

Disruptive Business Model Innovation : How a Tech Firm is Changing the Traditional Taxi Service Industry

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Abstract

Speaking at the IOD Annual Convention 2014 in London, Travis Kalanick, CEO of Uber made a bold statement that "Uber is not a taxi service provider." This statement took everybody by surprise as Uber has become one of the biggest taxi service providers, having global presence in more than 55 countries and 200 plus cities worldwide. Uber has emerged as a biggest start-up in corporate America since the last 5 years, and is expected to overtake some of the biggest companies in United States in a couple of years down the line. The company was expected to touch \$10 billion in revenues by the end of 2015, while a company like Facebook, after completing 10 years of its operations for the first time, is expected to earn \$10 billion in revenues this year. The case highlighted how Uber has transformed a traditional capital intensive industry into a high-tech business. The company relies on an independent pool of contractors (cab owners/drivers) who register themselves on Uber's website and for every ride, 80% of the payment goes to the driver, and Uber takes the rest 20%. The case further illustrated the various challenges which the company is facing in its global expansion, particularly in countries like Spain and India, and questioned the validity of surge pricing.

Keywords: business model innovation, surge pricing, taxi industry, technological innovations, Uber

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The tricky part in the global taxi industry is that every market looks very different in each unique country/region (different regulations, ownership structures, urban taxes, infrastructure, and so forth) and is undergoing constant change. Jeremy Arnold, a marketing consultant, projected the total valuation of the taxi market in United States worth \$11 billion per year. The market in India is estimated at between \$6-9 billion per year, while the African market is worth \$3.7 billion, bringing the total valuation of the global taxi market at more than \$50 billion (Arnold, 2014). Taxis are an important constituent of the public transport system in an economy, and their importance in providing comfortable and flexible services to customers cannot be ruled out. The point-to-point demanded services could be provided to individuals or groups around the clock in lieu of an agreed fare. The importance and need of taxis in an industry cannot be ignored, which complement and compete with other forms of traditional transport and create job opportunities in any economy. Irrespective of the nature of the economy of any nation, the taxi industry is quite visible, which can be a single-passenger taxi market or a shared taxi market on fixed and/or flexible routes.

Single passenger taxis are more preferred in markets having less-demand and established in rural areas having a

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low population, where the main motive of customers is to reach business centres or areas of interest from dispersed residence. On the other hand, shared taxis are more popular in urban areas having highly dense population. The traditional global taxi market is being owned by independent owners in many developed and emerging economies. Sensing the potential, many large companies have now entered into the taxi business and are generating good profits.

About Uber

In 2009, Travis Kalanick and Garrett Camp founded Uber as 'Uber Cab' and released the app on which consumers can submit their request for taxis, which is then routed to crowd-sourced taxi drivers who are not owned by Uber. Having their headquarters in San Francisco (California), Uber has transformed the global taxi industry by developing, marketing, and operating mobile-app-based transportation network. The business model of Uber is so innovative that other taxi companies are also trying to leverage the trend, known as Uberification, which it has created globally. As a result, Uber was named as Tech Company of the year by USA Today in 2013 (Wolf, 2013).

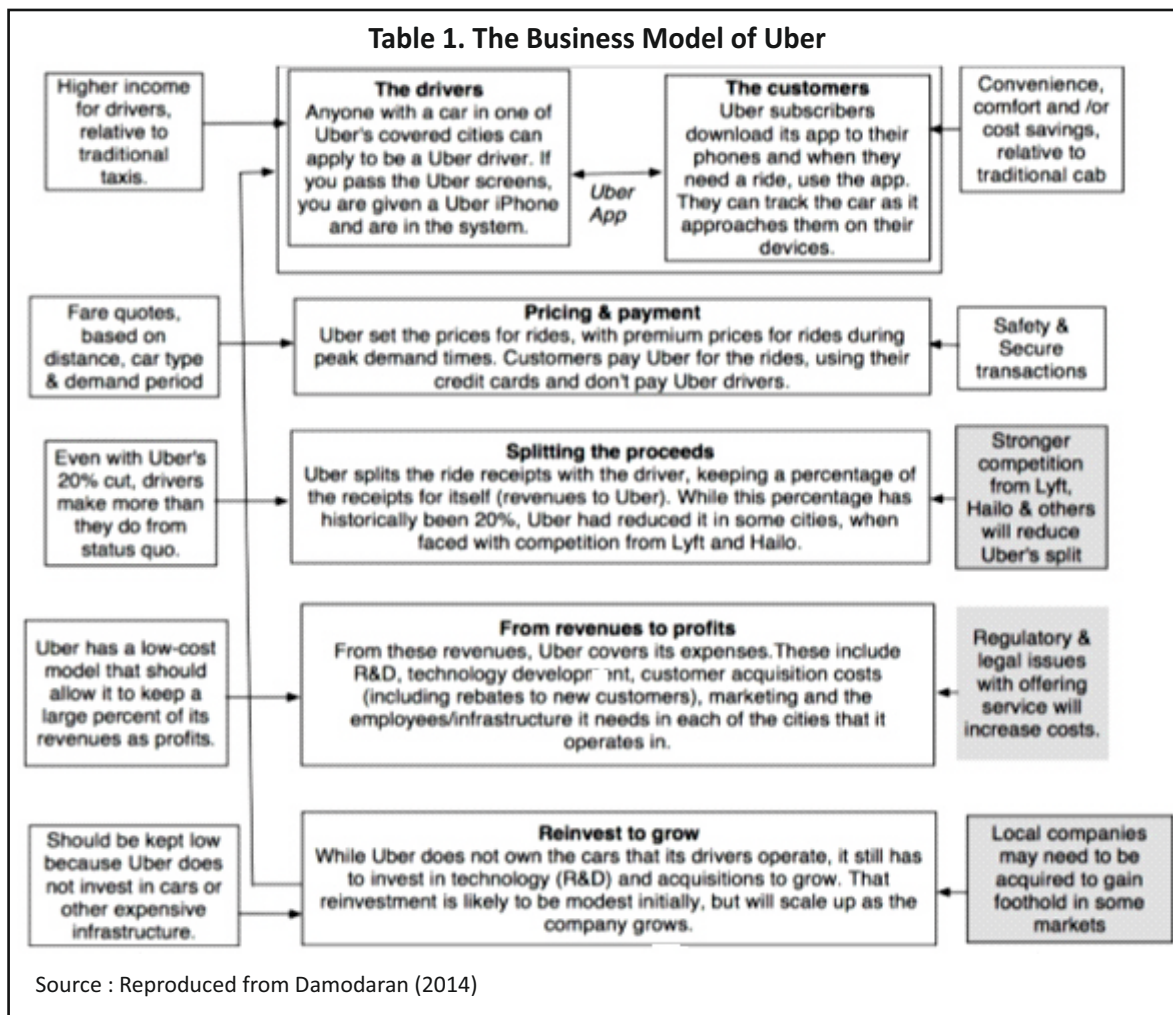
Uber has never looked back after its inception, and expanded internationally in 2012. Uber is truly a global company having a presence in 55 countries (200+ cities) till March 26, 2015 and received a \$2.8 billion funding by 2015 (Company Website). Experts valued Uber as a \$40 billion darling and forecasted that revenues of Uber will touch \$10 billion by the end of 2015, which is an incredible accomplishment for a 5 year old start-up (Shontell, 2014). It was also forecasted that Uber will witness a 300% increase in its revenue and is expected to grow to another 300% in 2016 (Davidson, 2015).

Competitive Rivalry

Being a global company, Uber faces a stiff competition across different nations from different companies. In USA alone, Uber is present in 132 cities and faces very less (or zero) competition in 54 cities (Johnson, 2014). However, in other cities, it faces a stiff competition from Lyft, which appears to be the main competitor of Uber and has raised \$530 million (\$2.5 billion valuation) to compete with Uber (Karnik, 2015). In the competitors list, the next competitors are Curb and Sidecar. With India being the second biggest market for Uber (though 5% market share), competition got stiffer when Ola Cabs (60% market share) announced (on March 2, 2015) about its acquisition of India's second-largest cab company TaxiForSure for \$200 million (Johnson, 2014). Similarly, the Chinese taxi market is very important for Uber since the 100th city for Uber was in China only. It has always been difficult for any foreign company to succeed in the Chinese market despite of strong competitive advantages, since localization is the most important factor for winning in China. YongChe, a mobile car-sharing service, is the biggest competitor of Uber in China. YongChe has already entered 50 Chinese cities and planned to enter 100+ cities by the end of 2015 (Karnik, 2015). Competition exists and will always stay. The most important thing is how Uber has transformed the traditional global taxi industry into a high-tech competitive global market by creating a disruptive business model.

Business Model of Uber

Travis Kalanick, CEO of Uber, while speaking at the IOD Annual Convention 2014 in London made a bold statement that Uber is not a taxi service provider. This statement took everybody by surprise as Uber has become one of the biggest taxi service providers, having a global presence in more than 55 countries and 200 cities worldwide. The company raised a new round of funding of approximately \$1.2 billion dollars in December 2014, bringing the total valuation of the company at \$41 billion dollars (Macmillan, Schechner, & Fleisher, 2014).



So what is Uber? Uber is a tech company (software company), as per the words of Travis Kalanick, which does not own any of the cars which transport Uber customers. The company does not employ any of the drivers driving cars, but instead, acts as a liaison between the drivers and the customers. Uber articulates that all the drivers are like independent contractors for the company. This all sounds like a fairy tale and something magical, but this is how it is.

The company does all of this by efficient use of technology. Firstly, drivers register their cars with Uber. The company does a background check of the drivers before putting their cars on the website. The smart phone app is assimilated with Google maps. Therefore, a customer can see how far the car is and sets a meeting point. Meanwhile, while the car is on the way, a customer can see the driver's information, including the ratings on five stars given by earlier customers. Then the driver will either text or call the customer that he/she is on the way, and will be at the desired location within 5 minutes. Once the cab arrives, the driver greets the customer with his/her name, and then the customer sits in the cab. In the meantime, when the customer arrives at his/her destination, the app charges his/her card, and the customer walks hassle free without even paying the tip. The Table 1 gives a holistic view of the business model of Uber (Damodaran, 2014).

This business model not only benefits customers as they get the lowest prices which are almost 20% less as compared to the traditional taxi service providers, but also the drivers who earn an average of \$500 per day, which is almost a week's work for conventional drivers. This is due to the efficient use of technology and brilliant demand

Figure 1. Surge Pricing Message on User's Registered Mobile



Source : Reproduced from Rao (2015)

forecasting by Uber, which they do for every 15 minutes. As a result of this forecasting, the utilization rates of cabs increases to a dramatic extent, and as a result, the driver is able to make more number of trips per day. This is the reason why Uber doubles in size after every six months (Damodaran, 2014).

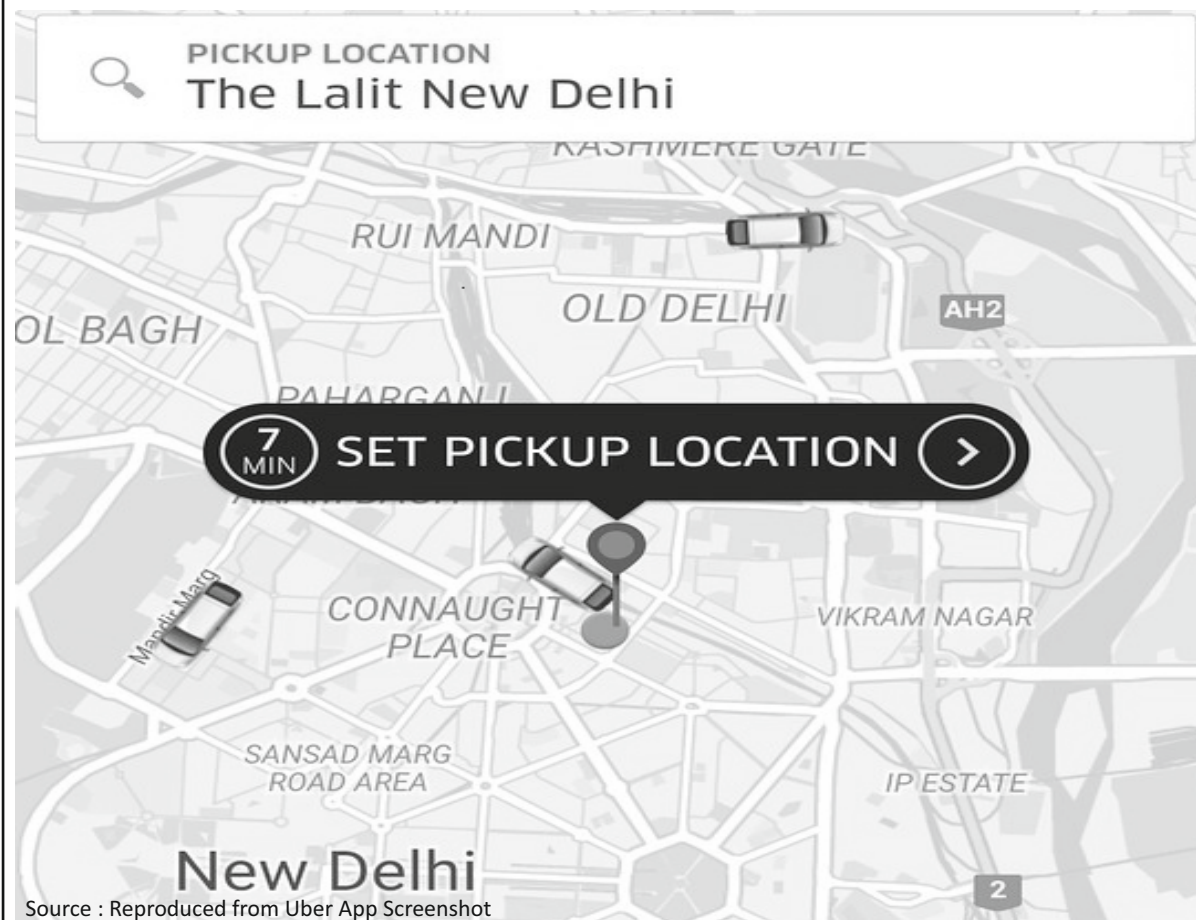
(1) Surge Pricing : Imagine you riding an Uber aligned cab, and suddenly, a pop up flashes on the screen, “Due to sudden influx in demand, the prices have appreciated” (See Figure 1). Do you accept the higher price? Uber, during rush hours, imposes a surcharge which can be as high as eight times its normal rate. Last New Year's Eve, for instance, Uber cautioned customers that its pricing would not be for “the faint of heart.” There were people who still complained like the guy who paid \$63 for a 0.73 mile trip (Mohammad, 2013). Uber, in defence, always stresses the fact that customers always have an option to walk away and not purchase.

On the other hand, Uber has two other main pricing structures; fixed airport rates and standard fee, which include per minute charge. For example, the fixed airport fee from downtown Chicago to Midway is \$65 and \$75 to O'Hare, slightly less than two times that of conventional operators (Company Website). In India, the company charges a base fare of ₹ 40 with ₹ 7 per km, and a minimum fare of ₹ 60, which is again lower than the closest competitors like Ola, which has a minimum fare of ₹ 100 (Sharma, 2014). The pricing here does not differ that much, but the company differentiates itself by the convenience which they provide to the customer.

(2) Demand Forecasting : Fifteen minutes seems to be a very brief time period, but not for Uber. The company does demand forecasting for every 15 minutes. The app which is available for iPhone, Android, and Windows uses GPS from the pickup destination and displays the map of all Uber cars in the area (See Figure 2). The driver manages the customer requests by an iPhone provided by the company (Robbins, 2011).

The company employs mathematicians and scientists who develop models, prediction algorithms, and heat maps to predict expected demand at different times in a day (See Figure 3). These scientists analyze how many

Figure 2. Uber App Displaying Available Cabs in Vicinity



Source : Reproduced from Uber App Screenshot

Figure 3. Heat Map Displaying Location of Cabs



Source : Reproduced from McClaine (2012)

times the application is open and where clusters are located to manage demand and supply, thereby managing a very brief waiting time period for the passenger who is always in a rush, and a busier and more utilized cab for the driver (McClaine, 2012).

Challenges Ahead

So far, this brief journey of Uber has been nothing short of exceptional. The company does not disclose its financials, but if we go as per some rumours in the industry, the company is believed to generate about \$1 billion in revenues every month. However, there is a lot of criticism about surge pricing/ dynamic pricing technique, which is being followed by the company ("The taxi-app market Uber : Competitive," 2014). The damaging insinuations of its use of dynamic pricing are also enlarged because the company banks so heavily on social media and word of mouth to promote its app.

There was a huge cry by customers on New Year's Eve and during Sydney's hostage crises, when customers were charged almost five times extra as of the normal fare. Secondly, the company is facing many legal issues in many countries like Spain, where the services have been banned as the company is accused of unfair competition and operating without authorization.

In India, the company had promised a fare less than that of autorickshaws at unbelievably ₹ 7/Km. Within months after its launch in Delhi, the services were banned by a court in Delhi as one of the drivers had raped a female passenger ("Uber taxi app suspended in Spain," 2014). The Delhi government authorities blamed the company for doing a little and in some cases, no background check of the drivers. Uber, on the other hand, has a minimal control on the drivers as they are like independent partners and are not directly on the payroll of the company. After facing huge embarrassment in social media circles in India, Uber came up with some major changes in the app. More transparency was brought into operations, and the Uber app reflects the driver's photo, name, license number, vehicle type, phone number, and an SOS alert where the user can connect with the local police station in no time (Malpani, 2015). Despite all these efforts, there would always be a challenge in this regard as Uber has almost no control on the drivers. On the same day when Uber services were banned in Delhi, India, judges in The Netherlands banned Uber's UberPop ride-sharing service, which was launched as a pilot project in Amsterdam between July and September, and was subsequently extended to The Hague and Rotterdam. Authorities in Thailand also reached a similar conclusion, deeming Uber's operation of unlicensed and uninsured taxi services to be unlawful, and also asked the company to cease business at least until it starts using properly accredited drivers rather than private cars (Savov, 2014).

One of the major factors responsible for such an enormous success in such a short period of time is the hassle-free payment, where in, the customer walks hassle free without even paying the tip as the customer gets charged on his/her credit card. This seems to be the driving force for the growth of the company in developed countries of the world. However, this backfires in developing markets, particularly like India and Africa, where a majority of the people don't have access to credit cards and are more comfortable in paying by cash. Therefore, there has to be a change of strategy and the company needs to decide whether it's really wise to follow the same strategy throughout the world.

Thus, the challenges for Uber are its international operations and how they will clear the air about surge pricing in the near future. Despite all this negative hype, Uber has reached the highest level and has gained a huge competitive advantage over its rivals, but will Uber be able to maintain this over a period of long run and how the company will handle all its global operations is a billion-dollar question.

Teaching Notes

(1) Synopsis : Speaking at the IOD Annual Convention 2014 in London, Travis Kalanick, the CEO of Uber made a

bold statement that “Uber is not a taxi service provider”. This statement took everybody by surprise as Uber has become one of the biggest taxi service providers, having global presence in more than 55 countries and 200 plus cities worldwide. Uber has emerged as the biggest start-up in corporate America since the last half a decade and is expected to overtake some of the biggest companies in the United States in a couple of years down the line. The company was expected to touch \$10 billion in revenues by the end of 2015, while a company like Facebook, after completing 10 years of its operations, for the first time, is expected to earn \$10 billion in revenues this year. The case highlights how Uber has transformed a traditional capital intensive industry into a high-tech business. The company relies on an independent pool of contractors (cab owners/drivers) who register themselves on Uber's website and for every ride, 80% of the payment goes to the driver, and Uber takes the rest 20%. The case further illustrates the various challenges which the company is facing in its global expansion, particularly in countries like Spain, India, and questions the validity of surge pricing.

(2) Learning Objectives : This case has the following objectives:

- (i) To study how business model innovation can be a source of competitive advantage.
- (ii) To illustrate the impact of Uber's business model innovations on the global taxi industry.
- (iii) To illustrate the validity of surge / dynamic pricing and how it is changing the current taxi industry.

(3) Use of the Case : The case is written for courses in technology & strategy, strategy management, innovation management, and / or business models. The focus of this case is to showcase how Uber has transformed the traditional global taxi industry into a competitive hi-tech industry. The case has been written in such a way that students will be able to get deeper insights into the business model of Uber and how it has become one of the biggest start-ups in just half a decade (\$41 billion company valuation). The case also provides important insights to the students about the influence of technology on the business models of the firms. The case could be used by academicians in their classes while discussing the concepts of business model innovation, technological innovations, and / or innovation management.

(4) Relevant Theory : The current case focuses on the concept of business model innovation with a primary focus on the influence of technology on business model innovation. Readers will get to know about the concept of business model innovation, its importance for any organization, surge / dynamic pricing.

(5) Suggested Readings

- Amit, R., & Zott, C. (2012). Creating value through business model innovations. *Sloan Management Review*, 49, 41-49.
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- Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management*, 37 (4), 1019-1042. doi: 10.1177/0149206311406265

Organizing Discussion Using the Current Case (Assuming 60 Minutes Class)

- (1)** Discuss about the global taxi industry (5 minutes).

- (2) Discuss the concept of business model innovation and its importance (15 minutes).
- (3) Discuss the concept of surge / dynamic pricing (10 minutes).
- (4) Discuss the role of technology in business model innovation. Discuss how Uber is leveraging technology in their business to stay ahead of its competitors (15 minutes).
- (5) Discussion and takeaway (15 minutes).

Discussion Questions

- Q1 :** Critically examine the concept of business model innovation.
- Q2 :** Does technology play an important role for Uber? Comment with strong arguments.
- Q3 :** What is your understanding of surge / dynamic pricing? What is your opinion of Uber's adoption of surge / dynamic pricing in its business model?
- Q4 :** Discuss how Uber has changed the age old traditional taxi industry.

Teaching Strategies

(1) Case Preparation

- ✦ The audience should have a pre-understanding of the concept of business model innovation.
- ✦ Readers of this case are expected to have an understanding of the concept of surge / dynamic pricing and few other concepts of strategy management and management terms.
- ✦ The reader(s) should have a familiarity with Uber.

(2) Teaching Methods : White board format teaching method can be used for teaching the case. The board plan for the same is as discussed below:

✦ **Board Plan :** The case can be presented to the students by opening the discussions related to business model innovations in the initial phase, shifting gradually to the importance and application of the concept of interest.

MAIN BOARD		
Left	Center	Right
	Core Concept	Takeaways /Outcomes
<ul style="list-style-type: none"> • Discussion of Uber • Discussing the disruptive business model innovation of Uber. 	<ul style="list-style-type: none"> • Discussing the concept of business model innovation. • Discussing the importance of business model innovation. • Discussing the role of technology in business model innovations. • Discussing the concept of surge / dynamic pricing. 	<ul style="list-style-type: none"> • Effective and unique business model innovation can shake the roots of well settled competitors and can help even new start-ups to achieve good results. • Technological innovations play an important role in business model innovation. • Uber's business model innovation is quite unique, and competitors across the globe are imitating it.

Later on, the company can be discussed by the instructor and how Uber is leveraging great benefits using technological advancements in its business model. These different activities can be presented simultaneously with Osterwalder's (2008) framework.

Answering Discussion Questions

(1) Answer 1 : A business model describes the rationale of how an organization creates, delivers, and captures value. Business model innovation simply means finding novel ways of value creation, which are distinct from product and process innovation. Some scholars have focussed on business model innovation as a medium for transformation and rebirth. Business models are critical for commercializing scientific innovations, creating strategic flexibility, reducing costs, and being able to transcend the constraints faced by different societies such as affordability. In case of Uber, the company has really disturbed the existing business model of the taxi industry which was very high in terms of capital requirements as companies need cabs plus drivers, but Uber has removed all these intermediaries and has made the rides cheap and efficient.

(2) Answer 2 : The case of Uber represents a true disruptive innovation. Technology has a huge role in the business model of Uber, that is why, Travis, the Co-Founder and the CEO of the company positions it as a technology company and not a taxi service provider. The app technology which is available for iPhone, Android, and Windows uses GPS from the pickup destination and displays the map of all Uber cars in the area. The driver manages the customer requests by an iPhone provided by Uber. The company employs mathematicians and scientists who develop models, prediction algorithms, and heat maps to predict expected demand at different times in a day. These scientists analyze how many times the application is open and where clusters are located to manage demand and supply, thereby managing a very brief waiting time period for the passenger who is always in a rush, and a busier and more utilized cab for the driver. All this is not possible without efficient use of technology.

(3) Answer 3 : When the demand for rides exceeds than the number of available drivers, Uber uses "surge pricing" to charm additional drivers to the roads, meaning the cost of a single ride can go seven times higher than the normal price. Uber uses a computerized algorithm to increase prices to "surge price" levels, responding rapidly to changes of supply and demand in the market. Customers receive a notice when making an Uber reservation that prices have increased. The company applied for a U.S. patent on surge pricing in 2013.

The company has definitely received huge criticism for surge pricing, whether it was New Year's Eve, Halloween, or the Sydney hostage crisis, causing huge outrage on social media. The company defended its position of surge pricing during Sydney's hostage crisis, but later on, refunded the money to the customers. There is nothing as such wrong with the surge pricing as it notifies the customer in advance, but the company needs to bring more clarity on this issue in the eyes of its customers ; else, it can really bring a bad name to the company.

(4) Answer 4 : Uber has made the taxi industry a very high-tech business, and has changed the basic building blocks of the business model in the taxi industry. The company has a very unique and efficient way of capturing value, which rivals are finding very difficult to imitate, and as such, the company has achieved a sustainable competitive advantage. Usually, the fixed costs for starting a taxi business are very high as it requires considerable investment upfront in the purchase of cabs, their maintenance, and then the salary and other benefits for the drivers. On the other hand, Uber has become one of the biggest taxi service providers having a global presence in almost 200 cities covering 55 countries without owning any of cabs and without employing any of the drivers. Competition has become more open, and it has become really easy for new entrants to enter this market as the investment barriers in terms of fixed costs no longer exist.

Managerial Implications

The case study highlights how business model innovation can shake the roots of well established firms in any industry, which requires considerable investment in terms of fixed costs. The study stresses the fact that managers should look beyond their traditional perspectives and look for new ways of value creation and value capture. Managers can use business model innovation not only as a source of value creation, but also as a source of sustainable competitive advantage which rivals will find impossible to imitate. Lastly, the study also highlights that business model innovation can have huge implications on the financial performance of the company as Uber has become one of the biggest start-ups in corporate America in recent times, touching a valuation of more than \$40 billion.

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