WORKING PAPER NO: 559

Where do my first users come from? Network Mobilization Strategies for Multi-Sided Platforms

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Year of Publication – September 2017

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Abstract

Every single platform has a growth stage where it needs to attract enough users onto the platform so that it becomes interesting for users on the other side(s) to on-board. How does a firm attract initial set of users, also referred to as "solving the penguin problem" (Farrell & Solaner, 1987), to the new platform to have a viable business model? Based on a set of case studies on multi-sided platforms in India, we hypothesize that apart from the source of users, the resources that the firm has access to is a critical dimension which firms need to consider in order to strategize the on-boarding of its initial set of users. We first lay out the different aspects of the user and resource dimensions that the firm wishes to leverage. We propose strategic recommendations for new platform firms to adopt when attempting to solve their own penguin problems as they grow.

Keywords: Multi-sided platforms; Resources; Complements; Ecosystem; Chicken-egg problems; Network mobilization

1.0 Introduction

Some of the most successful firms that have captured our attention in recent times have adopted multi-sided platform business models (Eisenmann, Parker, & Van Alstyne, 2006). Be it cab hailing apps, airports, video games, social networks or online auction sites, we encounter platform mediated firms competing for market share and consumer mindshare. Internet and mobile penetration have made it easy to build large and viable platforms with multiple sides participating. Since the year 2000, there has been much interest in the analysis of platform business models (Rochet & Tirole, 2003). The seminal work of Rochet and Tirole (2003) on two-sided markets has triggered much of the theoretical and empirical literature on multi-sided platform businesses dealing with network effects.

A firm's decision to establish a multi-sided platform instead of the traditional pipeline model (Evans, 2011) shapes the strategic approach it needs to undertake. A multi-sided business facilitates interaction between two or more transacting parties so that they can seamlessly conduct business (Gawer & Cusumano, 2014). They match buyers with suppliers, who transact directly with each other using platform resources (Hagiu & Wright, 2015).

In many industries, consumers place great deal of importance on platforms that have a large installed base of users (Afuah, 2013; Cennamo & Santalo, 2013) and have a great variety of complements available to further enhance the value of the core platform services (Gawer & Cusumano, 2008). These platforms not only facilitate transactions that would be hard to do otherwise, but help reduce transaction frictions and bring in market efficiencies (Eisenmann et al., 2006; Evans & Schmalensee, 2016). Partner firms have participated as *complementors* on the platform to build extensions to enhance the utility of the platform to its users. The ability of platforms to co-create value along with its users and complementors is a driving factor of platform growth (Adner & Kapoor, 2010). Users of a platform place high value on the presence of users from the other side that they want to transact with. The more the platform can attract users from different groups, the more valuable the platform is to each of the sides (Eisenmann, 2007). For instance, in a taxi-hailing app, commuters value a platform where they can find a large number of taxis available, valuing cross-side network effects (Caillaud & Jullien, 2003). Users of messaging applications would prefer to choose a service popular amongst their co-workers, family and friends. These '*network effects*' drive people to choose one platform over another, and therefore becomes the bases of competition amongst the competing platforms, demonstrating same-side network effects (Rohlfs, 2003).

The presence of cross side network effects or indirect network externalities give rise to a 'chicken & egg' problem: for instance, to attract buyers, a marketplace platform should have a base of registered sellers, but the sellers will be willing to sell on the platform only if they expect many buyers to show up (Caillaud & Jullien, 2003). Be it newspapers which have been around for centuries or the cab hailing apps, a platform needs to make explicit attempts to get on-board each side so that it is appealing for the other sides to also participate. This challenge of getting critical numbers on each side is commonly referred to as solving the Penguin problem (Farrell & Saloner, 1986) or the chicken-and-egg issue (Caillaud & Jullien, 2003).

Solving the penguin problem is crucial to have a viable business model especially when the switching and multi-homing costs for participants are low during the early stages of association (Evans, 2003; Farrell & Solaner, 1987). In this paper, we explore how different platform firms have approached this challenge. We study firm decisions along two dimensions of growth: the extent to which the firm leverages resources, and the path it takes to acquire its first set of users. We establish the criticality of these two decisions in the context of growth strategies for multi-sided platform firms. We use a nested case-study approach (Yin, 2014) to analyze the strategic decisions relating to growth. Based on our analysis, we present a strategic framework for use by multi-sided platform businesses to solve their penguin problems.

2.0 Strategic dimensions: Resources & Users

In this paper, we analyze the approaches taken by various firms to solve the penguin problem. Strategically, firms would approach the challenge based on the kind of resources at their disposal and the set of initial users they want to target. Hence analyzing the firm's approach to building critical mass requires strategizing along two dimensions: *Users & Resources*. There are three primary sources for initial set of users: Port all users from existing pipeline (or platform) business, target marquee users first, and attract altogether new users. Firms leverage resources in three major ways: use existing firm resources, leverage resources from partnerships or complements to augment existing resources, and develop new resources that can power the platform growth.

2.1 User Dimension

Users could be individuals or institutions such as government agencies or other large corporations which are looking for means to reach out to the other side(s) of the platform. Users choose to affiliate with one platform over another based-on multiple considerations including, past reputation of the sponsors of the platform, quality of products/ services, business models offered, and privacy provisions. In platforms that exhibit significant cross-side network effects, the number and quality of users on the other side is one of the primary considerations for platform affiliation.

2.1.1 User Dimension: Porting Users (on all sides)

We define porting as migrating existing users of a firm to a new product or service to be launched by the same firm. Established firms that have an existing user base can be offered new services by porting all users onto a new platform offering. All sides of the new platform emerge from users or entities that are ported from the existing base of the firm. For instance, Amazon.com ported its publishers and book buyers from its ecommerce bookstore in launching its Kindle e-book reader (Perez, 2014). Porting from a captive installed base of available users is one of the least expensive ways to build critical mass for a fledgling platform business.

2.1.2 User Dimension: Attract Users via Marquees (Marquee Users / Events / Brands)

Multiple platform firms that have emerged since the Internet took wings have used Marquee users or events as their rallying point to invoke network effects and attract users onto the platform. Marquees come in different forms and sizes (Dave Centeno & Jeff Jianfeng Wang, 2017) as they could be important personalities such as rock stars or politicians, reputed entities such as the government itself or marquee brands that can pull users. A platform could target marquee events such as the Olympics or a presidential election. The online micro-blogging platform Twitter effectively used the 2008 US Presidential candidate Michael Obama to attract a large base of users to sign-up for its services. It could also be a disruptive event such as sudden changes in politico-economic situation in the country like the role of Facebook in the Tunisian revolution (Ben Letaifa, Edvardsson, & Tronvoll, 2016; Breuer, Landman, & Farquhar, 2015). Endorsement by marquees is seen as testament to the fact that the platform affiliation is valuable for the audience. If a platform can provide exclusive access to the marquee, then users who seek to interact may even attach a premium to be on the same platform.

2.1.3 User Dimension: Attract New Users (at least on one side)

Some platforms are ground breaking in that they tend to create entirely new markets where none existed before. Users may not have experienced similar services in its traditional form either due to transaction frictions inherent in the old ways or due to access issues. The platform could provide new means of expression to its members and in turn make it desirable for the other sides to also come onboard to interact. When the video-sharing platform YouTube was launched, it was a disruptive new service for peers who produced and consumed videos (Cool, Seitz, Mestrits, Bajaria, & Yadati, 2017). New users could come in the form of consumer groups, audiences who are targets for advertisers or even new suppliers who are coming onboard an e-commerce portal. When this new user group joins the portal or the product, a multi-sided platform is then born.

2.2 Resource Dimension

Firms traditionally leverage resources at their disposal to build sustainable businesses where possible, or develop new resources using their other capabilities. In business models with cross-side network effects, the source of firm resources is a critical dimension in staging its growth (Cusumano & Gawer, 2002). Which resources are leveraged (costs, control, and fungibility of resources) influences pricing models, direction of growth, and pace of network mobilization.

2.2.1 Resource Dimension: Use Existing Resources (from same firm)

Firms can leverage their current/ existing resources in their offerings on the new platform so that users who value those resources will onboard. Resources held by a firm could include tangible resources like capital intensive machinery that gives it a manufacturing advantage, or intangible resources like an established brand, a network of users, or routines/ processes, that can be leveraged for the new platform. For instance, Uber could leverage its matching

algorithm (matching drivers with riders) to expand its scope to Uber Freight (Etherington, 2017).

2.2.2 Resource Dimension: Leverage External Resources (via partnerships / complements)

Firm may not themselves own the necessary resources to directly build a critical mass of followers for its new platform, but could leverage resources they have access to through partnerships with other firms or their complements. While complementary products are built by external firms using public interfaces exposed by the platform; firms have also launched new platforms by entering into joint ventures with partners. Instead of the firm having to do all the innovations, complements and partnerships help the platform address a broader problem domain. These have the potential to attract entirely new user groups who otherwise would not have considered the platform. When a gaming application is included as part of a social network, then the complementary product keeps existing users engaged. For instance, Zynga leveraged Facebook Application Programming Interfaces (APIs) (Rao, 2010) to launch popular gaming platform, which in turn increased appeal of Facebook.

2.2.3 Resource Dimension: Develop New Resources (in-house development)

When a firm develops an entirely new resource in-house, it is aiming at solving a core technical issue or a market imperfection/ market failure. When a platform offers to solve issues in a better manner than ever before, it attracts customer groups away from other established offerings as they see the benefits of the new approach. For instance, Airbnb solved the market failure in the matching of demand and supply of hotel rooms (Benoit, Baker, Bolton, Gruber, & Kandampully, 2017; Hartl, Hofmann, & Kirchler, 2016). Leveraging technology, Airbnb made available surplus rooms in homes to budget travellers with price-sensitive demand. In order for firms to resolve market failures/ imperfections, they need to develop new resources in-house.

3.0 A two-dimensional framework of solving penguin problems

(Parker, Choudary, & Van Alstyne, 2016) have enumerated a list of strategies platform firms adopt to solve the chicken-egg problem. The list includes (a) follow-the-rabbit-strategy (b) piggyback strategy (c) seeding strategy (d) marquee strategy (e) single-side strategy (f) producer evangelism strategy (g) big bang adoption strategy and (h) the micromarket strategy. We bring together the two dimensions (users and resources) to evolve a two-dimensional framework for solving penguin problems. We elaborate it using a 9-box matrix with instances of how successful platform firms have resolved their penguin problems (see table 1).

Where do Users come from?

Where do resources come from?

	Port Users (on all sides)	Attract Users via Marquees (Marquee Users / Events / Brands)	Attract New Users (at least on one side)
Use Existing Resources (from same firm)	kindle direct publishing amazon video direct	XBOX	UBER EATS
Leverage External Resources (via partnerships / complements)	Alipay	twitter	salesforce appexchange
Develop New Resources (in-house development)	m-pesa	airbnb	YouTube

Table-1: How international firms have utilized resources and user base to address penguin problems

3.1 Use existing resources to port users on all sides

Amazon leveraged its existing assets such as tablets, streaming devices and AWS compute infrastructure to bootstrap two platforms. Amazon Video Direct was launched in May 2016 (Guerrasio, 2017) as a video publishing platform competing with commercial YouTube videos in the user-generated video market wherein independent film makers could upload videos and leverage existing Amazon Prime viewership base. Here Amazon customers were ported to the new video publishing platform as viewers and creators of videos. With advertisers already on-board the Amazon Prime ecosystem, Amazon Video Direct evolved into a three-sided platform with strong network effects. Kindle Direct Publishing platform followed a similar strategy to allow Amazon customers publish e-books and paperbacks for free to get access to users on Kindle devices, Kindle apps and Amazon portal worldwide (Perez, 2014).

3.2 Leverage external resources to port users on all sides

Payment platforms such as Apple Pay, Android Pay and Alipay partnered with credit card firms such as Visa and MasterCard to leverage their banking expertise. Alipay, a third-party online payment platform launched in 2004 by the Alibaba group controlled a major share of online payments in China (Aouad, 2017; Shah, 2014). By 2004, Alibaba.com was already a growing B2B and B2C marketplace through its different entities and needed a robust payment platform that could handle financial transactions in-house. Alipay provided an escrow service for buyers on Alibaba.com, allowing them to verify the products received before releasing payments; and helped Alibaba overcome buyer apprehensions arising out of relatively weak consumer protection laws in China. Alibaba ported its large install base of business entities, both buyers and sellers, from Alibaba.com to Alipay.

3.3 Develop new resources to port users on all sides

Consider the M-Pesa platform launched by Safaricom, a subsidiary of Vodafone, in Kenya and Tanzania in 2007 that enabled mobile-phone-based branchless banking. It allowed users to deposit and withdraw money using secure SMS messages, and using retail outlets (who charged a commission for every transaction) as banking nodes. M-Pesa had become the most successful mobile-phone-based financial service providing access to financial system for millions in Africa by providing remittances, bill payments and micro-credit services (Runde, 2015). Safaricom leveraged its mobile customer base to port both sides, the end users who want to transfer their money and retail merchants who work as banking nodes, on to the banking platform.

3.4 Use existing resources to attract users via marquees

Microsoft leveraged its dominant position and expertise in building computer operating systems to enter the gaming consoles market with Xbox. It acquired the reputed game developer Bungie and released the much anticipated marquee game titled 'Halo' just in time for the 2001 launch of Xbox (Marshall, 2013). Halo became a first-person shooter game developed exclusively for Xbox that sold millions of copies and helped bootstrap Xbox's games portfolio. As gaming enthusiasts on boarded the Xbox platform, it attracted even more game developers to build new games or port existing ones onto Xbox (Nucciarelli et al., 2017).

3.5 Leverage external resources to attract users via marquees

Launched in 2006, Twitter got first big public exposure during the marquee digital media conference SXSW in March 2007. But the stage was set for rapid growth of Twitter when it opened up its APIs right at its public launch in August 2006. The ability for complements to build useful near real-time apps using APIs helped the small team at Twitter achieve broader acceptance and new uses as compared to what the firm itself had envisioned. Marquee users greatly assisted Twitter in keeping up the growth momentum when President Obama (Hughes et al., 2010) used Twitter during 2008 election campaign.

3.6 Develop new resources to attract users via marquees

Airbnb founders capitalized on a popular design conference in San Francisco to launch their venture. When the founders rented their own apartment, and found that they could sell beds, they realized a great business idea fueled by shortage and high prices of hotel rooms during peak demand. Airbnb built a new platform which inspired home owners to list and travelers to book easily (Gallagher, 2017). Airbnb hired professional photographers to post high quality pictures to help customers make stay decisions easily and set the quality standard for future postings across the globe.

3.7 Use existing resources to attract new users at least on one side

Uber used the taxi drivers on the platform to launch new platforms looking for sectors ripe for disruption. UberEATS emerged as an online meal ordering and delivery platform that

partnered with restaurants in over 90 cities around the world to deliver an integrated experience to the user. UberEATS evolved into a three-sided platform with restaurants, customers and drivers as its different sides. While Uber started out building the network of drivers and commuters as part of its taxi hailing service, UberEATS leveraged these same drivers on the new platform to diversify into food delivering business, leveraging its existing matching infrastructure while attracting a new user group: restaurants (Alba, 2016). Similarly, Uber Freight allowed truck drivers to collaborate with businesses looking for logistics help without need for prolonged negotiations (Etherington, 2017).

3.8 Leverage external resources to attract new users at least on one side

Salesforce AppExchange was a cloud-computing marketplace where partners leveraged the open architecture of Salesforce to build plugins. On one side, the partners developed plugins and extensions using APIs that extended the Salesforce CRM for the enterprises (the other side of the AppExchange platform). Salesforce attracted new enterprises on to its platform due to the rich variety of extensions available (Gagliordi, 2017). It also attracted developers to customize Salesforce and leverage the new extensions to reduce the implementation effort.

3.9 Develop new resources to attract new users at least on one side

YouTube was a three-sided platform serving content creators, viewers and advertisers. Viewers got access to quality content in different genres for free; producers got easy access to a wider audience; and advertisers got targeted audience (Soukup, 2014). YouTube solved the Penguin problem in its early days by attracting content creators on to its platform through a sustained marketing campaign and by providing better video tools. The recommendation engine also ensured new videos were recommended every time a viewer came back to the portal. Ability to view videos using a Flash plugin which was widely deployed across PC systems coupled with the ability to embed videos on other sites encouraged viewers to prefer YouTube as it solved key technical issues that were stopping mass adoption of video sharing. YouTube also invested heavily in hosting and streaming infrastructure to ensure seamless viewing experience.

4.0 Data and Methodology

For our study, we collected data from multi-sided platforms in India. We collected data on these cases from secondary (published) sources. We used the multiple case study design (Yin, 2014) to analyze the firm strategies. We followed a three-stage process. In the first stage, we identified fifteen platform businesses operating in the Indian market. We chose these based on a purposeful (theoretical) sampling to reflect three kinds of platforms: pure start-ups, i.e., firms that began as platforms; start-ups that emerged out of diversification by existing pipeline or platform firms; and firms that emerged out of vertical integration by existing firms. We restricted our search to platforms that have successfully solved the penguin problem, or in other words, have already 'tipped' (Gawer & Cusumano, 2008). We shortlisted firms for whom credible data on how they solved their penguin problem was available in the public domain (including academic case studies written on these firms). At the end of this stage, we had identified three start-up platforms (Practo, PayTM and

Redbus); five diversification platforms (Tally for GST, BHIM, Kotak 811, HotStar, Quikr); and seven vertical integration platforms (Justdial.com, Commonfloor.com, Airtel Payments Bank, India Post Payments Bank, OLA Money, Gati E-connect and MatrimonyBazaar.com).

In the second stage, for each of these firms, we collected data on four primary questions:

1. Basic information about the founding of the firm (opportunity and history)
2. Business model architecture
3. How did the firm get its first set of users (both sides) from?
4. What specific organizational resources did the firm build or leverage to tip the platform?

We wrote out these cases studies reflecting each of these questions (see Appendix for a summary of these case studies).

In the third stage, we coded each of these case studies on the two dimensions – where did their users come from, and where did their resources come from. Four researchers (three doctoral students and their faculty advisor; including the two authors of this paper) independently coded these case studies, and the cases were classified into one of the nine boxes. The four coders agreed on 24 out of 30 decisions; and the disagreements were resolved by the faculty advisor's review of the coding scheme, and arriving at a convergence.

5.0 Discussion

The table classifying the Indian platform firms is shown in Table-2. Predominantly, start-ups that set out as platform-businesses typically attract new users for both sides of their platform. Matching platforms such as Practo, PayTM and Redbus have had to stage their platform development by investing in one side of the platform first before building the other side. Practo built the Practo Ray to attract clinics before launching Practo.com for the patients; Redbus built and installed the BOSS solution to the fleet owners before attracting riders; and PayTM attracted the mobile service providers and utility companies to accept cash-less payments before targeting payers. As a pattern, we see that all start-ups that set up as platform-business models stage their evolution to solve penguin problems and therefore, attract new users at least on one side of the platform.

Diversification platforms have typically used marquee events for launch. While 811 and BHIM used the demonetization as the trigger event, Tally for GST leveraged the introduction of GST to attract users and HotStar used the ICC Cricket world cup to attract viewers. Quikr, through its verticalization strategy (Raghavendra, 2017) has been able to port users from its existing service (marketplace for used goods) to all other services. Diversification platforms typically use a marquee event to diversify into new products/ services.

Vertical integration platforms typically leverage their user base to launch related products and services. Justdial.com ported its user-base from its tele-calling database; Commonfloor.com leveraged its network from CommonFloor Groups; Airtel and India Post leveraged their user base and distribution networks to launch the payments banking

business. Even though one of the sides was already locked in, GATIConnect and MatrimonyBazaar had to attract the other sides in the form of e-commerce customers and service providers respectively. OLA got into digital wallet as an extension to its taxi hailing service to start with. As one would expect, all vertical integration platforms would port (at least one side) their users when they forward or backward integrate into new products or services.

Where do Users come from?

Where do resources come from?

	Port Users (on all sides)	Attract Users via Marquees (Marquee Users / Events / Brands)	Attract New Users (at least on one side)
Use Existing Resources (from same firm)	Justdial.com, commonfloor.com	hotstar, 811 kotak	matrimonybazaar.com, GATI CONNECT.COM
Leverage External Resources (via partnerships / complements)	airtel Payments Bank, Quikr	BHIM (UPI)	OLAMONEY
Develop New Resources (in-house development)	India Post Payments Bank	TALLY FOR GST	:practo, Paytm, redBus.in

Table-2: How do multi-sided platforms in India utilize resources and user base to address penguin problems

6.0 Strategic Analysis

Based on our analysis of the cases, we see patterns relating to how the resources and users were leveraged for the launch of a new platform.

6.1 Patterns from the User Dimension

We observe that firms that tend to **port users** have deep pockets and are capable of investing heavily in the new platform due to sustained cash flows from their existing businesses. They typically have a sizable loyal user base that allowed the firm to provide additional services to the same customers. These users would have high switching costs as they were deeply invested into the services offered. Net cost of acquiring new customers was near zero and they would be setup to transact on the platform instantly due to their prior engagement with the firm.

Platform firms that **leverage marquees** were aiming to solve customer issues that were yet unaddressed. Easing customer experiences through frictionless transaction on the platform seemed to be the aim. These end user issues could be sudden needs that arise due to changes in the marketplace or long-standing ones that have remained unaddressed. In the case of marquee events, the events could be either well-planned or could occur with no prior notice. In the case of GST tax reforms in India, it was a well-planned tax reform event wherein platform firms had the opportunity to onboard retail businesses on to the new tax

regime (Choudhury, 2017). In the case of demonetization of high currency notes in India in November 2016 (Kumar, 2016), the financial platform firms had no prior notice of the marquee event and had to quickly repurpose assets to leverage the spike in digital transactions. In the case of the natural calamities that throw up business opportunities, there is again hardly any time to prepare as witnessed in the surge in usage of ride sharing apps such as BlaBlaCar due to the volcanic eruptions in Iceland in 2010 that disrupted air traffic in continental Europe.

Successful firms that have built new platforms by attracting **new users** had big marketing spends or were well funded. These were big brands that users easily recognized and would want to be part of a new platform launched by these firms. With the success of their core products, these firms explored other ways of further increasing demand for their core products and services. For instance, in the Amazon Web Services (AWS) marketplace, the core offering from AWS prompted a variety of ISVs to participate in the migration to cloud computing.

6.2 Patterns from the Resource Dimension

Firms that have **leveraged existing in-house resources** to launch new platforms had strong market presence. Be it Amazon, Microsoft, Uber, Star Network, JustDial, Matrimony.com or Kotak, these firms were market leaders in their categories. These firms had access to critical resources such as key patents or technology that made it easy for them to launch new platforms centered on these resources. These firms were also able to transfer quality of their core assets onto the new platform which helped onboard users. Without proven quality of the core assets, no user group would be willing to onboard the new platforms that are launched by these established entities.

Firms that launched new platforms by **leveraging partnerships or complementary assets** were extending the utility of their own products through open interfaces or have leveraged partnerships well. Firms such as Facebook, Twitter and the BHIM app invested in value co-creation that allowed the platform to be extended in a variety of ways. These firms also focused on fulfilling user needs through forward or backward integration by leveraging related assets from their own portfolio or by leveraging assets of partner firms. Complements and partnerships helped these platforms in extending the platform value in unintended ways leading to new competitive advantages. Platforms that offered a rich set of complements were also perceived to be superior in quality (Cennamo & Santaló, 2015) to ones which either did not have open interfaces or where the sponsor wishes to build all the functionalities in-house. Even competition amongst complement providers enriched the platform as it expanded the appeal to diverse user groups. The number of complements available on the platform was perceived as a sign of quality of the platform that attracted even more complements and users. As the platform sponsor of iOS App Store, Apple has always reserved the right to verify and exclude any third-party applications that do not meet the strict quality standards. This has helped Apple maintain an edge over other app stores with better quality control over what is available for download (Boudreau & Hagiu, 2009).

Firms that **developed new assets** before launching their platforms leveraged the opportunity for early entry into a new segment. Some firms diversified into new businesses

by developing new assets that would allow them an opportunity to generate additional revenue streams. In the case of M-Pesa, it was an opportunistic entry into a new market of mobile payments. M-Pesa captured significant additional value for the parent firm due to its significant reach across countries. India Post Payments Bank was a case of opportunistic diversification by India Post into the banking sector given its broad reach and the need to tap additional revenue streams.

6.3 Strategy Recommendations

Based on our study of various platform firms that have overcome penguin problems, we present strategy recommendations on network mobilization for each of the nine boxes in our framework.

6.3.1 Use existing resources to port users on all sides

To successfully port users to a new platform using existing resources, it is evident that our strategic approach needs to include consistency in portability of users and relevance of resources leveraged along with a strong focus on quality. Firms must ensure they maintain high switching costs to prevent user groups from migrating to rival platforms. Quality of existing services play a vital role as users who are not happy with the existing product or service that they are consuming would not flock to a new offering by the same firm. It is critical for the firm to maintain consistency with respect to what it is offering as part of the new platform to which it is porting its users to. For example, any attempt to port users onboard a matrimonial site to a new dating platform launched by the same firm could have disastrous consequences. Users on the matrimonial site have different expectations from the platform as compared to what a casual dating user would come to expect.

If existing users value the brand they are associated with and trust the firm to provide similar or improved services with the new offering, then porting would have higher chances of success. This expectation helps firms leverage existing user base on one side and easily attract users onto the platform. Other groups could then be enticed to participate on the same platform as they value transacting with the first.

6.3.2 Leverage external resources through partnerships or complements to port users on all sides

Value co-creation and sharing is a critical aspect visible in an ecosystem approach. Multiple firms come together to pool resources to create a new offering that offers compelling value proposition to the user (Adner & Kapoor, 2010). Firms with an open mind-set to collaborate will be most successful in this setting. Platform firms must ensure that partners get to leverage the complements across the entire ecosystem without need to rebuild the complements all over again. Given that the platform firm wants to expand reach, it should focus its forward and backward integration approaches so that partner firm's assets can be leveraged to gather resources for the new platform. Firm should look for different ways in which it can develop complementary resources – acquisitions, joint ventures and partnerships. Firms should also look for unique ways in which it can incentivize complementors better than what their competitors can do. Ability of platforms to sustain

price erosion and intense competition improves when rich partnerships and complements are available to enhance the value proposition of the base platform.

6.3.3 Develop new resources to port users on all sides

Firms should focus on solving core problems, either technological or process related, and something that helps reduce transaction frictions. Not sacrificing on quality is critical as users will expect the firm to provide a high-quality experience when it addresses existing pain points. Identifying adjacencies where the firm can extend its offerings is an important strategic aspect. Firms must ensure that the new resources being developed are closely related to the user base that it is looking to port. Straying too far away in terms of the type of new resources developed would lead to lesser effectiveness in porting the existing users onto the new platform.

6.3.4 Use existing resources to attract users via marquees

Firms targeting a marquee user or event need to ensure that there is a possibility to maintain sustained engagement with the users through the marquee personality. If it is a onetime act, then the firm will struggle to retain the users who came in due to the marquee customer. In the case of a rock star, users should be able to expect frequent interactions which will keep the teenagers engaged on the platform. Similarly, if the government can use a trading platform for all its ongoing procurements, then it will attract more vendors to participate and engage. If it's a marquee brand, then users would expect to see new releases from the brand to stay engaged on the platform with the brand. Firms must look for crowd pullers who can attract new users onto the platform. Through sustained marketing efforts, the firm must onboard key personalities or opinion leaders whose usage of the platform will send the right message to the observing population.

6.3.5 Leverage external resources to attract users via marquees

Twitter's decision to embrace open architecture enabled its growth as a robust communication platform with a thriving ecosystem where popular apps such as Twhirl, TweekDeck and Twitterific (Milstein et al., 2008) have helped bring more users. Along with an early decision to open access, the platform firm needs to time the launch so that it has the desired impact of attracting the users when they are most primed for the service. If targeting a timed event (like the Olympic games) for the launch of a platform service, the firm must right-size the feature set, its degree of openness and the timing of the availability of the preview to its partners so that they too get an opportunity to develop the right extensions. Complements or partners can help onboard users even during subsequent growth phases for the platform as they bring in possibility of new value to the different sides due to the extensions they develop to the core perceived value of the platform when it started out.

A marquee user ascertains the quality dimensions of the platform by its ability to help target the exact intended audience (Hughes et al., 2010), number of returning users and degree of engagement that the users would get into. Marquee users themselves would not choose a

platform that does not help them connect with the right kind of users they wish to be associated with.

6.3.6 Develop new resources to attract users via marquees

Timing is right is critical for firms that look to leverage marquees while developing new assets. Firms need to be opportunistic to recognize the unserved need of the target customer base and move quickly to address core issues. When the timing is right, the impact of the solution offered by the platform is more profound and could help the platform go viral given the strong network effects. Post the marquee event, it is crucial for the firm to ensure strategies to maintain sustained engagement of all parties on the platform.

6.3.7 Use existing resources to attract new users at least on one side

Once a firm has substantial user base through other services or holds other critical assets such as an established supply chain, distribution network, patents or regulatory approvals, it could approach the challenge of attracting new users onto a new platform offering by just subsidizing users to onboard. When the platform subsidizes one side to onboard the platform, it can expect other interested sides would in fact pay to participate on the platform to transact. When taxi hailing platform Uber launched in new cities, it subsidized the taxi drivers to on-board the platform first so that ride-seekers can find a taxi easily at any point of time (Lashinsky, 2017). Firms should leverage brand image and the core product offerings to attract new users who would want access to existing firm resources. Innovation to solve core issues is critical in this segment where firms of any size can flourish.

6.3.8 Leverage external resources to attract new users at least on one side

With the success of the core offerings in the case of Salesforce, Apple and GATI, these firms have explored newer ways of increasing demand for their core products and services. Firms have leveraged their existing products and extended its capabilities either through open interfaces or through partnerships. With the deep investments that these firms are capable of, there is significant value co-creation that they can do in order to attract partners who wish to get a small pie of the large market that the platform firm in attempting to build. Having open architecture as the strategy corner stone along with willingness to build on partnerships is key when firms are trying to build new platforms on the strength of complements. When partners are enabled to extend platform functionalities, they get empowered to create new value propositions for the entire ecosystem.

6.3.9 Develop new resources to attract new users at least on one side

To attract new users through the new assets that the firm has developed, the firm should make sure that it is indeed solving an existential problem such that an entirely new user base is attracted due to the innovative solution the firm offers. Firms could start with a focus on specific segment before diversifying the solution into others. The firm must try to develop unique and compelling features as part of the new offering on the platform such that it is hard to imitate and attracts users. This will help give confidence to the new users

who are onboarding the platform that the firm is serious about addressing the issue at hand and has the deep expertise to address the same.

A summary of the strategy recommendations for the different user and resources conditions is shown in Table-3.

Where do Users come from?

Where do resources come from?

	Port Users (on all sides)	**Attract Users via Marquees** (Marquee Users / Events / Brands)	**Attract New Users** (at least on one side)	
Use Existing Resources (from same firm)	Consistency in portability Quality focus Resource relevance	Time it right Find crowd pullers	Just subsidize Leverage brand Innovate	**Strong presence** **Market leaders** **Translate quality to brand**
Leverage External Resources (via partnerships / complements)	Ecosystem play Vertical Integration Incentivize complementors	Open architecture Leverage partnerships	Open architecture Leverage partnerships Ecosystem play	**Extending / Re-application of resources** **Value Co-creation** **Vertical Integration**
Develop New Resources (in-house development)	Solve core problems Identify adjacencies	Build communities & sustain engagement	Solve core problems Start with specific segment	**Opportunistic entry/diversification** **Easing of discovery, matching & transaction costs**
	Have large, loyal user base **Deep pockets** **High switching costs**	**Users with unserved needs** **Easing user experiences**	**Big marketing spends** **Big brands**	Observations from sample firms ↑ ←

Table-3: Strategies that firms could follow to address penguin problems

7.0 Conclusion

Firms that fail to solve the penguin problem effectively will eventually lose out to those that have figured out more potent ways of attracting different sides on to their platforms. Getting it right with solving the critical issue of early user base so that there is momentum in the building up of the platform is crucial for success. This is especially true of platforms that operate in technology markets due to the rate of change and innovation witnessed. More nimble competition is adept at dislodging established platforms due to new approaches to solving the critical issues and attracting users away from the existing platforms.

In this paper, we analyzed strategies used by multi-sided platform firms for solving the penguin problem. Using multiple case study design (Yin, 2014), we extend the one-dimensional strategic analysis (Parker et al., 2016) to launch platform businesses and evolve a two-dimensional framework. We study how successful firms leveraged resources at their disposal to attract users during the initial years of platform launch. We contribute to the literature on multi-sided platforms by proposing a two-dimensional framework that provides nine different strategies to build up the user base on a new platform.

8.0 Appendix: Details of Indian firms analyzed for four primary questions

	History & Opportunity	Business Model Architecture	First Set of Users (both sides)	Organization Assets Leveraged
Justdial.com	Started as tele-directory service for SMBs	Annual subscription fees for listing, Ads	SMBs and end users ported from tele-directory business	Foot-soldiers, brand, call centers, domain expertise
commonfloor.com	Apt. management solution evolved into real estate portal	Annual subscription fee for realtors & project promotions, Ads	Apt. Management users as buyers & sellers along with builders ported	Critical know-how of communities & preferences of apt. dwellers, Brand
airtel Payments Bank	JV - Airtel & Kotak Bank, India's 1st Payments Bank	Merchant commissions, interest paid on deposits	Port both sides - Airtel telecom users form buyer & merchant side	Banking expertise via JV, Airtel outlets, mobile numbers, telecom infra, Brand
Quikr	Starts as eBay subsidiary, built traffic via classifieds, large venture funding	Ads, Sellers pay for premium listings, Acquisition spree	Ported users from Quikr classifieds traffic to acquired platforms	complementary assets of acquired platforms, Brand, marketing
India Post Payments Bank	Govt. of India venture, financial inclusion, DBT	Margins on selling financial instruments, high volumes	Postal customers on both sides of payments bank	Built Banking expertise, leveraging rural reach
hotstar	Star India owned, leverages mobile & internet penetration	Paid subscription for premium content, Ads, sponsored content	Free viewing of ICC Cricket World Cup brought viewers, Advertisers followed	Star's premium content, licenses for sporting events, Brand, TV reach
811 kotak Kotak Mahindra Bank	Mobile wallet of Kotak bank, UPI enabled, digital payments opportunity	Replaces credit cards, merchant commissions	Demonetization cash crunch brings end users & merchants looking for digital payments	Kotak banking expertise, brand, outlets & reach
BHIM (UPI)	2016, Govt. of India app, UPI enabled, Zero charges, multi bank support	Non-profit aimed at promoting cashless transactions	Driven by cash crunch post demonetization, Merchants - zero charges	UPI interfaces, Integration between bank via UPI APIs
TALLY FOR GST	Accounting s/w market leader, upcoming ERP, SMB s/w of choice, marketplace for apps	S/W is charged, updates are through subscription model, app commissions	SMBs looking to gear up to GST, tax regime change for auditors & enterprises	New accounting s/w for GST regime for SMBs
matrimonybazaar.com from BharatMatrimony	Marketplace from BharatMatrimony for wedding services	Commissions from service providers, Ads, premium membership fees	Ported wedding families from BharatMatrimony, attract new service providers	Matching algorithm, offline outlets, brand, supply chain
GATI CONNECT.COM	1989, Leader in logistics, forward integration, marketplace model	Commissions on delivery, Ads, premium listings	Leveraged SMBs from logistics biz, attracting e-commerce end users	Logistics & supply chain backend, B2B assets to power B2C push, Brand
OLAMONEY powered by ZipCash	2015, ZipCash partnership, Utility payments & wallet, integrated payment solution	Commissions from merchants, Ads	Attracted newly the merchants side, leveraged users from taxi hailing service	Leveraged wallet tech from ZipCash, rest of infra in-house
:practo	Venture funded clinic management SaaS, appointment booking	Subscription fees from clinics & labs, premium listings, Ads	Practo Ray links doctors & Practo portal for appointment bookings, all new users	Developed Practo Ray to bring doctors on-board first
Paytm	Started as bill payments app, Venture funded wallet, Payments bank	Commissions from utility providers on bill payments, earns interest, Ads	On-boarded utility providers for bill payments & mobile recharges, convenience attracts users	Developed first consumer wallet, mobile payments solution
redBus.in	Organized bus ticket booking, SaaS solution for inventory management, internet penetration	Commission from both sides for each ticket booked, subscription for Bus ticket booking s/w	Couple of operators on-boarding RedBus based booking, seasonal crunch drives users online	Scalable solution for operators to manage inventory, simplified booking experience, Brand recall

References

Adner, R., & Kapoor, R. (2010). Value Creation in Innovation Ecosystems: How the Structure of Technological Interdependence Affects Firm Performance in New Technology Generations. *Strategic Management Journal*, *31*, 306–333. https://doi.org/10.1002/smj.821

Afuah, A. (2013). Are network effects really all about size? The role of structure and conduct. *Strategic Management Journal*, *34*, 257–273. https://doi.org/10.1002/smj.2013

Alba, D. (2016, March). Uber Just Launched Its Food-Delivery UberEATS App in First US Cities | WIRED. *Wired*. Retrieved from https://www.wired.com/2016/03/ubereats-standalone-app-launches-us/

Aouad, A. (2017). Alipay is setting up for global dominance - Business Insider. Retrieved July 8, 2017, from http://www.businessinsider.com/alipay-is-setting-up-for-global-dominance-2017-5?IR=T

Ben Letaifa, S., Edvardsson, B., & Tronvoll, B. (2016). The role of social platforms in transforming service ecosystems. *Journal of Business Research*, *69*(5), 1933–1938. https://doi.org/10.1016/j.jbusres.2015.10.083

Benoit, S., Baker, T. L., Bolton, R. N., Gruber, T., & Kandampully, J. (2017). A triadic framework for collaborative consumption (CC): Motives, activities and resources & capabilities of actors. *Journal of Business Research*, *79*(November 2016), 219–227. https://doi.org/10.1016/j.jbusres.2017.05.004

Boudreau, K. J., & Hagiu, A. (2009). Platform Rules: Multi-Sided Platforms as Regulators. *Platforms, Markets and Innoation*, 163–191. https://doi.org/10.2139/ssrn.1269966

Breuer, A., Landman, T., & Farquhar, D. (2015). Social media and protest mobilization: evidence from the Tunisian revolution. *Democratization*, *22*(4), 764–792. https://doi.org/10.1080/02614367.2016.1188137

Caillaud, B., & Jullien, B. (2003). Chicken & Egg: Competition among Intermediation Service Providers. *The RAND Journal of Economics*, *34*(2), 309–328.

Cennamo, C., & Santalo, J. (2013). Platform competition: Strategic trade-offs in platform markets. *Strategic Management Journal*, *34*, 1331–1350. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/smj.2066/epdf

Cennamo, C., & Santaló, J. (2015). *Value creation and free-riding in platform markets: The asymmetric impact of competition on quality across the platform life cycle*.

Choudhury, K. (2017, June 12). The Rs 35,000-cr business of making India GST-ready. *Business Standard*. Retrieved from http://www.business-standard.com/article/economy-policy/the-rs-35-000-cr-business-of-making-india-gst-ready-117061100607_1.html

Cool, K., Seitz, M., Mestrits, J., Bajaria, S., & Yadati, U. YouTube, Google, and the Rise of Internet Video, 1Kellogg School of Management Cases 1–25 (2017). Kellogg School of Management. https://doi.org/10.1108/case.kellogg.2016.000421

Cusumano, M. A., & Gawer, A. (2002). The Elements of Platform Leadership. *MIT Sloan Management Review*, *43*(3), 51–58.

Dave Centeno, & Jeff Jianfeng Wang. (2017). Celebrities as human brands: An inquiry on stakeholder-actor co-creation of brand identities. *Journal of Business Research*, *74*, 133–138. https://doi.org/10.1016/J.JBUSRES.2016.10.024

Eisenmann, T. (2007). Managing Networked Businesses : Course Overview for Educators. *Harvard Business School*, *5-807–104*, 1–65. https://doi.org/10.1111/j.1475-3588.2006.00418.x

Eisenmann, T., Parker, G., & Van Alstyne, M. W. (2006). Strategies for Two-Sided Markets. *Harvard Business Review*, *84*(10), 12. Retrieved from http://hbr.org/2006/10/strategies-for-two-sided-markets/

Etherington, D. (2017). Uber Freight launches to connect truck drivers with available shipments | TechCrunch.

Retrieved August 20, 2017, from https://techcrunch.com/2017/05/18/uber-freight-launches-to-connect-truck-drivers-with-available-shipments/

Evans, D. S. (2003). The antitrust economics of two-sided markets. *Yale Journal on Regulation*, *20*(2), 325–381. https://doi.org/10.2139/ssrn.332022

Evans, D. S. (2011). *Platform economics: Essays on multi-sided businesses*. CreateSpace Independent Publishing Platform.

Evans, D. S., & Schmalensee, R. (2016). The New Economics of Multisided Platforms : A Guide to the New Economics of Multisided Platforms, (June), 1–7.

Farrell, J., & Saloner, G. (1986). Installed Base and Compatibility: Innovation, Product Preannouncements, and Predation. *The American Economic Review*. https://doi.org/10.2307/1816461

Farrell, J., & Solaner, G. (1987). Competition, Compatability and Standards: The Economics of Horses, Penguins and Lemmings. In *L.G. Gabel (ed), Production Standardization and Competitive Strategies*. Amsterdam: North-Holland.

Gagliordi, N. (2017). Salesforce launches AppExchange partner program, new $100 million platform fund. Retrieved October 2, 2017, from http://www.zdnet.com/article/salesforce-launches-appexchange-partner-program-new-100-million-platform-fund/

Gallagher, L. (2017). *The Airbnb Story* (First Edit). Boston: Houghton Mifflin Harcourt.

Gawer, A., & Cusumano, M. A. (2008). How Companies Become Platform Leaders. *MIT Sloan Management Review*, *49*(2), 28–35. Retrieved from http://sloanreview.mit.edu/the-magazine/articles/2008/winter/49201/how-companies-become-platform-leaders/

Gawer, A., & Cusumano, M. A. (2014). Industry Platforms and Ecosystem Innovation. *The Journal of Product Innovation Management*, *31*(3), 417–433. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/jpim.12105/full

Guerrasio, J. (2017). How Amazon is trying to lure in indie filmmakers with a $100,000 bonus | Business Insider India. Retrieved July 14, 2017, from http://www.businessinsider.in/How-Amazon-is-trying-to-lure-in-indie-filmmakers-with-a-100000-bonus/articleshow/56901436.cms

Hagiu, A., & Wright, J. (2015). Multi-sided platforms. *International Journal of Industrial Organization*, *43*(March), 162–174. Retrieved from http://dx.doi.org/10.1016/j.ijindorg.2015.03.003

Hartl, B., Hofmann, E., & Kirchler, E. (2016). Do we need rules for “what’s mine is yours”? Governance in collaborative consumption communities. *Journal of Business Research*, *69*(8), 2756–2763. https://doi.org/10.1016/j.jbusres.2015.11.011

Hughes, C., Graham-felsen, S., Albright-hanna, K., Grove, S., Zuckerberg, R., Sladden, C., & Bohnet, B. (2010). Obama and the power of social media and technology. *The European Business Review*, (June), 16–21.

Kumar, R. P. (2016, November 9). Rs 500 and Rs 1000: What is demonetisation and why was it done. *The Economic Times*. Retrieved from http://economictimes.indiatimes.com/news/economy/policy/what-is-demonetisation-and-why-was-it-done/articleshow/55326862.cms

Lashinsky, A. (2017). *Wild Ride: Inside Uber’s Quest for World Domination* (First Edit). New York: Portfolio.

Marshall, R. (2013). The History of the Xbox | Digital Trends. Retrieved July 27, 2017, from https://www.digitaltrends.com/gaming/the-history-of-the-xbox/

Milstein, S., Chowdhury, A., Hochmuth, G., Lorica, B., Magoulas, R., & Reilly, T. O. (2008). *Twitter and the Micro-Messaging Revolution: Communication, Connections, and Immediacy-140 Characters at a time*. *O’Reilly Radar*.

Nucciarelli, A., Li, F., Fernandes, K. J., Goumagias, N., Cabras, I., Devlin, S., … Cowling, P. (2017). From value chains to technological platforms: The effects of crowdfunding in the digital game industry. *Journal of Business Research*, *78*(Supplement C), 341–352.

https://doi.org/https://doi.org/10.1016/j.jbusres.2016.12.030

Parker, G., Choudary, S. P., & Van Alstyne, M. W. (2016). *Platform Revolution* (First Edit). New York: W. W. Norton & Company.

Perez, S. (2014). Amazon Invites Children's Book Authors To Kindle Direct Publishing, Rolls Out Kids' Book Creator Software | TechCrunch. Retrieved July 14, 2017, from https://techcrunch.com/2014/09/03/amazon-invites-childrens-book-authors-to-kindle-direct-publishing-rolls-out-kids-book-creator-software/

Raghavendra, S. (2017). Introducing Quikr week. Retrieved July 3, 2017, from https://the-ken.com/introducing-quikr-week/

Rao, L. (2010). Facebook And Zynga Enter Into Five Year Partnership, Expand Use Of Facebook Credits | TechCrunch. Retrieved August 22, 2017, from https://techcrunch.com/2010/05/18/facebook-and-zynga-enter-into-five-year-partnership-expand-use-of-facebook-credits/

Rochet, J.-C., & Tirole, J. (2003). Platform competition in two-sided markets. *Journal of the European Economic Association*, *1*(4), 990–1029. Retrieved from http://ssrn.com/abstract=1396751

Rohlfs, J. H. (2003). *Bandwagon Effects in High-technology Industries* (Reprint ed). Cambridge: MIT Press.

Runde, D. (2015, August). M-Pesa And The Rise Of The Global Mobile Money Market. *Forbes*. Retrieved from https://www.forbes.com/sites/danielrunde/2015/08/12/m-pesa-and-the-rise-of-the-global-mobile-money-market/#350dc98c5aec

Shah, A. (2014). Alipay surpasses PayPal as leading mobile payments platform - bobsguide.com. Retrieved July 7, 2017, from http://www.bobsguide.com/guide/news/2014/Feb/12/alipay-surpasses-paypal-as-leading-mobile-payments-platform/

Soukup, P. A. (2014). Looking at, with, and through YouTube™. *Communication Research Trends*, *33*(3), 3–35.

Yin, R. K. (2014). *Case study research : design and methods* (Fifth edit). Thousand Oaks, CA: SAGE Publications Inc.