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Public policies as a factor for innovations in customs procedures: a Case Study by Itri - Rodoferrovia e Serviços Ltda.

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Abstract

The effort to improve organizational changes to the import process in order to meet fiscal requirements faces issues concerning immediate cargo placement by port terminals, this being the reason for lack of space in the Santos Port primary zone. This results in choosing alternative bonded warehouses bearing better physical capacity outside the Organized Port Zone. The present study identifies the public policies that allowed the extension of bonded warehouses, which, associated with organizational innovations applied to a company in the transportation logistics sector, have brought benefits and improvements to rail modal performance by the utilization of the Customs Transit Declaration (CTD) called DTA - CARGA PÁTIO[1]. This kind of customs procedures has been developed as an essential third-party logistics service. Customs procedures are analyzed under the aspect of intermodality in the case study of a road-rail freight carrier operating between the City of Suzano-SP and Greater ABC-SP region. This study's findings show that rail modal performance is influenced by public administration, which can limit competitiveness of modal and freight transporting systems by the Port of Santos.

Key words: DTA - CARGA PÁTIO. Public Policies. Rail modal. Intermodal Transport

Introduction

The handling system of cargo stored in secondary zones called Estações Aduaneiras do Interior (EADI)[2] or Dry Ports, Centro Logístico Industrial Aduaneiro (CLIA)[3] makes product consignment extremely easy by means of procedure standardization. According to Aguiar & Santos (2001, p.194), "The goods movement is undertaken within a broad field, often referred to as logistics management"[4].

As per freight transportation, the competitive advantage offered by EADI, according to definition from Customs Regulation by Decree nº. 4543, December 26th of 2002, has become evident since the implementation of the DTA - CARGA PÁTIO customs procedure, Regulatory Instruction (RI) nº. 248 of 2002 of the Secretaria da Receita Federal - SRF (Federal Revenue Secretary). This instruction was issued to regulate and control cargo removal from the primary zone of the port to the secondary zone of bonded warehouse.

Under the perspective of transportation service performance, rail modal has become more productive and competitive regarding the operation of cargo removal from the Port's primary zone to the Secondary Zone (EADI). As stated by Ângelo (2005), there is a need for monitoring external indicators in order to assess logistics performance in transportation management. Much more than service quality follow-up tools, provided by the value chain partners, aiming at a possible negotiation, external indicators for logistics performance are fundamental to define internal policies and processes linked to their partners' performance. Moreover, they are essential to coordinate policies that guarantee competitiveness in freight transportation.

In the case of Baixada Santista's[5] railway network, basically operated by MRS Logística S/A and América Latina Logística (ALL) S/A, in which railway operations are harmed due to invasions led by the homeless, this reality jeopardizes the lives of the population irregularly residing along the railway company’s domain strip. As Rodrigo Vilaça, Director of the Associação Nacional dos Transportadores Ferroviários (ANTF)[6], stated, "Risk of accidents, loss of operational performance on the railways, due to the reduction of the average speed of 40 km / h to 5 km / h in urban areas, vandalism and difficulty in to capture cargo with high added value, is the main problems caused by irregular occupation of the track field"[7] (QUEIROZ, 2008, p.18).

As a consequence, it is comprehensible that cargo depots' strategic capacity keeps focused on the ability to plan and manage the logistics chain as a way to gain competitive advantage through the holistic vision of freight processes and to adjust operations in conformance with the market dynamics offered by competitive forces (FINE, 1999).

Nevertheless, in order to make customs transit removal operation feasible, huge operational problems related to cargo handling arise in the Port's railway network, and they are bigger than those concerning the economic aspects, which limit intermodality implementation.

Although the situation in Latin America's largest port is still chaotic, the port's users have been annoyed by traffic bottle-necking in the primary zone (ports and airports), but this can be mitigated by Dry Ports' activity, earlier called EADI. Besides lessening the quantity of goods

kept in transit areas, Dry Ports provide a series of services and benefits by means of special customs regimes and reduced prices in storage (ABEPRA, 2004). However, specifically for cargo removal to Dry Ports, it is important to get acquainted with customs services and correlative activities offered in those bonded warehouses. The framework analysis of the several options of bonded warehouses and special customs systems are fundamental to adjust services to clients' demands.

To do so, the present study identifies the public policies that have made the establishment of bonded warehouses viable and, together with organizational changes, have yielded benefits, such as improvement to rail modal performance, by using the Customs Transit Declaration called DTA - CARGA PÁTIO. This kind of customs process has been developed as a service to third party logistics and is as essential as transportation services.

As a case of seeking for sustainable business development, the modality DTA - CARGA PÁTIO, which grounds the customs clearance procedure, is essential regarding logistics management in the sense of generating results for all integrated parts of operations.

1 Public policies and the creation of the EADI

In the development of urban policies for freight, the public sector has been concerned with analyzing the totality of transportation costs and impacts on urban zone. It has been noticed, thus, that the general goal of policies and planning related to freight transport is to find and implement measures meant to reduce social costs total of goods movement extending them to the needs of cargo itself, in the analysis of the chain of the logistics cost preferentially allied to goals of lesser impact for society. These social costs are constituted by six components, transformable into organizational objectives (SANTOS & AGUIAR, 2001, p.195):

- Contribution to regional, state and national economy;
- Operation efficacy (including traffic bottle-necking);
- Safety for Road Transportation;
- Environmental impact;
- Community costs (especially the cost of road transportation construction and maintenance);
- Urban form.

Since the development of urban policies and the creation of the Inland Customs Stations (Estações Aduaneiras do Interior [EADI]) or Public Bonded Warehouse Terminals, it is possible to establish the structure tending to social cost minimization and aiming at the transportation sector, offering better competitiveness of national products in foreign trade (KEEDI, 2007). According to Vieira Filho (2002) and the Ministry of Exchequer - Federal Revenue Secretary (Dry Ports), " the laws and regulations have about the operation of dry ports are: No Laws No.8987 of 13/02/95 (available on the system of granting permits and public services through bidding) and No. 9074 of 07/07/95 (Article 1, section VI, includes the customs stations and other terminals customs of public use, not installed in the port area or airport whether or not made public works)"[8]. According to the author, Brazilian dry ports, created in the early 1970's by Minister Antonio Delfim Netto, were designed to work as public use bonded terminals, located

in the secondary zone. Their goal is to lessen the flow of goods occurring in the primary zones (located in ports, airports and customs entry points) as well as offering customs clearance procedures right at the place. Before the creation of the EADI, there were only the Terminais Retro-portuários Alfandegados - TRA (Customs Bonded Dockside Terminals), which were also known as "dry ports with draught" capable of receiving cargo, in areas connected to the port, in accordance to the distance established to this purpose, as a way to overcome saturation of ports facing an import volume growth boom. By that time, customs bonded warehouses were regulated by modern laws of special regimes, most of which still in force nowadays. This legislation has highly accelerated evolution of Brazilian exporting and importing markets, consequently boosting Brazilian foreign trade in general. Vieira Filho (2002) also comments that during President Fernando Henrique Cardoso's mandate, in 1995, a regulatory policy was established ruling dry ports by means of provisional measure in the civil service, determining, thus, that public bidding is mandatory to operational start-up.

As aforementioned, the initiative towards the creation of EADI or Dry Ports comprised measures taken by public policies that circumstantially made port operation efficacy feasible, at least temporarily, by lessening port's traffic bottle-necking. The result obtained by port terminals regarding import freight outflow by means of operational productivity makes social costs reduction possible through high operational performance and turns port logistics cost viable by centralizing transportation inside road transport operational areas located in the Organized Port Zone, mainly in the use of rail modal (SOARES, 2008).

Railway transportation, as well as road modal, starts in the primary zone, which is the origin place of the cargo in the Organized Port Zone for the analysis of strategic geographical positioning to be considered in this study on the multimodal transportation. The Instalação Portuária Alfandegada - IPA (Bonded Port Area) is a port terminal contained in the alongside-ship perimeter and delimited by local customs authority. According to Implementing Regulation SRF nº. 1743 of 12 of August of 1998, in the Bonded Port Areas (IPA) meant for public use, the practice of any operations related to storage of goods that might not be under customs control is totally interdicted. In case a terminal is located in a storage complex, whose cargo have not been nationalized yet, goods custody or transportation must be physically separated from that area reserved to handling, and storage of goods that might not be under customs control.

According to Duarte (1999, p.33), concerning the aspect of market interaction "The EADI have the same bureaucratic structure needed to trade and usually concentrated in ports, airports and frontier posts. The authorities of the Customs - responsible for overseeing the collection of import taxes -, the supervisors of Health Surveillance and agents of the Federal Police"[9].

During transporting activities under customs transit, cargo is destined to the secondary zone, specifically to bonded areas, where bonded warehouses are located; as an example we can cite the EADI, public use terminals, also named dry ports. This kind of bonded area is usually located in regions of concentration of import and export freight destined to provision, by third parties, of goods handling and storing services, and that enables administrative customs resources, such as temporary tax suspension for their ulterior exemption in computing the added value of the product. To create the perception on the port logistics benefits from the EADI, it is necessary to know the dimensions related with the function for goods loading and unloading infra-structure (DUARTE, 2002).

As Dias and Endlich (2004, p.135) state, the logistics rationale in the economic ambit is related to the market, to its logics and to the supply chain management, with a progressively faster, more

efficient and lower costs flow. The prompt response to demand is a fundamental factor of flexible operation with little stock. Just-in-Time system demands an extreme rationale for product movement.
Such an advantage is strongly bound to the aspect of the EADI utilization, because it requires the efficacy of rail modal as a link to port competitiveness, with emphasis on import. Therefore, this postulates the need for public policies compatible with the regional demands.

1.1 The public policies in the urban transportation of cargo

The true essential capacity of the company is focused on the ability of planning and managing the supply chain, in order to offer a holistic view of activities, capacities and knowledge of such a chain, in a market where the competitive forces are in constant mutation (COX, 2004).
In Brazil, intermodal transport operation is the one that occurs by the combination of two or more modals, from origin to destination of products, by using one or several carrier's agreements with their respective and specific document for each covered distance (DUBKE, FERREIRA & PIZZOLATO, 2004). For each stage and each carrier, liability is held by before the freight shipper or cargo owner due to losses susceptible of pleadings (NTC DE LOGÍSTICA E TRANSPORTE, 2006, pg.146). Law nº. 6288, of 12/11/1975, that provides for containers and other forms of unit load, has defined intermodal transportation as one in which "The cargo is transportated using two or more transport modals"[10] (art. 8, IV). Several modals can be adopted, but, knowledge of intervening public policies and intervening agents in the process must be acquired so that the operation can be competitive.
To identify intervening agents and understand the urban system of freight services, it is necessary to understand the problems faced by the present road system of port transportation. To understand the complexity associated with the development of the urban system of freight services, three topics should be observed (SANTOS & AGUIAR, 2001):

• Physical distribution process of urban freight, that comprises several internal transporting activities and several stages of handling and transportation between a sender and a consignee receiver, as well as logistics management of the process;
• Participants in the urban process of freight transport (shippers, receivers, carrier companies, truck drivers, terminal operators and companies, and operators of various transport modes, such as road and railway concessionaires as well as waterway concessionaires, and traffic authorities, government);
• Role and nature of urban freight (main features of urban freight), freight as an economic activity, urban demand for cargo, relation between supply and demand.

Urban policies are innovations and measures of common interest that, without immediate investment resources, seek for new alternatives that vary according to infra-structure, productivity, operational costs of each modal in particular, distinct in each region. In practice, private management in the freight transportation sector arose from the obstacle to obtain emerging investments by public management. The increment of public policies towards promoting railway utilization is sustained by objectives associated to Sustainable Transportation, as shown in Chart 1.

General Objective	Specific Objective	Indicator
Quality	Mobility / Accessibility	• Travel Time • User's Expense
	Economic / Energy Efficacy	• Relation Cost/Benefit of the Projects • Fuel Consumption
	Satisfaction and Safety	• Number of Accidents
Sustained Development	Better Distribution of Benefits	• Selective Reduction of Costs
	Job Generation	• Number of Generated Jobs
	Use of More Efficient Modals	• Change to Modal Matrix
	Environmental Quality	• Environmental Standards
Competitiveness	Integration in Transporting Activities	• Total of Transfers in the Terminals
	Price Reduction	• User's Expense
	Agricultural Production Flow	• Cost for Regions with Intense Agricultural Activity
	Geographical Range	• Transportation Cost for Regions Outside the State
Feasibility	Political-Institutional and Financial	• Qualitative Assessment

Chart 1. Objectives of Sustainable Transportation.
Source: São Paulo State Transportation Secretary (Secretaria de Transportes do Estado de São Paulo) (2008).

Dubke, Ferreira & Pizzolato (2004) mention that presently in Europe there is a trend towards integrating the road-rail transportation system. To Boudouin (1996), this initiative is associated to the benefits that integration brings up; among other benefits, the following stand out: clearing the main trading hubs from heavy-truck traffic, environmental issues such as air and sound pollution, and risks of accidents. It is also evident that the relations between road and railway systems are no longer conflicting among client users. Intermodality is a practice that has grown widely in a way to improve global efficacy in goods movement system. According to Martins & Caixeta Filho (2001, p.15):

> "The infrastructure effects in general conditions of economy efficiency are quite evident. The availability of adequate infrastructure leverages the efficiencies of the production system, not just individual businesses. It happens because occurs growth at the final product, increasing productivity, while simultaneously reducing the cost per unit. Higher productivity, in turn, translates into raising the remuneration of factors, which stimulates investment and employment"[11]

In Dry Ports, among the main benefits that can influence an organizational change by means of cargo handling logistics procedures in import, permit processes for storing operation of imported merchandise without exchange cover, temporary tax suspension, and the possibility of partial freight nationalization are also available.
Under this circumstance, products can remain in the bonded warehouse for a one year's deadline without freight nationalization, extended for an equal period, which produces economic-fiscal benefits to Dry Ports' users. In the EADI, as an example of benefits from utilizing customs

regimes, we can list: the drawback operation (modality largely employed by companies importing supplies and components that are applied to manufacturing of products destined to foreign market); taxes (II[12], IPI[13], ICMS[14] and others) incident upon supply and component import are suspended and afterwards are converted into exemption, as soon as effective product export occurs.
Another interesting aspect of the EADI is the capacity of receiving empty containers for export unit load inside the bonded area (NTC DE LOGÍSTICA E TRANSPORTE, 2006). To the operational purpose of transportation efficacy, it is necessary for the EADI to have well planned road accesses, next to the main roads and an adequate internal railway infra-structure, as well as the proximity to the domicile of the implicated economic agents for each operation, which results in reduction of total logistics costs and in procedure simplification for the tax-payer.

1.2 Just-in-Time

In Brazil, there was the need to develop changes to the industry segment aiming at making it more efficient from the decade of 1980's on. Companies came on to re-examine their organization, their production structures, their processes and their quality with the purpose of gaining better results under the point of view of performance. With such concerns, higher costs generating aspects, which had been in hiding, started emerging, suggesting a process leap so that they could be improved and become more efficient (BORELLA & PADULA, 2006).
Thus, the Just-in-Time (JIT) tool seemed an alternative management to coordinate production with demand. This philosophy principle is to "pull" production from the market, and consequently streamlining production resources (CORRÊA & GIANESI, 1996). Under that perspective, the JIT stimulates and favors general reduction of costs and stocks, quality improvement, productivity and flexibility increase.
This alternative allows manufacturers to adjust the amount of each merchandise to be produced and in the same length of time, and as a result minimizing costs and stocks. According to Bowersox & Closs (1996), manufacturing companies relate internally and externally with clients and suppliers. See Figure 1.

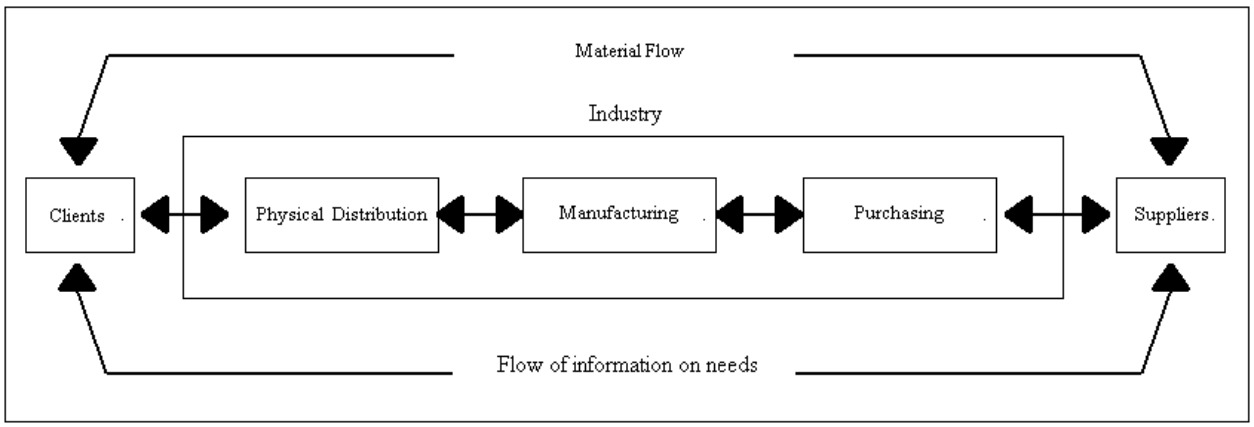

Figure 1 - Productive chain of manufacturing industries by JIT as integrated logistics management.
Source: Bowersox & Closs (1996).

This flowchart assumes that clients put pressure on in order to achieve fulfillment of their needs, so that suppliers develop JIT production and supply practices. This factor can be distributed along the supply chain with the aim of reducing costs, minimizing production cycles and maximizing perceived value generation per final client. This integration seeking for better market servicing is the factor that leads to a more efficient and competitive logistics system (BORELLA & PADULA, 2006).

2 Methodology

The adopted methodology is, as to its scopes, explanatory and applied, as stated by Vergara (2005, p.47): "The explanatory research has as main objective is to make something intelligible, justifying reasons. Therefore aims to clarify which factors contribute in some way for the occurrence of a particular phenomenon"[15]. As a primary strategy, theoretical orientation was used, once the theoretical propositions grounding this study reflect the ensemble of research issues. The theory displays a set of propositions as well as the circumstances within which these propositions are considered true. Placing the challenge in face of the theory, even knowing what it might mean, can manifest some knowledge by means of the adopted theory and practice themselves.

The research is explanatory because it tries to elucidate the reasons to create dry ports when public policies associate the interest in utilizing these areas for the intermodality practice in order to make intelligible its positive contribution towards logistics within Brazilian foreign trade. At the same time, it is also an applied research as it exposes the need for solving problems inherent to traffic bottle-necking and jamming and conflicts between transportation modals in port areas, whose fleet's productivity improvement is obtained by means of a specific customs procedure named DTA - CARGA PÁTIO. This consists of customs clearance of import freight, whose nationalization is achieved by the EADI.

As to the investigation means, this will be a case study providing documentary expedient and field research (YIN,2008). It points out that the case study is an adequate construction under several circumstances. Firstly, it is analogous to an experiment in which the same conditions justify the case study. Thus, a reason to adopt a case study is similar to present a play carefully tested on a well formulated theory (YIN, 1994). To achieve that, the object of this research is a third-party logistics from the rail modal. The relevance of choosing ITRI - Rodoferrovia e Serviços Ltda. is grounded on the fact that it works out about 4,500 TEU’s (Twenty Equivalent Unit) per month for several importers and exporters operating in the freight transportation service with available wagons exclusive to the hired daily rail shuttle service. This company presents the implementation of positive results obtained by practical innovations regarding customs clearance of freight flow on the Santos/Suzano route to the Dry Port (CRAGEA), which is made possible by operating the intermodality system in container transportation with expertise, in the analysis of the logistics performance of freight transportation of this flow.

The analyzed results were obtained by the company operating in the freight customs clearance procedure in the Port of Santos, and this analysis has enabled logistics integration. By affirming, among other propositions, that a case study seeks, therefore, to forecast and explain phenomena that, as a whole, comprise the ever-changing administrative environment (HAIR, 2005), in this

study, documentary investigation and field research were necessary. By following principles as the ones demonstrated by Marconi & Lakatos (2001), the documentary research is consequent in this case study because it refers to information registered for consultation, study or testing of documents obtained through primary or secondary sources, which do not endure scientific treatment, but complement the theoretical referential of this case study.
Documentary investigation and analysis were necessary in a complementary way to detail specificities of this kind of customs procedure, indispensable to the operational management of the analyzed company. During this stage, the principal laws, decrees and regulations related to customs clearance procedures were cited, mainly the available and essential information of RI-248/2002 for this action. Field research was also carried out, including semi-structured interview developed from a partially structured syllabus with open questions. Such a questionnaire was applied by the operations manager of the aforementioned company, who also participates in the Board of Directors of the Câmara Brasileira de Contêineres (CBC) (Brazilian Chamber of Containers), Transporte Ferroviário e Multimodal (Multimodal and Rail Transportation).
As an explanatory case study, this article shows the results obtained by the company in customs clearance procedure in the Port of Santos by logistics integration, efficacy and results that positively impact on its operation. A pertinent conceptual review led to considerations with the purpose of contributing for effective comprehension of the presented issue.

3 Customs procedures and intermodal transportation of ITRI

ITRI - Rodoferrovia e Serviços Ltda., is a road-rail transporting service provider and Multimodal Transportation Operator (Operadora de Transporte Multimodal [OTM]), and duly certified by the Agência Nacional de Transporte Terrestre (ANTT) (National Agency of Haul Transportation) to perform such an activity. For intermodality practice, a railway track is used exclusively for wagon unloading inside a bonded warehouse located in Suzano (EADI-CRAGEA), which enables railway transportation logistics by offering daily express trains, with pre-fixed schedules, to its users. Users of special customs procedures are usually automotive manufacturers with huge daily cargo volume in the Port. The alignment for integration with suppliers and clients of most of these companies depends on several factors linked to the supply chain and essential for the utilization of the customs procedure of DTA with Yard dealing (SOARES, 2007).
In the decade of 1990's, gradual participation of rail modal in the general containerized cargo segment was noticed after its privatization. Consequently, the intermodal transportation has been adopted as a more and more efficient resource for operational performance assessment of this segment.
As for containerized cargo, the increase of the participation of large companies widely adopting intermodal transportation strategy is utterly noticed, mainly when, concerning unimodal rail transportation logistics, there is no railway infra-structure inside the plants (CBC, 2008).
One of the reasons for this growth is due to the assessment of a social variable defined by constant problems caused by urban traffic jamming, or to lack of parking areas, and static capacity of storage in the Port. In this study, in the process management, the technique of the "Critical Path Method" was adopted in order to plan and control the necessary activities regarding freight customs clearance through rail modal, in a way that, when compared to road

modal, it brings out a competitive advantage of the total logistics costs. The Critical Path Method shows each one of the activities and the time associated to them, making it possible to determine the critical path, identifying the elements that restrict the total time of the project. This technique enables the analysis of time lengths of DTA - PÁTIO (DTA - YARD) customs procedure, when associated to the use of intermodal transportation to or from the interior of the Port's hinterland areas (NTC DE LOGÍSTICA E TRANSPORTE, 2006, p.93).

In conformance with the organizational ecology model (BAUM, 1990), by implementing this analysis model into the port environment, ITRI showed some dependence on the organizational change with focus on the port sector. Examination of the business model and analysis of demographic, ecological and environmental processes was performed to guide success or failure of the operations. In this concept, the organizational population is represented by importers, and the remaining organizational community by the other interacting populations, herein considered as port terminals, carriers, brokers, intervening authorities, among others.

Bearing this perception, ITRI proposed some coalitions necessary to business among the organizational populations to perform changes to the port environment in a synchronized way in order to minimize possible conflicts. In the collection of guidelines and data from business practices searching for innovation, such practices being set in the Oslo Manual of the Organization for Economic Co-operation and Development (OECD, 1997), the innovation implemented by ITRI may be classified as a kind of innovation for organizational changes, once the innovation of merging Just-in-Time concept, to reduce stocks, with the adoption of the DTA process in the transporting management has enabled it to reduce the disorganized availability of vehicles in the Port, therefore, avoiding the traffic bottle-necking in the transit system of urban freight, as the flow of its clients' cargo started occurring at a maximum of 48 (forty-eight) hours after unloading containers from the vessel.

In a practical way, as to rail freight transportation services provided by ITRI, the main benefit from this customs procedure is found in the application of the Just-in-Time modality, which has become associated to the high degree of rail modal specialization. By doing so, ITRI acquired intensive participation in the integration of distribution channels to the partial management of the supply chain, and this has acted as a relevant business strategy and an increased profitability of the company. In the link of importing and exporting companies, efficacy of time length reduction in transporting operations was essential to reduce total logistics costs for the rail modal transporting operation.

Although knowledge of elaboration of dispatching processes for customs transit is essential, the ITRI business model, in a complementary way, depends on the RI-248/02 of the SRF, which regulates the process of Declaração de Trânsito Aduaneiro (DTA) (Customs Transit Declaration [CTD]) with yard dealing, which consists of freight customs clearance from the primary zone of the Organized Port Zone of Santos, to container terminals located in the secondary zone (Dry Ports / EADI / CLIAS) of the State of São Paulo.

The process of customs transit to bonded warehouses is used to hasten customs checking "outside" the Organized Port Zone. This happens because of the necessity deriving from the lack of operational infra-structure inside the Organized Port, which is inefficient to fulfill the demand of deunitization of cargo (container) according to the JIT concept and to effectively fulfill the need of importers as to lead-time reduction.

Under the users' perception, due to this emerging growth, the port primary zone presents a bottle-neck, and bears no static capacity of cargo storage or handling. Cargo physical checking

procedures performed by the Fiscal Advisors of the National Treasury makes difficult the nationalization of import cargo inside the Port. That operational productivity dysfunction was detected by Port users after the monitoring and the assessment of operational performance of the fleet of vehicles inside the Organized Port Zone.
On the other hand, world-class companies, usually concentrated in urban industrial condominia so that they can reach economic benefits from market nearness, make a choice for bonded warehouses near industrial centers. In the aspect of ITRI logistics, consolidating cargo in one single bonded warehouse is beneficial, since it is operationally possible to optimize a daily express train of containers during the hiring of a rail shuttle service. A regular rail shuttle service, with schedules pre-fixed by railway concessionaires, would reduce the logistics costs of railway transporting system users. Consequently, that makes freight fees more competitive due to enhanced productivity by using this modal. The specificities of the RI-247/02 worked as a disciplinary action for the port operators and this has been fundamental regarding to cargo segregation after unloading from the vessel, in the sense of preventing vehicle-loading delays to the carrier. Private terminals provide services in the freight delivery system after unloading from vessels and are responsible for loading wagons parked on the railway tracks along port terminals inside the Organized Port Zone.
Besides, rail modal was always kept last for loading in the Port, which made unexecutable the accomplishment of fixed schedules for train arrangements by railway concessionaires because, in the process of DTA - PÁTIO (DTA - YARD), rail modal, under the condition of SPOT or extra freight contracting, faced the worst transit-time and the impossibility of efficiently effectuate the hiring of express trains of containers. The present RI-248/02 regulating system determines that port terminals must obey and execute the deadline for container shipping onto vehicles of carriers certified to this customs regime within a maximum deadline of 48 hours. In the analysis of customs procedures without the advantage of the deadline established in RI-248/2002, there would be cargo stoppage in the port, and certainly the service time lengths constituting the Critical Path Method of the supply chain lead-time of ITRI users would be harmed. In the analysis of the DTA-I process time length due to the fact that there is, for the Port user, the option for cargo stoppage, unlike the one for DTA - CARGA PÁTIO (DTA - YARD CARGO), a maximum deadline is not established for the port terminal operators, and they are not obliged to perform immediate shipping after unloading from vessel as provided by RI-248/02.
According to the ITRI representative's technical opinion, practical assessment of the performance of DTA process with yard dealing, regulated in the electronic environment called SISCOMEX-TRÂNSITO (Sistema Integrado de Comércio Exterior - Siscomex [Integrated Foreign Trade System]) also called SISCARGA, is grounded from the control of the total logistics costs with the reduction of stoppage time length of cargo inside the Port. From the main performance indicators, one can notice the shortening of lead-time deadlines for supply chain attendance, which minimizes the costs of stocking inside the primary zone and hastens transportation and the alignment of deadlines in the efficient integration with suppliers and clients.

Conclusion

In this case study, the consensus that transportation planning is essential to the Port user was achieved, and this is justified because it is a task that besides empirically subsidizing urban policies, it does not depend on the need for new infra-structure projects. In this sense, it is

necessary to make freight flow feasible without urban and sectorial conflicts. This way, administrative solutions by means of processes that hasten cargo removal from the Port to the secondary zone (EADI) are essential measures that interact with public policies, as they can assist economic, social and environmental needs of each region.

To the sustainable development of companies that look for competitive differentials, a strategy for social cost reduction with logistics efficacy can be adopted. In general, port users rarely relate customs procedures to public policies or vice-versa, because they focus results in a purely market-based way. However, in the port's operational environment, seeking for customs procedures efficacy can be a strategic tool in the mission of integrating the supply chain to intermodal transportation logistics. Several transportation modalities can overcome structural difficulties of Ports' road accesses, and adversities are superseded after setting up intermodal or multimodal transportation systems, with the option of a customs procedure more adequate to each kind of organization meant for debureaucratizing the national freight transportation system. Concerning the cost of customs clearance transaction, it is possible to reduce transportation costs by adopting intermodal transportation. As a conclusion, in practice, the management of daily express trains for container transportation, has recently left approximately 4,500 trucks per month out of Anchieta/Imigrantes highways, managed by ECOVIAS. Consequently, the increasing use of this kind of customs procedure can assist urban policies towards environmental preservation and improvement in urban transportation of cargo, because it economically and operationally enables intermodal transportation and reduction of CO_2 and other pollutant emissions into the environment, when there is higher rail modal participation.

Understanding the nuances of the process implies the possibility of significantly reducing costs, transit-time, risks of accidents, fossil fuel utilization, among others. It is necessary to take the aforementioned technical definitions as essential to the study of transportation service exploration during removal of cargo in customs transit, aiming at the rail modal competitive advantage.

Another important customs feature worth pointing out in a complementary way is the requirement demanded to the freight carrier, by the Federal Revenue (Receita Federal), or to the Customs Transit beneficiary, regarding the obligation to acquire customs freight insurance. This is implemented to ensure Federal Government's taxation on goods not yet nationalized by the importer while in transit between customs yards. This proves the transportation system in this modality to be safe concerning the protection to assure tax collection from the Federal Government. In case cargo is either stolen or led astray while on route, the carrier is held liable for the tax payment. As a consequence, it is advisable that, before the analysis of transportation management in processes of such a nature, the importers assess productive processes of the corporation's internal environment. The features of companies using this kind of customs procedure were also studied. They chiefly focus on the time factor, on account of the short deadline for supply chain attendance. With this mutual feature, companies usually choose for alternative organizational methods of production created by the Japanese industry, whose control of the production process in attending the supply chain is measured according to the exact quantities necessary to the production and, consequently, in Just-in-Time, which, regarding the aspect of production, diverges from the traditional method.

These results make evident the importance of this matrix as an assessment tool for value chain competitiveness, as well as the conditioning of its use to a series of considerations, as for example, its non-utilization as an isolated technological assessment tool, the requirement of

regularity and commitment to information collection, and the fact that the results achieved ground plans of action aiming at the company's technological potential increment.

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1**T.N. (Translator's Note):** DTA stands for Declaração de Trânsito Aduaneiro (Customs Transit Declaration [CTD]); DTA - CARGA PÁTIO means CTD - YARD CARGO, that is, cargo destined to immediate handling and kept in a container yard area.

2**T.N.:** Estações Aduaneiras do Interior (EADI) - Inland Customs Stations (ICS).

3**T.N.:** Centro Logístico Industrial Aduaneiro (CLIA) - Industry-Customs Logistics Center (ICLC).

4**T.N.:** "Goods movement is accomplished within a broad-ranged field, often referred to as logistics management."

5**T.N.:** Baixada Santista: Santos Lowlands Area.

6**T.N.:** Associação Nacional dos Transportadores Ferroviários - Railway Carriers' National Association (RSNA).

7**T.N.:** "Risk of accidents, loss of operational performance of the railways due to average speed reduction from 40 Km/h to 5 Km/h within urban areas, vandalism and difficulties in obtaining freight with high added value, constitute the main problems caused by irregular occupation of the domain strip."

8**T.N.:** "the legal norms and the regulation that provide about dry ports' working method are: Laws nº. 8987, of 02/13/95 (providing about the regime of concession and permits from the civil services by means of a bidding process) and nº. 9074, of 07/07/95 (article 1, clause VI, including customs stations and other bonded terminals of public use, not settled in port or airport area, originated or not from public works)".

9**T.N.:** "The EADI bear the same bureaucratic structure necessary to foreign trade and usually concentrated in ports, airports and customs entry points. Federal Revenue (Receita Federal) authorities - responsible for the inspection of import tax collection - Health / Sanitary Surveillance inspectors and Federal Police agents."

10**T.N.:** "merchandise is carried by utilizing two or more transportation modalities."

11**T.N.:** "The effects of the infra-structure on the general conditions of economy efficacy are highly evident. The availability of an adequate infra-structure raises efficacy gains to the producing system, and not only to the companies separately. This is due to the occurrence of final product increase, which increments productivity and concurrently reducing the cost per supply unity. Higher productivity, on its turn, is translated into raising of remuneration of factors, which stimulates investment and job generation."

12 **T.N.:** II - Imposto de Importação (Import Tax).

13 **T.N.:** IPI - Imposto sobre Produto Industrializado (Tax on Industrialized Products).

14 **T.N.:** ICMS - Imposto sobre Circulação de Mercadorias (Tax on Merchandise Circulation).

15**T.N.:** "The explanatory investigation targets mainly at making something intelligible and justifying its reasons. Therefore, it aims at clarifying which factors contribute somehow to the occurrence of a specific phenomenon."