Applying a Framework for Analyzing the Roles and Relationships of Cybermediaries on Selected Middle East Cases

ADIL FATHELRAHMAN

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e-commerce adoption has caused the marketplace to undergo transformation from intermediation as in the case of traditional retailers who help selling goods for bricks-and-mortar companies, to the disintermediation stage that has resulted from companies selling their products directly over the internet, to the current stage of reintermediation realizing the importance of Internet Intermediaries that have caused disruption to the traditional supply chain and gave rise to new business models. It is evident how Internet Intermediaries –known as cybermediaries - are playing an important role in the internet marketplace and how they generate revenues from their activities and revolutionize the way suppliers manage their supply chain. Past research noted that despite the emergence of new e-commerce business models, little has been done to investigate these business models. In the context of this research (Middle East), it becomes increasingly important to investigate the existing cybermediaries business models which is useful to new entrants to ecommerce fields. Based on a framework adopted from Barnesa and Hinton (2007), business models of selected Middle East cybermediaries and their characteristics will be revealed, evaluated, and documented. Having a clear idea about business models is beneficial for online startup companies as well as existing businesses (Chaffey, 2015).
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Keywords: business model; cybermediaries; electronic commerce; supply chain
1. Introduction

As defined by Oxfordreference (2021), cybermediary is “an intermediate company which uses Internet technology to provide a service between a customer and one or more companies”. Cybermediaries have revolutionized the ways in which companies manage their supply chain and have evolved into new business models. It is no longer true that business models are only based on revenue from the direct selling of goods (Chaffey, 2015; Laudon and Traver, 2014). It is no surprise that researchers have referred to the internet as a “disruptive technology” (Chaffey, 2011, 2015), as it has reshaped many businesses and industries. Laudon and Laudon (2012) refer to the changes in the business model or the creation of a new business model as a “paradigm shift” and suggest that this is the riskiest yet the most rewarding type of change that an organization may undergo. Timmers (1998) has defined a business model as “an architecture for the product, service and information flows, including a description of the various business actors and their roles; and a description of the potential benefits for the various business actors; and a description of the sources of revenues.” (Timmers, 1998, p. 4).

This paper aims to contribute to the literature in internet business models by taking a proven framework for understanding roles and affiliation of cybermediaries in the Middle East region for the objectives of providing insight into how these cybermediaries are conducting their business, and what role(s) are they playing within the supply chain of service / product providers.

2. Research methodology

Barnesa and Hinton (2007) framework is a two-fold framework for the analysis of cybermediaries Business models comprising roles of cybermediaries and the status of
affiliation of cybermediary with customers and suppliers. This paper has adopted this framework for the following reasons:

- Our research is based on qualitative research methodology (case studies). Data have been collected from different sources of information, including companies’ marketing data and sales materials, interviews with the top executives of these companies, and analysis available on their business model(s) and revenue model(s).
- The scale of the data is limited to several case studies (only three case studies were used for application of Barnesa and Hinton framework in their paper).

These factors make the choice of the framework appropriate as the framework justifies the use of qualitative data on a small scale of cases, making this research work an application of the framework on a geographical context.

This research selected four cybermediaries based on market evaluation data from the Middle East. The selection has considered the diversification of the business sectors in which these firms are operating. Another selection criterion is online intermediaries that have been featured in local and international news. Table 1 illustrates the demographic data of the selected Middle East firms.

(insert Table 1 here).

3. Literature review of internet business models

One of the first attempts to classify internet business models was that of Timmers (1998) who categorized internet business models into e-shops, e-procurement, e-auctions, e-malls, third party marketplaces, virtual communities, value chain service providers, value chain integrators, collaboration platforms, information brokers, and trust and other services (Timmers, 1998, p. 6). Sarkar et al. (1995, pp. 9-11) have identified some of the cybermediaries, such as gateways, directories, search services, malls, publishers, virtual resellers, web site evaluators, auditors, forums, fan clubs, user
groups, financial intermediaries, spot market makers, barter networks, and intelligent agents. Laudon and Traver (2014, p. 67) identified eight key elements of a business model: “value proposition, revenue model, market opportunity, competitive environment, competitive advantage, market strategy, organizational development, and management team”. Chaffey (2015) related the discussion and identification of business models and revenue models to the marketplace analysis of e-commerce and focused on online intermediaries. Chaffey stated that the Business Model Canvas “is a valuable framework for summarizing strategy for online businesses”. Osterwalder and Pigneur (2002), as quoted in Chaffey (2015, pp. 59-60), listed 9 main sections of the Business Model Canvas: “value proposition, customer segments, customer relationships, channels, key sellers, activities, resources, cost structure, and revenue stream”. Wang and Chan (2003) constructed a taxonomy of internet business models that is based on the work of Bambury (1998), Eisenmann (2002), Rappa (2001), and Timmers (1998). Wang and Chan, noted that there are commonalities and noticeable differences between these models, and graphically depicted the relationships between these models. Many past studies that have researched internet business models have focused on identifying critical success factors (CSFs) and applying technology adoption models on business models of the e-commerce (Sharon, 2001; Hope, Hermanek, Schlemmer & Huff, 2001). Laudon and Traver (2014) noted the importance of the revenue element of the business model. Chaffey (2015) defines a revenue stream as “the methods by which a business derives income”. Chaffey (2015, p. 60) listed the revenue options for e-commerce as “ad revenue, subscription fees, sales of physical or virtual goods or affiliate—based commission arrangements, as well as licensing and
leasing”, and further identified eight online publisher and intermediary revenue models: CPM (cost per thousands) advertising on a site, CPS (pay-per-click) advertising on a site, the sponsorship of a site section or content types, affiliate revenues, transaction fee revenues, subscription access to content, pay-per-view for documents, and subscriber data access for email marketing (Chaffey, 2015, p. 63). Laudon and Traver (2014, p. 67) stated that a firm’s revenue model is one that “describes how the firm will earn revenue, generate profits, and produce a superior return on investment”. Laudon and Traver (2014) identified some of the revenue models that e-commerce companies are adopting by either selecting a single model from the list or by combining more than one model; a summary of the major revenue models listed by Laudon and Traver are the advertising revenue model in which firms, in addition to offering services and /or products to its own customers, give provisions for other companies to advertise on their website and receive fees for these services; a subscription revenue model where revenue is generated by the firm offering content on their website, which is based on a subscription; a transaction fee model where the firm’s revenues come from the fees paid for executing a transaction; a sales revenue model in which companies generate revenues by selling goods, information, or services to customers; and an affiliate revenue model in which revenues are generated through using a website to drive business for an affiliate and receiving a referral fee or a percentage of the revenues from any sales resulting from these referrals (pp. 68 – 67).
4. Literature review of roles of cybermediaries

A Forbes Middle East report on the Middle East e-commerce industry highlighted that the e-commerce market is growing rapidly and that there is a potential for new firms to enter this market, as the marketplace is far from being saturated. The report also suggested that the role of cybermediaries is essential, as traditional companies rely on these cybermediaries to grow their businesses online. This fact is evident in the food industry, where restaurants are counting on cybermediaries to extend their reach to customers and handle deliveries (Arabian Business, 2017; Export Gov, 2018; Forbes Middleeast, 2017; Makemymeal, 2018; Mckinsey, 2016; Talabat, 2018). An Arabian Business (2017) report predicted that the Middle East e-commerce market would double to $69 billion by 2020, thus growing by 23% with two factors influencing this growth: an increase in online travel bookings in Saudi Arabia compared to growth in the events and entertainment-marketing sector in the UAE. Several researchers have discussed the role of cybermediaries in different industrial sectors. Sarkar et al. (1995, pp. 2-3) suggested that contrary to the conception that electronic networks will cause intermediaries to fade away due to theoretical reductions in transaction costs when using electronic networks, such networks instead will promote the growth of “a new generation of intermediaries. These new players, which Sarkar et al. (1995) termed Cyber-intermediaries, are organizations that perform the mediating tasks in the world of electronic commerce”. (Yacouel and Fleischer, 2012, p. 225) discussed “the role of cyber-intermediaries in reputation building and price premiums in the online hotel market”. Yacouel and Fleischer concluded that the internet plays an important role in boosting efficiency in the hotel business sector. This conclusion assumes that the
feedback received from past customers and recorded in the online hotel agents’
databases drives the efforts of hotels to improve their services and that obtaining good
feedback ratings helps the reputation of the company, which leads to more revenue
generation. Luo and Donthu (2007, p. 452) defined the role of cybermediaries “based on
several theories such as transaction cost analysis, agency, social exchange, and
relationship marketing”, and outlined the theoretical focus and implications for
cybermediaries; their framework addresses theories that either add economic value, as
in the case of transaction cost analysis theory and agency theory, or “adding social,
socialization and non-economic value, building trust and commitment in the channel”, as
in the case of the social exchange theory and relationship marketing.
Barnes and Hinton (2007, p. 64) discussed Anderson and Anderson’s (2002) approach
to the classification of cybermediaries that is based on the role that cybermediaries are
playing rather than the kind of business model adopted. Barnes and Hinton, based on
literature reviews, classified the roles of cybermediaries into five basic roles which is
used to form part of their framework:

1. Informational: “This role involves the provision of information about customers, sellers
and their products”. Success of intermediaries is attributed to their effective use of
information. Cybermediaries that are explicitly playing the informational role are termed
“‘infomediaries’.

2. Transactional: in this role, the cybermediary acts as a customer or a supplier or both.
In this role, a cybermediary may help in facilitating processing of transactions between
sellers and customers.
3. Assurance: In this role, cybermediary provides the assurance of products quality and the “legitimacy of purchases”; this type of assurance is needed for both customers and sellers, noting the risks that online trading incurs, “customers need to be assured that they will receive their goods and that they will be of the expected quality. Sellers will need to be assured that they will be paid”. Such assurance is achieved by either firm’s reputation or by offering a “warranty guarantee” via third party entity.

4. Logistical: In this role, cybermediary plays a role in the supply chain of delivering products – services or goods- to customers. Cybermediary role is ideal for digital forms of products as they are working in online marketplace. “For physical goods or personal contact services the cybermediary’s role is to facilitate delivery of the goods or services, whether using their own physical resources or that of a third party”.

5. Customisation: “This involves the tailoring of products and services to better meet the needs of individual customers”.


The five roles are presented as a ladder where the first cybermediary’s role is transactional and cybermediary climb the ladder taking roles from 1 to 5.

Barnesa and Hinton (2007) believe that understanding the degree of affiliation of cybermediary with suppliers and customer, along with their roles help better understanding of how these firms conduct business online. Affiliation is presented as a spectrum with one end represents 100% affiliation with customer while the other end represents 100% affiliation with suppliers.

We will follow Evans and Wurster (1999) in using the term ‘affiliation’ to describe the balance of a cybermediary’s relationship between its suppliers and its customers. By this, they mean the extent to which a cybermediary represent
the interests of its suppliers and the extent to which it represents the interests of its customers. They claim this will become a crucial element in the competitive strategies of online intermediaries. In the virtual world, the strength of these relationship will crucially depend on the how the cybermediary is viewed by its customers. The customer–supplier affiliation dimension can be seen as a continuum, with the position of a cybermediary being determined by an assessment of the strength of its relationships with its customers and suppliers, respectively.

(p. 67)

In building their framework, Barnes and Hinton (2007) developed a taxonomy of internet business models from literature – as discussed above- and related these to the five roles of cybermediaries.

Table 2 illustrates examples of cybermediary roles.

Insert Table 2 here.

5. Applying the framework on the selected case studies

Each of the business models of our selected cases are being analysed and Barnes and Hinton (2007) framework is used to classify the roles and affiliation of each cybermediary. Though all the data has been available over the internet, this research decided to withhold cybermediary real names.

5.1 Cybermediary 1 case

The company business model is an intermediary between customers and restaurants to facilitate the choice and delivery of food, with other services such as
collecting customers’ feedback and providing customer support throughout the supply chain. The services provided by the cybermediary are a combination of search services, financial intermediaries, value chain integrators, and value chain service providers.

- **Informational:** The cybermediary website provides detailed information about available restaurants and the menus of meals that the customer could choose from. It has extended its offering to customers by adding pharmacies, flower shops and grocery. This model is based on searching restaurants’ menus based on customer preferences (referred to as a price discovery model).

- **Transactional:** The cybermediary revenue comes mainly from receiving a fee for enabling transactions between customer and supplier using the internet. The cybermediary processes transactions on behalf of the supplier and takes a commission for this service.

- **Assurance:** participating restaurants and other products are approved by the firm before being included in the list of providers. The feedback received from customers is available to other customers to help them understand the quality of services and products. The ownership of supply chain processes from order to delivery give extra assurance to customers (customer does not have to communicate directly with a restaurant to track his order).

- **Logistical:** The role of the cybermediary is to arrange the delivery of products from restaurant to customer using online system.

- **Customization:** a little is being done with regard to customization as the cybermediary does not have a say on the content of the product delivered. The product is prepared and packaged by the restaurant.
The cybermediary business is aimed at receiving transaction cost fees from its sellers and deliver goods to its customers. The supplier is important to their business and maintaining good relationship with supplier is important, as well as customer satisfaction in their services. As they receive their profit from completed transactions for the seller, and they need to attract more sellers to their website (not having their own products), it is representative of both supplier interest and customers interest with more inclination to the customer side. In the continuum of affiliation in the two-dimensional framework, location at customer side of the center of affiliation (50:50) appears appropriate.

5.2 Cybermediary 2 case

The cybermediary business model identified by this research is an intermediary between service providers and service consumers in the business of home repairs and maintenance. The cybermediary business model is a result of the personal difficulties in finding skilled workers to do repair work. The founders realized that there is an opportunity to fill the gap created by the household demand for skilled workers to do repair jobs and the need for such workers to fulfill a continuous flow of orders from customers.

- Informational: The cybermediary website provides detailed information about service providers in various categories, and the option of direct assignment of service provide that matches customer request using matching technology or providing the customer with quotes from different service providers where the customer can negotiate price through a chatting facility in the cybermediary website.
• Transactional: once sale is agreed, transaction is processed online by the cybermediary.

• Assurance: The business model is based on “finding trustworthy and affordable skilled professionals”, that were vetted by the cybermediary and reviewed by its customers.

• Logistical: delivery of the actual service is the responsibility of the service provider.

• Customization: The only customization is the process of selection of service provider from number of professional and the role of cybermediary is restricted in providing the original quotes and the platform for communication between the service provider and the customer.

The delivery of the services is direct responsibility of the service provider. The role of the cybermediary is to facilitate and process sales transaction as well as approving each service provider, and to receive profit from their service provider and generate revenue for them. Nevertheless, its success is based on customer satisfaction and they solve a problem of finding a trusted service provider, something that is highly needed for the repair and maintenance sector as the sector is not regulated as in the case of western countries. The cybermediary applies a sales revenue model, the revenue is generated as in the case of direct sales, and service providers work as agency workers who receive their revenue from the cybermediary. To this end it is suggested that an inclination to the supplier side in the affiliation axis of the framework is appropriate.

5.3 Cybermediary 3 case
Within the retail sector, an online marketplace is the business model for this cybermediary, it promises customers a seamless and easy shopping experience using smart technology. This cybermediary business model allows sellers to register and list their products and allows customers to search for and buy a vast range of products. This cybermediary business model is like an auction website such as e-Bay, It handles website marketing on behalf of other companies, and receiving fees from advertisements, and for enabling transactions for sellers. This Cybermediary has been recently acquired by Amazon to satisfy the needs of a growing market in the middle East. A revenue stream that involves the “advertising route”, where companies are charged for ad space in relevant categories to clients, and a revenue stream utilizing the demographic data collected to sell reports to companies. One cybermediary revenue source is based on sales commissions where the cybermediary charges sellers a commission for each product or service sold through the website, but customers purchase items free of charge. There are different advertising packages available for advertisers. Car and real estate sellers enjoy a discounted commission rate that is “based on timely payments, number of ads posted, whether users complained, and how many items they sell”. Other identified models include an advertising model with advertisements for other companies that are placed on its website, a revenue model based on a commission fee structure calculated using the item type and country and is paid by sellers only after the completion of the sale of their item. Sellers also pay an order-based processing fee if the order exceeds a certain amount. The VAT rate will also vary based on the country to which the shipment is made, generating revenue through a sponsored products program which allows advertisers to create campaigns.
and advertise on the cybermediary website in Google search, or from a fee structure, revenue generated through offering order fulfillment, which gives customers peace of mind by handling the online sales fulfillment process, and a revenue model based on sales referrals whereby firms’ sellers who advertise on the website pay for every click that takes them from the firm’s website to the seller’s website.

- Informational: The website provides all details of the products that are available for sale from other retailers. Products are arranged by categories to simplify product search.

- Transactional: The website handles the completed transaction from supplier to customer, including shipment of sold products.

- Assurance: The website maintains customers ratings for each supplier and warrantee is provided by the supplier and displayed on the item details.

- Logistical: The whole supply chain is handled by the cybermediary.

- Customization: The sold product is shipped from the supplier as is, with no customization.

This cybermediary position on the customer-supplier relationship suggest more inclination to the customer side as its sales revenue comes from its customer, so the affiliation for the two-dimensional framework should be more inclined to customer side in the 50:50 affiliation of the framework.

5.4 Cybermediary 4 case
This cybermediary business model is a hotel reservation systems and its revenue model is based on receiving revenue through lead generation; small amount is charged when a lead is generated from the service provider, Cybermediary website provides marketing functions on behalf of partner hotels, and directs the customer to the selected website.

- Informational: the cybermediary website provides a search services for locating a suitable hotel through their powerful search engine. Detailed information about partner hotels are displayed in cybermediary website.
- Transactional: The customer is directed to his choice of the hotel website, so very little is done by the cybermediary in this role.
- Assurance: Apart from facilitating communication between partner hotels and customer, all assurance is offered by the partner hotel.
- Logistical: Service is offered by the partner hotel. No real role in the supply chain is performed by the cybermediary
- Customization: The service is completely managed by the partner hotel

This cybermediary is mainly playing a transactional role. Their contribution to the customer-supplier relationship is minimal. The cybermediary receives its revenue from supplier who manage the whole business of hotel accommodation. They are interested in growing the supplier business to ensure that their revenue continues. An inclination to the side of supplier side of the affiliation in the two-dimensional framework appears appropriate.

(Arabian Business, 2016; Arabnet, 2016; Entrepreneur Gov, 2015; Haraj, 2018; kfupm, 2016; MrUsta, 2018; Reuters, 2015; Sarkar et al., 1995; SME Advisor, 2017; Souq, 2017; Talabat, 2018; Timmers, 1998; Zaahib, 2018; Arabianmarketer, 2015;
Entrepreneur Gov, 2015; Haraj, 2018; Oddappz, 2017; Souq, 2018; Trivago, 2018a; Trivago, 2018b; Wamda, 2015; Zaahib, 2018)

Figure 1 illustrates how the companies from the four case studies are positioned on the two-dimensional framework of roles and affiliations of cybermediaries.

All the investigated cybermediaries have not undertaken all the five roles in the ladder, and all have not indicated that they are playing the customization role. As indicated by the bar height in the vertical axis of the two-dimensional framework:

- Cybermediary 1 which operates in the food industry business is undertaking the informational, transactional, assurance, and logistical roles.
- Cybermediary 2 which operates in home repairs service industry is undertaking the informational, transactional, and assurance roles.
- Cybermediary 3 which operates in online marketplace industry is undertaking the informational, Transactional, Assurance, and logistical roles.
- Cybermediary 4 which operates in the hotel booking industry is undertaking a transactional role only.

Affiliation – as illustrated by the horizontal axis of the two-dimensional frameworks reflects that:

- Cybermediary 1 indicates an inclination at customer side of the center of affiliation (50:50)
- Cybermediary 2 indicates an inclination to the supplier side in the affiliation axis of the framework.
- Cybermediary 3 indicates an inclination to customer side in the 50:50 affiliation of the framework.
- Cybermediary 4 indicates an inclination to the supplier side of the affiliation of the framework.

(insert Figure 1 here).
6. Conclusion

This paper represents an effort to extended literature on the area of cybermediaries business models through application of a framework of two dimensions of roles and affiliation, taking the Middle East as the focus of the study. This research noted that the studied Middle East firms have adopted and invested in proven business models, and some of these firms have diversified their sources of revenue rather than depending on a single source. An excellent example is entry into other areas of the supply chain and the order fulfillment process. This paper noted that the trend of using online cybermediaries by firms to extend their market reach, increase revenues and boost customer relations is evident. As noted in previous studies, the roles that cybermediary is planning in the supply chain vary from one cybermediary to another. It is noted that reaching the highest step in the roles ladder (customization) is rarely evident in the selected cybermediaries.
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### Table 1. Demographic data of the Selected Middle East firms

<table>
<thead>
<tr>
<th>Classification</th>
<th>Firm business sector / website</th>
<th>Firm home country</th>
<th>Location where the firm is operating</th>
<th>Year when firm commenced business</th>
<th>Marketing data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Case 1 company</strong></td>
<td>Online food delivery</td>
<td>Kuwait</td>
<td>Kuwait, Kingdom of Saudi Arabia, United Arab Emirates, Oman, Bahrain, Qatar, and Jordan</td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td><strong>Case 2 company</strong></td>
<td>Service industry (home repairs and maintenance)</td>
<td>UAE</td>
<td>UAE</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td><strong>Case 3 company</strong></td>
<td>One-stop shop for all types of classified goods</td>
<td>KSA</td>
<td>KSA</td>
<td>2007</td>
<td>&gt; 400,000 products 23 million visitors / month</td>
</tr>
<tr>
<td><strong>Case 4 company</strong></td>
<td>Hotel bookings</td>
<td>Germany operating in all Gulf countries</td>
<td>Entire Middle East</td>
<td>2005</td>
<td>Hotels &amp; Alternative Accommodation 5m+ Countries that Meta Search Covers 190</td>
</tr>
</tbody>
</table>
Table 2. Examples of cybermediary roles
Developed using data from Barnesa and Hinton (2007)

<table>
<thead>
<tr>
<th>cybermediary roles</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informational:</td>
<td>Google, Kelkoo</td>
</tr>
<tr>
<td>Transactional:</td>
<td>eBay, Amazon</td>
</tr>
<tr>
<td>Assurance:</td>
<td>VeriSign, Web Trust</td>
</tr>
<tr>
<td>Logistical:</td>
<td></td>
</tr>
<tr>
<td>Customisation:</td>
<td>Landsend.co.uk</td>
</tr>
</tbody>
</table>
Figure 1 The Four Middle East case companies on Barnesa and Hinton (2007) two-dimensional framework.