

Potential to Setting Up of Maritime Clusters in Angola

Gabriel Henriques Leitão^{1,2}, Maria de Lourdes Bravo²

(1. Ministry of Economy and Planning, Angola;

2. Economics Faculty, University Agostinho Neto, Luanda, Angola)

Abstract: This paper seeks to address the relationship between the concentration of economic activities associated with the sea and Angola's economic development. The investigation on Maritime Clusters arises from the fact that Angola has maritime infrastructures and a strong maritime activity being the sea hinterland of landlocked countries in Southern and Southern Central Africa. It is also experiencing socio-economic and demographic changes generated by economic activities with a relevant impact on the business environment, bringing about opportunities for the establishment of industrial clusters in particular maritime clusters. Thus, this paper aims to understand that the setting up of clusters might reduce regional asymmetries and poverty in the country, showing the importance of maritime clusters for economic development and job creation by enhancing the growth of solid micro, small and medium-sized enterprise (MSME). It also enables to understand that maritime clusters are relevant not only to the diversification of country's economy that is still largely dependent from the oil industry but also to the integration of the Angolan economy in the Southern African Development Countries (SADC). Regarding the existing gap in knowledge about the issue, this research work represents an analytical contribute for further research initiatives, particularly quantitative nature.

Key words: maritime clusters, regional asymmetries, economic agglomeration, economic development

JEL code: O

1. Introduction

The purpose of this research work is to present a conceptual framework regarding the economic fundamentals of the concentration of activities in a location systematically, for addressing the Potential to Setting up Maritime Clusters in Angola. Angola is a developing country where economic growth is perceptible in some coastal regions, bringing about regional development asymmetries. This research work will approach the impact of the clusters in the regional economic development and intends to show paths and tools that might support the setting-up of maritime clusters in Angola to reduce the mentioned asymmetries, focusing on the essential role of transport and logistic systems. The choice of the maritime theme clusters and their impact on local, regional, and national economic development is linked to the following reasons:

1) on the one hand, the fact that in Angola socio-economic and demographic changes are taking place on a business environment that generate opportunities for the setting up of clusters,

Gabriel Henriques Leitão, Ph.D., Economics Faculty, University Agostinho Neto; research areas: general and strategic management. E-mail: gahleit@yahoo.com, gahleit@yahoo.com.

Maria de Lourdes Bravo, Ph.D., Economics Faculty, University Agostinho Neto; research areas: economics and supply chain management. E-mail: mlbravo16@gmail.com.

2) on the other hand, because the setting up of maritime clusters might support the formulation of policies for boosting economic growth and development that is needed.

As a seaborne country in Southern and Southern-Central Africa, Angola has a privileged location. Due to this fact, we highlight maritime clusters as they might be a new and significant driver to the country's economic growth and development. By analyzing clusters in general and in particular maritime clusters, we hope that this research work will represent an analytical contribution as there is a lack of studies approaching the issue of the setting-up of maritime clusters in Angola and its impact on the economy.

The paper is structured with the following sections: the introduction is followed by the Section 1 with a description of the methodology used, the Section 2 concerns literature review, Section 3 addresses the potential for the setting-up of maritime clusters in Angola, and finally, Section 4 presents the conclusions.

2. Methodology

This work aims to understand the socio-economic importance of the setting-up of maritime clusters in Angola, focusing on the interdependence of activities related to the sea and the hinterland upstream and downstream of the ports. As there is no statistical and theoretical data regarding this issue, our qualitative research is based on a literature review and various studies that address the experience recorded on maritime clusters in several countries.

The assumption is that a literature review is a valid approach for structuring research, helping to identify the field's conceptual content and guiding towards theory development (Easterby-Smith et al., 2002; Srivastava, 2007).

To get a comprehensive assessment and to generate the literature review focused on the nature of clusters and their relationships, data collection was mainly made based on the consultation of books, reports, magazines and especially articles concerning the impact of clusters on national economies, from publishers such as Elsevier, Emerald and library services such as ABI/Inform and EBSCO.

The emphasis was placed on analyzing the economic impacts of the setting up of clusters, identifying also published papers related to maritime clusters. To ensure that relevant information was found, papers addressing economic performance, national policies, regional economic development and innovation were also considered.

According to Reiter (2017), exploratory research can reach great validity and provide new and innovative ways to analyses reality. Thus, this paper can be characterized as a descriptive, exploratory research work. The research is descriptive as it seeks to describe, through a literature review, the fundamentals and characteristics of maritime clusters. It is exploratory because no study is known about the setting up of maritime clusters in Angola and any respective impacts. What is known is only the Angolan Government's intention to promote the setting up of clusters to foster economic growth and development.

3. Literature Review

Since Alfred Marshall's (1920) work, researchers have devoted significant attention to agglomeration economies. The growing intellectual and political interest in clusters' economic importance and their impact on local and regional development is associated with economists and most notable economic geographers. Scott (1988), Porter (1990), and Krugman (1991) using different approaches to economic clusters focused their work on the potential benefits of economies of scale and the efficiency of industrial clusters. Regarding economies of scale and local and regional economic growth and development, transport gains increased importance because allowing the loading of more goods in a cargo unit provides geographical proximity (Ketels & Memedovic, 2008).

Grimstad and Burgess (2014), based on a case study at the micro-level, analyze the drivers and obstacles in the operational environment and demonstrate that the concentration of economic activities has been important in pursuing a sustainability agenda. These authors realised that small companies or small businesses could benefit from the setting up clusters because they offer them the possibility to share resources, information, and technical specialists' access. Carpinetti et al. (2008), based on the balanced scorecard concepts, presented and discussed a conceptual model to assess the performance and management of a cluster. This model captured the perspectives of a cluster's "management performance", emphasizing the importance of performance dimensions such as efficiency and socio-economic results.

The cluster concept is multidisciplinary. Pagano et al. (2016) define a maritime cluster as a set of activities that have direct, indirect and induced effects on the maritime economy. The direct and indirect effects refer to activities associated with shipping such as shipping agencies, piloting and dredging services, ship repair and ship-chandler suppliers. The induced effects concern tourism, ports, container repair, banking and insurance, and industrial activities.

Stavroulakis et al. (2019) adapting the definition of Michael Porter, define maritime clusters as "a geographically proximate group of interconnected companies and associated institutions in the maritime field, linked by commonalities and externalities". These researchers and others like Pinto et al. (2015) use Porter's definition to explain maritime clusters' characteristics and dynamics at the national level. This is done through a detailed analysis of the strategies of companies and markets. Studies regarding Norway (Benito et al., 2005) show that innovation and entrepreneurship, as well as the strong interdependencies between actors in the maritime sector, are key factors that have caused the maritime cluster's growth in the country

Other researchers, such as Doloreux et al. (2016) and Monteiro et al. (2013) define maritime clusters in terms of geographic concentration of maritime industries, within a regional community, and a network of companies and institutions that support the development of those industries. Doloreux et al. (2016), in a work-related to Québec/Canada, refer that the concept of clusters has been increasingly integrated into policies for economic development. Monteiro et al. (2013) present definitions of maritime clusters that include different maritime activities and that support undertakings such as training, research and development, public administration and others related to the sector. In these definitions, two different subsystems related to the maritime cluster are observed. One apprehends maritime economic activities. The other involves organizations such as universities, research centers, and specialized services.

From those perspectives, a maritime cluster is a spatially organized structure, where the role of companies' right location has been sometimes overlooked despite the remarkable and impressive evidence that the success of economic growth, innovation, and competitiveness is geographically concentrated in many areas. This occurs when we refer to Wall Street's financial area, or to the highperformance auto industry in Germany, or even the electronic products industry in Japan. In this sense, Porter (1998) characterizes clusters as a critical mass in a given location and experiences unusual competitive success in a specific area. Porter says that clusters represent a rooted feature, practically existing in any country and even in metropolitan economies, especially in the most economically advanced economies. Regarding the referred to concentration, geographical proximity encourages the establishment of interactive networks and between different organizations. This interaction fosters innovation and entrepreneurship. Nevertheless, a differentiation of the maritime cluster concept, contrary to that of clusters with activities based essentially on land, can be found in the definition provided by the Europe of the Sea project. Here a maritime cluster is "...a network of firms, research, development and innovation (RDI) units and training

organizations (universities, specialized schools, etc.), sometimes supported by national or local authorities, which co-operate with the aim of technology innovation and increasing maritime industry's performance" (CPMR, 2006).

4. The Potential for the Setting Up of Maritime Clusters in Angola

This section analyses the productive sector of Angola, the diversification of country's economy and the role that clusters as spatial concentrations of economic activities can play in the country, constituting a valuable tool for developing its economy. This is of great relevance for many developing countries, especially if they are rich in natural resources. In the analysis, the focus is the maritime clusters, and the potential for setting up them in Angola, a developing country.

In general, in the developing countries' production systems located in Sub-Saharan Africa, a substantial part comprises micro, small and medium-sized enterprises (MSMEs). They represent a wide sector of traditional companies, which are usually characterized by using obsolete machinery and employing less-skilled workers. Besides, a small sector of a medium, large and few modern companies can adopt the best international production practices, employ the best-skilled workers, and direct the marketing of their products largely to the international market (Yoshino, 2011). It is in this context that Angola fits in.

In general, in the developing countries' production systems located in Sub-Saharan Africa, a substantial part comprises micro, small and medium-sized enterprises (MSMEs). They represent a wide sector of traditional companies, which are usually characterized by using obsolete machinery and employing less-skilled workers. Besides, a small sector of a medium, large and few modern companies can adopt the best international production practices, employ the best-skilled workers, and direct the marketing of their products largely to the international market (Yoshino, 2011). It is in this context that Angola fits in.

In Angola, apart from oil and diamonds, the productive sector is very fragmented and characterized by MSMEs, being the State, the main employer. Around 58%¹ of them are legal, but with strict access to financing². The remaining enterprises belong to the informal market. Regarding the legal enterprises, the National Institute of Support to Small and Medium Enterprises (INAPEM) refers to the existence of 12 thousand MSMEs. Many of those enterprises, about 70 percent, do not start their activities due to financing difficulties resulting from hindrances in accessing credits. In respect to the enterprises in general, the lack of technical skills of the entrepreneurs enabling efficient management of their businesses is pointed out as a cause of some bankruptcies.

Given this situation, and considering the positive impact of enterprises' geographical concentration, the Government might create the conditions for economic growth if it is responsive to the real existing needs, through articulated policies amongst them are of significant importance those that promote the development of clusters.

The Angolan economy is based mainly on crude oil production, representing around 70% of State revenues and 98% of exports. This dominant role of crude oil export and the growing oil prices in the international markets up to 2015 have prevented the diversification of the economy and the necessary reforms both fiscal and good governance. The ownership of abundant and high profitable crude resources did not generally encourage incentives to acquire skills in other areas of knowledge.

The international financial crisis that started in 2008 and 2015 led to a drop in crude oil price affected the

¹ Data cited by Deloitte and contested by the INAPEM.

² Available online at: <http://www.valoreconomico.co.ao/economia-politica/item/1700-angola-tem-12-mil-micro-pequenas-e-medias-empresas-legais>, accessed on 27 February 2018.

Angolan economy. The decline and volatility of international oil prices highlighted the need for Angola to diversify its economy, maximizing its productive sector's performance apart from oil exploitation and optimizing the national logistics and transport network.

Thus, the Angolan Government decided to create a diversified economic base for the country, on the one hand, to get out of the strong dependence on oil exports and imports of consumer goods. On the other hand, to contribute through economic growth and sustainable development to the country's integration in the SADC and the world economy. For carrying out those objectives, the National Development Plan (PND 2013-2017) set political priorities, of which we highlight "the setting up of industrial clusters and business networks for increasing the added-value and enhancing the creation of positive externalities in the economy..." (PND 2013-2017, p. 63). The implementation of the referred priorities would take place based on Action Programs, particularly the Program for the setting up of Priority Clusters. The transport and logistics mega-clusters are amongst the clusters identified as a priority that has been reiterated by the National Development Plan (PDN 2018-2022).

The Angola Long-Term Strategy (ELP 2025) includes the transport and logistic mega-clusters development as one of its strategic policies. Those mega-clusters should be established in association with a logistic network supported by the intermodality where maritime transport would have a fundamental role, given the objective of setting up of maritime clusters. In this context, the Transport, Logistics and Distribution Strategic Policy and the setting up of maritime clusters proceed with the projects developed between 2013-2017. Linked to the setting up of maritime clusters in Angola are, as the first initiative, the logistical activities in the port of Lobito and the Benguela rail-road intermodal transport, that are of relevant importance for the economies of the landlocked countries in southern and southern-central Africa. The referred to logistical activities are meaning a logistical network having infrastructures geared towards delivery, storage and even transformation of products, that is to say, a value chain that goes from production to consumption through transformation.

The Government's Program for Restructuring the Logistics and Distribution of Essential Products to Production (PRESILD), approved in October 2007 initiated the logistic network establishment. In this respect, the PDN (2018-2022) refers to implementing the National Network of Logistic Platforms to support the distribution and trading of products in the country and internationally. On the one hand, the platforms should promote economic growth and economic development for reducing the existing regional asymmetries. And on the other hand, the country's economic integration in the SADC region.

In Angola, the Program for the development of logistical platforms supported by a network of transport infrastructures is part of a strategy for solving the existing serious problems regarding the flows of materials and the distribution of goods, in special products from the national agriculture. In 2014³, it was officially announced the intention of Government to build road-railway logistics platforms in the Provinces of Huambo and Mexico, serve the Lobito corridor, and contribute to the growth of the Angolan economy by increasing the distribution capacity of the national production. The platforms should also enable the provision of logistical services to the landlocked countries in the Southern and Central African region.

The Lobito corridor extends from the coast (port of Lobito) to the Luau border with Zambia reaching Zambia and the Democratic Republic of Congo. It is based on rail transport, with operations requiring road-rail multimodal transport, which integrates the sea transport. In 2014³, and according to the Director of the National Shippers

³ Jornal de Angola. Segunda-feira, 3 de Novembro de 2014.

Council⁴, there was also an intention of the Government to create the platforms of Malange, Moxico, Menongue, Lubango, Cabinda and Soyo, each one with the capacity to handle more than two thousand containers. The purpose of all logistical platforms supported by multimodal transport networks including road, rail and sea and corridors, was to encourage the agglomeration or concentration of enterprises in the regions. This concentration would comprise the production, distribution and transformation of the national products from the agriculture, cattle-raising and respective industries, and the exploitation of the country's mining resources.

A strategic objective behind the PND (2018-2022) is to bring about this agglomeration and extend it to the whole of the national territory which will allow, similarly to what happens with the maritime clusters in many countries, in particular of the European Union, Asia and South America, an economic development providing a high level of employability (World Bank, 2009; The Danish Shipowners' Association, 2010; Parrili, 2007). In Angola, the creation of jobs represents the distribution of income to many families that otherwise would be unemployed or in a precarious situation, with a strong effect on the spreading of informal economic activities. Given the relevant economic and social impact, programs and policies aimed at promoting clusters have also become political tools in Angola. For this reason, there is also a greater interest of the Government in assessing the effectiveness of such policies and programs in the countries mentioned above.

For Angola, the programs' assessment of the relevance of clusters must be well-founded and reliable because it is important to legitimize new policies or programs and facilitate learning from involved processes. Concerning this matter, Sölvell (2009) defines the evaluation of the cluster's programs as a careful evaluation of the merit, the carrying out, and the effects of the public interventions in progress or finished, to enable a gain of knowledge and improvements in future actions.

5. Conclusions

The determining role of logistic and transport infrastructure for regional economic and social development was emphasized. It has a decisive impact nevertheless only when the benefited regions have at the outset a favourable development potential. This potential exists in many regions of Angola, a country where the geographical situation potentiates maritime clusters' establishment, intensive in logistical operations. However, it might be fulfilled if the obvious comparative advantages of location are associated with logistical conditions and operating systems that foster competitiveness gains and allow efficient supply chain management. This means that it is necessary to add the structural element and the services to the comparative advantages of location, for fostering gains in competitiveness.

As a structural element, we consider the existence and maintenance of physical infrastructures, facilities, technologies and services that allow a continuous and efficient flow of materials and other flows related to the logistic operations. A limited supply of infrastructure and services regarding transport and logistics is considered a limiting factor for the country's development.

Angola has a great potential for setting up industrial clusters in particular maritime clusters due to the railways' network, ports, shipyards, and refineries. These maritime clusters might aggregate activities related directly or indirectly to the petrochemical industry, shipping, forwarding agencies, public services, fisheries, agro and cattle-raising industries, industrial salt production, mining as well other economic activities that are generated in the respective port hinterlands to serve not only the domestic market but also the Southern and Central African countries.

⁴ Mentioned by Angop in Jornal de Angola – Quinta feira, 18 de Setembro de 2014.

Thus, depending on its links with the rest of the economy and not only on the cluster's internal dynamics, maritime clusters may be an instrument to boost a local and regional economic development that will reduce the regional asymmetries and poverty associated with unemployment, by enhancing the growth of solid MSME in the country and the SADC as well. However, for this to occur, as referred to before, it is necessary that in addition to the comparative advantages of location, other factors that promote competitiveness gains must be present.

Maritime clusters employ workforces in general with technical skills for the management of maritime and land-based activities. The strong linkage between all the parts involved in those clusters is reflected at the processes' level, requiring overtime a versatility of the workforce. They might give rise to the occurrence of joint activities at the level not only of innovation and joint projects but also of research and development.

It will be the responsibility of the Government of Angola to take initiatives for the emergence of a maritime cluster supported by the activities mentioned above, due to the necessary great investment in infrastructures that are required.

As an Action Program, the Government has decided to begin with a maritime cluster associated with the port of Lobito and the Lobito corridor. Thus, its essential role is to boost the business environment that is necessary for the region of the Benguela Province to become attractive to the foreign direct investment and to catalyze a significant economic development of the region. This condition is also valid for other regions as the Province of Namibe where a maritime cluster might be set up linked to the road-railway system and the port of Moçamedes.

In Angola, the Transport and Logistics Sector has to play a decisive role in the setting up of maritime clusters and any local, regional and national macroeconomic development scenarios. A role that derives from the fact that they guarantee the mobility of people and goods fomenting populations' settlement in their local of origin and the rehabilitation and extension of the country's productive sector. The maritime clusters are fundamental for the effective integration of the Angolan economy in the sub-region of the African continent, particularly in the SADC, a potential market that, in 2014, pointed to above 300 million people, and a Gross Domestic Product of around US \$300 billion.

References

- ANGOP (2018). "Vitalidade das economias Africanas depende do potencial marítimo", *Relativo ao 2º Seminário de Reflexão sobre a Autonomização das Marinhas Mercantes* (Luanda).
- Benito et al. (2005). "A cluster analysis of the maritime sector in Norway", *International Journal of Transport Management*, Vol. 1, No. 4, pp. 203-215.
- Bravo M. L. (2002). "A importância das infraestruturas de transporte para o desenvolvimento económico: O caso do Caminho-de-Ferro em Angola", *Revista dos Economistas*, ISEG-Universidade de Lisboa, JUL/SET 2002.
- Carpinetti R., Galdámez C. and Gerolamo C. (2008). "A measurement system for managing performance of industrial clusters: A conceptual model and research cases", *International Journal of Productivity and Performance Management*, Vol. 57, No. 5, pp. 405-419.
- Doloreux D. (2017). "Québec' coastal maritime cluster: Its impact on regional economic development, 2001-2011", *Marine Policy*, Vol. 71, pp 201-209.
- Doloreux D., Shearmur R. and Figueiredo D. (2016). "What is a maritime cluster?", *Marine Policy*, Vol. 83, pp. 215-220.
- Easterby-Smith et al. (2002). "Management research — An introduction", London: Sage Publications.
- Srivastava S. K. (2007). "Green supply-chain management: A state-of-the-art literature review", *International Journal of Management Reviews*, Vol. 9, No. 1, p. 53, doi: 10.1111/j.1468-2370.2007.00202.
- FMI (2018). Angola Temas Seleccionados, Relatório do FMI nº 18/157, Junho 2018.
- Grimstad S. and Burgess J. (2014). "Environmental sustainability and competitive advantage in a wine tourism micro-cluster", *Management Research Review*, Vol. 37, No. 6, pp. 553-573.

- Holte E. A. and Moen Ø. (2010). “Successful maritime clusters: Key drivers and criteria, innovation in global maritime production 2020”, Norwegian University of Science and Technology Department of Industrial Economics and Technology Management.
- Hotelling H. (1929). “Stability in competition”, *Economic Journal*, Vol. 39, pp. 41-57, in: Charlie Karlsson (Ed.) (2008), *Handbook of Research on Cluster Theory Series*, Edward Elgar Publishing Limited.
- Jornal de Angola (2014). *Segunda-Feira*, 3 de Novembro.
- Jornal de Angola (2014). *Quinta Feira*, 18 de Setembro.
- Ketels et al. (2012). “Strengthening clusters and competitiveness in Europe — The role of clusters organizations”, *The Cluster Observatory*, Center for Strategy and Competitiveness.
- Ketels C. H. M. and Memedovic Olga (2008). “From clusters to clusters-based economic development”, *Int. J. Technological Learning, Innovation and Development*, Vol. I, No 3, pp. 375-392.
- Krugman P. (1991). *Geography and Trade, Eyskens Lecture Series*, Leuven University Press and MIT Press, Leuven and Cambridge, Mass.
- Leitão Gabriel H. (2020). “Os clusters e o desenvolvimento local, regional e nacional: A formação de clusters marítimos em Angola”, unpublished Ph.D. thesis, Faculdade de Economia de Angola, Universidade Agostinho Neto.
- Marshall A. (1920). *Principles of Economics: An Introductory*, Macmillan, London.
- Monteiro P., de Noronha T. and Neto P. (2013). “A differentiation framework for maritime clusters: Comparisons across Europe”, *Sustainability*, Vol. 5, pp. 4076-4105, doi: 10.3390/su5094076.
- Pagano et al. (2016). “The impact of the Panama Canal expansion on Panama’s maritime cluster”, *Marit. Policy Manag.*, Vol. 43, No. 2, pp. 164-178.
- Parrilli M. D. (2007). *SME Cluster Development — A Dynamic View of Survival Clusters in Developing Countries*, Palgrave Macmillan.
- Stavroulakis P. J. et al. (2019). “Case studies on transport policy”, doi: <https://doi.org/10.1016/j.cstp.2019.10.008>.
- Plano Nacional de Desenvolvimento (PND). 2013-2017 República de Angola.
- Plano de Desenvolvimento Nacional (PDN). 2018-2022 República de Angola.
- Pinto A. R. and Combe C. (2015). “Cooperation and the emergence of maritime clusters in the Atlantic: Analysis and implications of innovation and human capital for blue growth”, *Marine Policy*, Vol. 57, pp. 167-177.
- Pinto J. V. (1975). *Background and Development of Location Theory*, The University of Oklahoma.
- Porter, M. (2014). “Reshaping regional economic development: Clusters and regional strategy”, U.S. Cluster Mapping Launch Event, University of Minnesota, Minneapolis, MN, September 29th, 2014.
- Porter M. (2003). “The economic performance of regions”, *Regional Studies*, Vol. 37, Nos. 6/7, pp. 549-578.
- Porter M. (1998). “Clusters and the new economics of competition”, *Harvard Business Review*, Vol. 76, No. 6, pp. 77-81.
- Salvador R. (2014). “Maritime clusters evolution: The (not so) strange case of the Portuguese maritime cluster”, *Journal of Maritime Research*, Vol. XI, pp. 53-59.
- SADC (2016). Prestação de serviços de Assistência Técnica para o Apoio Institucional ao Secretariado Nacional da SADC- Europe Aid/131653/D/SER/AO (FED/2012/305-582 (EC). Missão nº3: Estudo sobre o Impacto da Adesão à Zona de Comércio Livre da SADC nas receitas alfandegárias.
- Sölvell Ö. (2009). *Clusters: Balancing Evolutionary and Constructive Forces*, Ivory Tower, Stockholm.
- Scott A. J. (1988). *New Industrial Spaces*, London: Pion.
- Srivastava S. K. (2007). “Green supply-chain management: A state-of-the-art literature review”, *International Journal of Management Reviews*, Vol. 9, No. 1, pp. 53-80, doi: 10.1111/j.1468-2370.2007.00202.
- Stroz Friedberg Limited (2016). *Angola: Country Risk Report*.
- The Danish Shipowners’ Association (July 2010). “The economic significance of maritime clusters. Lessons learned from European empirical research”, working paper.
- Valor Económico, accessed on 27 February 2018, available online at: <http://www.valoreconomico.co.ao/economia-politica/item/1700-angola-tem-12-mil-micro-pequenas-e-medias-empresas-legais>.
- Yutaka Y. (2011). “Industrial clusters and micro and small enterprises in Africa: From survival to growth”, The International Bank for Reconstruction and Development, The World Bank Washington, D.C.
- World Bank (2009). “International logistics performance index”, in: *World Economic Forum’s The Global Enabling Trade Index*.