BULLETIN

FAL

FACILITATION OF TRANSPORT AND TRADE IN LATIN AMERICA AND THE CARIBBEAN

Efficiency —a key ingredient towards sustainable supply chains

Introduction

There is an urgent need to improve the performance of supply chains to make them not only more competitive, but also more sustainable. This is particularly important as supply chains are increasingly integrating production processes linking developed, transition and developing economies. Thus, supply chains have to function in different economic, social and environmental, as well as institutional and regulatory, contexts. Given the existing challenges, the goals of future sustainable development, competitiveness and profit, there is a clear link between sustainability and efficiency.

The connection between the functioning of the supply chain and businesses' commercial goals (efficiency) is not always clear, and it can be surmised that the link between efficiency and sustainability is even less well understood or accepted.

Today the supply chain industry is under significant pressure to meet the next delivery window and to ensure that drivers are available to make the vehicles arrive on time. The day-to-day challenges can, therefore, get in the way of making the changes that will bring about more efficient and sustainable global supply chains.

However, more and more often companies are setting sustainability goals themselves, in order to meet external demands coming from a growing number of concerned stakeholders and to stay in business. As a matter of fact, there has been an attitudinal shift towards the importance of sustainability strategies in businesses over recent years. The view that sustainability actions are costly, time-consuming and fail to add value appears to be losing ground, but significant differences still exist between different countries and regions. A majority of today's businesses consider the concept of sustainability to be important contributor to the firm-specific competitive

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advantage. Furthermore, several companies indicate that the sooner sustainability goals are implemented in the business strategy, the more concrete benefits will be obtained (Haanes and others, 2012).

At the same time, the economic relevance of supply chains is still underestimated by the industry. According to a recent study, 80% of supply chain managers still do not see their supply chain as an enabler of business strategies within their organizations, 55% of respondents do not regard their business's supply chain as a fundamental source of business value and competitive advantage and almost a third (29%) see it as purely an operational function. Finally, almost half (45%) do not believe that their organization's supply chain would deliver increased profitability.[1]

Businesses need institutional and regulatory frameworks that push for sustainability and efficiency in the context of competitiveness and economic development. Given the regional and global span of supply chains, business is often done in incomplete, backward-looking and reactive frameworks which are neither complementary nor integrated across borders. These create inefficiencies in logistics and supply chains systems and do not proactively contribute towards improving our collective sustainability.

In short, current challenges to address include:

- Helping the business community understand that sustainability is actually in reach and delivers economic benefits (efficiencies).
- Alleviating the concerns of the companies which may have to compete in a framework where competitors are playing by different rules or standards. This is one of the key dilemmas: a competitor might be able to gain a competitive advantage by acting in a non-sustainable way.
- Determining what short-term actions can deliver long-term economic and sustainability benefits.
- Helping companies "walk the talk" of sustainability.
- Creating legislative incentives which support continuous progress towards attaining sustainability goals and avoid subsidizing inefficiency.

This *FAL Bulletin* aims to highlight a few of the good and simple initiatives and actions and to encourage dialogue between all actors in spreading and enhancing the link between sustainability and efficiency.

I. The future challenges

The continued expanding demand for material mobility and related logistics and supply chain services comes at a cost, particularly in rapidly developing economies. It raises demand for energy, initiates land-use debates, drives increased emissions and exploits natural resources.

The traditional geography of production and consumption is changing. By 2025 the part of the world population belonging to the consuming class will be —for the first time in history— greater than the group living in conditions below consuming class. The global consuming class will have grown by 75% between 2010 and 2025, and most of the population belonging it in 2025 will be living in the countries today considered as emerging markets.

Figure 1
WORLD POPULATION
(Billions of dollars)
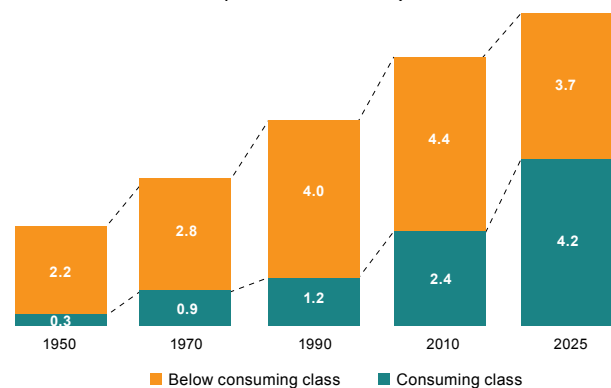
Source: The authors, based on H. Kharas, A. Maddison, Mckinsey Global Institute (2012).
Note: Consuming class: daily disposable income is equal or greater than $10; below consuming class: less than $10; incomes adjusted for purchasing-power parity. Data for 2025 are projections

Figure 2
WORLD CONSUMPTION
(Trillions of dollars)
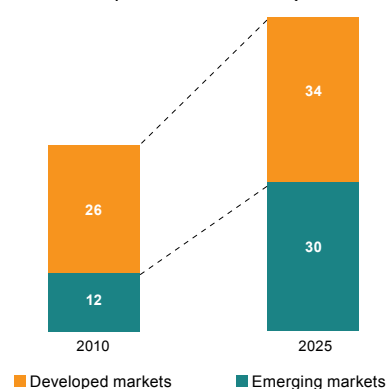
Source: The authors, based on H. Kharas, A. Maddison, Mckinsey Global Institute (2012).
Note: Estimate based on 2010 private-consumption share of GDP per country and GDP estimates for 2010 and 2025; assumes private consumption will remain constant. Data for 2025 are projections.

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[1] Hitachi Consulting (2013), "The Supply Chain Disconnect: 80% of Managers Don't See Supply Chain as Business Strategy Enabler" (link).

The changes are accompanied by a shift in industrial production; further economic growth and development will therefore change the configuration and scale of supply chains and sustainability challenges.

Given the current growth paradigm, the question is: to what extent can traditional logistics and supply chain strategies be transformed into more sustainable approaches which are ready to cope with future challenges?

But it is also important to know whether the necessary development of regulatory and political frameworks can be supported by industry, so that:

- Resources (land, labour and capital) are used more efficiently,
- The dependency on fossil fuels is curbed,
- The environmental impacts of freight mobility are limited,
- The quality of our logistics services is not jeopardized.

II. Can a common definition of sustainability of supply chains be found?

One barrier to action towards more sustainable supply chains is the magnitude of the debate around sustainability, the enormous number of definitions of it and the relatively technical nature of sustainability measures.

To trace the roots of the definition of sustainability, reference should be made to the Brundtland report (United Nations, 1987), in which sustainable development was defined as "[…] development that meets the need of the present without compromising the ability of future generations to meet their own needs". In the beginning, however, the major concern was the efficient use of natural resources.

It has been pointed out that sustainability aims to reduce the long-term risks associated with resource depletion, fluctuations in energy costs, product liabilities and pollution and waste management (Shrivastava 1995). The macro-viewpoint includes social, environmental, and economic aspects. Sustainability is thus "a wise balance among economic development, environmental stewardship, and social equity" (Sikdar 2003, p. 1928).

The notion of sustainability is directly linked to the concept of corporate social responsibility (CSR). "Corporate Social Responsibility is the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large." (WBCSD 1998, p.3). Despite the fact that CSR is often seen as a credible strategy, there is still an issue of inconsistency between what is said to be done and what is actually done.

Several companies are proactive in establishing goals, but when it comes to actual actions taken the results come off as mediocre, if not poor (Kiron and others, 2013).

Interviews with industry and reviews of the literature clearly demonstrate that no agreement on the actual definition of sustainability in point of fact has been reached, despite its widespread presence in political and industry-sector discussions.

While there are many definitions of sustainability and even of what a supply chain is, a clear notion on what sustainability is necessary to achieve maximum benefit across entire industries and country borders.

Simplifying existing measures and linking efficiency and sustainability could encourage more people and organizations to take action today. Even if they are small actions to start with, if every player in the supply chain saved 10% of its fuel consumption, the overall savings would be significant.

Sustainable supply chains integrate issues and flows that extend beyond the core of supply chain management such as: product design, manufacturing, by-products produced during product use, customer service, product life extension, product end-of-life, and post-disposal disposition of products. Sustainability is reached by the integration of a company's social, environmental, and economic goals through the systemic coordination of key inter-organizational business processes to improve the long-term economic performance of the individual company and its value network. (Carter and Rogers, 2008).

III. Removing the confusion —the essence of sustainable supply chains

Common themes and principles are found when studying the definitions of businesses[2] and international organizations:

- Sustainability includes three dimensions: economic, social and environmental.
- Sustainability is not a phase or a fashion, it is a necessity.
- It is equivalent to being competitive in the long term.
- Sustainability must be measurable (benchmark).
- It requires proactive approaches.
- Sustainability can only be reached when public and private sector co-operate.
- Sustainability means that organizations need to reach beyond their organizational boundaries (coordination; we cannot do it alone).

[2]   Survey amongst F&L member companies.

It is also generally recognized that to reach efficient, sustainable and coordinated supply chains, industry needs:

- Measurable outcomes.
- Commitment from the boardroom to the shop-floor.
- Effective and predictable public administration and policies.
- Collaboration.
- Corporate Social Responsibility (CSR).

To achieve results, three groups of actors (public and private) must converge: the logistics sector (how we do business), society (how we consume) and legislators (how we motivate, support, regulate). In this sense, to achieve global sustainable growth in a resource-constrained world, it must be assumed that business takes responsibility to decrease the corporate footprint by using our resources in the most efficient way throughout our supply chains.

The efficiency-sustainability link/sustainability-efficiency link in supply chains can be based on the definition of efficiency. The Oxford Dictionary defines efficiency as "a measurable concept which relates to the input/output ratio of any task. It is defined as achieving maximum productivity with minimum wasted effort or expense (of a system or machine)." (Oxford Dictionaries, 2014). Efficiency, thus is complementary to the definition of sustainability. There is a strong case for the supply chain actors to improve efficiency and so advance sustainability, and whilst improving sustainability to progress efficiency.

IV. The perception of sustainability in supply chains —evidence from Brazil[3]

How sustainable companies operate depends on the environment in which they do businesses. A combination of the economic, political and social dimensions of the country forms the conditions for sustainable development. Traditionally, western European conditions are seen as favourable, considering a strong involvement of governmental institutions, which shape the corporate responsibilities of a company (Carbone and others, 2012). However, some emerging economies are starting to catch up and increase their commitment to sustainability at higher rates than the developed western Europe. This trend can be explained by the need to deal with environmental degradation in developing areas (Haanes and others, 2012). Due to changes in the geography of trade, new economic growth centres are relocating to developing countries. This entails increased interest in supply chains that involve trade with and between emerging markets, and relevance

of sustainability issues that arise as a consequence of the growing and changing trade flows (Wilmsmeier, 2013).

In general, sustainability practices in supply chains are considerably segmented, often targeting only particular aspects of sustainability. Among the supply chain actors, shipping lines usually demonstrate a more comprehensive approach and some supply chain actors are proactively trying to influence other stakeholders, by increasing customers' awareness of sustainability though commercializing the concept of sustainability. By way of example, companies expect suppliers and shippers to take major responsibilities for sustainability issues. Certification schemes are perceived as a way to facilitate integration of sustainability in the companies' strategies or to fulfil customers' demands.

Empirical data show that ports approach sustainability differently due to the role that they play in the supply chain network. They have to provide efficient infrastructure and effective services to handle the flows of cargo in a sustainable way. By way of comparison the port of Gothenburg, Sweden, covers both aspects, efficiency and sustainability, working towards the port's expansion and at the same time controlling environmental impacts of related transport flows, while Brazilian ports are still in the process of overcoming operational issues, such as port congestion and technological change, which makes that sustainability issues (i.e. environmental and social aspects) only play a limited role.

Sustainability is not commonly measured and the results are not widely distributed in Brazil, unless the company is an international player and thus has to comply with internationally set standards. In Brazil there are few incentives for measuring sustainability and publishing data, a situation which might be explained by the lack of demand from customers and government.

In Brazil most actors named profitability as a first and foremost criterion for being sustainable, thus the economic dimension of sustainability stands out. This is coherent with Carroll's model (Carroll, 1991), which has economic responsibilities as the base for sustainability. (See figure 1). The economic dimension is the root of efforts as shown in the following statement by a supply chain manager: "One can work around this [sustainability], talk about one thing or the other. But even if you are the world champion of ethics and environment and act nice to everyone, you will die [as a company] if you do not earn money".

As the Brazilian economy is at an emerging stage, cost orientation among companies is a main priority, which automatically leaves less room for other dimensions of sustainability. Even in the academic world in Brazil, the word "sustainability" is associated mostly with economic growth.

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[3] Results are based on qualitative interviews with 22 supply chain actors in Brazil and Europe in May 2014.

Companies often limit sustainability to the reduction of negative environmental impacts. Brazilian interviewees stressed that legal responsibility for environmental violations follows the economic dimension and thus, companies have to comply with these laws in order to proceed to the next stage of sustainability. Hence, the regulative aspect is the next layer after the economic. Social aspects often seemed to be neglected, which indicates that Brazil is on the second stage of the four-stage sustainability pyramid (Carroll, 1991) (see below), mainly coping with institutional obstacles.

Diagram 1
SUSTAINABILITY PYRAMID

Discretionary responsibility: contribute to the community, act as a corporate citizen

Ethical responsibility: be ethical

Legal responsibility: obey the law

Economic responsibility: be profitable

Source: Authors, based on Carrol, 1991.

The statement of Bretzke and Barkawi (2013, p.3), "You cannot design what you cannot define", serves as an overall explanation, as the definition of sustainability differs between actors and the companies with more comprehensive understanding of sustainability had more efficient strategies towards reaching sustainability, including clear measurements.

Thus, the understanding of sustainability plays a significant role in how the concept is dealt with. "…the more typified and rationalized the concept of "sustainability" becomes, the greater the likelihood that some of its components will be accepted and legitimated by action in society, including business organization" (Jennings and Zandbergen, 1995). Sustainability should be tangible in order for people to grasp the concept and start to care about it. If people have a concrete understanding of sustainability with its benefits as well as consequences of neglecting it, they will be more motivated to comply with legislation and implement actions towards it.

Stakeholders

The reasons for different understandings of sustainability can be further explained from a stakeholder perspective. Freeman's (1984) argumentation of this theory is underpinned by his statement that the company is not fully self-sufficient but dependent on the external as well as the internal environment for further development. Companies should consider stakeholders' interests before making strategies. This is done with different degrees of enthusiasm. With the exception of shipping lines, supply chain companies are quite passive in formulating strategies in collaboration with stakeholders, and often responsibility for implementation is passed on to other relevant actors. This leads to the assumption that sustainability is not that important after all. Almost all respondents mentioned that government and customers have by far the greatest influence on corporate actions and strategies regarding sustainability. Governments should set the minimum legislative requirements and customers should determine the direction taken by sustainability actions. In Brazil, customers' demands are not as strong as in Western Europe, which means that sustainability actions are not very strong. The government is therefore the most important stakeholder for Brazilian businesses.

By way of example, stakeholders' influence depends on how a port is run. Generally sustainability strategies are developed in accordance with legislation in a situation in which private or concessioned ports can expect rather considerable external pressure. Customer demand drives sustainability through high customer awareness and interest in sustainability, which is often not yet embedded in society in emerging economies.

Institutions

Institutions can be categorized as regulative, normative and cognitive (Scott, 1995). Regulative institutions are found to be dominant in respect of sustainability actions. By way of example, shipping lines behave in a rather similar, proactive way as they must face up to pressures placed on them by the same external global laws and regulations. Consequently, international ocean carriers work more extensively with environmental issues than other (national) actors in the supply chain.

Regulative institutions set rules, monitor compliance or punish or incentivise behaviour depending on circumstances. Brazil would appear to comply when it comes to regulations for the environment, but Brazilian port representatives and other supply chain actors claim that follow-up procedures are weak and poorly regulated overall. The lack of effective monitoring and penalization systems leads to low levels of compliance with legislation. This partly explains why the country has a long way to go in ensuring transparency. Terminals at ports are obliged to present environmental reports, but do not do so on a regular basis as drawing up reports is costly

and they face no sanctions if they fail to publish them. Moreover, little social legislation, with the exception of general employment regulations, is enforced in Brazil in comparison with western European countries.

Normative aspects shape the behaviour of the company as a reaction to values and social obligations that are common to a particular environment. Brazilian companies are not generally expected to behave in a public-spirited manner, so sound social practices are not widely implemented. However, if a company operates within an industry which has a significant environmental or social impact it should be expected to implement certain practices with a view to improving its behaviour.

Finally, cognitive aspects involve the business perspective, which is a function of a company's primary purpose, namely to be financially secure and bring profit. The importance of this pillar can be seen in the prioritization of sustainability dimensions since companies always value economic aspects when determining sustainability efforts.

Business context

Another aspect that might suggest an explanation of different approaches to sustainability is the environment the company operates in. As a primary factor, the country's economic development affects performance and, as a secondary, the industry and type of business have a significant influence.

Different economic systems give rise to different priorities in respect of sustainability. For example, Europe leans towards an environmental focus, unlike the United States where a rather philanthropic view dominates. In Latin America the economic climate matters most. The United Nations (2007) extend this theory by claiming that

in emerging markets, such as Brazil, the importance of sustainability is growing and there is an urgent need to address environmental degradation, but due to the focus on growth, priorities such as the environment are not taken into account in the current situation.

Furthermore, it is fair to expect that the scope of sustainability practices will depend of the size of companies. As Inyang (2013) has argued, major international corporations are seen in sharp focus since they both have potentially the largest budgets and are at greatest risk of public criticism. They thus need to take a relatively strong proactive stance in this regard. The largest companies interviewed had the most developed sustainability strategies. Small and medium-sized companies are expected to have a more limited input in such strategic development.

Another important aspect is the differences between industries. Sustainability performance can vary considerably among industries, and stakeholders present the greatest pressure (Carbone and others, 2012). Supply chain actors were found to be rather defensive in their efforts towards sustainability by obliging suppliers to conform to sustainability requirements. Still, what the customer asks for is what will ultimately be delivered. One might conclude that if a customer does not ask for sustainable products, there is little incentive for the company to develop sustainability. Further, the smaller the scale of businesses, the more isolated from each other the three main sustainability aspects become (Kechiche and Soparnot, 2012).

To conclude, there is a strong interrelationship between institutional frameworks, stakeholder relationships and the business context when it comes to perceptions of sustainability.

Social and institutional aspects

The perception of time and the value of the future differ from country to country. In a cultural context, where the perspective of time focuses on the immediate future, it is difficult to introduce a long-term perspective into decision-making, particularly if the environment for such decisions has in the past been volatile and often uncertain. Because of that, it is difficult for people to understand sustainability due to its rather long-term orientation, particularly when profitability today is perceived as the most important matter.

Social aspects, in terms of wage differences, are also related to the discussion of sustainability in the sense that if low salary levels and temporary contracts contribute to short-term decision making since such conditions give rise to instability and uncertainty. For developing countries,

the most crucial issues have to be dealt with before sustainability aspects such as proper labour conditions and environmental regulations can be established. Therefore, time perceptions clearly influence sustainability approaches.

Another factor which reaches much further than sustainability is governance. Interviews with Brazilian supply-chain actors revealed the lack of integration of and synchronization between different government bodies. Discussions also raised the issue of a certain lack of specialized port-sector knowledge among port authorities, resulting in an unequal dispersion of resources. For the port, such lack of knowledge is specifically harmful since insufficient organization leads to problems such as congestion and stagnating innovation. In the end, this may result in hampered growth since these bottlenecks slow trading procedures considerably. By way of example, none of the Swedish respondents emphasized any serious managerial issues in the Swedish government.

The prevailing short-term vision and poor management affect Brazilian perceptions of sustainability and implementation of it in the country, and since the public sector vision in transport, infrastructure and logistics also requires further integration and long-term perspectives, it can be said that the sustainability of supply chains is not currently in the mainstream of discussions.

The less comprehensive understanding of sustainability in Brazil leads to a decreased demand for it. Many people and companies treat sustainability as a costly and complicated concept, and therefore not a concern of theirs. In decision-making, the cheapest options are often still preferred over sustainability.

Beyond supply and logistics chains, a number of coordination issues become relevant, such as the integration of the various national legislations and regulatory frameworks by including such aspects as environmental standards.

Finally, measuring sustainability remains a challenging task that becomes even more difficult when there is an unclear perception of sustainability. Quantitative measures such as emission rates and budget goals are often described as the least troublesome, while social aspects are regarded as more problematic to measure and present, given the fact that indicators for these aspects are not always evident.

As long as there is a weak understanding of sustainability components, the measurability process will be dispersed, and the validity of the data presented can be questioned. In Brazil, however, insufficient attention is paid to measurements of the environmental dimension, which leads to situations where western corporations experience significant difficulties in dealing with local companies in such emerging markets.

V. The need for benchmarks

Benchmarks are a key driver in modern life's focus on process improvement. **Widely available, simple, pragmatic and accessible benchmarks** are necessary to enable many supply chain practitioners to become engaged and improve not only the efficiency but also the sustainability of supply chains. Benchmarks must be like-for-like measures to engage users to compare themselves and measure their own performance or there is an excuse for inaction.

There are various well-known initiatives, including, for example, the Global Reporting Initiative (GRI). While a general adaption of such standards can be used for transport and logistics, the measures they require are often bureaucratic and difficult to fulfil for many companies.

Benchmarks can be straightforward for different elements in the supply chain but need to encompass all areas of sustainability, including economic, social and environmental dimensions. By way of example, benchmarking energy efficiency reveals the potential for simultaneous improvements to economic and environmental performance.

Business should feel confident about innovating and trying new ideas as it is often the case that imaginative solutions can solve environmental challenges such as greenhouse gas emissions, pollution and congestion. Occasionally, overregulation can prevent innovative solutions from appearing. It should not be up to the legislator to decide what is feasible but rather the reverse.

VI. Small step from measuring efficiency to measuring sustainability

While the above-mentioned challenges exist for supply chains in different economic contexts, active work is already under way within many businesses who are leading the way in all areas of corporate social responsibility (CSR), energy efficiency, and environmental standards. There remains, however, ample scope for most businesses to see the sustainability-efficiency link and to "walk the talk" of sustainability.

Action should be taken to create simple benchmarks and monitoring tools that are easily accessible and relevant. It is widely recognized that monitoring and benchmarking raise the performance bar —the old adage "if you can measure it you can manage it" holds true.

By using widely available route-planning tools, efficiency is delivered by means of reduced fuel and insurance costs, sustainability is achieved through reduced emissions from the vehicles and the business becomes a better citizen by reducing traffic risks for its staff and the public. There is growing evidence that collaboration with customers also improves customer satisfaction.

Box 1
EXAMPLES OF ACTION BY INDUSTRY

Example A: "UPS in America decided to stop taking left turns, because when you cross the traffic you have to wait and idle the engine. It sounds crazy but by using widely available route planning tools to avoid left turns, UPS saved 3 million gallons of fuel and reduced insurance costs – because crossing traffic is risky and then more accidents occur."[a]

Example B: Nestlé —Smarter Distribution. More than 125,000 tonnes of Nestlé products are transported to customers from factories and distribution centres every day. The company found that smarter route planning and shifting to different modes of transport can have a marked positive impact on greenhouse gas emissions, noise and road congestion. In Poland it decreased greenhouse gas emissions by a fifth in 2013 by relocating one of its distribution centres. The move also lowered distribution costs by a quarter and cut 60 km off each domestic delivery journey. In 2011 Nestlé achieved a reduction of more than 5,000 tonnes of CO^2 emissions across Europe by switching from long-distance road transportation to rail or short-sea shipping.[b]

Example C: Mars Inc.[c] This is a business that continues to grow globally, often in places where cultural norms may differ and regulations may be unlike Mars' standards. The company thus introduced five guiding principles: quality, responsibility, mutuality, efficiency and freedom. By way of example, in the United States, Mars Petcare's supply chain operations and commercial teams collaborated to make the delivery of pet food products more efficient. Their work saved 100,000 gallons of fuel and US$ 1 million per year, while reducing greenhouse gas emissions by 2%.

Example D: Heinz, Mars and Samskip in Bavaria – Converting 15,000 loads to the "blue road". This project took 15,000 containers from the road and shipped them by barge from loading locations (Elst, Lieshout and Veghel) to the Port of Rotterdam short sea terminal. The benefits obtained included: (a) no extra costs were incurred over using road; (b) 1.2 kg of CO^2 were saved per move; c) there was a measurable reduction in congestion on the A15 motorway by removing 10,000 truck journeys, particularly in the mornings.[d]

[a] "Green Innovation - Wacky Ideas", "Green to Gold" by Andrew Winston.
[b] Nestle.com.
[c] Mars Inc Principles in Action Summary 2012.
[d] Presentation at F&L Event Rotterdam November 2013.

It is good practice in business is to measure key performance indicators such as sales, costs, resource usage etc. In many cases business already measuring these indicators, which relate for the most part to efficiency, although some, such as fuel use, and empty mileage, also measure sustainability.

It should be emphasized that:

- A business can only compare itself when it has measurements to use.
- Measuring itself against itself on a year-on-year leads to progress in respect of efficiency.
- Benchmarking must be like-for-like.
- Efficiency measures the input-output ratio.

Measurement is the first step, but then it is necessary to make a comparison against the benchmark (like-for-like measurement). Good like-for-like measures may necessitate government involvement.

VII. Creating a better dialogue

New challenges lie ahead for all supply chain participants in a changing world and geography of production and consumption. However, many actors in the supply chain find sustainability difficult to achieve and are not sure how they can move forward.

Regardless of business context, sustainability actions are stakeholder-driven for all actors. Customers and government are by far the strongest influencers. The government will impose the minimum requirements, but it is the customer that drives the demand for higher sustainability. In Brazil, customers in general do not have a substantial impact due to their cost orientation, low interest and lack of exposure to sustainability concepts.

- Poor institutional management complicates processes of sustainability. This has to do with the fact that a considerable part of the sustainability concept is imposed by governmental legislation. When synchronization among legislative bodies is low, penalization systems are not in place and regulations are constantly changing, the level of compliance to laws becomes low. In such circumstances, the path towards full integration of sustainability becomes problematic. This is particularly so in Brazil. Even with major improvements, several other issues have to be settled before sustainability can be developed in the country.
- Sustainability is a very contextual concept, which further explains differences in sustainability approaches. Such factors as country, industry and company type matter. Larger enterprises, in our case shippers, demonstrate more comprehensive understanding of the concept,

which can also be explained by the heavily regulated nature of the logistics industry.

- Differences in understandings of sustainability also have to do with cultural aspects. In particular, time perceptions turn out to affect perceptions. The short-term perspective in Brazil influences people's attitude: individuals and companies want to achieve results immediately and the benefits of effective planning are not widely recognized, which is reasonable when you live in the "here and now". In such a context, the concept of sustainability cannot be applied efficiently.

Different attitudes to sustainability are apparent among customers, who in general are reluctant to pay more for sustainability options. Additionally, various approaches may impact trading pattern between countries; if companies in a particular national context are not transparent and do not work with sustainability explicitly, their competitive advantage is reduced, making them less attractive partners for international companies.

Finally, non-standardised approaches make it harder to measure sustainability, particularly the social dimension; not many actors understand which indicators should be used and this data is thus seldom collected and presented.

In consequence, actors from the **logistics sector**, **society** and **legislators** need to further join up their efforts and increase dialogue between them to achieve global sustainable growth in a resource-constrained world.

Creating a better dialogue means improving the chances of better decisions for the future but, as is always the case, there is much that is yet to be done. On the basis of current challenges, we should start cooperating to improve the efficiency of operations and regulatory and institutional frameworks based on the knowledge that:

- Efficiency makes supply chains more sustainable. Sustainability can make supply chains more competitive, but for that a level playing field in global supply chains (subsidies, competition and regulations) is required.

- Everyone involved in the global supply chain needs to be engaged in the journey towards efficiency and sustainability.

- Industry leaders and governments need to show that sustainability is within reach and has a direct link with efficiency.

- Sustainable business requires good reporting. Benchmarking raises performance over time and across industry sectors.

- Existing initiatives for global supply chain benchmarking are important building blocks but need to be accessible, relevant and executable for supply chain practitioners.

- Benchmarks must be transparent, factual and concrete.

- The small steps also need to be celebrated as much as the major projects.

- The current and future dialogue for sustainability and efficiency needs to be conducted within and across organizations at a local and practical level.

The reliability and sustainability of supply chains is dependent on the facilitation of international trade and services. Thus issues such as security (e.g. asphalt piracy), safety (e.g. road safety and standards) and institutions (e.g. bureaucracy at border crossings and customs) significantly affect the reliability of supply chains. Thus there are emerging questions about how the prevalent challenges can be addressed and solved.

As social and economic conditions in the countries of origin and destination are main drivers of these challenges, it might be relevant to discuss how the private sector can contribute more to improving these conditions and in what way existing practices address these challenges, especially in developing countries. Finally, there is a strong need to establish more direct dialogue between the private sector and legislators to promote long-term, integrated policies and regulatory frameworks which incorporate sustainability. (ECLAC, 2014 and Lupano, 2013).

VIII. Note

This discussion was also presented at the 2014 ITF OECD Annual Summit of Ministers, Leipzig, Germany in the side event organized by the European Freight and Logistics Leaders Forum: "SUSTAINABLE FREIGHT —creating a joint vision for business and legislators" on 21 May 2014.

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