenue) can be split between the principal entity and the local subsidiary based on the relative contribution made by respective parties. Based on the accurate delineation of the actual transaction, the weighted average of multiple profit splitting factors may be considered. Some of the instances of combined profit splitting factors that may be considered are (i) the cost-based profit splitting factor, such as the marketing expense incurred by the principal and local entity to build the brand name, salary cost of principal entity (on proportionate basis) and local subsidiary; and (ii) the asset-based profit splitting factor, such as using valuation techniques to determine the value of

8. *See* OECD, *Revised Guidance on the Application of the Transactional Profit Split Method: Inclusive Framework on BEPS: Action 10*, para. 2.130 (OECD 2018), Primary Sources IBFD.

platform technology (self-generated intellectual property) and the value of the network (i.e. drivers and riders network), which may be used to split the profit/loss (or revenue).

6. Conclusion

Unlike other types of platform business model, the ride-hailing business is significantly a local business. This is clearly reflected in the value chain of the ride-hailing business. While the principal entity develops and upgrades the technology, launches a new service offering and builds a global brand name, local subsidiaries play a critical role in launching and scaling business in their market jurisdiction, expanding the drivers and riders network and building the brand name locally in its jurisdiction. Thus, the profit split model (or revenue split model) appears to be aligned with the value chain of the ride-hailing business.

Further, as per the OECD/G20 Base Erosion and Profit Shifting Project, Tax Challenges Arising from Digitalisation – Report on Pillar One Blueprint ("Pillar One Report"), the ride-hailing business would fall under the definition of automated digital service as it is a type of online intermediation platform. Although the Pillar One Report is in draft stage and OECD envisages publishing a final report by mid-2021, once finalized, ride-hailing companies (if they meet certain thresholds that are yet to be finalized) will also be required to share a portion of the group's residual profit to market jurisdictions. It would appear that the ride-hailing industry still has a long way to go in its tax journey.