

Sustainable public transport network development in Developing Countries

Samuel Petros Sebhatu
E-mail: samuel.sebhatu@kau.se,
Tel: (+46) 54 700 2163
Fax: (+46) 54 83 65 52

Bo Enquist
E-mail: bo.enquist@kau.se,
Tel: (+46) 54 700 2163
Fax: (+46) 54 83 65 52

Mikael Johnson
E-mail: Mikael.johnson@kau.se,
Tel: (+46) 54 700 1177
Fax: (+46) 54 83 65 52

SAMOT (Service And Market Oriented Transport Research)
And
CTF - Service Research Centre
Karlstad University
SE-651 88 Karlstad, Sweden

Abstract

Type of paper: Research paper

Purpose: The aim of this paper is to assess and analyse the new service development and the integration of sustainable public transport in the developing economies based on the case of Jakarta, Indonesia through “Sustainable service research perspective”.

Design/methodology/approach: The paper will be of an explorative nature. The paper presents three concepts—(i) sustainable development (ii), value network and (iii) service research based on S-D logic. The paper then illustrates these concepts in a case study of Jakarta, Indonesia.

Findings: The study will reveal that sustainable public transport and service development based on BRT and future plans for Mass Rapid Transit (BRT) can be used as an active tool for promoting comprehensive public transport service changes leading to sustainable development. The study is also assess the opportunities for value network.

Research limitations/implications: The single case-study design of the present research does not enable empirical generalisations to be made. Future research in this area should focus on generalising the present findings by studying the development and integration of values-based thinking in other empirical settings.

Practical implications: The selection of Jakarta, Indonesia as a case study for this paper, assess the service development, environmental and social challenges of public transport in developing countries. Sustainable public transport can be an active tool for sustainable development and value creation.

Originality/value: The paper makes an original contribution to the study of holistic organisational change by explicitly linking the adoption of Mass Transit for sustainable public transport based on social and environmental thinking and value creation and network.

Keyword(s): Sustainable Public Transport; Service Research; Developing Countries; Sustainable Development; Value Network; and Value Creation.

Introduction

Public transport and its networks in developing countries is relating to solving the challenges of increasing mobility, improving quality of life, satisfying customer needs (to the possible degree), and solving road congestion. This study assesses how public transport tackling the overlooked problems of sustainability, especially on the environmental and social aspects and the development of value network. There is fast changing economic reality in the globalized world in the midst of increasing customer demands for value creation (Edvardsson and Enquist, 2009) and the emergence of greening, especially “climate change” and societal development. This change creates not only pressure but also the necessity for a new force for competitive advantage at both micro and macro levels based on social and ecological sustainability, which constantly force organizations to be responsible and innovative and to develop both existing and new values (ibid.; Normann, 2001; Laszlo 2008; Vogel 2005). This we can live up to and shared it as a value (Edvardsson and Enquist, 2009). This sustainable way of thinking has also to be part of creating a value network as a strategy of engaging with local stakeholders (Hart, 2007) that provides the input to deal with the transformation process of integrating sustainability into new infrastructural changes. According to Lusch *et al.* (2010), a ‘value creation network’ is built upon loosely coupled social and economic actors who interact through institutions and technology, and are held together by “... the trinity of competences, relationships and information” (ibid p. 21).

Gummesson (2008) talks about “*the value network society*”; the conceptual world in which he searches for a new business logic of value creation networks as Normann (2001) making its request on his book “*Reframing Business*”. Stabell and Fjeldstad (1998) elaborate value configurations according to different value creation logics, and argue that *Value network*, create value by facilitating a network relationship between the organizations and their customers, using a mediating technology. This paper will also assess Service-Dominant logic (S-D logic) and a customer perspective for value co-creation (Vargo and Lusch, 2004; 2008). Based on these discussions, ‘value network’ will be used as the value configuration for the context of public transport.

The aim of this paper is to asses and analyzes the challenges and opportunities of the integration of sustainable development in the developing economies and value network, based on the case of Jakarta, Indonesia, Bus Rapid Transit (BRT) through “Sustainable service research perspective”. The paper in an explorative nature presents theoretical frameworks of, contextualized on public transport, - (i) sustainable development (ii), value network and (iii) service research based on S-D logic. The paper then illustrates these concepts in a case of Jakarta. A comparative study of value network based

on contextual illustration of the best practices of value networks in public transport of Sweden (Enquist and Johnson, 2010) and Switzerland (Gebauer, Johnson and Enquist, 2010) will be used to discussing the case.

Conceptual and theoretical analysis

1. Sustainability and Sustainable public transport

The emergence of greening, especially “climate change” is one of the lead way developments in transport sector, which provides the input to deal with the transformation process of integrating sustainability into new infrastructural changes. The transport sector is responsible for 31% of energy consumption and 21% of EU greenhouse gas emissions (GHG) and is the sector where GHG emissions have increased constantly during the last years – contrary to other sectors (UITP, 2006). If, we contrast the Percentage of total passenger transport CO₂ emissions from public transport; it was 11% in Western Europe and 19% in Low income Asian countries in 1995 with fast increase (Kenworthy, 2003). However, Public transport and its networks in developing countries are focusing only on solving the mobility or infrastructural problems. This approach does not take into account the cautions and backing to respond for early signs of environmental changes, important social shifts and stakeholder interests. Transport infrastructure and congestion issues are high on the agenda and social and ecological sustainability is at stake. The developing countries that are most rapidly urbanizing are, with some exceptions, adopting unsustainable motor-vehicle dominated transportation systems and land use patterns (Abmann and Sieber, 2005). The transport sector continues to be dependent on fossil fuel and continues its growth trends, consumes about one-fifth of primary energy and is responsible for almost 60% of oil consumption in with motor vehicles alone contribute 17% of current global CO₂ emissions (<http://www.iea.org/>). Thus, it is of vital importance to assess how transportation and land development can be made more sustainable, especially in rapidly growing cities.

In assessing definitions for sustainable public transport, there is no universally accepted definition of sustainability, sustainable development or sustainable transport (Beatley, 1995). “Sustainable Development” (SD) in management is related to a socio-political concept, which is part of stakeholder thinking. According to the World Commission on Environment and Development (1987) sustainable development is one that meets the needs of the present without compromising the ability of future generations to meet their own needs. In this sense, the word sustainability implies a presumption of no economic development (Ehrenfeld, 2005). MOST (1999), for instance, describes as the goal of sustainable transportation is to ensure that environment; social and economic considerations are factored into decisions affecting transportation activity. However, in the case of public organizations

it is imperative to also assess Agenda 21 for “Integrating Environment and Development in Decision-Making”. Millennium development Goals (MDG), in this case has fundamental contribution towards sustainable public transport in developing countries. MDG do not specifically make reference to transportation issues. Although, two of the eight MDGs, *Goal 7: Ensure environmental sustainability and Goal 8: Develop a Global Partnership for Development*, could have an impact in securing sustainability for transportation projects and programs. They have an enormous impact on both the poverty alleviation and environmental sustainability goals. Hook (2006) argues that the lack of inclusion of concrete targets for transport in the Millennium Development Goals carries with it two risks: 1) that critical transport sector interventions will get left off the development agenda entirely, and 2) that the lack of specific targets will give wide latitude to donor agencies and governments to intervene in the transportation sector without any clear guidance from the MDGs, leading to misguided interventions that do little to reduce poverty, and may even make it worse. Sustainability is not about threat analysis; sustainability is about systems analysis. Specifically, it is about how environmental, economic, and social systems interact to their mutual advantage or disadvantage at various space-based scales of operation (Transportation Research Board, 1997). In general, Sustainable development *provides the framework to integrate the environmental, social and economic dimensions of human activity at every level from local to global* (Roome, 1998, p. 3).

The essence of this form of development is a stable relationship between different activities and the natural world, which does not diminish the prospects for future generations to enjoy a quality of life at least as good as this generation (Mintzer, 1992). It is also a way to a new view of organizations for what they are, what they do and how they relate to social environmental and political concerns in a manner previously unthinkable (Demirag et al., 2005, p. 356). Public sector organizations, as well, have to work for the adoption of environmental initiatives for sustainable business: by learning to do the right things. As Sustainable public transport has a harmonizing role to the economic, social, and environmental needs of the communities they serve, based on sustainable systems and thinking.

2. Value co-creation

Value creation and co-creation is a central principle of S-D logic: “A service-centred dominant logic implies that value is defined by and co-created with the customer rather than embedded in output” (Vargo and Lusch 2004, p. 6). Service is also defined as the application of operant resources of knowledge and skill for doing something as part of an exchange process. It is the co-creation of value through resource integration (ibid; Vargo and Lusch, 2008). Value is co-created by both a firm and a customer: (at least) two actors. Value-in-use is realized for the customer at the time a service becomes real in action (Vargo and Lusch, 2004; Edvardsson et al., 2005). The construct of S-D logic remains

resource-centred, which is grounded in Resource-Advantage theory (Hunt 2000; Vargo and Lusch 2004; Lusch and Vargo, 2006).

S-D logic is a constructive frame for theory building (as opposed to a normative framework), based on ten “foundational premises” (FPs) (originally eight in the prior publication), as argued by various authors (Vargo and Lusch, 2004; Vargo and Lusch, 2008b). However, S-D logic has no broad and explicit perspective of societal value creation except one FP (8) indicating that social and economic actors are resource integrators, which is a positive (non-normative) assertion by Vargo and Lusch (2008a). As a value creation process that is essentially relational, S-D logic mostly concerns economics (seven of the FPs, except FPS 7 and 8). Abela and Murphy (2008) concluded that the FPs do not have an explicit ethical content. This is argued from a variety of viewpoints, such as relationship marketing and quality (Gummesson, 2006; 2007; 2008), social responsibility (Enquist et al., 2008), values-based thinking (Edvardsson et al., 2006; Edvardsson and Enquist, 2009) and marketing ethics (Abela and Murphy, 2008). The integration of sustainability and stakeholder thinking for social responsibility and decision-making allows S-D logic to have a broader view and reflect its implicit assumptions regarding business ethics. It also represents a shift from static to dynamic resources with a stakeholder rather than a customer-centric perspective (such as those of employees, value-creation partners, and customers) (Edvardsson and Enquist, 2009).

This shift in thinking towards sustainability by integrating SD with S-D logic thinking for shared values for quality service is the basis of a sustainable service. This can be analysed through the case.

3. Value network

Stabell and Fjeldstad (1998) elaborates on value configurations according to different value creation logics and argue that *value chain* is about transformation of input activities of long-linked technology into products. *Value network*, on the other hand, creates value by facilitating a network relationship between their customers using a mediating technology (ibid. p. 414, 415). Besides considering the classic dyadic links known to every spectator, in network activities there is also a need to consider the less visible relationships among all of involved entities (Enterprises, Individuals, Clients, Stakeholders), which really contributes to the competitiveness of the whole system (Polese, 2009; Polese and Mele, 2009). Based on S-D logic and with customer perspective arguments, we therefore prefer “value network” as the value configuration for the context of public transport. It can be argued that another approach to this would be to follow the value chain path.

Several researchers are discussing value networking in several ways. Gummesson (2008) in his book talks about “*the value network society*”; - the value society where citizens looking for value for their

own welfare and benefits offered by different operators and the public (co-creator of value) and the network society where Gummesson search for new business logic of value creation networks. Normann's (2001) notion of a "value-creating system" (in the quotation presented above) has been addressed in various ways by several other authors who have discussed value creation in networks (Grönroos, 2006; Gummesson, 2006; Lusch *et al.*, 2008; 2010; Håkansson *et al.* 2009). According to Lusch *et al.*, (2010), a 'value-creation network' is built upon loosely coupled social and economic actors who interact through institutions and technology and are held together by "... the trinity of competences, relationships and information". Håkansson *et al.* (2009) introduce the metaphor of rainforest for a value network in opposite to the jungle metaphor: The rainforest metaphor steers interest to the direct interactions between customers, suppliers and other related companies and governmental and non-governmental organizations, and to the interplay between other indirectly related parties.

Other authors have offered similar views on the nature of a value-creation network, and what they have in common is a rejection of Porter's (1980) value-chain theory in favor of a more interactive view of network parties collaborating in the central process of creating value for the customer. In this regard, it is of interest that Vargo (2008) has recently broadened the scope of value creation from *value-in-use* to the wider concept of *value-in-context*.

Empirical study

Research design and methodology

The construct of this case study is "designed with purpose" (Harrison and Freeman, 1999) to analyze and conduct an in-depth study of the role of sustainable public transport and its effects on sustainability and service development for a limited period of time in Jakarta Bus Rapid Transit System in Indonesia. The case study method was chosen in order to assess and reveal the strength and extremity (Yin, 1994) of the organizational change for creating sustainability and value and its role on value creation. The study focuses on narrating (Pentland, 1999) the case of Indonesia rapid bus transit (BRT) system and draws some findings. We have been studying the different public transport cases for several years, including the case of Indonesian Public transport. This has involved: (i) the extensive perusal of documents; the collection of narratives about BRT and Jakarta from the media, the Internet, and books; and (iii) supervision of several masters' theses in the case of Indonesia and on related subjects. This extensive research involvement has provided us with a solid basis for selecting representative empirical data for this article.

The selection of Jakarta, Indonesia as a case study for this paper, assess the environmental and social challenges of public transport in developing countries. Jakarta will be the fifth-largest city in the world by 2015. The city is facing growing challenges in the traffic congestion and harmful pollution that result from the increasing use of cars and motorcycles.

Jakarta public transport

Jakarta is capital city of Indonesia and one of the fast growing cities in East Asia. The city has that has about nine million inhabitants and total about twenty one million people, if we combine population from the surrounding municipalities. The fast growing economy and tourism makes Jakarta a destination and a business capital. However, this has a counter effect in the increasing number of cars in the street and congestion with the need for increasing mobility as seen in any cities and megacities of developing countries. In 2007, the number of vehicles that operated in the Jakarta roads was counted totaling 7,773,957 that consists of motorcycle vehicle 5,136,619 units, cars 1,816,702, buses 316,896, and other vehicles 503,740; motor vehicles mean growth reached around 10% per year in average, which is for car 12.51% and motorbike 7.75%. Public transport only shared 2% from all vehicles in Jakarta. It is also influencing by the satellite cities of Jakarta, namely Bogor, Depok, Tangerang and Bekasi. These cities are contributing to the congestion, as around 700,000 persons/ day traveling to Jakarta. In general, it estimated, there are more than 17 million trips every day in Jakarta. Besides the fast growing number of cars the road construction in Jakarta grows at around 0.01 percent a year. Private car users complain due to severe congestion. Public transport users in Jakarta also do not have a lot of choices and convenience.

The congestion and increasing demand have also affecting environment and health negatively - air pollution, crowd, accident, crime., etc. Based on these factors Jakarta Provincial Government has formulated the Transportation System and developed directives and strategies to reduce traffic congestion in Jakarta. Bus Rapid Transit (BRT) is started since 2004, as one strategy of Macro Transportation Pattern (MTP) to improve services and the provision of transportation services that are safe, integrated, orderly, smooth, comfortable, economical, efficient, effective and affordable to the citizens.

Jakarta Transportation Pattern is covered in the Region Regulation (PERDA) No.12/2003 and then Governor Regulation (PERGUB) No.103/2007. The aim is to:

- Optimize the use of public transport as the backbone of the system and implement demand management policies (Transport Demand Management / TDM) and supporting the provision of road network
- Improve accessibility and mobility, and rearranging the integrated transportation modes

- Socialize mass public transport system
- Improve the road Network
- Promote the use of public transport
- Reduce use of private vehicles

Jakarta public transport is administered under Dinas *Perhubungan (Dishub)* or Jakarta Transportation Authority. Dishub has the task to organize, development, management, control and coordination of activities in the fields of land, sea and air transportation in Jakarta. Dishub vision is to “*make a city which has integrated transport system and equal with other big cities in developed countries*”.

The Development objective of *Dishub* is to create sustainable mass public transports system in Jakarta. This will also allow, as a primary target, the switch of some private transport users to public transport; thereby it can reduce the operation of private vehicles. This policy is also supported by private vehicle operation reduction policies such as policy of "three in one", road pricing, and others. Meanwhile based on PERGUB No.103/2007 the planning development transport system is focusing on developing the public transport system between the years 2004-2020. This is based on development of mass transport system; bus transport system; road network system; rail Transport systems – river way *by utilizing canal / river in to 2020; and* development of supporting policy. This includes the regulation of using new environmental friendly busses on the route.

The main part of this study is focused on the *Development of mass public transport system*. Mass rapid transit system is a network of priority bus or Bus way, monorail and the Mass Rapid Transit with the duration target 2004 to 2020.

a. Bus Priority Network (Bus way): Based on the planning of Macro Transportation Patterns (PTM) in Jakarta, one of strategies is optimizing the mass public transport buses which using Bus Priority or Bus Rapid Transit (BRT). BRT already established since 2004, based on PERGUB No.103/2007, development of corridor 1 to 7 had been planned and be constructed in 2004 to 2007. , the construction of the corridor 8 to 15 has planned for 2007 to 2010. However, because there were some problems, development corridors 8-15 is delayed from the original scheduled. The bus way of the BRT currently has 8 corridors (or lines) in operation with a total length of 123.35 km.

BLU *TransJakarta* is also established by the government of Jakarta to provide bus rapid transit system on January 15, 2004. TransJakarta’s BRT was designed to provide the citizens of Jakarta fast public transport system to help reduce rush hour traffic. The Indonesian

Government provided TransJakarta buses with their own private lanes and TransJakarta's ticket prices are subsidized by the state government.

- b. Light Rapid Transit (LRT):** Light Rapid Transit is designed to be developed in as Monorail, which is currently going under construction in Jakarta. It will consist around 61- 85 kms. The construction of pylons for the elevated track started in 2004, financial problems and legal disputes soon stalled the project, and in March 2008 developers PT Jakarta Monorail officially abandoned the project.
- c. Mass Rapid Transit (MRT):** Jakarta MRT network of rail-based according to plans will be established in approximately 100 kms. on the South – North route (Lebak Bulus to Kampung Bandan) along approximately 22 km and route of East - West along approximately 80 km. The first Corridor has targeted to start operation in late 2016. Jakarta MRT project was signed in Jakarta March 25, 2009 with the first stage 4 underground stations and 8 station overpasses. MRT project fund is coming from JICA (Japan International Corporation Agency) and financed with loans. It is guarantees by central government. In other words, the MRT project is a national project organized by the Provincial Government of Jakarta. The support of central government in funding is agreed as the on-granting to the Jakarta Government. Although loan payments might be shared by the Government and the Provincial Government of DKI Jakarta, in the deal emphasized that to ensure sustainability of the project.

This rail-based MRT Jakarta is expected to overcome Jakarta congestion (bottlenecks).

Integration of all the three rapid transit systems is happened with the construction of roads to the station and other facilities including stations, shelters, sideways and parks.

In *analyzing the case of TransJakarta BRT*- based on performance during operation, TransJakarta increase in passenger numbers and revenue earned. This can be seen in terms of increase in No. of passengers' and revenue below:

Year	2004	2008
No. of Passengers:	15.942.423	74.619.995
Revenue:	39.063.108.475	248.339.552.000 rupiah

TransJakarta is also introducing *JakCard TransJakarta* an electronic payment card system since 11 April 2010 and Internet based *Halte cam* of the different corridors and Bus ways. JakCard is now using in four corridors and 32 bus ways, which creating convenience and security. The card is issued

by Bank and can be used for as a shopping card at certain merchants (Indomaret). The main purpose Halte cam is to provide more complete information of overcrowding, so that customers can know the actual situation of each bus stop. The Halte cam service can be used by passengers who want to see the current condition in the shelter by using internet through www.transjakarta.co.id. This service is now available on six corridors.

Even though, Dishub has been implemented Bus Rapid Transit as the new system to provide better services and sustainable solutions still there are some major *challenges* including congestion, safety and quality of services. This is beside the environmental cost caused by traffic jam, which traffic delays alone cost Jakarta \$3.5 billion a year in lost productivity and extra fuel costs. The number of vehicles on the road in Jakarta doubled in the preceding 10 years while roads only grew 10%, according Yayasan Pelangi, an environmental NGO. If nothing is done to improve things, the study predicts, traffic will reach to a complete halt by 2014. World Bank also places Jakarta as one of the cities with high levels solute particle after Beijing, New Delhi and Mexico City. The biggest contributor of pollution is transport reach 70%.

The strategy of Dishub, to the least, is to establish sustainable and integrated Mass public transport in the long term, and improving service quality through Mass Rapid Transit (MRT), Bus Rapid Transit (BRT) Light Rapid Transit (LRT) and other alternative transit methods.

Discussion and conclusion

We use insights from the study of other public transport agencies in Sweden (Enquist and Johnson, 2010) and Switzerland (Gebauer, et. al., 2010) together with a conceptual analysis to create a framework of sustainable public transport in developing countries. Gebauer et. al, (2010) indicate a framework for *Designing the public transit service* to extend value creation from *value-in-use* to the wider concept of *value-in-context*. This is based on five activities in value co-creation, which will be used to discussing the above case. As the case is mainly of developing economies an additional factor of sustainability, based on MDG will be also used.

Five activities in value co-creation:

1. ***Customer engagement***: the engagement of customers for Dishub should be based on value co-creating with the operators. This can be done through open and fair contract and competitive tendering, and indispensable relationship built on commitment and trust for providing better service. As part of long term strategy Dishub is planning to engage customers by using public transport system. This can be started by providing fast and affordable public

transport based on BRT. The objective also includes the reduction of private cars to reduce traffic jam, congestion, pollution and accident, which are major threats to Jakarta.

2. **Self-service:** Public transit services could also offer a variety of self-service opportunities. The introduction of JakCard TransJakarta an electronic payment card is one of the efforts made to increase self service. In addition the operator TransJakarta launched Halte cam service for users of TransJakarta. Self-services do not stop after buying and paying tickets, but appear also by using public transit service. Customers, for example, are confronted with self-controlling mechanisms or observe overcrowding and safety, which could motivate them to use safe mode.
3. **Customer experience:** Customer experience starts with an integrated public and individual transport network. The public transport service integration involves different means of public transport (buses, trains, and shelters), time schedules, ticket offering and geographical aspect (local, regional, national and international). The integration of individual means of public transport refers to park and drive services, car sharing, bike and sideways for walk and so on. The integration should also offer value creation opportunities of individual and business matters.
4. **Problem solving:** Value creation opportunities also emerge around problem solving. Problem solving can, on one hand, imply that public transit organizations offer customers the opportunity to navigate autonomously through information services and to solve problems themselves. In this case the introduction of Halte cam and electronic card are positive developments for solving passengers' problems. On the other hand, instead of leaving customers themselves in solving the problems, operators can take over responsibilities for solving the problem.
5. **Co-designing:** This is one of the major challenges facing in developing the mass transit in Jakarta. However, for successful, development of sustainable public transport co-designing and the engagement of customers is essential. Value creation opportunities evolve when public transit companies co-design services together with customers. Co-design implies either to use customer's better align services and customer needs during the market introduction, or involving customer already in the creation of new service ideas.
6. **Millennium development Goals (MDG):** MDG as a foundation for sustainable public transport in developing economies is essential. This also guaranties of having a

comprehensive solution to the societal problems and poverty alleviation. Sustainability public transport can be a hallmark of innovation with more comprehensive and integrated planning, which accounts for a broad set of economic, social and environmental impacts. In developing economies, especially, it requires the engagement of stakeholders and developing human capital to allow diverse perspectives and preferences to be incorporated. Of course, development projects and cooperation have roles in developing countries. The problems are more acute, since public funds are even scarcer. This is appropriate for developmental cooperation and environmental sustainability. The use of low-cost solutions and high-quality buses for public urban transport is essential to develop a very efficient Bus Rapid Transit system. This is supported by a regulation. The case of TransJakarta also demonstrates that a specific BRT system will improve the lives of low income group. Certainly it could deliver huge benefits, but a positive poverty alleviation outcome should not be taken for granted.

Public transport has to improve services and the provision of mobility, which is safe, integrated, orderly, smooth, comfortable, economical, efficient, effective and affordable by the community. BRT is adding value in the transport system. It can be described as a flexible and rapid transit mode that combines stations, vehicles, services, running way, and Intelligent Transportation System (ITS) into an integrated system. Sustainable public transport has shown to be an effective catalyst to help transform cities into more livable and human-friendly environments. The appeal of BRT, in the case of Jakarta, is the ability to deliver a high-quality mass transit system within the budgets of the city. BRT has thus proven that the barriers to effective transit are not costly or high technology.

Dishub is working in making incremental improvements in the established value network by integrating the available public transit modes including the pricing system. It could be remarkable to expanding services for the emerging value networks.

The paper will be developed further.

REFERENCES

- Abela, A. V. and P. E. Murphy (2008), Marketing with integrity: ethics and the service dominant logic for marketing, *Journal of the Academy of Marketing Science*, Vol. 36, No. 1, pp. 39-53
- Aßmann, D and Sieber, N. (2005), Transport in developing countries: Renewable energy versus energy reduction? *Transport Reviews*, Vol.25, No. 6, 719-738
- Demirag, I., Barry, J. and Khadaroo, I., (2005), Concluding remarks on emerging governance structures and practices: the state, the market and the voice of civil society; in Demirag I. (Ed.), *Corporate Social Responsibility, Accountability and Governance: Global Perspectives*, Greenleaf Publishing, Sheffield, pp.351-360.
- Edvardsson, B., Enquist, B. and Hay, M. (2006), Values Based Service Brands: Narratives from IKEA, *Managing Service Quality*, Vol.16, No. 3, pp. 230-246
- Edvardsson, B. and Enquist, B. (2009), *Values-based service for sustainable business – Lessons from IKEA*. Routledge, London.
- Edvardsson, B., Gustafsson, A. and Roos, I. (2005), Service portraits in service research – a critical review, *International Journal of Service Industry Management*, Vol. 16 No. 1, pp. 107-21
- Ehrenfeld, J. R. (2005), The Roots of Sustainability, *MIT Sloan Management Review*, Vol.46, No. 2, pp. 23-25.
- Enquist, B. and Johnson, M. (2010), *Value creation in public transport*, paper in progress
- Enquist, B., Edvardsson, B., and Sebhatu, S. P. (2008), Corporate Social Responsibility for Charity or for Service Business?, *The Asian journal of Service Quality Management*, Vol. 9, No. 1, pp.55-67.
- Gebauer, H., Johnson, M. and Enquist, B. (2010), *Value creation in public transport services*, paper in progress
- Grönroos, C. (2006), What can a service logic offer marketing theory? In Lusch, R. F and Vargo, S. L. (Eds.) *The service Dominant Logic of Marketing*, M.E. Sharpe, Inc. New York
- Gummesson, E. (2008), *Total relationship marketing*, 3rd edn., Butterworth-Heinemann, Oxford.
- _____ (2007), Exit services marketing – enter service marketing, *Journal of Customer Behaviour*, Vol. 6 No. 2, pp. 113-41.
- _____ (2006), Many-to-Many marketing as grand theory: A Nordic school contribution, in Lusch, R. F and Vargo, S. L. (Eds.), *The service dominant logic of marketing*, M.E. Sharpe, New York.
- Hart, S. L. (2007), *Capitalism at the Crossroads: The Unlimited Opportunities in Solving the World's Most Difficult Problems*, 2nd Edtn., Wharton School Publishing, Upper Saddle River, NJ.
- Harrison, J. and Freeman, E. (1999), Stakeholders, social responsibility and performance: empirical evidence and theoretical perspectives, *Academy of Management Journal*, Vol. 42, No. 5, pp. 479-485
- Håkansson, H., Ford, D., Gadde, L-E., Snehota, I., and Waluszewski, A. (2009), *Business in Networks*, Wiley, Chichester, UK
- Hook Walter (2006) Urban Transportation and the Millennium development Goals, *Global Urban Development*, Vol. 2, No. 1
- Kenworthy, Jr. (2003) Transport Energy Use and Greenhouse Gases in Urban Passenger Transport Systems: A Study of 84 Global Cities, *Presented to the international Third Conference of the Regional*

Government Network for Sustainable Development, Notre Dame University, Fremantle, Western Australia, September 17-19

- Laszlo, C. (2008), *Sustainable value: How the world's leading companies are doing well by doing good*, Island Press, Washington DC.
- Lusch, Robert F. and Vargo, S. L. (2006), Service-Dominant Logic as a Foundation for Building a General Theory, in Lusch R. F. and Vargo S. L. (Eds.), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions*, Armonk, M.E. Sharpe, New York
- Lusch, R., Vargo, S. and Tanniru, M. (2010), "Service, value networks and learning", *Journal of the Academy of Marketing Science*, Vol. 38, No 1, pp. 19-31.
- Mintzer, I. M. (1992), Insurance against the heat trap: Estimating the costs of reducing the risks, in Pearman, G.I. (Ed.), *Limiting the greenhouse effect: Options for controlling atmospheric CO2 accumulation*, John Wiley, New York.
- MOST (Moving on Sustainable Transportation) (1999), *Transport Canada*, www.tc.gc.ca/programs/environment/most/
- Normann, R. (2001), *Reframing Business—When the Map Changes the Landscape*, John Wiley and Sons, New York.
- Pentland, B.T. (1999), Building process theory with narrative: From description to explanation, *The Academy of Management Review*, Vol. 24, No. 4, pp. 711-724.
- Polese, F. (2009), "The Influence of Networking Culture and Social Relationships on Value Creation", *Sinergie*
- Polese, F. and Mele, C. (2009), "Key dimensions of Service Systems: Interaction in social & technological networks to foster value co-creation" in H., DEMIRKAN, J., SPOHRER, V., KRISHNA (Eds.), *The Science of Service Systems*, Springer, USA
- Roome, N. J. (1998), Industrial management; Social responsibility of business; Environmental aspects, in Roome, N.J. (Ed.) *Sustainability strategies for industry: The future of corporate practice*, Island Press, Washington, DC.
- Stabell, C. B., and Fjeldstad, D.Ö. (1998), Configuring Value for Competitive Advantage: On Chains, Shops, and Networks, *Strategic Management Journal*, Vol. 19, pp. 413-437.
- UITP (2006), The role of public transport to reduce Green House Gas emissions and improve energy efficiency: Position on the European Climate Change Program and the Green Paper on Energy Efficiency, *UITP/ EUROPEAN UNION*, Belgium
- Vargo, S. L. (2008), Customer Integration and Value Creation: Paradigmatic Traps and Perspectives, *Journal of Service Research* Vol.11, No. 2, pp. 211-215.
- Vargo, S. L. and Lusch, R. F. (2008), Why "service"?, *Journal of the Academy of Marketing Science*, Vol. 36, pp. 25-38.
- _____ (2004), Evolving to a new dominant logic of marketing, *Journal of Marketing*, Vol. 68, No. 1, pp.1-17.
- Vogel, D. (2005), *The market for virtue: The potential and limits of corporate social responsibility*, The Brookings Institution, Washington D.C.
- Yin, R. K. (1994), *Case study research: Design and methods*, 2nd edn. SAGE, Newbury Park, CA.

Web sites

<http://www.iea.org/>

<http://www.jakarta.go.id/>

<http://dishub.jakarta.go.id/>

<http://www.transjakarta.co.id/>

<http://instran.org/>

<http://www.detik.com>