Green Market-led Economy and Sustainable Adaptive Complex Systems in Emerging Markets

Siribuppa U-tantada,
Business English Program, Business Administration Faculty,
Rajamangala University of Technology Phra Nakhon, Bangkok, Thailand.
E-mail: siribuppa.u@rmutp.ac.th

Maurice Yolles,
Centre for the Creation of Coherent Change & Knowledge (C4K),
Liverpool John Moores University, Liverpool, England.
E-mail: prof.m.yolles@gmail.com

Bahaudin G. Mujtaba,
The H. Wayne Huizenga College of Business and Entrepreneurship,
Nova Southeastern University, Florida, USA.
E-mail: mujtaba@nova.edu

Ampon Shoosanuk,
School of Business Administration,
Bangkok University, Bangkok, Thailand.
E-mail: ampon.s@bu.ac.th

Tuomo Rautakivi,
Department of Public Administration,
Faculty of Social and Political Sciences,
Jenderal Soedirman University, Purwokerto, Indonesia.
E-mail: t.rautakivi@finlandconsul.or.th

Abstract

The green market-led economy (GME) can be modeled through cultural agency theory, thus representing it as an adaptive complex system. This economy develops through the involvement of a plurality of the World Trade Organization and commercial agents interacting in an emerging market environment that is able to support sustainable (economic, social, environmental) development goals. The modeling process offers a general theory of the green market, and is composed of core substructural axiomatic theory, and subsidiary testable supersystem theory. Formulating green theory as a core set of propositions that are accepted as defining a living adaptive substructure; a green superstructure will be built and tested empirically.

Key Words: Cultural agency theory, Green market-led economy, Market-led cultural agency, Developed and developing nations, Sustainable development goals
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1. Introduction

Crises with respect to climate, biodiversity, fuel, food, water, finance and the economy as a whole affect the world economy, that struggles and attempt to engage these challenges. Green economy is relevant to all economies, be they state or more market-led that enhances long-run economic performance and can increase total global wealth to serve the United Nations Sustainable Development Goals (SDGs) of the World Trade Organization (WTO) must be achieved by 2030, and is aimed at fostering stable, predictable and equitable trading relations across the world (WTO, 2018).

The utility of the green market-led economy (GME) can be explained in reference the United Nations-Department of Economic and Social Affairs set of 17 Goals (UN-DESA, 2015) in terms of an awareness of the global economic condition that and can contribute constructively to social and environmental growth, the elimination of poverty and hunger, and the sustainability of decent work (an economic perspective); human healthiness and well-being, equitable lifelong learning, gender equality, equal access to affordable and clean energy, sustainable innovative infrastructure and industrialization, equality within and among countries, sustainable cities and communities, peaceful, justice and strong institutions, and “sustainable development” partnerships globally (a social perspective); and clean water and sanitation, responsible consumption and production, the combating of climate change, security of life below water, and life on land (an environmental perspective).

However, to function, the green market-led economy (GME) requires world political leaders, civil society, and leading businesses to engage in the transition, and a sustained effort on the part of policy makers and their constituents to rethink and redefine traditional measures of wealth, prosperity, and well-being. Especially in emerging markets, emerging economies or developing countries are sophisticated in green market practices, and as such the green economy concept has failed as other resource management reforms of the past in Indonesia, uncertain markets and globally, that have ignored political and economic contingencies (Swainson, & Mahanty, 2018). An effective green economy model becomes doubtful because it ignores the complexities of dealing with the conflicts; tradeoffs and power struggles that it seeks to change (Swainson, & Mahanty, 2018). Overall, in the 2018 Index and Report found that no country is on track to achieve all of the SDGs, and progress is slowest on the environment-focused goals (SDSN, 2018).

In order to achieve the SDGs by 2030, the capacity of the green market-led economy (GME) to adapt to complex changes affects its longer-term viability and sustainability. This can be modeled through cultural agency theory representing an adaptive complex system in order to explore both its internal and external dynamics. It involves a plurality of governmental and commercial agents interacting in emerging market environment to be tested empirically.
Cultural entities can be modeled as complex adaptive cultural agencies and analyzed using adaptive complex systems theory (Yolles, 2006). Durable green market-led economy is seen as cultural entity, when it is applicable into Cultural agency theory or CAT (Yolles, 1999; 2006; 2018).

In order to fill the main gap in the literature on the international equity-based entry mode strategies of emerging market multinationals (EMMs), is to understand the performance implications of international entry mode strategies and the resource differences with different levels of institutional development to be addressed empirically (Surdu, Mellahi, & Glaister, 2018). An emergent diagnose of a green market-led economy environment (i.e., a zone of behavior) and the unpredictable changing dynamics of globalization in agencies e.g. WTO, emerging market, purchasing agency, supplier agency and top company for clearly picture on complex changes, challenges and threats contributed. A green market-led economy is also required to make emerging markets to be more resilient and businesses more successful.

Thus, an agency model will be developed to facilitate this. Exploring the positive effects of the green economy can provide understanding of the complex challenges and opportunities in systems and their linkage to transitions toward sustainable and, for example, innovation, design and business models that are capable of functionality in this context (França, Broman, Robèrt, Basile, & Trygg, 2017).

This paper presents an exploration of the green market-led economy (GME) and its environment, the nature of the emerging market environment using Cultural Agency Theory (CAT) as a grounded theory, can support a business model proposed for valid awareness building for the advancement of sustainable development goals.

2. Literature review
2.1 Cultural agency as green market-led economy (GME)

With the rapid development of economic, social and environmental perspectives and the changing of business complex environment, green market-led economy (GME) is applied into the model of cultural agency theory (CAT) (Yolles, 1999; 2006; 2018), a modeling theory. CAT is a cybernetic living system paradigm that models complex adaptive systems focusing also on socio-cultural dimension (Dominici & Yolles, 2016; Yolles & Di Fatta, 2017; Yolles, 1999; 2006; 2018). It consists of a self-evident substructure of cybernetic principles associated with autonomous "living" systems, culturally based social systems being an example. Within this context sensitive surpersystem models can be constructed through which situational analysis possible.

Superstructural theory is transferred into agency that centers on Bandura’s (2002) socio-cognitive theory. It is included attributes e.g. collective identity, cognition, emotion, personality, purpose, and intention, self-reference, self-awareness, self-reflection, self-
regulation, and self-organization. Agencies also interact in an environment with others' attributes, including other agencies (Yolles, 2006). The approach is also capable of delivering diagnosis of issues that need to be resolved (Fig. 1).

Figure 1: CAT Substructural System Model (Yolles, 2016)

CAT applied green market-led economy (GME) is a green based system, that includes an integrated green economy-wide economic plan covered investment and production decisions, intervened by the world trade organization (central green planning for balanced market development) limiting market freedom occasionally in balancing competition and preventing monopolies. The collective interactions of individual citizens and businesses seek their own sustainable advantages. It allows economic laws of supply (e.g. natural resources, capital, labor) and demand (purchases by consumers, businesses, government) to direct the sustainable production of goods and services. The free interplay of supply and demand achieves social aims. The sustainable production of the most desired goods and services in the most efficient way returns a profit. Innovation in creating new products and knowledge management of the most successful businesses is invested in top companies for sustainable quality production. This acts as a means to improve human wellbeing and social equity while at the same time reducing environmental risks and ecological scarcities. It covers low carbon, resource efficient and socially inclusive and is under policy makers’ conditions on increasing investments in a transition to a green economy (UNEP, 2011). Consequently, CAT model-applied GME interacting with its emerging market environment represented as adaptive complex systems to be tested empirically and valid for promoting the SDGs.

2.2 Green market-led economy as a model of the market based approach

Green market-led economy (GME) is applied as a basic model of market based strategy to maximize returns that arises out of sustainable strategic, Porter’s (1985) view on market based strategy which is susceptible to a knowledge management view in order to compete for
resources’ competitive advantage, resulting superior performance—in order to be a market leader in either cost and differentiation (Porter, 1980; 1985). Thus, GME has primary forces that determine agency competitiveness: the bargaining power of customers, the bargaining power of suppliers, the threat of new entrants, and the threat of substitute products – which combine together to create a level of competitive rivalry in an industry (Porter, 1980; 1985).

This orientation towards the external environment does little to address the capability of an organization to develop its own internal processes (Guo, Yolles, Fink, & Iles, 2016).

2.3 Green market-led economy as an intelligent organization

Green market-led economy (GME) as an intelligent organization. It is self-aware and strategic in nature, as a knowledge organization that invests in continual reflection, self-evaluation, and self-assessment. Its ideally organic organizational orientation is knowledge based, and engages third cybernetics that draws on the notions of Viable Systems. Intelligence is the ability of an individual or group actor to discern attributes of cultural knowledge, to efficiently and effectively discriminate, relate, manipulate, and apply that knowledge in a variety of environments, and to operate viably, maintaining sustainable operations. Reflecting those contexts from thoughtful considerations on organizational trends and risk protections based on the formation of beliefs in an unbiased manner supported by sufficient evidences, placing on stakeholders’ values (Yolles, 2006).

Relating to knowledge management or KM, as an effective strategy to create competitive power linking core competencies, it depends on management’s ability. It fosters learning, knowledge creation, knowledge sharing and the use/re-use of agency and personal knowledge in working improvement in the pursuit of new business and corporate goals (Furlong, 2005). Its behavior is connected to green market-led economy’s political power and changing, so knowledge needs to be “knotted” before facing knowledge migration problems (Guo et al., 2016; Yolles, 2006). Result of KM creates good standing and gain positive attitude in customers’ perception when organizations involve the acquisition and dissemination through innovation process (Verona, 1999), which is connected to organizational learning (Calantone, Cavusgil, & Zhao, 2002), creating powerful value, and sustaining competitive advantage in highly complex and dynamic environment (Tellis, Prabhu, & Chandy, 2009).

It also influence the way that people behave signified by their comprehensible web partnership collaboration (Yolles, 2006) and to stay connected in a digital era of networking and social learning through sustainable leaders with accountability on sustainable perspectives, legal, ethical, morale, and operational values where personal, professional, or organizational objectives can be successfully achieved. These influence others within organization (Mujtaba & Cavico, 2016; Mujtaba, Cavico, Senatip, & U-tantada, 2016) and its intelligent organization’s environment.
2.4 The green market-led economy as a living system

This model of the market economy can be massaged to develop conditions under which a green market-led economy (GME) can result. In order to explore predefined contexts of GME, applicable to reflect those contexts, which are supported by "sufficient" evidences, placing on co-values, good performance when dealing with the market-led economy environment globally that covers agencies e.g. WTO, emerging market, purchasing agency, supplier agency, and top company when interacting each other in order to know well about how these agencies have made significant contributions to the global economy in recent years, a qualitative modeling to provide succinct explanations based on CAT, which is applied into durable green market-led economy when interacting with global market environment as a whole superstructure to bring awareness to all involved agencies in sustainable adaptive complex systems (Fig. 2).

Fig. 2: A model of green market-led economy dealing with emerging market environment (prepared by authors)
Fig. 2 presents an agency model of green market-led economy. It explains the relationship between self-processes of green market-led economy (GME) and emerging market environment (EME) which cover five interactive agencies: WTO, emerging market, purchasing agency, supply agency, and top company. This strategic GME model is a CAT representation, and consists of (1) a cultural system; (2) a normative personality system; and (3) an operative system. The three systems have their own dynamically intelligent networks of processes called “Figurative intelligence” (Autogenesis or self-creation) and “Operative intelligence” (Autopoiesis or self-production) that link the three generic representations of GME.

“Figurative intelligence” is a learning attribute that provides core relational explanations of reality due to interactions with its environments and their knowledge processes (Yolles, 2006) through feed-forward processes such that attributes can be processed for operative action to manifest figurative/strategic attributes of personality, influencing behaviors. While “operative intelligence” is an instrumental attribute creating an operative couple, which is located between the figurative and operative systems (Maturana & Varela, 1987; Schwarz, 1997). Behaviors, operational codes, implementation systems, own laws and regulation originate within an environment, populated by objects created by agencies--how a living (social) system – self-produces. Feedback processes create imperatives for adjustment issues in doing this (Yolles, 2006) through the intelligent networks of processes, which are developed by the cooperation of various departments and individuals.

Both GMO and MKO are located in cultural system of the organization for conducting businesses. Organizational culture is defined as a complex set of values, norms, and symbols for business operations (Barney, 1986). These cultural attributes e.g. values, norms, beliefs and meaning connected to knowledge, green market orientation market orientation from which context sensitive information in cultural system are interpreted and delivered to strategic and operative systems. Thus, a sense of belonging of organizational culture in management and organizational members should be made aware of the specific influence on the development of mechanisms and subsequent useful feedbacks may help decrease the activation of their own violations of moral disengagement in organization (Petitta, Probst, & Barbaranelli, 2017). Petitta et al. (2017) revealed that the technocratic safety culture is achievement result-oriented and competition and innovation focused, was opposite bureaucratic safety culture. The technocratic safety culture is related to greater violations of moral disengagement (e.g. skipping safety steps, underreporting and hiding errors, etc.).

GMO is one of an organizational culture attributes with green values and norms to be disseminated into the corporation strategy and its operation truly in the cycle of a comprehensive eco-competitive beneficial advantage by changing in product design, enterprise culture, and environmental impact analysis of enterprises, and ends with the analysis of the competitive environment (Moravcikova et al., 2017). GMO (Papadas et al., 2017) provides
three dimensions: strategic green marketing orientation, tactical green marketing orientation, and internal green marketing orientation. These are (1) strategic green marketing orientation (e.g. making efforts to use renewable energy sources for products/services; investing in low-carbon technologies for production processes and in R & D programs in order to create environmentally friendly products/services, using specific environmental policy for selecting partners, creating a separate department/unit specializing in environmental issues for organization, participating in environmental business networks, engaging in dialogue with stakeholders about environmental aspect of organization; implementing market research to detect green needs in the marketplace). (2) Tactical green marketing orientation (e.g. encouraging the use of e-commerce, because it is more eco-friendly; preferring digital communication methods for promoting products/services; applying a paperless policy; using recycled or reusable materials in products/services; absorbs the extra cost of an environmental product/service). Lastly, (3) internal green marketing orientation (e.g. acknowledging and rewarding environmental behavior, environmental activities by candidates, creating internal environmental prize competitions, forming environmental committees for implementing internal audits of environmental performance, organizing presentations on green marketing strategy for all, encouraging employees to use eco-friendly products/services, and targeting environmentally-conscious consumers). Also, MKO is a creation of value for customers, becoming a longstanding and institutionalized culture (Narver, Slater, & Tietje, 1998) that covers customer orientation, competitor orientation, and inter-functional coordination that originate capabilities influenced solely by the organizational culture to place the highest priority on the profitable creation and superior customer value to achieve ultimate goal of stakeholders, profitability (Narver & Slater, 1990). MKO (Narver & Slater, 1990) can e.g. create customer value; show commitment to customers; understands customers’ needs; meet customer satisfaction objectives; conduct superior service; contribute values; share resources with other business units; integrate functions into business strategy; share information among different functions; discuss competitors’ strategies; target opportunities for competitive advantage; respond rapidly to competitors’ action; and share competitor information. These attributes and information are disseminated and transferred into strategic or normative personality system and made them into cognitive attributes e.g. attitude, ideologies, goals, strategies, ethics, self-schemas, and self-image (Guo et al., 2016; Yolles, 2006) under the network of process called “figurative intelligence” in all functions. In order to continuously provide relevant and timely goods or services within internal green practice and supplier management (Li, Ye, Sheu, & Yang, 2018) in “the operative system,” under “operative intelligence” network of process for its life-long demand agency.

Inter-relationships with competitive activities to maintain all the dynamics of agencies in challenging complex systems, are linked to “behavioral intelligence.” It is related to the ability
to understand, manage other people, and to engage in adaptive social interactions (Kihlstrom & Cantor, 2000). How well these works of GME is measured as efficacy. It refers to the controls of emotionality processes that condition what the intelligences do by operating on the manifestations of information that occur between the two systems, modifying the semantic channeling processes of the intelligences (Guo et al., 2016; Yolles & Fink, 2011). Based on this CAT model, emerging market environment globally cannot only be interlinked with GME but also other market-led agencies like WTO, emerging market, purchasing agency, supply agency, and top company.

- The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations. At its heart are the WTO agreements, negotiated and signed by the bulk of the world’s trading nations and ratified in their parliaments. The goal is to ensure that trade flows as smoothly, predictably and freely as possible. It has a crucial role to accelerate progress in achieving the United Nations Sustainable Development Goals (SDGs) to be achieved by 2030 by fostering stable, predictable and equitable trading relations across the world in promoting sustainable development (WTO, 2018). WTO acts as central government for central planning and as an important means of steering business agencies in developed and developing countries onto more sustainable pathways. External change agents’ conditions are used to most effectively overcome organizational path dependencies (Hoppmann, Sakhel, & Richert, 2018) that can limit occasionally market freedom in order to help balance competition, and prevent monopolies.

- Emerging market agency is emerging economies or developing countries that is becoming more advanced in rapid growth and industrialization determined through many socio-economic factors. These countries experience an expanding role both in the world economy and on the political frontier, where the autonomous development of its own functional future (Dominici & Yolles, 2016). Taking advantages of the growth in market opportunities (Kohli & Jaworski, 1990) provides negotiations through dynamic processes of multilateral communication (Dominici & Yolles, 2016; Yolles, 2006).

Emerging market moves toward a more market-driven form by looking across substitute industries by perfect integration the core functions of many product categories into a single device, and looking across complementary product and service offerings by relying on a platform mounted on its other devices that brought together a broad ecosystem of developers for its products (Giachetti, 2018). Thus, green market orientation and market orientation, organization cultural attributes disseminated to be market-led strategies for tactic behaviours in all functions of GME when dealing with emerging market environment require persistent time and effort to sustain greater customer satisfaction and loyalty by all countries to achieve the SDGs by 2030 (SDSN, 2018).
- **Purchasing agency** is associated with large size organizations, namely: government and public-sector agencies. They can be deployed in a variety of ways rather than merely through raw bargaining power. The potential contribution of purchasing professional services supports innovations, offers insights on aspects to be considered to increase potential innovation outcomes, and draws attention to the strategic role of purchasing agency (D'Antone & Santos, 2016).

- **Supply agency** is an agency that runs its business with sustainable management of its primary and support activities to provide values to an organization, society and the economy. The agency has to be aware on environmental, social, ethical, and economic issues of external resources in a way to supply all goods, services, capabilities and knowledge. In consequence, trust and loyalty will exist between the supplier and the client, business associations and government-backed sources (Bennett & Robson, 1999). Sustainable supply management with customer-supplier interaction processes, relationships and networks, sit on a significant proportion of sustainable purchasing, and supply management. Supplier selection is strategically important because it can determine the organization's success in achieving goals of adopting green practices (Johnsen, Miemczyk, & Howard, 2017). In case of top enterprises, the challenge is to select suitable suppliers among many suppliers to realize their goals of greening the supply chain of SMEs. SME green innovation ability that is under a framework for supplier selection by large organizations, the suppliers consequently organizations can reproduce the proposed framework for supplier selection for their new product range (Gupta & Barua, 2017).

- **Top company or big business** (Big Business, 1905) is defined as an economic group consisting of large profit-making corporations especially with regard to their influence on social or political policy for building up strong structures of economies and other forms of material wealth with financial systems of environment (Yolles, 2016). They are subject to more stringent regulations by the parent company and providing more extensive environmental information than local companies (Ghazilla, Sakundarini, Abdul-Rashid, & Yusoff, 2015). It makes emerging market (EM) have to adjust its operating within an industry with technologically advanced suppliers, as a result they will improve higher innovation potential (Lecerf, 2012). Serving green value of top companies in competitively complex environment is to find possible small partnerships in SMEs that can promote a publically high impact on the environmental dimension (Schaper, 2002).

3. **Conclusion**

This paper illustrates how strategic green market-led economy (GME) and its environment designed via CAT model and its emerging market environment globally in which can be interlinked with e.g. WTO, emerging market, purchasing, supply and top company agencies.
Strategic green market-led economy (GME)’s dynamic and its compositions of the three generic systems interacting within its involved agencies; key elements of emerging market economy environment are also discussed.

Within the constant superstructure, in the changing complex world, can be testable propositions, elaborating on the agency nature, properties and capabilities. Positive ties of the strategic green market-led economy (GME) and the interacting agencies can keep each particular dynamic of the sub-structural (generic) model balance in order to limit conditions of social ill health e.g. poor management, poor procedures, and poor communications and threats that interfere a sequence of structures and processes.

In more complexity explanation provides preliminary understanding and insight on how the responding autonomous agencies considered as the strategic green market-led economy (GME) and its stakeholders keeping balance for estimated green global through over the next 14 years, in a relation to the Sustainability of Development Goals. Due to modern firms and leaders must become stewards of their firms and their local communities if they are to remain competitive and sustainable over time by meeting the needs of their stakeholders in a socially responsible manner. We all have a responsibility to develop leaders with a sustainability mindset, who think and act in socially and environmentally responsible ways.

As can be seen from our model and literature about the green market economy (GME), it is a moral imperative for all firms and countries to transition toward lean operations, recycling, and, thus, a sustainable world. Overall, sustainability is about the ability of institutions or entities to efficiently manage their operations, while proactively respecting the environment in a transparent manner. Within each culture and country, we need to encourage technopreneurship, which is a set of knowledge, skills and activities using innovative technologies and ideas along with other innovations to run a sustainable business. Similarly, companies must adopt a position of sustainability not just for a competitive advantage goal but also for long-term survival of our planet.

As presented in our comprehensive model depicting the interaction of cultural systems, strategic or persona systems and agency-operative systems, sustainable management is critical in today’s dynamic and interdependent economy. As such, the goal of every modern professional should be to create a positive value and to sustain the firm and its stakeholders, including society as a whole. We understand that organizational and cultural changes are difficult to attain; and it takes time, money, and education to bring about relevant behavioral and operational changes for long-term sustainability. Nonetheless, rising economic costs as well as societal pressures will eventually force society to bring about such changes for reducing and reusing products rather increasing waste and societal “carbon footprint.” In other words, we must proactively become socially and environmentally responsible and make strategic decisions that are sustainable over time. The ultimate solution is to conserve, reduce, recycle,
and reuse more of the world’s finite natural resources. Accordingly, we need to think of “sustainability” in everything we do, and thus conserve energy, decrease waste, and protect the environment in our society.

References


