Business Models For Transport eBusiness

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SUMMARY:

In this paper authors are presenting expectations from electronic commerce and its connotations on transport logistics. Based on trends, the relations between the companies in the international transport have to be strengthened using Internet business models. In the paper authors are investigating e-business information models for usage in transport.

1.INTRODUCTION

Due to the widespread adoption of the supply chain view by manufacturers and retailers, transport providers are increasingly required to offer global logistics service packages to better satisfy customer needs. In the case of transport, this move from hardware-based service suppliers into a know-how service industry requires a higher degree of integration in the trans-ocean supply chain to offer true door-to-door service with all steps of the chain under one control. Information and communication technologies play a key role in this process, assuring the linkages between all parties involved in the supply chain operations and a more effective control of time, cost and quality of the service supplied.

2. TRANSPORT AND DIGITAL ECONOMY

Transport is a derived demand. It is therefore part of the economic process. The requirements of industrial processes have changed drastically during the past 10 years and can be characterized by global competition, shorter production processes and product-life-cycles and the need to cut costs.

The concept of transport includes three segments, maritime, terrestrial and port.

In the maritime transport the phenomenal growth of containerised trade volumes and container movements in general, that have resulted in an ever expanding shipping industry, constantly putting increasing pressure on ports to achieve ever faster vessel turnaround times, thus increasing their profitability, quality and efficiency of service. The growth had especially prevailed in last three years in increased capacity of the container ships, having d.w.t capacity up to 8000 TEU. Other analysts envisage ships of 12,000 or even leviathans of 18,000 TEUs such as the one that has been designed by researchers at TU Delft University in Holland.

Second characteristic of the new maritime transport trends is tendency towards consolidation by acquisition and merges, and according to Containerization International the first 20 carriers in the world have upgraded their capacity of the container transport from 35% in 1985 up to 76% in the year 2000.

Third characteristic is globalization, as the global (or mega) carriers are present at all 4 world market segments(transatlantic, transpacific, Europe-Asia, North/South)., in contrast of eighties where they have been present in only 2 segments

After the constitution of maritime networks, the attention goes on to the ports networks. The terrestrial ports - main ports, hubs - and platforms - dry ports - are of a particular importance in this very dynamic landscape. Indeed, by the decrease of transport costs on the one hand, by the search of value added on the other hand, these places became the privileged location to generate profits along the whole transport and logistic chain

The eCommerce techniques are going to radically change the shipping and port industry. It is obvious how much could be saved by introducing electronic commerce on a wider scale. Communication costs could be cut down to virtually nothing. Administration costs can be cut right down, if automated systems that provide the customers with availability, information and schedules to manage booking, financial transactions, paperwork and container tracking are in use.

UNCID has estimated that the costs of the data flows associated with international trade to be between 4 to 7 % of the value of the goods, and that the complete distribution costs are up to 16% of the net value of the goods.

If only data flow costs are from 25% to 44% (depending on the length of the transport, and number of border crossed), then the sum of all other transaction costs: searching costs, decision costs, bargaining costs, control costs, handling costs, adjustment costs and execution costs has to exceed 50% of the transportation costs.

Komadina (2000) at all have shown that using only the common standards and common information system of integrated ports could introduce cost diminution of 40% for all documentary costs, in distinction with the 20% to 31% of cost diminution for every port proprietary system.

Additional cost for the implementation of the electronic commerce application, on account of integration, is 40% according to MetaGroup. This means that nearly half of the efforts and costs for

electronic commerce applications are caused by the processes of cooperation and integration among companies.

Applying this to the fact that the average influence of transport to BNP is about 8%, this would signify that the eCommerce technologies could introduce the savings up to 4% of BNP. The ports as a nodal points and a natural origins of the supply chain integration could introduce alone more savings than 1.2% of the BDP.

In recent years, a growing number of manufacturers and retailers have adopted the supply chain view to manage their business. For these companies the delivery system has become an integral part of the supplied product, to the extent that transportation and logistics receive the same evaluation as the product itself; this is the concept of Supply Chain Management (SCM). In this context, transportation providers play a more important role than in the past insofar as they are entrusted with the task of co-ordinating and, secondly, accelerating physical and information flows along multiple levels of the supply chain and of making the whole logistical system more efficient and flexible in responding to swift market changes.

2. eBUSINESS MODELS

In the most basic sense, a business model is the method of doing business by which a company can sustain itself -- that is, generate revenue. The business model spells-out how a company makes money by specifying where it is positioned in the value chain.

Some models are quite simple. A company produces a good or service and sells it to customers. If all goes well, the revenues from sales exceed the cost of operation and the company realizes a profit. Other models can be more intricately woven. Broadcasting is a good example. Radio, and later television, programming has been broadcast over the airwaves free to anyone with a receiver for much of the past century. The broadcaster is part of a complex network of distributors, content creators, advertisers (and their agencies), and listeners or viewers. Who makes money and how much is not always clear at the outset. The bottom line depends on many competing factors.

Internet commerce will give rise to new kinds of business models. That much is certain. But the web is also likely to reinvent tried-and-true models. Auctions are a perfect example. One of the oldest forms of brokering, auctions have been widely used throughout the world to set prices for such items as agricultural commodities, financial instruments, and unique items like fine art and antiquities. The Web has popularized the auction model and broadened its applicability to a wide array of goods and services.

Business models have been defined and categorized in many different ways. This is one attempt to present a comprehensive and cogent taxonomy of business models observable on the web. The proposed taxonomy is not meant to be exhaustive or definitive. Internet business models continue to evolve. New and interesting variations can be expected in the future.

According to business models on Internet could be classified as:

- Brokerage
- Advertising
- Infomediary
- Affiliate
- Community
- Subscription

BROKERING MODEL:

Brokers are market-makers: they bring buyers and sellers together and facilitate transactions. Brokers play a frequent role in business-to-business (B2B), business-to-consumer (B2C), or consumer-to-consumer (C2C) markets. Usually a broker charges a fee or commission for each transaction it enables. The formula for fees can vary. Brokerage models include:

Marketplace Exchange -- provides a full range of services covering the transaction process, from market assessment to negotiation and fulfillment, for a particular industry. The exchange can operate independently of the industry, or it can be backed by an industry consortium. The broker typically charges the seller a transaction fee based on the value of the sale. There also may be membership fees

www.shipvertical.com is tipical representative of marketplace exchange

Buy/Sell Fulfillment -- customer specifies buy or sell orders for a product or service, including price,

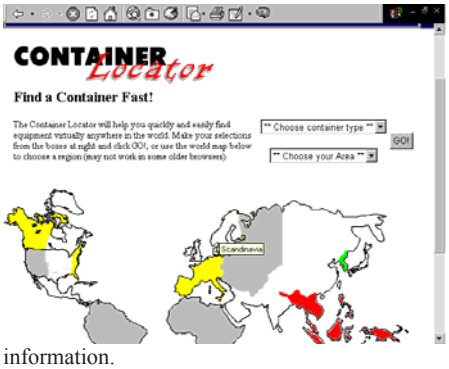
delivery, etc. The broker charges the buyer and/or seller a transaction fee.

Auction Broker -- conducts auctions for sellers (individuals or merchants). Broker charges the seller a listing fee and commission scaled with the value of the transaction. Auctions vary in terms of the offering and bidding rules. Reverse auctions are a common variant.

www.shipbrokering.com is typical auction broker selling the cargo and vessel capacities

Transaction Broker -- provides a third-party payment mechanism for buyers and sellers to settle a transaction. **(example www.paypal.com)**

Distributor -- is a catalog operation that connects a large number of product manufacturers with volume and retail buyers. Broker facilitates business transactions between franchised distributors and their trading partners. **Search Agent** -- is an agent (i.e., a software agent or "robot") used to search-out the price and availability for a good or service specified by the buyer, or to locate hard to find



information.

www.isocontainers.com uses the distributor model for containers. The search agent is quite different than in typical distibutor model – because it uses a goeographic location search for finding the same product- container all over the world.

ADVERTISING MODEL

The web advertising model is an extension of the traditional media broadcast model. The broadcaster, in this case, a web site, provides content (usually, but not necessarily, for free) and services (like e-mail, chat, forums) mixed with advertising messages in the form of banner ads. The banner ads may be the major or sole source of revenue for the broadcaster. The broadcaster may be a content creator or a distributor of content created elsewhere. The advertising model only works when the volume of viewer traffic is large or highly specialized.

www.marinedigital.com is typical advertising and portal services appliance

INTERMEDIARY MODEL

Data about consumers and their consumption habits are valuable, especially when that information is carefully analyzed and used to target marketing campaigns. Independently collected data about producers and their products are useful to consumers when considering a purchase. Some firms function as infomediaries (information intermediaries) assisting buyers and/or sellers understand a given market.

www.navalweb.com is a intermediary site

AFFILIATE MODEL

In contrast to the generalized portal, which seeks to drive a high volume of traffic to one site, the affiliate model, provides purchase opportunities wherever people may be surfing. It does this by offering financial incentives (in the form of a percentage of revenue) to affiliated partner sites. The affiliates provide purchase-point click-through to the merchant. It is a pay-for-performance model -- if an affiliate does not generate sales, it represents no cost to the merchant. The affiliate model is inherently well-suited to the web, which explains its popularity. Variations include, banner exchange, pay-per-click, and revenue sharing programs

www.merchantnavy.com has an affiliate model

COMMUNITY MODEL

The viability of the community model is based on user loyalty. Users have a high investment in both time and emotion. Revenue can be based on the sale of ancillary products and services or voluntary contributions.

www.informare.it is a community model from maritime industry

UTILITY MODEL

The utility or "on-demand" model is based on metering usage, or a "pay as you go" approach. Unlike subscriber services, metered services are based on actual usage rates. Traditionally, metering has been used for essential services (e.g., electricity water, long-distance telephone services). Internet service providers (ISPs) in some parts of the world operate as utilities, charging customers for connection minutes, as opposed to the subscriber model common in the U.S.

4. DISCUSSION

Transportation industry has changed in last decade, from the industry that has been archaic in usage of new technologies to the industry that is in front rows in using Internet technologies.

The Internet looks like it is going to radically change the shipping industry. It is obvious how much could be saved by introducing electronic commerce on a wider scale. Communication costs could be cut down to virtually nothing. Administration costs can be cut right down, if automated systems that provide the customers with availability, information and schedules to manage booking, financial transactions, paperwork and container tracking are in use

The SWOT analysis provided shows that the internet technologies ould have a big impact on transportation system.

STRENGTHS

- •Communication costs are decreased to about nothing
- •Administration costs are cut down
- •Integration Vertically and Horizontally
- •Ties in all trading partners and entire supply chain
- •High degree of customization
- • 24x7 Service-Support
- •Distinctive competence relative to transportation management
- •Customer versus carrier centricity, and (weighted) value proposition
- •Extent to which activities are geared toward instantaneous or real-time transaction capabilities
- •Modes of transport involved and the extent of geographic coverage, such as regional, national, or global
- •Additional channels being considered and how are they offered (partnership versus development)
- •Vertical industry domain expertise and vertical marketplace agreements in existence
- •Technology alliances helping drive the underlying infrastructure
- •Financial liquidity and anticipated positive cash-flow situation

WEAKNESSES

- •Cargo interests determine freight demand , shipping -exists to serve cargo movers
- •Cargo interests have deeper pockets
- •Cargo supply chains dictate shipping industry treatment of visibility
- •Conflict with existing trading partners and patterns- ie broker disintermediation
- •Low level of enablement and inconsistent databases/ schema across the industry
- •Fear of relinquishing control and competitive advantages
- •Cost in staff time to adapt new technologies
- •Reliability/ security / privacy concerns

OPPORTUNITIES

- •Current market challenges highlight need for greater efficiencies
- •Emergence of enabling technologies such as:
  - –Internet speed, accessibility worldwide (including aboard vessels)
  - _Wireless and broadband technologies to deliver more data/ more places
  - –Extensible Markup Language (XML) enabled connectivity
  - –Global Positioning Satellite (GPS) enabled tracking to better manage voyages
  - –Ubiquity of auction and trading hub engines and software
- •Demonstrated success of e-commerce in cargo generating industries
- •Huge Industry by any measure
- –Annual turnover of $570 Billion (source = MaritimeDirect)

THREATS

- •Deferring participation
- •Picking the wrong technology
- •Unwillingness to commit
- •Lack of persistence

Nowadays new business models are constantly emerging in electronic commerce and can become a major stake in the e-business game. It is even possible to patent them in some countries (Pavento, 1999). Understanding new business models and helping to design them are important research issues, not so well covered until now.

During the Internet-euphoria consultants, executives,academics and journalist have abusively used the term, but have rarely given a precise definition of what they exactly meant by using it.

The transportation industry as shown is using most of the identified models, and even creating new ones as in case of the www.isocontainers.com , where is search for information changed to geographical search for a goods.

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