

Telecommunication Business Structure in Mobile Internet Banking

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Abstract: In this paper, we gave some information about telecom industry structure. How this industry is evolving, how competition is getting tougher day by day. Also explained the revenue models of mobile services it is categorized in 2 types: customer initiated and non customer initiated. Also explained revenue models of internet and eleven so called profit sites. Services and comparison of both mobile and internet services which offers constructive implications for the emergence of Mobile internet.

Keywords: Telecommunication business, mobile internet banking.

1. INCREASING PLAYERS AND COMPETITION

One distinguished feature of the evolution of the telecommunication business is escalating complexity and competition. To illustrate the intensifying quality of commercial structure, Fransman argues that it has modified from the previous 3 layer construction to 6 layers. The new six layer division (figure 1.1) consists of apparatus & software, network, property, navigation & middleware, applications (content is included) and customers. the expansion within the range of layers has agitated those closed telecom systems and opens up new opportunities. Not solely will it lower the entry barrier for brand new entrants to induce into instrumentality manufacture or network operator domain, but it additionally attracts corporations from different industries to require their competitive benefits to expand their power to the current market.

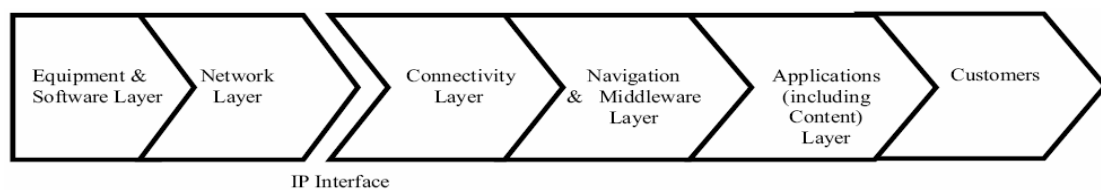


Figure 1.1 The new telecommunication business (adopted from [5])

Synthesizing value chain of mobile telephony which of Internet, Maitland et al. [6] draw a value chain of 3G mobile data services (figure 1.2). They highlight a construct of enabler, as a supporter between hardware manufacture and the services provisioned to end customers, which incorporates middleware, content and application suppliers. It is pointed out that separation of this layer offers newcomer opportunities to get in on the action and modify the likelihood of intermediaries like aggregators.

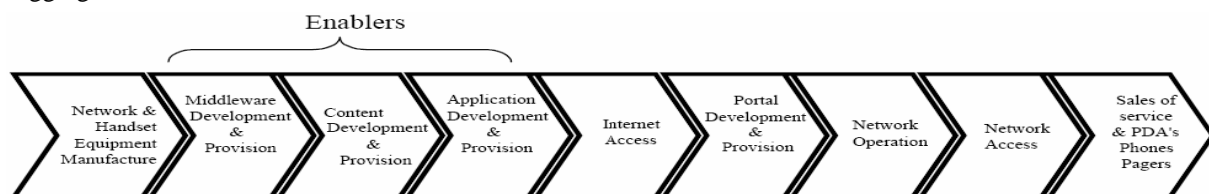


Figure 1.2 3G value chain (adopted from [6])

The traditional structure has folded within the telecommunication business. many new business models, as a consequence, inherit our sights [5]. Device makers may expand into package market. change of integrity along and establishing operative systems and software package platforms, telephone set makers enhance their dominance within the mobile device market and additionally produce potential of latest revenue sources from worth added services. Software package corporations extend their influence by conducting investment and acquisitions upon upstream makers. Money service companies like mastercard issuers and banks, cash in of their robust client relationship and offer them custom-built handsets with capabilities of M-banking and M-commerce. Vertical expansion and integration don't seem to be, however, the sole choice for actors . Having not integrated with any infrastructure or device manufacturer, Yahoo maximizes its accessibility and so augments its own worth as a portal.

2. EVOLVING INDUSTRIAL STRUCTURE

Not simply do the rising range of players increase the competition, it has additionally been reshaping the commercial structure and triggering a lot of quality. a lot of selections cut back the dependency of companies on their suppliers, however on the opposite hand propel them to improve their fight as a response to the fiercer competition. Also, a bigger variety of potential partners companies may unite result in potentialities of various kinds of strategic network. in line with Li and Whalley [5], the flat structure exposes a lot of entry points and exit points for business actors and provides a lot of choices to the shoppers (figure 1.3). After financial condition of upstream industries, they claim, the chance of latest opportunities is moving downward on the worth chain, closer to finish customers.

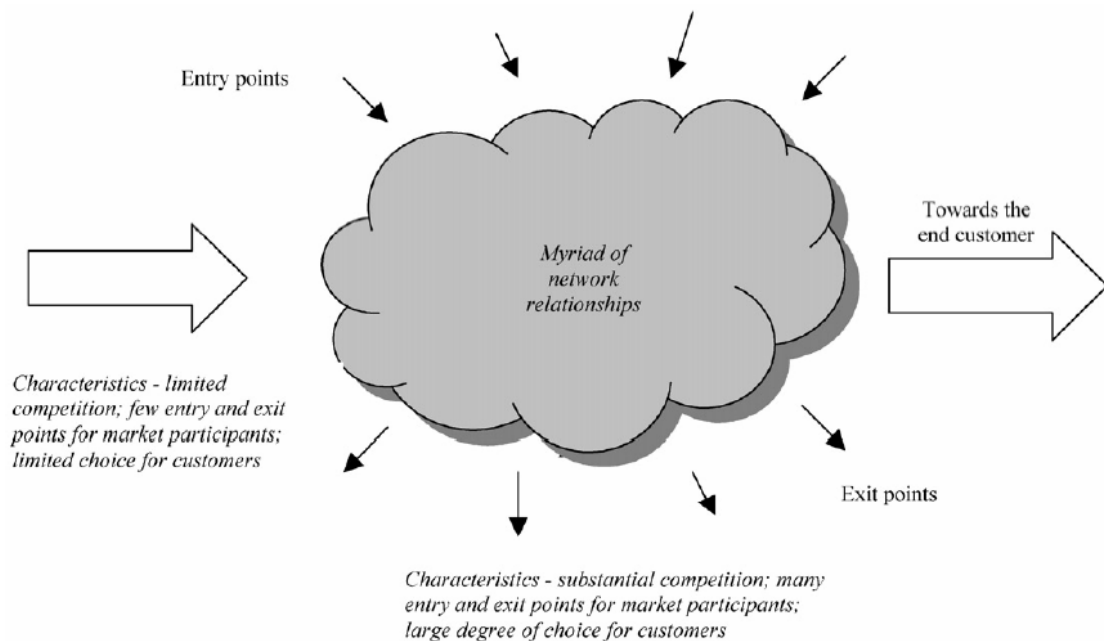


Figure 1.3 The interlacing worth network and worth chain (adopted from [5])

3. COMPARISON OF REGIONAL MARKETS

While the telecommunication business has seasoned philosophical doctrine and is being reshaped [5], diversiform structures seem in numerous markets [7]. 3 typical examples may be identified in Japan, European nation and therefore the uk. The japanese market takes on a vertical integrated structure wherever 3 oligopolistic operators, NTT DoCoMo, KDDI and Vodafone K.K., offer one-stop services to the subscribers. during this case, mobile subscription, purchase of handsets and worth extra service subscription square measure bundled together for patrons. that's to mention, customers don't have the liberty to settle on their handsets, add or cancel any of the worth extra services as a result of each handsets and services are technologically customized to a specific operator's network and incompatible with different networks. On the distinction, the telecommunication business of European nation has presented a horizontal, standard structure. Players don't set foot in different elements of the value chain and focus on winning the competition over their

counterparts. Part of the reason is because of the open unified customary. In different words, a client will choose any mobile subscription, insert the SIM card into any telephone set on the market, and then choose any worth extra service while not compatibility restrictions. Like neither of the preceding models, the structure of the united kingdom telecommunication business seems to be a hybrid of the vertical and horizontal models. Customers will notice mobile subscription with neither handset nor extra service whereas there square measure bundling packages that embody specific mobile devices and services similarly. In addition to analysis of the structure of the telecommunication business in those 3 markets, Vesa [7] conducts measuring of their worth networks. The quality of various networks is evaluated judgment from therefore referred to as strength of the network, that is formed of four elements: the quality alone product performance, the user network, the enhances network and therefore the producer network. He argues that the mobile networks exhibit higher performance and therefore the handsets there gift higher cost-effectiveness for the top customers. From the content and repair perspective, the Japanese suppliers square measure without doubt far more before their European counterparts.

About the user network, the penetration of mobile information service is additionally beyond within the UK and European nation, to not mention that the population of these European countries cannot compare with Japan. As to the enhances network and producer network, Japan scores beyond the united kingdom and European nation similarly. The mobile market attracts complementing partners from numerous industries, from restaurants to printing kiosks, to induce in on the action. From the producer viewpoint, a much larger range of freelance content and service suppliers is that the most prominent feature of Japanese market compared with the united kingdom and European nation. For each 2 networks, the tight cooperation and shut integration make sure the stability of these networks in Japan. because the conclusion, Vesa states that the collaboration networks of Japan square measure the foremost powerful one in every of those 3, because of the vertical integrated industrial structure there [7].

4. MOBILE SERVICES REVENUE MODELS

According to Coursaris and Hassanein [3], the revenue models of mobile services can be categorized into two broad types, namely customer initiated and non-customer initiated, which altogether contain eight models. The major difference between the two groups is the involvement of end consumer payment, that is to say, if there is any cash flow from customers to any one or more of actors in the value network. Hence, the two categories are separately labeled as customer initiated models and non-customer initiated models. Customer initiated revenue models comprise access, subscription and pay-per-use while non-customer initiated models incorporate advertising, transaction, payment clearing, hosting, and point-of-traffic. All the eight models are described below:

Access model [3]: Customers pay the bill from mobile operators in order to access the wireless network. Four different pricing schemes are listed, namely flat rate, time based, volume based as well as an innovative free access model.

Subscription model [3]: Customers purchase mobile value added services in a subscription manner.

Pay-per-use [3]: Unlike the subscription model, customers just pay for parts of services that they are interested in to avoid a long-term commitment. For instance, an individual who is not crazy about changing ringtones all the time probably prefer to download a ringtone when he needs instead of subscription of a monthly download.

Advertising [3]: Content providers or value-added service providers sell advertising spaces for funding the content or service development.

Transaction [3]: Transactions take place while they are flowing on the content supply chain, such as the purchase of content from raw content providers by content aggregators.

Payment clearing [3]: It refers to commissions the billing and charging provider charge.

Hosting [3]: Content providers outsource hosting of the content if they are lack of this capability.

Point-of-traffic [3]: Mobile operators subsidize value-added service providers on the basis of the amount of traffic their services generate.

In the above categorization, revenue models are studies mainly from a single firm perspective. In other words, each one of the value network members is considered separately regarding revenue generation. But still, valuable lessons can be drawn from the work of Coursaris and Hassanein [3]. Plus advertising model, customer initiated models can be

regarded as different means of value appropriation for the value network though customers pay attentions as the price levied instead of money in advertising model. The other class, non-customer initiated models make useful suggestions about value creation and value allocation in the network.

Another study by Camponovo and Pigneur [1] [2] examines revenue models of different actor groups. Mobile device manufacturers do not only sell devices but also make money by operating portal and providing additional services. Network equipment vendors generate revenues by selling or leasing equipments as well as provisioning equipment-related services. There are a range of revenue sources for content providers, they argue, such as subscription fee, pay-per-use, syndication agreement and airtime revenue sharing. Similar to variety of content provider revenue models, revenues of application providers may come from licensing, installation fees, hosting service, operation & maintenance service and consulting services. Payment agents, who are called charging and billing providers in our study, earn revenue streams from commission, payment platform development and operation. The major source of mobile operators' revenue is subscription fee, together with potentials like whole selling network capacity to MVNOs (Mobile Virtual Network Operator) and operating portals.

Internet service providers (ISP) charge subscription fees from customers and earn revenue from other ISPs based on their agreements. Regulators, which infrequently appear in revenue model analysis, levy license fees and various kinds of taxes. Despite that they do not conduct a further classification; the revenue models presented still offer a comprehensive coverage of legacy models. Thus it can be useful as an input of our analysis.

5. REVENUE MODELS OF INTERNET SERVICES

There are numerous taxonomies of Internet business models. For the assessment of this thesis, the classification proposed by Afuah and Tucci [1] is chosen as a reference. One argument for this choice is its logical clarity and exhaustiveness, that is to say, it has distinctly and comprehensively illustrated most of the prevailing Internet business models. Another reason is their analysis is on the basis of revenue models, which is quite similar to our approach. Before digging into revenue models, Afuah and Tucci [1] identify eleven so called profit sites, of which the concept resembles actors in our analysis. They are respectively E-commerce, content aggregators, brokers/agents, market makers, service providers, backbone operators, ISPs, last mile, content creators, software suppliers and hardware suppliers. Seven sources of revenue for those profit sites are then depicted: Commission [1]: Third party service providers charge fee on the transactions conducted through them. Different variations of commission based model are further enumerated.

1. Buy/sell fulfillment, which is referred as transaction broker or online broker by other scholars, allows customers to conduct transactions (e.g. Scottrade, Orbitz).
2. Market exchange, which build up online marketplace playing a role like business facilitator (e.g. New View).
3. Business trading community, which set up a vertical site for people with specific interests to exchange information (e.g. Vertical Net).
4. Buyer aggregator, which gathers buyers together to gain bigger bargaining power over the sellers (e.g. Market Mile).
5. Distribution broker, which is essentially business-to business distributor (e.g. Grainger).
6. Virtual mall, which is an aggregate of links to merchants (e.g. Yahoo! Shopping).
7. Metamediary, which also provider clearing services in addition to a virtual mall (e.g. Amazon zShops).
8. Auction broker, which provides an auction place and charge fees to sellers (e.g. eBay).
9. Reverse auction, which provides an auction place where the sellers bid, that is a buyer name a product or service he intends to purchase and sellers bid for the deal (e.g. Priceline).
10. Classifieds, which is a vertical portal for trades of certain kinds of products or services (e.g. Apartments).
11. Search agent, which facilitates online shopping by scanning other sites and return customized results for customers' enquiries (e.g. My Simon shopbots).

12. Bounty broker, which assists customers to search for hard-to-find products or services (e.g. BountyQuest).
13. Matchmaker, which helps business or individual to get what they need (e.g. iShip).
14. Transaction broker, which is a third-party platform for transactions (e.g. PayPal).
15. Peer-to-peer content provider.

Advertising [1]: The cost of service provision or content development is subsidized by advertising income. Users get services for free or for lower-than-cost prices, but in return they have to accept the advertisements via different methods. In order to achieve success in terms of online advertising, one site needs to attain either quantity of audiences or quality. Similar to traditional media like TV and newspaper, a bigger audience base one site has, the more attractive it is likely to be for advertisers. By quality of audiences, they mean the audiences exhibit common characteristics so that they can be clearly aimed at by targeted ads. Advertising is further specified by the following variants:

1. Generalized portal, like Yahoo and MSN which cover a great range of content to attract visitors and thus build up big audience bases.
2. Personalized portal, customized by users themselves which consists of different modules according to their personal preferences.
3. Specialized portal, of which the content is all about a specific field (like Carmagazine).
4. Attention/incentive marketing, in which visitors can get monetary benefits from the website by viewing pages or clicking links.
5. Free model, in which visitors can get free goods or services by viewing ads.
6. Bargain discounter, in which the products are largely discounted in order to attract eyeballs.
7. Recommender system, where users share opinions about products or services.
8. Informediary registration model, in which users sign up services with certain personal information in exchange of free services (e.g. NYTimes).
9. Community provider, which provides a platform for online communities.

Markup [1]: companies purchase goods from producers and resell them. They can pure online retailing businesses like Amazon which don't have physical retailing stores.

Another variant, which is widely referred as click-and-mortar model, is that traditional merchants extend their businesses to the Internet.

Production [1]: manufacturers utilize Internet as a marketing channel, for the purpose of directly reaching the customers without any intermediary or distributors in between.

Five variants of this model are mentioned:

1. Manufacturer-direct, of which the most prominent example is probably Dell's direct sell.
2. Content producer, within which corporations directly sell their data product.
3. E-procurement, specifically corporations move their acquisition of products or services online to cut back group action price.
4. Networked utility supplier, that make the most of network spatial relation or two-sided market (e.g. Adobe).
5. Brand integrated content, that integrates ads into on-line content to moderate intrusiveness for viewers.

Referral [1]: Sites earn commission by directional guests to different websites. It may well be pay-per-click or pay-per-sale, counting on the agreement between referral sites and destination sites.

Subscription [1]: a subscription sells periodic access to a service, which might be either access to the web or price intercalary services like content. Fee-for-service [1]: users get the number of services or product they consume, resembling the pay-per-use model in chapter three.2. In addition to the seven revenues on top of, evaluation models on the

web square measure classified into six classes. they're fastened evaluation, matched dialogue, auction, reverse auction, barter and free.

6. COMPARISON OF MOBILE AND WEB SERVICES

After introducing the background of each telecommunication and web industries, a comparison of the 2 offers constructive implications for the emergence of mobile web. In a study of electronic commerce, Wu and Hisa [9] investigate common characteristics and variations between web-based commerce and mobile commerce. Their analysis is dampened into 2 elements. The first step is associate assessment from views of 3 core parts, namely technology, content and repair [9]. From the technological dimension, they stress that the lack of universal normal could be a downside of mobile services compared to the IP-based web. Cellular transmission is connection-based, message-oriented, device-dependent and has restricted information measure, imperfect coverage whereas web is the other method around. The strength of mobile services includes quality, continuous presence and location awareness. As for the content, web services and mobile services square measure compared by development and distribution of content. web services square measure more data intensive and largely pull-oriented whereas mobile content is often push-oriented and restricted to regional distribution. Moving on to the service dimension, mobile services relish a plus in terms of location-awareness and personalization.

Internet services, on the opposite hand, leave mobile services behind in practicality and usability perspective. They exhibit a wider vary of services, associate easy-to-use search, rich interaction and comparatively higher potential for integration. On the idea of the preceding findings, Wu and Hisa [9] take an additional step to match the business models of those 2 industries. The comparison consists of 5 aspects, viz. price proposition, targeted market, price structure, profit and price network. They first of all argue that high-speed, affordable web permits wealthy communication that largely expels information imbalance. In distinction, core value proposition is personalized, location-aware services are often delivered to end-users while not temporal and spacial limit. Compared to web services, mobile services square measure typically additional precisely targeted at an exact market phase. As to the price, infrastructure of telecommunication is often costlier that indicates mobile data transmission is additional pricey. In the in the meantime, they claim that development price of mobile service is invariably lower thanks to the easy presentation. About the profitability, the lean, direct-to-customer distribution channel of web services significantly curtail the price whereas mobile services facilitate web market expand by providing quality. Lastly, the web price network exhibit a standard structure [8] where the telecommunication world encompasses a vertical integrated industrial structure [7].

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