Competitive paper

FRAMING OF A BUSINESS MODEL NAMED TOTAL OPERATING ECONOMY

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ABSTRACT

The concept of a business model is widely used, not least in practitioners' everyday life. This paper explores a vehicle manufacturer's business model of total operating economy as a marketing practice in the operation of an existing market and in the attempts to define and create an international market. A research model instruments the empirical part to show a number of instances of a specific business model in order to understand its use. The research model is of calculative frames that make possible insights to marketing processes, and a better understanding of trials for vehicle markets creation and operation is discussed. A business model such as of extended services is co-created by different actors. Any potential trigger point in frame-makers' evaluation of total operating economy in emerging markets is in relation to its intertwinement with the context. The conceptual understanding builds on business model literature based on sociological assumptions, in order to learn about relational aspects of business models and understand its development.

Keywords: Business model, market making, calculative frame, automotive

INTRODUCTION

Business models that focus on offering customers a package of services rather than just a product are increasingly important in many industries. Spreading such models to new customers and new markets can however be difficult. Market making raises questions about the offer and the market. The Swedish vehicle industry's business models involving extended service commitments are seen as a market innovation regarding up-time of the buyer's fleet of trucks. One of these is a business model labeled as total operating economy by the vehicle manufacturer. It has relied on marketing practices that work in Sweden. In Araujo's (2007) line of argument this means that this model has taken shape and produced results by relying on a degree of stability of institutional frameworks and calculating agencies that matters in the Swedish case. What about the market making in other contexts? Araujo (2007) argues that market processes are an outcome of particular constellations of marketing practices and mobilization of heterogeneous expertise. Not only the activities that disentangle exchanges of customized services from their context are required (i.e. that makes these calculable through objectified properties), but also activities that embed exchange in a specific context of the buyer's world (Araujo, 2007).

China is one of the world's largest and fastest growing markets for transportation vehicles and offers huge potential for vehicle manufacturers. The Chinese market is in many ways different than the Swedish market for transportation vehicles, with simpler alternatives that are less costly in the short term. In particular, vehicle buyers tend to prefer low vehicle purchase price. The concept of total operating economy based on extended services has attracted little interest. If we interpret Araujo's (2007) argument, then the vehicle manufacturer needs to rely on existing institutional forms and routines in China as well as on imagination and entrepreneurship in the marketing. But how? Little is known about how marketing contributes to the creation and operation of markets (Araujo, 2007).

The purpose of this paper is to explore the vehicle manufacturer's business model of total operating economy as a marketing practice in the operation of an existing market and in the attempts to define and create an international market. Mason and Spring (2011) define business models as frames for action in which the technology, offering and network interact in different ways. The business model is an object with constructed frames that relates to others' calculation, which will develop the business model in line with their frames (Doganova and Eyquem-Renault, 2009). The calculation is progressively transforming the business model and for that reason a research model of calculative frames is developed and presented in the end of the theoretical framework.

Business models are sensitizing devices for industrial marketing and purchasing practitioners but there is little discussion about it in IMP literature. The business model literature has grown into a stream of the management field. In the continuation of the paper a theoretical background of business models will be created. We have an interest to understand the business model as a marketing device for the industrial marketer. For that reason we continue the theoretical

framework with the stream of business model literature and IMP literature that goes into the work of business models. As a market practice, the business model acts as a boundary object in the making of a new market. The theoretical framework is finalized with substantiation, a research model that draws on sociological assumptions, in order to instrument our empirical analysis. Next, the method that explains our profound case access and partial understanding of market-making is presented. Before the calculative frames involved are discussed we present different materializations of the total operating economy model illustrated in the empirical section. Finally, the conclusions present the main contribution, where besides the research model of calculative frames that make possible insights to marketing processes, the better understanding of trials for vehicle markets creation and operation is discussed.

FUNDAMENTALS OF BUSINESS MODELS

The business model concept is thought-provoking and has been used for many reasons. Teece (2010) argues that business models are frequently mentioned but rarely analyzed, and, therefore, poorly understood. The discussion of business models is vivid in nonacademic articles and the number of these articles is more than 1000 in 2009 (from about 400 in 1999), also, the number of academic articles within the topic has increased significantly but is less than 20 per cent of the journalistic publications (Zott et al., 2011). The concept obviously has value for practitioners simultaneously as scholars have problems to categorize and conceptualize the phenomenon.

Business model literature might be seen as interdisciplinary in that different academic fields are engaged but act rather as academic silos of knowledge with definitions and conceptualizations that go in different directions (Zott et al., 2011). However, based on a frame analysis of business model public talk between 1975 and 2000, Ghaziani and Ventresca (2005) state that such disagreement implies a pluralism that is productive, since there is room for community specific interpretations within the general interest. As a management phenomenon it is debated to a large extent in terms of innovation and information-and-communication technologies, (see e.g. Björkdahl, 2007) and it has particularly been related to Internet opportunities for creating value. Also, a smaller stream of business model literature is found in strategy, organization and marketing literature, which increased significantly with Long Range Planning's special issue on business models in 2010. In this, definitions and approaches are theorized (Baden-Fuller and Morgan, 2010; Teece, 2010; Casadesus-Masanell and Ricart, 2010; Zott and Amit, 2010), together with how business models emerge (Demil and Lecocq, 2010; McGrath, 2010; Gambardella and McGahan, 2010; Wirtz et al., 2010), how new business models are built for emerging markets (Thompson and MacMillan, 2010; Yunus et al., 2010; Dahan et al., 2010; Peter J, 2010), and implementation issues (Chesbrough, 2010; Itami and Nishino, 2010; Doz and Kosonen, 2010; Sosna et al., 2010; Svejenova et al., 2010; Sabatier et al., 2010; Smith et al., 2010). The concepts that are used across the academic silos are value creation, revenue model and market innovation.

THE WORK OF BUSINESS MODELS

The business model takes on different roles for different firms and has different and overlapping purposes (Baden-Fuller and Morgan, 2010). Its usefulness lies in its multiple and mediating roles. Business models are not applied exclusively by individual actors, but in complex networks in which development of complementary products and services increase or decrease product/service value (Hawkins and Ballon, 2007). A specific business model is an object that speaks out to relevant others and is made in social relationships of production and consumption. The business model becomes an object of interaction in work as a marketing practice.

In a similar vein, Knorr Cetina and Bruegger (2000) define"the market" as an object of relations in financial markets. "The market" is an object that speaks out to traders, among others, and

demands connected continuous attention and action. This way of theorizing the business model draws on economic sociology, especially the part that is critically examined by Araujo (2007). The business model is more than a plan or a representation, it is an object that speaks out and is made in relation to others. By understanding its making, we better understand what enables the creation and operation of markets. It works differently in diverse markets because the market and the market-making are intertwined. Araujo (2007: 218) argues that "marketing as a practice is deeply rooted in specific market contexts, spatially distributed and dependent on complex forms of coordination amongst different actors and heterogeneous bodies of expertise". This means that market-making is not rolling-out a business model but a dynamic interactive process.

Araujo argued that we need to see market processes as the (partial) outcome of particular constellations of marketing practices and mobilization of heterogeneous expertise. Taking the business model as the unit of analysis (in line with Zott et al., 2011), it implies that some dynamics related to the market processes might be understood. The business plot of suppliers, partners, distribution channels and coalitions, value motivations (economic, environmental and social objectives) and the profit model (Zott et al., 2011; Shafera et al., 2005; Magretta, 2002; Itami and Nishino, 2010) are logical parts. This composition is a complex living entity (Casadesus-Masanell and Ricart, 2010). The business model in use is attached to a space in which it work and develops in such a manner that is meaningful to relevant others (see e.g. Mason and Spring, 2011).

INTERNATIONALIZATION: THE BOUNDARY OBJECT OF A BUSINESS MODEL

Replicating a business model in different markets might be difficult. When a business model is introduced in emerging markets, the interactive business model is co-created with the context (Sánchez and Ricart, 2010; but see also Zott and Amit, 2010; Mason and Leek, 2008). This means that its success does not depend as much on the business model's intrinsic qualities as on its attractiveness in the eyes of allies (users, intermediaries, etc.). Intrinsic qualities are often used to explain diffusion, while the "model of interessement" explains other's active participation (Akrich et al., 2002). Allies influence the model by interest and active participation, which localize the model. This is market-making in line with Araujo's (2007) argumentation that different market forms rely on different calculative agencies, modes of qualculation and assemblages of expertise. The business model allows practitioners to explore the market (Doganova and Eyquem-Renault, 2009). The result is that the business model is made and re-made between numerous social actors, because of adaptations, series of trial and error and countless negotiations (Akrich et al., 2002). It is performative in that it constructs both the new business model (adapted) and its network (Doganova and Eyquem-Renault, 2009).

In order to explore what a business model does in innovation processes, Doganova and Eyquem-Renault (2009) study a case of an entrepreneurial venture, by business model materiality and business model use. In a fascinating illustration of an academic spin-off's product, venture and involved partners, Doganova and Eyquem-Renault (2009) show how the business model is

adapted and transformed by links with other companies, which become partners and competitors in the value chain. The authors argue specific costs and revenues to be a consequence of a relationship with a partner. The business model materiality is, in Doganova and Eyquem-Renault's case, three different presentations directed to different actors. The core, the technology of the idea is homogeneous but the presentation is made for different calculative agents. The technology is an algorithm that is fed with data from equipped vehicles in order to compute *travel time*. The business model is adapted by different encounters with actors. Conceptually, the business model is seen as a boundary object that circulates in different spaces and is adapted in order to make sense to different parties. In some trials the customers were changed to be consumers which led to changed application of the technology and a need to ally with other partners. For professional drivers, partners, such as service operators (e.g. related to road planning services) and tracking operators, which sell services to fleet managers in transport companies, were needed. This framing of the technology failed because partners did not find it interesting. The next business model version (to consumers) failed partly because venture capitalists did not invest and partly because technology might have not managed the different demands of consumers. Thus, there was a redefinition of problems and opportunities related to the stakeholders which are constructed with the business model.

Doganova and Eyquem-Renault's (2009) socio-technical approach illustrates dynamics about the business modeling in the making. This is by explaining the continuous exploration and the role of different actors in this exploration (Akrich et al., 2002). With the assumption that a business model is a boundary object which means different possibilities to actors in different sites, different possibilities to frame it appear (Doganova and Eyquem-Renault, 2009). In order to empirically address the calculative character of markets, Doganova and Eyquem-Renault rely on Callon and Muniesa's (2005) scope of calculation, in which a good is made calculable through its endowment with objectified properties ("objectification") and its incorporation into the buyer's world ("singularization"). Doganova and Eyquem-Renault (2009) investigated the specificities of business model calculations by addressing two entities that are detached and associated in the business model – the new venture and its product that were incorporated in the worlds that they construct or transform: the customer's world and the value chain of the sector. They did it by investigating the boundary object (business model) in different spaces and its adaptation.

The answer to how empirically address singularization, i.e. what triggers change of calculative frames, can be extracted from the Amazon.com case: Beunza and Garud (2007) examine how frames made by financial analysts of Amazon.com produced a stock valuation gap of $400 versus $50. In the financial market, one valuation is deemed as appropriate. This then determines the value perceived despite framing controversies. By investigating the extreme pattern of Amazon's stock price, Beunza and Garud (2007) interpret analysts as market intermediaries and social determinants of value in the capital markets. The financial controversy over Amazon was peculiar in that both analysts drew from one formulae that involves similar categories, analogies and key metrics. In the calculative frames the choices of *category* (the frame-makers differed

whether the category was “internet company” or “book retailer”), of *analogy* (Dell vs. Barnes & Nobles) and of *key metric* (revenue for a customizing service provider vs. profit in a competitive and low-margin business) are in use, while assessing Amazon.com. What made the valuations so influential? And what triggered change of calculative frames? Actors decided to change frame, i.e. adopt or abandon a frame, on the basis of a combined effect of information and the social context (Beunza and Garud, 2007). There is not enough information due to fact that the trigger is a combination of timing, process and reasons that are set in the social context. In the Amazon.com case analysts and investors changed frame because of converging indications of the dot-com crash, vulnerabilities acknowledged in reigning frame and the alternative frame. Beunza and Garud (2007: 32) state that “*frames are abandoned on the basis of concrete information (lack of profits, low sales growth, etc.) interpreted on the basis of social context. Such context includes …[t]he initiatives of emerging frame-breakers, and the milestones created by the frame-makers themselves*”. Thus, value is set in a prevailing calculative frame, such as choice of category, analogy and key metric. Any influence on such valuation, by a competing calculative frame, relate to information and the social context.

RESEARCH MODEL

The extended service offer grew together with Swedish customers in long-term relationships. Over the years it has been conceptualized as business model based on total operating economy in order to denote benefits to buyers related to their usage of the vehicle throughout its lifecycle.

An assumption is that performative marketing practices construct markets and involves mobilization of varying bodies of expertise and calculative agencies (Araujo, 2007; Callon and Muniesa, 2005). These practices are poorly understood (Araujo, 2007). We have proposed the business model as a marketing practice. Furthermore, it is proposed that (1) the business model is in a framing process under experimentation within the organization and in relation to others. Further, (2) it is objectified in parallel framing processes as it is in use in different contexts with different purposes and different participants. (1) instruments the empirical analysis of the business model’s market making (in line with Doganova and Eyquem-Renault, 2009) and (2) instruments the empirical analysis of what triggers change of calculative frames, based on choice of category, analogy and key metric in its incorporation into the buyer’s world (“singularization”) (Beunza and Garud, 2007).

The Doganova-and-Eyquem-Renault approach is an application of Callon and Muniesa’s (2007) investigation of “how to address empirically the calculative character of markets” that we use in a similar manner in order to explore the marketing process related to total operating economy in the section “Narratives of total operating economy”. The Beunza-and-Garud approach is based on associations they found in calculative frames, i.e. internally consistent associations between categorizations, analogies and key metrics. These frames were robust over time, leading to sustained controversies among calculative agents over the value. We analyze evaluations in line with these associations of calculative frames after the empirical material.

METHOD

The authors of this paper are engaged in a collaborative project with a Swedish vehicle manufacturer in which the business model is the common interest. Discussions with the vehicle manufacturer started in August 2010, as they engaged in the question "how can a value-based business model succeed in an emerging market?" Obviously, the development in one of the emerging markets (in China) was troublesome and difficult to understand. The business model of total operating economy was well-known in the organization and over the years the knowledge of how it works has been developed from different places in which it has been developed (or not), for example Poland, Sweden and China. In next sections we will describe some of these situations that are relevant in forming the understanding of the business model. Also, the Chinese market situation that brings this question to the agenda is described. In December, 2010 the common project with ongoing project meetings in order to learn about the business model and its challenges was initiated. We have learned about the business model in various forms based on formal and informal meetings, and formal and informal documents. An example of formal meeting is a whole day kick-off meeting in February, 2012, where different functional bodies of the company participated and clarified their perspective on total operating economy. Informal meetings include telephone meetings, physical meetings and lunch conversations. Formal documents include power point presentations (among others, the vehicle manufacturer's press release material from marketing directors of the vehicle manufacturer and Head of franchise and factory sales), official web sites and brochures. Informal documents are minutes from informal meetings and reflective descriptions about total operating economy in Sweden, Poland and in China written by key personnel. The collaborative project participants from the vehicle manufacturer's side are a strategic planner at head office and a strategic developer in China. The strategic planner at head office acts as an intermediary and facilitator for the research exploration through connecting people with knowledge about the queries with academic group and arranging the interviews. Presently, 11 regular interviews have taken place. The data collection is a systematic exploration based on the methodology reflexive constructionism (in line with Alvesson and Kärreman, 2007).

In line with Doganova and Eyquem-Renault (2009) the approach of this paper is exploratory. For the purpose of this paper we have developed a research model based on theoretical understanding of input to calculative frames and assessment based on calculative frames, i.e. previous applications of how to understand market processes from a sociological perspective.

The empirical material is structured for conceptual understanding of total operating economy and its potential by business model materiality and use in line with the Doganova and Eyquem-Renault study (which is focused on an academic spin-off business model with other types of complexity and uncertainty involved). In that it is argued that business models are situated in relation to others and value is mediated in idiosyncratic frames. The evaluation related to calculative frames (Beunza and Garud, 2007) is fruitful for understanding problems and opportunities with marketing the business model in another location. An even better

understanding might be possible through interviews with different types of manufacturer's customers but for the purpose of this paper the secondary data of customers' evaluation (provided by CEOs of sales) is acceptable. We have got an understanding of framing controversies (several valid frames that are in opposition, such as of "this typical customer do like this") and understanding of confrontation, such as how calculative frames are abandoned and lose validity.

In the industrial network context there is as much emphasis on suppliers as on customers. For example, Mason and Spring (2011) define business models as frames for action in which the technology, offering and industrial network interact in different ways. In this paper the emphasis is on the marketing process of the vehicle manufacturer. The supplier side of the vehicle manufacturer makes a difference in the technology offered and which services to include in the offering but there is no specific relationship between the supply side and customer side of the vehicle manufacturer. Therefore, the supply side is not a part of the empirical analysis of this paper.

NARRATIVES OF TOTAL OPERATING ECONOMY

The total operating economy concept is a construct, an object. First, the insights about the core and the technology of the idea will be illustrated. Then, the appearances in other situations in which it is materialized (this in line with Doganova and Eyquem-Renault's, 2009 illustrations of business model materiality) will be discussed. Thereafter, the part that explain the use (in line with Doganova and Eyquem-Renault, 2009) will follow. Second, after the illustration of technology follows an illustration of the technology exploration, i.e. Livelab that works in relation to the extended services offered in order to refine the basics of total operating economy. Third, a frame that is experienced in China is discussed. Fourth, a frame based on successful markets is presented. Finally, a frame about prospects is discussed.

The core technology

A formal version of the business model is nicely captured by a heading in a brochure:

> *You handle the driving.*
> *Let us handle the rest.*
> (Brochure: The vehicle manufacturer omnibus range.)

The initial story is that the coach and vehicle owners earn money driving on the road. In order to maximize customers' money-making potential, the vehicle manufacturer proposes that they take care of everything else related to the operating cycle, such as financing, maintenance and repairs. They offer uptime, predictable costs and manageable risks related to ownership as well as fleet management for monitoring and driver training, in order to facilitate everyday operations as a part of the plot "total operational focus". A wide range of maintenance centers together with assistance worldwide seem to be an important part of "*handling the rest*".

Different aspects of the business model are put forward in its encounters with others. As a service-provider the vehicle manufacturer has the possibility to customize offers. The basic business model is supplemented with an add-on, namely "ecolution". Ecolution is described as an active response to environmental challenges, especially CO_2 emissions. It encompasses optimized vehicle specifications but also the core of total operating economy, such as driver training, fleet management and maintenance. Depending on target group the representation of total operating economy is adapted.

Experiment -Livelab version

One of the vehicle manufacturer's employees was after 28 years promoted to be a customer-equivalent – a CEO for a transport firm owned by the vehicle manufacturer. The practical task was to arrange continuous distribution of components from the vehicle manufacturer to Zwolle (the Netherlands) in order to learn about customers' daily work. Among others, different drivers in terms of age, experience, sex, and gender were employed, in the real-life simulation of how to manage transport operations. By using the vehicle manufacturer and the vehicle manufacturer's

services, it was possible to present key figures and learning for internal development and for selling the concept to customers. *"The CEO continuously asks; why cannot every time be as efficient as this time", thus, calling for more robust set up."* Under continuous improvement the delimited transport operations have been optimizing key figures related to total operating economy and ecolution. The Livelab acts as a showcase for the technology of total operating economy. The vehicle performance is much higher in this milieu with continuous improvements and optimal technical specifications. The lab is at least to some extent avoiding the complexity of business networks that other transporters face in different ways.

Challenges in China

China is the largest truck market in the world. With over one million produced and sold trucks, China alone stood for 50% of the global truck production and sales, in 2011. There are many explanations for these numbers, such as:

- A need to build a truck population since the Chinese heavy duty truck industry is so young.
- China is geographically vast and needs more long distance transport than most other countries.
- Single truck owners are seen by the government as a way to alleviate the unemployment problem, especially in rural areas.
- Vehicles have low utilization rates.
- Vehicles in use have short lifespan and need to be replaced more often than in the west.
- Vehicles operate with low average speeds due to un-specified vehicles and poor infrastructure

The most important rationale in the buying decision for a Chinese truck operator is the investment cost of the vehicle, which favors low end producers. A low utilization rate means that a truck operator will find it difficult to offset investment costs. There is a belief that the:

> *key to success is to provide cheap affordable trucks to transport companies that are generating very thin gross margins under fierce competition in a market of too many small and disparate truck operators.*

Thus, conditions would appear not to favor the premium brands offered by the Swedish vehicle industry. The experience of sales in China is that the parameter that counts in investment decisions is purchase costs. Due to low utilization cost of vehicle, investment cost as part of fixed costs becomes a big proportion of the total operating cost. Chinese truck buyers purchase cheap low quality vehicles that are not specified for their particular uses, which are used with low utilization rates by uneducated staff. Drivers of operating costs as well as financing sources are not aligned with other established markets and poorly understood by the vehicle manufacturer.

In spite of adopting many elements of a capitalist economic system, the National People's Congress' 5-year plan continues to exert significant influence over economic activity in China.

The 12th plan promotes economic development with focus on efficiency and sustainable return on investment. The ambition of National People's Congress' 12th five-year plan is "*to increasingly achieve economic development through sustainable returns on investment*". The plan is important in forming societal and industrial development. The plan includes two chapters directed to transportation and the logistics service sector. The first spells out the ambition to develop a comprehensive transportation system and the second to speed up the development of productive service industry. The general principle is to "*Keep a resource-conserving, environment-friendly society by accelerating transformation of the mode of economic development*" in a way that is in close resemblance to practice described by total operating economy. The Chinese truck market might change because of changes in economy and politics, still investment decisions might be based on GDP growth or state control.

Total operating economy at work

In Sweden, extended services related to vehicles are common. It is a common practice and makes sense to many actors in the industry. The customers' way of working and services offered by the vehicle manufacturer has co-evolved, so the sales process involves a product and added services for the transportation task. Environmental requirements are affecting the process with demands for decreased fuel consumption and improved efficiency as well as driver training. The added services are an important part in the effectiveness and the vehicle manufacturer's strategy is working proactively towards customer orders and demands. Over the years the portfolio of services was developed and offered to the customer in various types of contracts. The concept 'one stop purchasing' offers the customer nearly complete business solution in this sense forcing the vehicle manufacturer to deepen the knowledge of the customer's business.

In Poland, total operating economy was seen as a strange phenomenon and the market entry in 1995 was difficult. Since then the total market development in Poland for trucks above 16 tonnes has increased steadily. Global brands dominate the market and the vehicle manufacturer's sales have followed the market development. Sales of used vehicles have dominated over sales of new vehicles. An extensive sales and services network has been developed and demand for services has increased together with understanding and involvement in the customer's business and operations. The business relationships with the customers are highly personal. Services aim to increase efficiency and effectiveness of the customer.

Large fleet operators in Sweden make sales decisions predominantly on total cost of operation. The importance of the price per km, maintenance cost and fuel consumption are more important than the vehicle's price. The vehicle manufacturer can guarantee the uptime of the fleet, open buy backs, flexibility to hand back vehicles when there are changes in demand, guaranties of life span of components, and extensive risk-reducing constructional terms and conditions. In this case extended services are important. However, the vehicle manufacturer's image cannot be underestimated, especially when it comes to small operators that identify themselves with the product image.

The value of the offer might be difficult to estimate. For example, sales of buses have developed from a traditional buyer-supplier relationship to strategic partnerships in which the customer up-time and life-cycle cost are on the agenda. Apparently, the supplier takes over some of the buyer's risks related to operating vehicles, because the supplier is better equipped to manage vehicle related problems. Risks are estimations of future obligations and costs. Some risks related to owning of the vehicle become expensive if given to the supplier, such as market risks. Therefore risk-reducing terms and conditions need to be carefully specified. This was expressed at a presentation about fleet sales:

> *"Buying the truck is kinder garden, total cost of operations is high school, and partnership is university degree"*.

The knowledge that needs to be integrated in the total offer relates to a combination of product, price, specification demands, service solution, up-time, and financing operational leasing. Still, it is not enough. In different countries with different economic development stages and political ambitions, total operating economy may require different solutions due to specific factors should be investigated.

Prospecting total operating economy

Premium vehicles and extended service offers make little sense in some parts of Europe and Asia. Basically, the vehicle manufacturer's branded vehicles has value but the offer of total operating economy is perceived as dubious. For example, small customers of the vehicle manufacturer that buy the product experience problems because they are used to do service themselves and if they do they may void the warranty. Similarly, customers who purchase large numbers of vehicles are prone to have maintenance and repairs workshops themselves, which brings similar problems with the warranty. In this situation, the vehicle manufacturer tries to bring understanding of the added services value through solutions in a sales process that evolves over the years.

Discussion

In calculative frames it is a choice of category, of analogy and of key metric (Beunza and Garud, 2007). Figure 1 illustrates the two competing materializations of total operating economy.

One calculative frame…

The technology of total operating economy is a premium vehicle. Doganova and Eyquem-Renault (2009) illustrate a business model trial in which the redefinition of problems and opportunities is related to the constructed stakeholders. The business model becomes a boundary object that is applied in order to make sense, first, in one customer context and then in another. In a similar way, it is meaningful to think of the total operating economy business model that involves the vehicle as a boundary object that circulates in different spaces. In the economic and political space in which it originated, services have been added. The business model is categorized as a solution, customized to usage with contextual demands. The analogy to the category is a professional service that by specialization increase cost efficiency. The key metric is revenue in a complex relationship involving customizing service provider.

…meeting another

As the business model circulates to e.g. China another frame is added. Now, the category is a vehicle manufacturer that produces high quality but expensive products. The analogy is premium products with an ambiguous meaning. Its high investment price might correlate to high up-time, but there are no expectations or needs in this market regarding superior performance. Cost efficiency relates to the system in which the business model is in use. Efficiency is calculated in a system. The acceptance of lower quality might be caused by the low utilization rates of vehicles and the competitive situation of "too many truck operators". In this situation, a short-term view of operations is logical. Sales in a competitive and low-margin business result in key metric of low investment costs.

Different countries might have different frame-makers that compete. The political five-year plan is an emerging frame-breaker in that the social context is in change. But concrete information is that the organization of transports and strategies of transporters confront that change.

Competing calculative frame

Beunza and Garud (2007) suggest a combination of timing, process and reasons to trigger actors to adopt or abandon a frame. The process that the five-year plan foresees is implementation of resource conservation and environmental protection, energy saving and basic state policies, because the country will actively promote low carbon technologies for a sustainable development. Of the two chapters that engage in transportation logistics one chapter prescribes development of the transportation system in a way that is close to what the total operating economy model offers. The other chapter prescribes development of the service industry for increased professionalism and logistics efficiency. It might be seen as a parallel development to that in, for example, Sweden. However, promoting up-to-date logistics management and logistics

concepts is contextual and involves support to the development of logistics parks, optimization of the development of logistics industries in different regions and enhanced logistics – what reasons will this development give to abandon or adapt the total operating economy business model?

The business model works well in spaces where 'one stop purchasing' is possible because of the vehicle manufacturer's deep knowledge of the customer's business. In these the price per km, maintenance cost and fuel reduction are key metrics rather than the vehicle's price. The actors have a common view of what political and economic challenges are there to make efficient, safe and reliant transport systems. This is not the case in China. The solution that total operating economy offers is not constructed for cost efficiency in this political and economic context, where risks are different. For example, failure to sell a transport service means unemployment. At present, there would appear to be limited opportunities to act as a partner and customizing service provider that are operating a function within the transport company. An emerging market is a space, marked by standardization in which total operating economy is framed as a Western phenomenon in terms of division of work and specialization and also as a high end vehicle brand.

Value is calculated in frameworks

The controversy over value of total operating economy is interesting in that both calculative frames are sensible seen in terms of the formulae of category, analogy and key metric. In the competing calculative frames we observe the category (specialized solution provider vs. vehicle manufacturer), analogy (professional service vs. extravagant premium product), and key metric (revenue by ownership vs. investment costs).

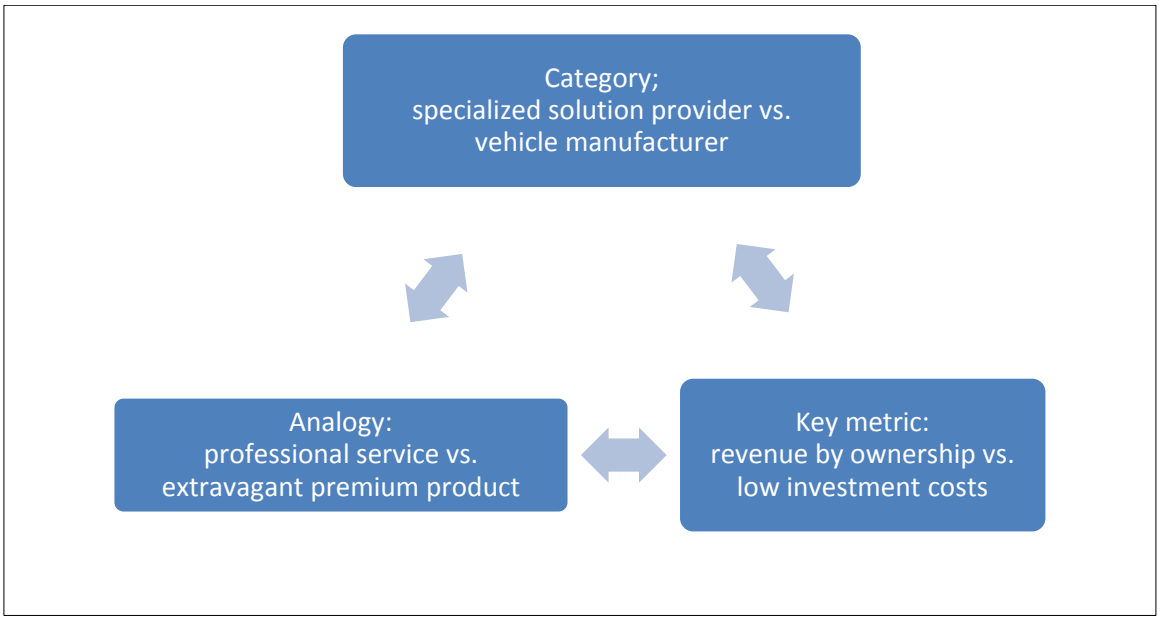

Figure 1. Calculative frames of total operating economy. Adapted from Beunza and Gared (2007).

The competing frames are internally consistent but difficult to combine. In the valuation of Amazon.com stocks, Beunza and Gared (2007) found a trigger point when the competing

valuation “won the battle”. This is natural in the context of financial analysis in which the calculation ends up in quantification. In this case of business model replication in another space, calculative frames might win a battle, but might as well complement or overlap each other. The calculation ends in a valuation that is not necessarily quantified. For example, one logic of inquiry would be to suppose that the buyer and seller will develop a business model together in a similar manner as total operating economy developed in Sweden. Another line of inquiry is to transform total operating economy in a way that make sense to the Chinese transport industry, for example, be an ally with logistics parks (category), professional service packaged in relation to the parks but with a short-term view and transactional approach in relation to customers (analogy) because the key metric is low investment and a short-term perspective.

CONCLUSION

In this paper we create a conceptual understanding of relational aspects of business models by relating the empirically driven concept of business models to the concept of market-making that draws on marketing processes refined by calculative frames (Araujo 2007). This implies that the business model is seen as an object with constructed frames that work in relations to e.g. customers, economic rationales and political reasons. The business model is diverse in different relations, i.e. a device allowing practitioners to explore the market (Doganova and Eyquem-Renault, 2009). It is valued in calculative frames made up by substantiation of influential frame-makers choice of category, analogy and key metric (Beunza and Garud, 2007), which is substantiated in a research model that facilitated our empirical analysis and might be useful for others exploration of market-making. Frame-makers offer several valid frames that might be in opposition and also in confrontation with one possible outcome that an existing calculative frame is abandoned and lose validity.

Thus, the total operating economy model has built-in affordances that imply complementarity of the business model and the economic and political situation. A Chinese business model development differs in relation to the historical development of total operating economy in Sweden and Poland, taking in that the business model was co-created by different actors. Any potential trigger point in frame-makers’ evaluation of total operating economy in emerging markets is in relation to its intertwinement with the space that Beunza and Garud (2007) denote as information and the social context.

We assume business models to be socially driven and then it is natural that they are influenced in the same way. More specific, the business model is a marketing practice that works in one way in the operation of the Swedish market and in another way in the creation of a new market. In a new market calculative frames might change the model or the model might trigger a change in the calculative frames and indirect also the way the model works in the operation of the Swedish market. Thus, a contribution to knowledge of the creation and operation of markets (Araujo, 2007), is in the role of business models as market practice.

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