

# Theoretical Overview of Various Business Model

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## ABSTRACT

**In this paper, I have explained various business models which we can use for analysis of mobile internet services. It can be used for analyzing and explaining some of the advertisement-oriented business models as well as strategic network formulation.**

**Keywords: Value Network, Double helix Model and Two sided Market**

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## VALUE NETWORK

Introduced by Porter in mid-1980s [19], the concept has evolved from the linear value chain at the beginning to the multi-dimensional value network. There are a number of buzzwords around these days which are inherently similar to value network, including value constellation, strategic network, business ecosystem, cluster, etc. In Porter's value chain analysis [19], the production of companies is identified as primary activities and support activities over the value chain. The mission of primary activities is to deliver the value proposition, which exceeds the cost and hence bring about margin, to the end customer. Primary activities incorporate inbound logistics, operation, outbound logistics, marketing and sales, and services. They directly affect value creation of a company while support activities have indirect influence, only by affecting primary activities. Support activities consist of infrastructure of the company, human resource management, technology development and procurement. The performance of both kinds of activities determines the fate of a company. Competitive advantage can be achieved either by the capability of having a lower cost or better differentiation than its rivals.

In the Report on Value Chains [9], four key factors are identified as determinants for successful participation or integration of enterprises in existing value chains. They are entry barriers, rents, governance and upgrading. Barriers to entry and rents are asserted that the winning strategy is to develop inimitable competitive advantage and exploit it to generate economic rents. They argue that the actors who capture the majority of the value are the ones that are capable of protecting themselves from competition by possessing scarce attributes and involving barriers to entry. The concept value chain governance indicates the bargaining power and influence one cooperates owns over the other actors on the value chain. It is a reasonable explanation for who has the market access, why some firms have to rapidly improve their production capabilities, the way gains are distributed along the value chain and the impact of value chains over policymakers. The concept of upgrading stresses that the speed of innovation is critical to win over the competitors.

This development of value chain analysis can be useful in business analysis of mobile services. For instance, Nokia decided to put a great effort on developing services and bundle those services with their handsets. By doing so, Nokia may increase its governance on the value chain and raise the entry barrier of both handset manufacture and service provision. The approach of value chain analysis has been questioned if it could apply to all these sectors of economy. Normann and Ramirez [15] raised the value chain analysis was grounded upon the hypothesis and model of traditional industries where the value chain is already mature and stable. As an alternative, they proposed the concept of value constellation, "within which different economic actors—suppliers, business partners, allies, customers—work together to co-produce value".

The strategic decision making should not be confined to a single firm level, they stress, and it rather ought to be "the reconfiguration of roles and relationships among this constellation of actors in order to mobilize the creation of value in new forms and by new players." As a synonym of value constellation, value network is defined by Timmers [24] that "value network is a multi-enterprise network of relationships focused on integration of information flows to exploit information and knowledge in the network for strategic business objectives".

Likewise, strategic network is termed as "stable inter-organizational ties which are strategically important to participating firms. They may take the form of strategic alliances, joint ventures, long-term buyer-supplier partnerships, and other ties".

[9] In his book “Mobile services in the networked economy”, Vesa [27] points out those theories are helpful in the strategy research of mobile industry because it involves a range of social actors and the business system is constantly changing. Gulati et al. [9] further elaborate the major benefits a firm can gain by becoming a part of a strategic network. First of all, the tight inter-organizational relation decreases competition and raises the barrier to entry. Besides, the firms which take vantage points called structural holes enjoy bigger profitability. Secondly, along with barrier to entry, strategic alliance also sets up mobility barrier for participating members which prevent them from switching to other alliances. Thirdly, the uniqueness and inimitability of network one company is in may contribute to its comparative advantage.

Fourthly, network can take edge off the transaction cost within the network by decreasing the information asymmetry and increasing the cost of opportunism. Lastly, the stability and dynamics vary from one network to another. Learning race can be a good illustration where an actor quits the network and leverage on its own competence once it has learned all the capabilities its partners have. Cluster represents a phenomenon of geographical concentration and proximity of linked companies in a certain industry. [20] Two factors make up the superiority of cluster. One is spillover that firms within a cluster benefit from the flow of information and diffusion of innovation. The other is the fierce competition within a cluster encourages and challenges all the actors there to perform at their highest levels. In addition, Porter points out the evolution of clusters or the emergence of new clusters can derive from one or two leading companies which stimulate the development of the whole cluster.

It can be exemplified by the Japanese operator driven clusters, Finnish Nokia driven cluster, Swedish Ericsson driven cluster and so forth. Business ecosystem is another interesting concept of strategic research. According to Moore [14], business ecosystem is stated as “an economic community supported by foundation of interacting organizations and individuals”. Unlike the concept of cluster, business ecosystem doesn’t emphasize the co-location of actors since the development of information technology and globalization reduces the importance of spatial proximity. On the other hand, Moore introduces the life cycle of business ecosystem which consists of birth, expansion, leadership and self-renewal or death. Each one of those four phases is illustrated with cases from mobile industry in Jarkko Vesa’s book [27].

The preceding concepts have a lot in common whereas each of them has some distinct characteristics. In the comparison from Peltoniemi [17], two differences are noteworthy. The first one is about the different views on competition and cooperation in those models. Clusters gain power from severe internal rivalry and value networks focus on cooperation while business ecosystems involve both competition and cooperation. The second dissimilarity is knowledge sharing. Knowledge flows within clusters because all the actors monitor each other and make quick response to others’ changes. On the contrary, members of value networks are somehow willing to co-operatively create or transfer knowledge but only to a limited level. In business ecosystem, knowledge sharing and co-production are enabled by the interconnectedness and motivated by the shared fate.

## **REVENUE MODEL**

Different colleges of thoughts have a range of definition of business models and revenue models, therefore because the scope of them. Some students advocate that business model and revenue model are 2 distinct approaches for business analysis whereas the bulk believes revenue model is part of business model. per Amit and Zott [1], the most concern of business model is worth creation whereas the center of revenue model is worth appropriation. They claim that the idea of business model and revenue model are complementary however totally different. even so additional specialists take into account revenue model as a constituent a part of the business model. Osterwalder and Pigneur [16] define revenue model because the capability of translating client worth proposition into cash flow, particularly the incoming revenue stream. Combined with value structure and profit model, revenue model is assessed into the monetary side of their business model framework. Petrovic et al. [18] divide a business system into seven sub-models, not least of that is revenue model. They describe revenue model because the logic of what, when, why and the way corporations gain compensation for his or her product. Likewise, Mahadevan [13] decompose business model into 3 streams, i.e. worth stream, revenue stream and supply stream. specializing in the economic and monetary side, Kim and Marbourgne [11] highlight worth and revenue models are essential for guaranteeing profitability.

In this thesis, we have a tendency to consult the latter perspective that business model goes on the far side revenue model and embraces it as a constituent. A comprehensive framework of business model conjointly covers alternative aspects like target client, partnership network, etc. Unlike the established theories, this thesis but analyzes revenue models of different worth networks, of that varied actors work along to supply services, in addition to revenue models of every individual firm. The revenue model analysis is conducted from 2 totally different levels. One level is however a revenue model is taken by users, particularly the valuation policy of 1 service. It serves as the interface between the worth network and end-users. the

worth network here is thought to be a recording machine, of that the outputs are product (services) and valuation policy while the inputs are money and attention (see chapter 2.4 attention economics) paid by users. On the second level, on the other hand, the internal structure of the black box is analyzed. Generally, it is about the relationship between different value network members, or rather, how those inputs are shared among them. To sum up, the first level is to expound value appraisal and value appropriation whereas the second level is to elaborate value allocation and value generation.

Among all concepts of revenue models, a classification from Amit and Zott [1] is adopted in our analysis. According to them, the revenue generation of Internet services can be categorized into three groups. They are subscription model (S), advertising model (A) and transactional model (T). The transaction model is comprised of fixed transaction fees, referral fees, fixed or variable sales of goods, etc. Various variants of these three models can be seen. Besides they are not exclusive so that they can be used in a combination as well. This classification is chosen due to its conciseness and comprehensiveness. It covers revenue models of Internet services, which are inherently similar to mobile Internet services, without bringing about further confusion. In this research, we will only carry out qualitative analysis from a strategic level. Details of revenue models and trivial variations aren't of our greatest interest. thus SAT model meets specifically what we want.

## TWO-SIDED MARKET

**User sensitivity to price:** Typically the user group which is more sensitive to price is treated as subsidy side [6]. A relatively small amount of subsidization might give a great rise to the customer base which makes it a more cost-effective approach.

Typically advertisement-oriented dot-com companies offer free services because users get used to free lunch on the Internet. They may switch to other service providers even if only a tiny amount of fee is charged.

**Output cost:** The user group with zero or near-zero marginal cost is usually subsidized [6]. It is especially common in digital content provision. Portals like Yahoo supply free access to their content so as to attract more eyeballs. Nonetheless, platform providers need to be cautious with decision-making in the case the marginal cost is not neglectable. A negative case given by Eisenmann et al. is Free PC [6]. It offered free PCs bundled with Internet connection in purpose of getting giveaway-takers as advertisement audience. Yet those low-profile customers are not of marketers' high interest. Consequently FreePC didn't manage to cover the expensive cost.

**Same-side network effects:** Users of each side of the platform probably have preferences in terms of the size of the group they belong to. Same-side network effects can be positive as snowballing [6]. For instance, the more users purchase Xbox console, the easier players can find partners to play online games or players to trade games with. Should there be competition between members from the same group, negative same-side network effect may then come into being. If it is particularly strong on one side, it is sensible to charge that side or limit the number of players. E.g. Autobytel gives exclusive access to one dealer in each region and charges clearly for that.

**User brand value:** Getting some celebrity users on board could greatly increase attractiveness of the platform [6]. Those celebrity users may be those with massive volume like massive patrons and suppliers. Let's take digital music business as an example. With the aim of creating its Music Store in, Nokia has been attempting onerous to persuade massive labels to hitch its platform. Not solely will the involvement of huge record companies build provide of music swell that is appealing to finish users, however it additionally serves as an honest reference so it's easier to persuade smaller labels to urge aboard.

The theory of two-sided market contributes valuable insights for analysis of mobile Internet services. It's been applied to studies of each telecommunication trade and Internet trade [3] [26] [29]. The standard economic college of thoughts, in a lot of cases, cannot justify dynamics between in operation systems, content suppliers, advertisers, telephone makers and network operators terribly effectively. Especially when it involves the case of valuation policy, two-sided market theory will properly account for the free or near-free service provision. The weakness of this theory is, however, no common theoretical framework has been wide accepted up to now.

## ATTENTION ECONOMICS

It is universally acknowledged that we live in an era of information explosion. Our eyes and ears are always flooded with different sources of information. As a consequence of overloaded information, most of us have experienced an attention crisis, that is to say we don't know where to spend our attention on. News that used to take several minutes to read through

now only gets a few seconds, because people just skim over it. The phenomenon is precisely explained by Simon [23] that the explosion of information results in the scarcity of attention. In many consumer-oriented industries, attention is turning into the most scarce resource competitors contending for. Essentially it is reshaping value chains, or value networks, of many sectors it is involved.

Let's take media industry, which is perhaps the most prominent in terms of attention economy, as an example [22]. Stepping back to the mass media world, distribution was the scarcest resource across the value chain. The scarcity in some sections is resulted from regulation. The usage of distribution channel (e.g. radio, TV broadcast) must be approved by government authorities. In other segments, natural monopoly gives rise to the scarcity (e.g. newspaper). As time went on, new technologies had been restructuring those sectors, by changing attention into the scarcest resource. Those technologies enable a number of novel ways of production, which can be exemplified by various user-generated contents like blog, and distribution, of which the most remarkable example is undoubtedly the Internet. In other words, production and distribution experience more abundance than attention. Consequently the competition for attention is getting fierce: attention is becoming more valuable than production and distribution.

In attention economy, customers accept free or price-reduced services in exchange of their attention [8]. The most significant difference of attention economy from traditional ones is there is no direct monetary transaction involved in the attention marketplace, namely between service providers and end users. Instead, service providers monetize the attention from customers by selling it to third parties such as ad agency. This is essentially how attention economics are applied in this study. To take a step further, we deem attention as a common currency from a broader sense. Service providers who directly obtain the attention from end users do not necessarily monetize it. As an alternative, they could trade with another actor in the value network to get other types of strategic asset. But eventually, attention must reach one end of the value network, i.e. the ad agencies; no matter it is sold by whom. Three factors, according to Iskold [10], are vital in attention economy. The first one is happiness. The abundance of information is annoying because it pushes up the information searching cost. People always need to make a choice where to pay attention to. A successful attention economy brings customers happiness by showing them the very information they are looking for. The second crucial element is relevance.

The more relevant one site's content is to visitors' expectation, the higher likelihood they will offer their attention to this site. Also, users probably stay there for a long time or are more likely to click the ads if the content is relevant. Another aspect is privacy which emphasizes users need to have control on their personal information in addition to getting protection of it. An important measurement of attention, addresses Davenport and Beck [5], is stickiness. The competition for attention is a zero-sum game. Acquisition of attention of one site means losses of others. A good site is one that capable of not just attracting visitors, but also keeping them coming back and spending more time on the site. A successful site, according to Davenport and Beck [5], must have outstanding performance in four dimensions, relevance, engagement, community and convenience. Relevance indicates that the services must fulfill users' needs. It could be either versatile like Yahoo, targeting multiple user groups, or specifically targets at a vertical market. Besides, the needs of users are dynamic which could be different from time to time. The services also need to be adjusted rapidly to adapt to the change. In addition to relevance, a popular site needs get ahead in engaging its users. Several tactics can be leveraged to achieve that such as enhancing interactivity and introducing competition. Another critical issue is community. A strong sense of belonging and ownership prevent users from leaving away. Last but not the least indicator is convenience. An easy-to-use hassle-free service results in great user satisfaction, and thus keeps a high customer retention rate.

### **RESOURCE-BASED VIEW OF THE FIRM**

Firms are regarded as a marshalling and combination of resources and capabilities in the resource-based view [30]. The assumption is different companies possess different resources and capabilities. The products or services, as a result of distinct bundle of services and capabilities, may result in value creation and competitive advantage. Resource-based view was initially established for analysis of individual firms and the intra-organizational resources those firms take possession of. Over the past decade, it has been extended to a network level, specifically applying resource-based view to analysis of strategic alliances [4]. Das and Teng claim that the foundation of alliances is "the value-creation potential of firm resources that are pooled together" [4].

According to them, the competitive advantage results from "effective integration of partner firms' valuable resources" which one company is unable to provide itself. Similar argument is made by Gulati et al. [9] that resource-based view should be developed to look beyond the boundaries of those individual firms. They further assert "a firm's network can be thought of as creating inimitable and non-substitutable value as an inimitable resource by itself and as a means to access inimitable resources and capabilities" [9]. If a firm belongs to a network its partners don't, the access to those unique

resources of this network, including information, marketing channels, capitals, etc. may make contribution to the firm's competitive advantage. In addition, they point out three types of so-called network resources. The first one is network structure. The basic idea is firms get access to information not only from the actors they directly communicate with but also from "the ties of the actors to whom they are connected" [9]. The second class is network members. The alliance with a resourceful partner is likely to bring benefit to the focal firm. Last category is tagged tie modality. Various characteristics, say strength, closeness and dimension, of the ties one company maintains in its network may all have an effect on its own performance. All the above viewpoints of resource-based view from a network perspective provide thoughtful implication for this thesis.

### TRANSACTION

The main idea of transaction cost theory [31][32][33][34] is firms choose between purchasing certain operations from (or outsourcing them to) suppliers and internalizing those activities depending on which one of the two approaches could result in a lower cost, to be exact, pursuing the most economically efficient way to conduct operations. Transaction costs incorporate the time and effort spent on searching information, costs of negotiation and establishment of the transaction, costs of production and inventory management, etc. The transaction cost economics well explain the structural evolution from value chain to value network in some industries [28]. The Internet helps reduce the costs of economic transactions. It propels intricate value networks, in which firms dedicate themselves to certain segments and "integration of separate activities inside one organization becomes economically suboptimal" [28], to replace simple value chains. This kind of progression toward value network is taking place in the present mobile Internet industry.

Chan-Olmsted & Jamison [2] claim that there are two approaches of expansion of a telecom firm. One is to develop and provide new services or products independently, only leveraging on its own resources while the alternative is to cooperate and collaborate with other companies. They argue that in the former way a firm can enjoy more powerful control on the network and less dependency on the other players. The consequences are higher cost to bear and greater risk to take. In the latter approach, the inducements for companies to join the network are the potential benefits, including access to particular knowledge, sharing risks, strategic synergy and joint venture. A firm evaluates the transaction cost of participating in the network then makes its choice to pursue a higher return on investment.

### DOUBLE HELIX MODEL

The framework is named after the molecular structure of DNA chains. The idea is the evolution of business world resembles development of natural ecosystem. The involvement of industries always follows an evolving route of ascendant helix, shifting between horizontal and vertical structure all the time. The initial case studies applying double helix model are mostly from product-related industries whereas Vesa [27] heavily leverages the model for the analysis of mobile industry in his book. According to Vesa, this is because the model "seemed to capture nicely the unique characteristics of the Japanese and the Finnish mobile services business model". The oscillation between horizontal and vertical models in mobile industry has also been exemplified by Vesa. He quotes the statement from Fine [7] that firms could often not be content just to stay in one part of the value chain while it is powerful enough to have some influence on the market, but tried to expand vertically and take a piece from others' cakes.

Then Vesa cites examples like Nokia offers portal and mobile services which used to be provided by operators, Vodafone starts to sell cell phones under its own brand and so forth. On the other hand, a firm cannot benefit from economy of scale and scope once it reaches certain size because the increasing complexity of management adds up to the marginal cost. In the meanwhile, numerous niche competitors are vying to grab a slice of the market from the leading giants. Vesa points out that Nokia has already foreseen one of the major challenges would be managing the growth. Double helix model doesn't help in analyzing individual services. It is, however, quite useful for explaining the dynamics and evolution from a long term perspective. In other words, it well depicts the trend of development and changes on a macroscopic level.

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