

The efficiency of transport logistics as a major determinant of economic performance: literature review

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Received .. /.. /

Accepted .. /.. / ...

Abstract — *in this paper, we will discuss the different contributions of studies and analyses that have helped to address the correlation between transport logistics and economic performance in Moroccan public institutions. To demonstrate this correlation between the two variables we are going to shed light on several theories that are going to help us formulate potential hypotheses for future research. Our paper aims to define the conceptual framework as well as the theoretical model of the efficiency of transport logistics as a major determinant of economic performance.***Keywords:** *economic performance, infrastructure, efficiency, logistics, performance, public institutions,*

à formuler des hypothèses potentielles pour des recherches futures.

Notre article vise à définir le cadre conceptuel ainsi que le modèle théorique de l'efficacité de la logistique du transport en tant que déterminant majeur de la performance

économique.

Mots-clés : *performance économique, infrastructure, efficacité, logistique, performance, institutions publiques,*

Résumé — *Dans cet article, nous discuterons des différents apports des études et analyses qui ont permis d'aborder la corrélation entre la logistique du transport et la performance économique dans les organisations publiques marocaines. Afin de démontrer cette corrélation entre les deux variables, nous allons mettre en lumière plusieurs théories qui vont nous aider*

1. Introduction

According to the World Bank, the Moroccan logistics performance index has dropped from 2.46 in 2016 to 2.43 in 2018,

which leads us to question the relationship between transport logistics performance and economic performance.

Indeed, to overcome this fall, Morocco continues its logistics strategy. Just after the completion of the extension of the port of Agadir, work started on the colossal Mediterranean-based port project called "Tangier Med". It is one of the largest terminals in the world, capable of serving thousands of ships per year. In the Mediterranean as in the Atlantic, almost every Moroccan coastal city has its port. Notwithstanding its geographical advantages and the investments that take place every year on its territory, Morocco is constantly improving its know-how in the field of transport logistics, and its relationship with the economic process is ongoing.

Moreover, the economic development of any country depends on its openness to itself and the rest of the world. Such openness can only be achieved through a logistics policy that is based on priority strategies. This efficient logistics policy can only be achieved through a reliable and efficient transport network.

In this sense, the importance of transport in the production activity will lead those in charge to define a transport policy in the same way as the other sectoral activities: monetary, financial, agricultural, industrial, and commercial...

The basis of our project is to address the following problem:

- To what extent can the practice of transport logistics have a positive impact on Moroccan economic performance?

Many research questions arise, some of which are obvious:

- To what extent can transport logistics performance indicators influence economic performance?

- What transport logistics resources are needed to improve economic performance?

- How does infrastructure upgrading positively affect Moroccan economic performance?

- To what extent does the ease of customs formalities positively influence economic performance?

- What is the impact of logistics service quality on the continuity of transport services and on economic performance?

The objective of this paper is to study the different theoretical contributions of studies and analyses that have addressed the correlation between transport logistics and economic performance in Moroccan public organizations. This will allow us, in the first place, to establish

a literature review of our variables. Secondly, we will try to formulate potential hypotheses that can constitute formal hypotheses in future concrete studies.

2. Literature review:

2.1. Infrastructure upgrading, customs facilitation, and economic performance

This section aims to define the concept of infrastructure and to establish the relationship between transport infrastructure and economic performance,

It would have been difficult in our thesis to ignore the prominent role of customs in the context of transport and logistics. Therefore, in this section, we will determine what these customs formalities represent while linking them with economic performance, which remains the dominant theme of our study.

The term infrastructure was used in the field of civil engineering and later in urban planning. The generalist dictionary defines it as "all the work on a structure, or all the installations necessary for everyday life and also for economic activity".

According to the work of Hirschman and Hansen (1959), infrastructure can be explained: "as goods and services that make productive activity possible within an economy". Thus, a distinction

is made between social infrastructures whose role is to protect and improve human capital (education, social services, etc.) and economic infrastructures that directly concern the productive economic process.

Hirschman (1958) offers a definition: "In its broadest sense, it encompasses all public services of law and order through education and public health, transport, communications, electricity, and water, as well as agricultural capital such as irrigation and drainage systems. The core concept can probably be limited to transport and energy.

According to Hirschman (1958), infrastructure is not only facilities such as roads, railway stations, etc., but includes all public services such as administrative services, schools, universities, etc.

Some international organizations, such as the World Bank, establish this classification by distinguishing between "economic" and "social" infrastructure. The emphasis is on the productive nature of infrastructure. Hirschman bases himself on the possibility of estimating them as factors of growth and economic performance. Thus, the researcher establishes a decisive finding by characterizing transport infrastructures by the role they play in the economy, including the effects they induce.

Perroux (1964) identifies infrastructure as fixed capital. The latter can have "upstream and

downstream effects in terms of economic activity and spatial planning".

Hansen (1959) analyses "infrastructure as a direct or indirect factor in productive activity and the movement of goods and people".

To better clarify the meaning, we can state that infrastructure is necessarily distinguished from private capital by several characteristics. On the one hand, investments are more important and much more costly at the time of the completion of transport infrastructures, hence the intervention of public policies. On the other hand, the simple nature of the infrastructure and the economies of scale that they induce make it impossible to spread the related expenditure. This financial aspect of the non-divisibility of infrastructure expenditure is also perfectly obvious in the case of infrastructure: motorways for example. Based on this observation,

Investment in transport infrastructure and its impact on logistics costs

Before looking at the relationship between investment in transport infrastructure and its impact on logistics costs, we will discuss the relationship between logistics performance and transport infrastructure.

Transport logistics plays an essential role in the national economy, enabling operations in various industrial fields, but also through the profit made. For the

implementation of logistics processes, logistics systems involve a variety of strategies, resources, and a wide range of services within and beyond individual companies. Their performance is measured by various logistics indicators. For the assessment of transport logistics at the national level, the World Bank has developed a Logistics Performance Index (LPI), targeting six key areas. One of the main areas for assessing transport logistics at the national level is transport infrastructure.

The importance of transport logistics to a country's economic system can be assessed in several ways. At the level of individual companies, transport logistics support the movement of material goods (and information) for production or consumption, thereby enhancing the process of their production and sales activities. When a country's economy grows, production and consumption also increase, leading to an increase in the volume of goods and an increase in demand for various logistics activities. The globalization of production and trade has created global supply chains. These are the backbone of international trade and require a fast, reliable, and inexpensive flow of goods. Under such conditions, the transport logistics industry is recognized as one of the

pillars of a country's development, not only for its support of national production and consumption but also for the revenues that transport logistics generates as an independent sector.

Logistics performance, notwithstanding the potential of individual companies, depends to a large extent on the macro transport logistics potential of the region where these logistics processes are implemented. The 'macro-logistics' system consists of shippers, traders, and receivers, public and private sector logistics service providers (Banomyoung 2009).

According to a study on the analysis of transport infrastructure in the Republic of Serbia, as a component of the country's macro transport logistics system, the analysis includes the basic characteristics of the existing transport network, the infrastructure indicator as an important part of the Logistics Performance Index (LPI), and the comparison with the corresponding values in Austria and the Czech Republic, as the countries selected for comparison. This study establishes that a good quality infrastructure contributes to an efficient transport logistics sector.

In the context of economic globalization, transport infrastructure has become one of the main instruments of the economic development of a country and its regions. One of the results of the development of transport infrastructure will be an efficient transport service and transport logistics that provide the most effective and efficient transport service (Vakhitova and Gadelshina, 2014). The development of an efficient transport system goes far beyond the construction of transport infrastructure. However, the attributes of transport infrastructure, its suitability, as well as its integration into the European regional network, are the basis for the establishment of a competitive transport system.

Developments in the growing global economy and increased competitiveness make transport logistics an area of strategic importance. Accordingly, Wang. A (2010) analyzed the effect of logistics activities on regional economic growth in Anhui Province, China. In this study, freight turnover was used as an indicator of logistics activities. The results showed that the effect of logistics activities on regional economic growth is uncertain.

Cheng et al (2010) studied the effect of the transport logistics sector on the growth of the Henan region in China

between 1978 and 2008. They find that the transport logistics industry has an important role in economic growth. In the study by Yuan and Kuang (2010), the effect of transport logistics development on the economy was investigated in the central, eastern, and western regions of China. The results showed that the development of transport logistics activity has fundamental impacts on economic growth, however, there were differences between regions. One conclusion: while logistics infrastructure plays a more essential role in economic growth in more developed regions, its contribution to growth is less in less developed territories.

Hu et al (2012) analyzed the relationship between transport infrastructure investment and regional economic growth in the central region of China. In their study, the relationship between transport logistics investment, transport logistics value-added, and gross domestic product (GDP) was investigated by the time series analysis method. According to the result of the co-integration analysis, they establish that there are three co-integration relationships between the variables. Regarding the results of the Granger causality analysis, we find that there was a one-way causality from transport

infrastructure investment to GDP and a two-way causality between transport infrastructure investment and logistics accretion value. Banerjee et al (2012) studied the impact of transport network on economic growth in various regions of China between 1995 and 2010. The results of the analysis show that the proximity of transport networks induces a moderate, significant, and causal impact on GDP. In the study, we also find that GDP per capita and income inequality are higher in regions close to historical transport networks and that there are more firms in the regions, but firms' earnings are higher.

2.2. Investment in transport infrastructure and its impact on transit time :

The positive externalities of infrastructure are diffused throughout the economy through various mechanisms. These relate to demand dynamics (infrastructure spending is a component of investment demand) and supply dynamics. Infrastructure requires capital investment and public works policies that are likely to induce a Keynesian effect by creating jobs and exerting a positive counter-cyclical impact during periods of declining activity or underproduction compared to the economy's potential. Namely:

- They lower transaction costs and facilitate trade between and within borders;
- They allow economic actors to respond to new demands in other territories;
- They lower the cost of inputs needed to produce goods and services;
- They make unprofitable activities productive and existing activities more profitable.

We thus understand the existence of increasing returns to capital. DFID (2002). “The hypothesis of increasing returns makes it possible to account for a phenomenon that has no place in standard neoclassical analysis, namely the imperfect international mobility of capital. Under standard diminishing returns assumptions, the return on capital should be higher in developing countries because their capital stock is smaller than that of developed countries. Yet, far from flowing from the richer to the poorer territories of the world, international savings are concentrated in the former. Taking into consideration the increasing returns and scale effects allows us to understand the mechanism: “the return on private investments does not decrease, but increases with the density of physical and human capital” (Lucas 1990).

For developing countries such as Morocco, economic growth is one of the sources of employment-enhancing functioning. But employment can also contribute to sustaining

growth. Indeed, it increases the size of solvent markets, the stock of human capital, and, through the game of increasing returns, that of private capital. Social consensus is also necessary for the sustainability of a growth dynamic. Notwithstanding the social issue, job creation, therefore, appears to be one of the factors of economic efficiency in the long term. According to the above,

2.3. Investment in transport infrastructure and its impact on trade expansion :

According to Barro R.J. (1990), the notion of infrastructure groups and links services attached to equipment, including roads, railways, motorways, airports, but also electricity, water, etc. In other words, all investments are aimed at facilitating the movement of goods and people.

This concept of infrastructure regenerates several essential elements ensuring the functioning of the economic system and generating positive externalities, i.e:

- Public utility infrastructure: gas, water, etc.
- Service infrastructures: social and educational services;

- Telecommunication infrastructures: telecommunication networks (telephone, Internet);
- Transport infrastructure: roads, bridges, airports, ports, etc., which allow the movement of goods and people.

These can therefore be considered collective goods based on productive activity. This definition refers to the concepts of "collective good and factor of production". This notion, developed by Samuelson (1954) and Musgrave (1959), is based on the criteria of "non-rivalry" and "non-excludability" of public goods insofar as their use by one actor does not reduce the quantity available to others. The non-excludability of public goods implies that all agents benefit from them because of their intrinsic nature, which escapes market mechanisms; this fact justifies the intervention of the state in the process of provision and the regulation of these goods.

Despite its conceptual relevance, this definition is open to criticism. Indeed, it does not take into account the "congestion phenomena" specific to public goods. For example, transport infrastructure. In reality, we are dealing with mixed public goods, i.e. partially "rival and/or excusable".

The partial abandonment of the non-rivalry hypothesis appears moreover relevant in the face of the congestion problems faced by public goods, in particular those of transport, which manifest themselves as soon as a critical threshold of use is reached.

Several studies have been carried out on the impact of infrastructure on growth and therefore on economic performance. In most cases, they show a positive affinity between the two variables, particularly in developed countries.

Nevertheless, the study by Nagaraj, Varoudakis, and Vezançon (1998) on the Indian states showed that policies aimed at improving the level of infrastructure could have an impact on long-term performance and convergence between states. Their work highlighted the phenomenon of regional propagation of growth, a major factor from the point of view of economic policy and public choices. The causality component concerning the correlation between infrastructure and growth, or the complementarity and interdependence between these two variables, remains a key issue in the synchronization of economic policy. Two empirical currents have focused on this phenomenon. The first is the "standard production function

approach using cross-sections or panel data; the second deals with the problem of a particular country using time series". However, there is a methodological sense in which the work adopting production functions does not take into account the issues of non-stationarity of time series, which biases the assessment of the relationships. Similarly, they do not take into account the problem of simultaneous growth under the impact of public capital. "One solution is to use time series by applying the unit root, co-integration, and causality test within the vector autoregression approach. This method allows for the pooling of all variables in the system of equations" Mitra. A and Varodakus. A (1998).

In this perspective, Roller and Waverman (2001) have taken into account the reverse causality dilemma and used a structured model leading to satisfactory elasticity steps for OECD (Intergovernmental Economic Organisation) countries. Esfahani and Ramirez (2003) used "a simultaneous equation model to analyze the reciprocal effects of infrastructure on growth". Their results show that infrastructure makes a significant contribution to GDP beyond the costs of investment.

Smith and Wahba (1994) show that "investments in human resources contribute to the expansion of productive capacity by improving the quality of the labor force".

An empirical study by Cooray (2009) captures Easterly and Rebelo's (1993) act as "a positive association between public investment and economic growth, particularly about transport". Cooray also shows in another study of the economies of more than 71 countries that "public spending and good governance can improve economic growth outcomes".

2.4. Ease of customs formalities and economic performance :

According to (Blyth, 2013), while customs formalities are implicitly related to economic

performance, this does not mean that this relationship is determinant. Improved economic performance depends on better macroeconomic policies as well as on factors beyond the control of the government. For example, demographic factors, climatic factors, and even the skills of the entrepreneurs in the country. Concerning government policies, the implementation of appropriate fiscal and monetary policies is an important contributor to performance, especially in times of crisis.

As we have shown, there is a growing interrelationship between customs procedures and economic performance. The latter requires an assessment of the efficiency of customs procedures to reduce the cost of doing business for companies. The classic definition of the World Trade Organisation (WTO) envisages it as "the simplification and reconciliation of formalities in international trade. These include the activities, practices, and formalities involved in the collection, appearance, communication, and also processing of information essential for the international exchange of goods.

2.5. The ease of customs procedures and its impact on logistics costs :

To establish the link between customs procedures and logistics costs, we would like to highlight the efficiency of the transport logistics process in the context of customs procedures.

Nowadays, the growth of international trade is increasing rapidly. Customs have very important links. With the logistics chain. Causing time losses, changes in customs operations are needed to facilitate border crossing. Therefore, appropriate and efficient customs operations are essential to speed up logistics supply chains. In this section, we will analyze the efficiency of logistics processes in customs procedures.

Every organization (public or private) aspires to carry out its activities efficiently. For a long time, performance evaluation in the public sector has been studied in the literature (Boyle, 2006). In the public domain, the problem remains the lack of a direct correlation between revenues and expenditures. Political factors also lead public organizations to focus on achieving objectives rather than value for money. In the literature, we have identified different approaches to measuring customs efficiency.

It is worth noting that the European Commission has established its Performance Measurement Project

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(PMP) for the customs services of the Member States. This work on Member States' customs activities is ongoing and the results will allow Member States to compare their performance against the EU standard and improve customs operations where necessary (Benazi.A2012).

The importance of customs efficiency is also recognized by the World Bank Organisation. This organization has developed the LPI (Logistics Performance Index) which aims to measure customs efficiency (Arvis, 2016). In this perspective, the evaluation of customs efficiency is measured through the:

- Customs efficiency in the international LPI (Genuine Progress Indicator) (the efficiency of the customs clearance process. i.e. the speed, simplicity, and predictability of formalities by border control agencies, including customs) ;
- Customs efficiency in the domestic LPI (quality and competence of the customs service, clearance, and delivery of imports and exports, transparency of customs clearance, provision of adequate and timely information on regulatory changes, number of import and export agencies, etc.).

Particular emphasis is placed on the efficiency of the customs administration.

Also, this index includes the effectiveness of the perception of customs procedures by the private sector, as well as the extent of services provided by customs authorities and related agencies. The effectiveness and efficiency of customs clearance processes (time, documents, costs, etc.) by customs and related border control agencies are also important elements of the LPI.

It should be noted that most approaches in the literature are based on the DEA method (data envelopment analysis method). However, this may have some drawbacks and in some situations cannot be applied.

The growth and efficiency of customs clearance therefore also depend on the efficiency of logistics services, which have an essential role in supporting the efficiency of customs procedures. Overall, the size of the transport logistics sector is not known. Shepherd's (2011) analysis of logistics data, covering 45 countries, found that on average, the transport logistics sector accounted for about 5% of gross domestic product (GDP), with a range of 2% to 12%. Given the pace of increase in world trade since 2000, the contribution of transport logistics activity to national output in many countries is expected to accelerate

as the pace of trade liberalization increases.

Recent initiatives by the World Bank in developing the Logistics Performance Index (LPI) have provided a reasonable understanding of transport logistics achievements at the national level for several countries around the world. In this regard, since 2007, the World Bank has produced annual LPI measures. Published data measuring transport logistics performance

in World Bank, member countries are only available for the years 2007, 2010, 2012, 2014, and 2016. For overall performance, the World Bank index is measured on a scale of 1 (low) to 5 (high). This measure is a weighted average of country scores covering six sub-dimensions of logistics performance. These include the ability to track shipments; the competence and quality of logistics services; the ease of organizing competitively priced shipments; the efficiency of the customs clearance process; the frequency with which shipments reach the recipient on time; and the quality of transport trade-related infrastructure. Each of these sub-dimensions is also measured on a scale of 1 (low) to 5 (high). The LPI measures the performance of trade transport logistics on the ground. It helps national leaders, key decision-makers, traders,

and private sector actors to better understand the challenges they and their trading partners face and aims to reduce logistics barriers to international trade (World Bank 2017).

The continued growth of global trade and the desire of many countries to accelerate the pace of integration into the global trading system is not only a condition for maintaining an open global economic system but also for improving the quantity and efficiency of support structures. The obstacles are many and varied: poor logistical services such as limited coordination between countries on border procedures; inefficient clearance process at ports, fragmented and poor quality transport-related infrastructure; costly and infrequent shipping (with long and indirect sea routes); delays in tracking and tracing shipments, delays in terminal management and clearance of goods, lack of cold storage facilities at ports and inability to certify product quality.

- A statement: Trade liberalization is pushing all countries to take advantage of the benefits of globalization, which offers them increasingly important trade opportunities. In this respect, the level of development of national and international logistics services is a critical element in enabling countries to

trade without too many constraints and at a lower cost. While the improvement of overall logistics services may be an important step towards trade facilitation (including customs clearance efficiency) in the long run, whether the level of logistics services facilitates trade further remains a compelling empirical question. This question deserves further investigation; empirical studies from this perspective are scarce.

Although the contribution of transport logistics to national output in a country may not be equally successful in all areas, the role that transport logistics plays in supporting activities within an economy cannot be underestimated or neglected. A well-known link between transport and transport logistics and national development is the facilitation of customs procedures which, in appropriate circumstances, also induces other beneficial economic and social outcomes (OECD/WTO 2013). Thus, the activity of transport and transport logistics is an integral part of facilitating customs clearance; it allows businesses to efficiently finalize imports and exports of goods and services with associated transactions.

Trade taxes imposed by customs and other border agencies are inescapable;

the customs arrangements subject to the government are intended to contribute to the achievement of public policy objectives. On the other hand, the more "efficient" customs are and the easier they are to enforce, the lower the costs of trade. The literature bears this out.

Thus, for Sourdin and Pomfret (2012), trade facilitation is achieved through "reducing trade costs". The concept of "trade costs" means "the difference between the costs of a domestic transaction and an international transaction, other than costs such as import duties, trade costs include transport costs and the cost of clearing customs at the border..."

The International Convention on the Facilitation and Harmonisation of Customs Procedures is known as the Revised Kyoto Convention (RKC). This international standard ensures that customs regulatory procedures are carried out with ideal efficiency. The CKR sets out statements with crucial principles, designed to ensure transparency and predictability of customs actions so that it is standardized and simplified regarding the declaration of goods and supporting documents; the ease of procedures for authorized persons; the ideal use of information technology; a significant minimum level

of control to see that Customs ensures compliance with regulations, application of risk management and controls from an audit; the alliance of interruptions with several border agencies and also cooperation with CKR agencies (1974). Numerous published studies show empirically how customs, through trade facilitation, contribute to reducing the transaction cost that is correlated with economic performance. There is currently little literature on descriptions and linkages, so the literature closest to this criterion is mentioned below with a description: Djankov, Freund, and Pham (2010) show the correlation of simplified customs rules with exports. According to our estimates, each additional day of delay of a product before shipment leads to a decrease in trade of more than 1%, and thus affects economic performance.

**2.6. The ease of customs rules and their
impact on transit time: Customs facilitation
impacts transit time.**

Milner, Morrissey, and Zgoyu (2008) state, "The
above review concludes that there is
considerable evidence that greater trade
facilitation is likely to :

- Significantly reduce the amount of trade, and in particular reduce delays;
- Lead to significant increases in the volume of trade, imports, and exports; these may even exceed the direct gains from trade policy reform;
- Promote increases in government revenue and the efficiency of revenue collection;
- Contribute generally to welfare improvements and economic growth".

For example, Engman (2005) argues:

"Quantitative studies have shown that reductions in trade transaction costs from trade facilitation are likely to result in welfare gains as significant as tariff liberalization".

Wilson, Mann, and Otsuku (2005) take a different view of the simplicity of customs procedures. They show that "Based on a specific simulation, an improvement in the four elements of trade facilitation in 'below average' countries, 'halfway' to the world average, produces an increase in world trade of US\$377 billion".

Hummels (2001), on the other hand, shows "the link between simpler customs procedures and tariffs, finding that every day saved in terms of shipping time (in part due to faster customs clearance - an element of trade facilitation) represents a 0.5% reduction in ad valorem tariffs" (quote from Wilson, Mann, and Otsuki [2005]).

2.7. The ease of customs procedures and its impact on trade expansion:

According to a study by the World Bank (2004) on several seaports, customs requirements "frequently affect the ability of the port to compete with rival ports for market share".

Based on various examples, the study shows that the economic performance of a country or entity is improved when the port's workflow is not constrained, making the port much more attractive to economic operators.

The simplification of customs procedures requires more reliable clearance and shorter dwell time for legitimate trade. In this perspective, Raballand et al (2012) conducted a study on dwell times in ports such as those in sub-Saharan Africa. They point out that several factors are admissible to evaluate the efficiency of a port and improve its organization.

For example, the port of Durban in South Africa has reduced its dwell time from 7 to 4 days through a series of measures, including a thorough change and modernization of customs.

This reduction has helped to accelerate the capacity of the container terminal. Thus, this study confirms that: "the approximate populations are penalized when downtimes are long: firstly, as taxpayers, since any extension of the facilities needs public investment, and also as consumers, so that it is the final user of these services who bears the cost of the incapacities and rentals of facilities in the port".

Under these conditions, we conclude that the reduction of downtime can contribute to solving certain difficulties such as poor quality handling operations; unreliable freight forwarders; and the high rent burden due to slow customs clearance. This reduced immobilization has a positive long-term impact on port operations. Therefore, it is important to resolve these complications before proceeding with any investment in an expanded storage facility. With this in mind,

3. Transport logistics service quality and economic performance:

In this next section, we will define transport logistics service quality and its impact on economic performance in terms of quality, cost,

time, and much more generally on business development.

Although the first attempts to define the concept of service date back to the 1960s, they were still vague. For example, the American Marketing Association envisaged it as "service in the form of activities, benefits, or satisfactions offered at the time of sale or provided in connection with the sale of products".

Robert C. Judd (1964) states that "market services are the transactions of a firm or entrepreneur with the market where the object of the transaction is other than a transfer of ownership of a tangible good".

These definitions emphasize the intangible nature of the service in contrast to tangible goods. However, this distinction between [intangible] service and [tangible] product is not so obvious. Service can have a tangible dimension. In this context, Theodore Levitt [1976] argues that the distinction between product and service is increasingly disappearing as our understanding of the concept of service grows. Philip Kotler and Bernard Dubois (2000) present a service as an activity or service that is subject to exchange, essentially intangible, and not subject to any transfer of ownership. Thus, a service may or may not be associated with a material product.

Monique Lejeune (1989) has attempted to formulate a fairly comprehensive definition of

the concept of service, presenting it as "a service, i.e. what a firm [or specialist] conceives, develops, offers, sells and provides to its customers whenever what is thus marketed, purchased and used is fundamentally other than a material good of which the customer would acquire ownership.

Service quality is defined as "the extent to which a product or service rendered conforms to a marketing promise or service commitment".

The changing needs and environment have created the need for transport logistics as a competitive tool to improve customer service and reduce the total cost of customer service delivery. The changes have also created the need to constantly review the different logistics systems and tools used by companies. The design of a transport logistics system is based on three major plans, namely

- a. Customer services in transport logistics, which include product availability, product delivery time, product condition when received, and accuracy in filling an order.
- b. Location decisions that involve the location of facilities such as warehouses, terminals, shops, and factories and the allocation of demands to supply points.

c. Inventory planning which includes the establishment of inventory levels and replenishment plans.

Transport management deals with the mode of transport, fleet size, route selection, vehicle scheduling, and freight consolidation. These four areas are economically interdependent and need to be planned in an integrated way to get the most out of them. Methodologies and systems that deal with integrated planning are usually at an aggregate level and do not include a detailed definition of the problem. More detailed systems and procedures do not address all four areas simultaneously. The main reasons for this are size and complexity.

3.1.The quality of transport logistics service and its impact on logistics costs:

Hitchcock (1941), for the first time, mentions this transportation problem or TP (Transportation Problem) which will be defended by Diagne and Gningue (2011). The latter note a strong relationship between the quality of transport service and economic performance. Knowing the cost of transporting a unit of goods, it is, therefore, a question of finding the “ideal” solution for transporting it from the point of origin (producer, distributor, etc.) to the destination (customers,

depots, etc.), while minimizing the total cost of shipment.

According to Vijaya R. (2007), “on behalf of the end consumer”, the conversion of resources into useful goods is done through transport by linking the stages of the production process in the various organizations. Usually, these steps are aimed at dividing the organizations for production, storage, transportation, wholesale, and retail. However, production and manufacturing plants, warehousing departments, and merchandisers are all carriers. The planning of all these functions and sub-functions in a goods movement system to minimize costs and maximize service to customers is the concept of trade logistics.

Production or manufacturing plants require the assembly of materials, components, and supplies, with or without storage, processing, and handling of materials in the plant inventory. Warehousing services between factories and retail outlets involved separate transportation. Merchandising facilities completed the chain with delivery to consumers. As a result, manufacturers limited themselves to the production of goods, leaving marketing and distribution to other companies. Warehousing and storage

can therefore be considered services for the production process and the distribution of products. Major changes have affected the number and location of facilities, resulting in the closure of many single-user warehouses and the expansion of consolidation facilities and distribution centers. These developments are indicative of changes such as better transport services and pressures to improve logistics performance.

3.2. The quality of transport logistics service and its impact on transit time

According to Nha Nguyen (1990), service quality can be defined from two perspectives: the providers and the consumers. From the customer's perspective, the term quality represents the gap between perceived benefits and expectations. From the customer's perspective, the term quality represents the gap between perceived benefits and expectations. From the provider's perspective, quality refers to the physical and technical specifications of the service (waiting time, cleanliness, etc.). Quality can also be related to the customer/contact person interaction.

3.3. Transport logistics service quality and its impact on business development:

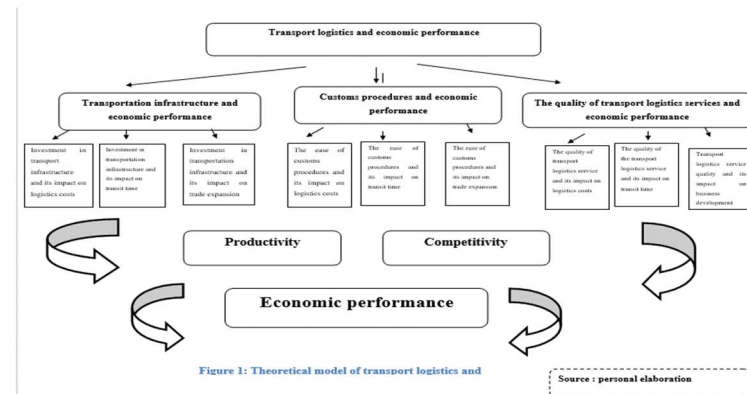
According to Tilanus B. (1997), the function that transport plays in the transport logistics system is more 'composite' than transporting goods for the owners. Its complexity can only take effect through high-quality management. With a well-managed transport system, goods can be sent to the right place at the right time to meet customer demands. It brings efficiency and builds an association between producers and consumers. Therefore, transport remains the basis for efficiency and economy in the transport logistics of organizations. It extends other functions of the logistics system. Moreover, an efficient transport system in logistics activities confers not only benefits to the quality of service, but also the competitiveness of territories.

The quality of service transport, made possible or less expensive, can be compared to the discovery of new natural resources from which the opening or enlargement of markets results. In the new countries, transport is the very type of "successful unlocking", to the extent that some have considered that the contribution of Western enterprise to the expansion of tropical countries has consisted mainly in improving transport

and in bringing the agricultural producers of these countries into contact with world markets. The relationship between transport progress and market expansion is, however, only partial and indirect. It is partly because the market can be enlarged in ways other than geographical extension. It is indirect because other conditions must be met, such as the existence of products to be traded or solvent demand, for a reduction in transport costs to be effective. The quality of transport is therefore a necessary condition, but insufficient on its own within a set of changes that contribute to development.

4. Theoretical model and potential hypotheses

4.1. Theoretical model



The model in Figure 1 demonstrates the mechanism of impact of transport logistics investments and ease of customs procedures on economic performance based on our assumptions. As a result, investments in transport logistics infrastructure increased transport logistics capacity, increased efficiency, improved transport logistics service quality by creating a secure domain, and increased value-added, thus confirming our other two hypotheses. This has resulted in low logistics costs, reduced transport time, and the creation of opportunities to expand work. As a result, this process increased the efficiency and strength of the country's competitiveness and thus enabled economic performance.

This theoretical model provides a better understanding of the relationship between transport logistics and economic performance, and more specifically the impact of transport infrastructure, customs formalities, and transport logistics service quality on economic performance, and will facilitate the testing of

hypotheses that we will discuss in the next section.

Section 2: Potential Hypotheses

The highlighting of the relationship between transport infrastructure and economic performance, the relationship between ease of customs clearance and economic performance, and the relationship between transport logistics service quality and economic performance in the first part of our paper led to the formulation of three major potential hypotheses and their sub hypotheses:

H.1 Transport Infrastructure Upgrades Have a Positive Impact on Morocco's Economic Performance

H.1.1 Investment in Transport Infrastructure Affects Logistics Costs

H.1.2 Investment in Transport Infrastructure Has a Positive Impact on Transit Time

H.1.3 Investment in transport infrastructure has a positive impact on trade expansion

H.2 Ease of Customs Procedures Influences Economic Performance

H.2.1 Ease of customs clearance has a positive impact on logistics costs

H.2.2 Ease of customs clearance has a positive impact on transit time

H.2.3 Ease of customs clearance has a positive impact on trade expansion

H.3 Quality of transport logistics service influences economic performance

H.3.1 Transport logistics service quality has a positive impact on logistics costs

H.3.2 Transport logistics service quality has a positive impact on transit time

H.3.3 Transport logistics service quality has a positive impact on trade expansion.

Conclusion

Referring to the theoretical and empirical literature, we have identified the relationship between transport logistics and economic performance; in this perspective, we have identified throughout this paper the different research hypotheses that allow us to address our two main objectives. Thus, firstly, we put forward the hypotheses concerning the effects of transport logistics on economic performance, which allowed us to summarise the first research objective and the related research hypotheses to be tested.

The examination of the validity of these different hypotheses in the context of transport logistics and economic performance may be the subject of a future study that will test them empirically in the field

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