MIT GLOBAL SCALE NETWORK

FINANCING SME SUPPLY CHAINS

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GLOSSARY

Small and Medium Enterprises (SMEs): There is no standard, global definition of what constitutes a SME. In the Asia Pacific region SMEs are generally defined as small enterprises; more than 95% of them employ less than 100 people. A common definition adopted in Malaysia describes SMEs according to their annual sales turn over and the number of full time employees, as detailed below.

According to the Malaysian definition, SMEs in the Services, Primary Agriculture and Information & Communication Technology (ICT) sectors, have an annual sales turnover of RM 200,000 (USD 65,000) to RM 5 Million (USD 1.6 Million), or 5 to 50 full time employees. For Manufacturing, Manufacturing-Related Services and Agro-based industries, the annual sales turnover ranges from RM 250,000 (USD 80,000) to RM 25 Million (USD 8 Million) or where the number of full time employees ranges from 5 to 150.

Micro SMEs (MSME): In the Services, Primary Agriculture and Information & Communication Technology (ICT) sectors MSMEs have annual sales of less than RM 200,000 (USD 65,000) or fewer than 5 full time employees. For the Manufacturing, Manufacturing-Related Services and Agro-based industries the minimum annual sales for a MSME is less than RM 250,000 (USD 80,000) or fewer than 5 full time employees.

EXECUTIVE SUMMARY

Asia's economic miracle is often associated with large, multi-national companies. While these organizations are important drivers of the region's growth, SMEs have played a key role. However, unlike larger companies SMEs struggle with finance as a limiting factor rather than a lever for value generation.

The research work summarized in this paper aims to explore the issue of finance in SME supply chains. On the demand side we look into the common financial challenges faced by these organizations in terms of access to finance, ease of availability, cost, control etc. On the supply side, we explore the challenges faced by financial institutions in helping SMEs. We use the case study approach to take a closer look at real-life scenarios that illustrate the key constraints restricting the growth of SMEs. Some of the successful attempts and innovations are discussed, and suggestions are made for developing a more holistic approach to make SMEs more competitive in the global environment.

INTRODUCTION

As the backbone of many economies across Asia, SMEs have been the key drivers of the remarkable growth that the region has achieved over recent years. More importantly, these enterprises will continue to play an important role in Asia's economic renaissance. It is estimated that SMEs comprise more than 98% of the number of enterprises in the Asia-Pacific region. The sheer number of SME organizations is not the only reason why they are important to Asia's prosperity. SMEs promote business ownership and entrepreneurial skills. They can be agile, adapting quickly to shifts in supply and demand, attributes that are particularly important in volatile global markets. In addition, SMEs are engines for job creation.

In an increasingly uncertain and complex business environment, understanding and managing the flow of finance through respective supply chains, is a critical capability for all companies regardless of their size. This is particularly true for SMEs as they compete on scope instead of scale, which requires an adaptable supply chain. This is a challenging task for SMEs who are limited by resources and the understanding needed to acquire the skills essential for designing, building, and managing an advanced supply chain; factors critical for their survival. For example, SMEs have a difficult time accessing and understanding their capital requirements and managing finances effectively internally and across the boundaries of their enterprise. Without a good understanding of currency fluctuations, trans-border transactions and associated costs, SME's struggle to compete. While larger companies capture efficiencies by forming strategic alliances with core suppliers, SMEs are not equipped financially to enter into such partnerships.

We studied the flow of finance through SME supply chains, with the focus on identifying and addressing the structural and operational constraints limiting SME performance and sustainability. We also define, evaluate, and propose enhancements to the flow of finance in the SME supply chains with the goal to improve the performance of these organizations, thereby allowing them to play a bigger role in the global value chain. Through case studies, interviews, direct observations, and past data, insights were gained into the general structure and challenges of the flow of finance through SME supply chains.

BACKGROUND

SMEs contribute more than half the country's GDP in developed nations such as USA, UK, France and Singapore. In developing countries such as India, China, Brazil, and Russia, they account for around 40% of the GDP. SMEs generate the largest number of employment opportunities overall, second only to agriculture. Thus SMEs play a pivotal role in the social and economic well-being of their host countries. Hence it is necessary to promote the SMEs through all possible means including policy initiatives, infrastructure development, availability of finance, legal protection, and access to markets. However, the overall development of SMEs is constrained by challenges within the system. The most prominent issues can be categorized into finance, infrastructure, market and technology. We focus on the flow of finance as it controls and generates value across the SME value chains. Before going further, we touch on the different ways in which government initiatives in some of the ASEAN countries, China, and India seek to address the issue of finance for SMEs.

GOVERNMENT INITIATIVES

Realizing the importance of SMEs, the governments in most countries have made dedicated efforts to create policy frameworks, regulations, financial institutions and rating agencies to promote the growth of SMEs. The Malaysian government launched a development plan in early 2000 and recently launched the SME Master Plan 2012-20. Malaysia also has a Central Credit Reference Information System (CCRIS) that facilitates the lenders by providing information about the borrowers. Singapore has initiated a SME credit bureau and a loan securitization scheme for promoting its SMEs. Thailand has created a dedicated banking system, a Credit Guarantee Corporation, Central Credit Information Service Company Limited and the Thai Credit Bureau Company Limited to promote the SME sector. They have also developed a Market for Alternative Investment (MAI) so that SMEs can have a better access to finance.

Indonesian banks are providing initiatives to SMEs under organized financing schemes with a special focus on the retail sector. They are also working to create a better database of SME borrowers. Meanwhile, the Philippines government has launched several policy initiatives to improve the condition of SMEs starting up including a mandatory target on banks for lending to these enterprises, the creation of a central database and the introduction of a standard credit rating framework. The government in Vietnam has taken a number of steps towards realizing the potential of SMEs in the overall development of the economy. It has pushed the state-owned banks to be more friendly and pro-active in providing credit. There are improvements in the legal system facilitating the SME sector as well. Cambodia is also making efforts to improve the condition of its SMEs through low interest rate loans, government and private partnerships, legal and policy changes and creation of a credit information center. Laos PDR has recently restructured its banking system to incorporate the financial requirements of the SMEs.

With a focus on indirect financing in China, the Department of SME has initiated a series of polices through the People's Bank of China and China Banking Regulatory Commission, to guide and encourage financial institutions to improve financing services and accelerate the innovation of financial products and services for SMEs. With regards to direct financing, a SME Board on the Shenzhen Stock Exchange has been opened and a system connecting securities traders through the Shenzhen Stock Exchange on a national market, called the Share Transfer System of Securities Companies has been set up in Zhongguancun, Beijing. SMEs are encouraged to raise funds in overseas capital markets.

Meanwhile India has fostered an influx of investment in Asia. The development of India's domestic market has a significant influence on neighboring countries such as Bangladesh, Sri Lanka, and Myanmar, and on the markets of the ASEAN countries. The Indian government has taken several vital steps towards identifying and promoting various SME sectors in India. The Ministry of Small and Medium Enterprises (MSME) has developed policy guidelines and legal frameworks. The Small Industrial Development Bank of India (SIDBI) provides credits to SMEs through a tie-up with various public-sector banks.

THE DEMAND AND SUPPLY OF FINANCE

Access to timely and cost-effective finance is a big challenge for any SME across the world. We divide the SME need for finance broadly into two categories based on their capital and operating expense. Capital expense is incurred for activities such as setting up the venture, scaling the operations, facility modernization, diversification, and other emergent needs. In addition, a SME incurs operating expense in every cycle of its growth, for the payment of raw material, salaries, rent, and utilities etc. Similarly we classify the source of funding for these expenses in terms of fixed costs and working capital. The fixed costs involved in setting up the business are mostly the initial investment made by the entrepreneur. The entrepreneur investing in land, machinery, and buildings, may get loans from the banks. Government funding also represents a huge contribution at various stages of the venture starting from the setting up of the business to technical modernization. Other sources of funding can be family, friend, and venture capitalists. Table 1 presents a snap shot of the sources and requirements for capital.

	Requirements / Needs	Source
1.	One Time Investment e.g. Acquiring Land, Building Factory etc.	Owner's Equity, Bank Loans
2.	Salaries, Rents, Bills	Family and Friends
3.	Periodic Fixed Assets e.g. New Machines, Live stocks	Micro Finance Institutions, Bank Loans
4.	Emerging Needs	Venture Capitalists
5.	Low Income Period	Advance from Buyers, Credit from Suppliers
6.	Raw Material	Factoring
7.	Loan Repayment	IPO/Shares

Table 1: Needs of Finance & Conventional Sources for Fulfillment

One of the largest costs is incurred in the initial stages of the SME's life cycle in the form of operating expenses. Bank loans are of the most prominent source of funding for this expense. Once the business is operational, there can be several other sources for financing the working capital. One of the major sources is through advance payments from buyers and credit from the suppliers. Another source is financial service providers, offering finance against finished-goods inventory.

Despite all the efforts, SMEs continue to face several hurdles to sustaining their operations. We find that one of the most predominant is related to access of finance both on the supply and demand side. On the supply side, the financial institutions face constraints due to a number of factors starting from information asymmetry. There is a lack of accurate and detailed information about the borrower. Few countries maintain a central database regarding the borrowers within the organized financial sector. But maintaining a database of the overall SMEs is not feasible for the banks due to the large number of borrowers. For any start up innovative enterprise such as an ICT firm, this information asymmetry becomes more crucial. A major issue is the lack of a policy framework for risk analysis of the borrowers. This results in the lending organizations charging very high interest rates for a good loan and a low interest rate for a bad one.

Banks want to see at least two sources of repayment to justify the ability of the lender to repay the loan: the cash flow from the business as well as the presence of a secondary source such as collateral. SMEs' inability to provide past financial statements to help analyze their cash flow and the minimum required collateral makes it difficult for banks to extend these loans. Existing businesses showing a proven financial track record with consistent profit are more likely to be approved than start up, innovative businesses or a business operating marginally but with an opportunity to grow with additional investment. Moreover, the financial institutions also want to see the owner's taking some equity in a business. This is to ensure that the owner is committed to the business and that the loan is used for the right purpose. Most banks want the owner to put in at least 20 to 40 percent of the total request. At the same time, banks depend on the owner's equity for rating a loan request. Lack of a reliable credit rating agency in several countries has become a major concern for the SMEs to advocate their credit-worthiness.

The associated transaction cost in processing a loan application, administering the loan, and updating the status makes it invariable for a large number of banks to finance SMEs. Any financing product or scheme provided by the banks is also affected by the system's political, social, and legal environment system. Inefficiencies in the banking sector also contribute to this problem. In the absence of a functional system to enforce and monitor the rules of lending and borrowing, inappropriate use of the loans cannot be prevented. For example, in the Indian subcontinent a notable behavior among borrowers primarily engaged in agriculture and related business is to use these funds for personal financial needs. Bad farm loans contributed 44 percent of new non-performing loans (NPLs) in fiscal year 2011 in India.

Thus the development of SMEs requires the presence of a supporting environment in any country. The figure below illustrates a conceptual framework categorizing the key factors into two layers. While the factors in the outer layer deal with the legal, social and political environment of the country, the factors in the inner as discussed earlier in the background are associated with infrastructure, technology, market and finance services available to the SMEs.

Figure 1: Environmental Factors for SME Sustenance

INSIGHTS

The case studies and interviews we conducted provide insights into the financial needs of SMEs in the respective sectors. On comparing the similarities and differences we observed the following:

Working Capital Constraints

- SMEs are under high pressure due to the constraints of day-to-day working capital.
- The longer the cash cycle, the higher the pressure e.g. Horticulture where it could be from 60 to 90 days verses small scale manufacturing.
- Establishing a line-of-credit with the suppliers like we found in the case of dairy supply chains could help alleviate some of this pressure.
- Where advance payments or loans are possible from buyers, the demand is more certain and predictable, and SMEs are able to operate with greater confidence.

Fixed Capital Constraints

For businesses with high investments in fixed assets upfront and a lower rate of return on these investments, scalability is constrained even when an opportunity to grow – such as purchasing a farm or a dairy – with further investment arises.

Inability to qualify for loans

- The lack of documentation, bills and receipts to demonstrate the cash flow of the businesses, especially for startup enterprises, means that SMEs fall short on acquiring loans from lending organizations. With most of their assets leased or rented, SMEs also lack the collateral required for financing or loans.

Lack of motivation, interest and education

Many of the SME businesses are based on needs and not as a conscious choice or an opportunity to build upon e.g. we found that businesses or trade including agro-business ventures inherited from the family lacks the motivation and entrepreneurship which is a key ingredient for innovation. Coupled with a lack of education, the growth and maturity of the business is not realized to its full potential

e.g. the use of working capital for non-business related personal expense and likewise a lack of differentiation between revenue and profit.

As a result, SME's are vulnerable to market changes. These are extremely varied and often unpredictable; the introduction of a low cost fashionable scarf from China and the dumping of live chicken into the Malaysian markets from Thailand on account of floods, are two examples from the case studies we conducted. While in both these cases the SMEs were aware that it will only take about six to eight weeks for the markets to absorb these disruptions, enterprises that are susceptible to even relatively small disruptions would mostly collapse.

DISCUSSION

Though there is a general consensus that the financial needs of SMEs must be supported to sustain them in the global business environment, a holistic approach maximizing on total available opportunities in a given financial landscape is required. Measures that support the financial needs of SMEs across various stages of their business cycle and supply chain have to be designed. Based upon the case studies, interviews, direct observations and past data, we would like to highlight the following factors that highlight the issues surrounding the financial landscape for SMEs.

Effective Lending: There is a need to establish a system for an easy, cost-effective, and timely lending mechanism for SMEs. Currently SMEs have limited access to formal financial institutions and are forced to borrow from unregistered money lenders at a very high interest rate. Lack of proper and timely capital prevents them from realizing their full potential. Payment of higher interest rates and/or reduction in operations reduces the gross income leading them into a debt trap. However, SMEs need to be cajoled to participate in the formal lending system to be able to address these issues. A larger number of SMEs find it difficult to manage cost-effective and timely finance and are forced to shut down the operations.

Credit Worthiness: It is very important for the banks to ensure the credit-worthiness of SMEs before lending. But the associated cost in evaluating, administering and maintaining the loans for the small borrowers makes it difficult on both sides. Banks lack proper information about the credit history of SMEs. On the other side, SMEs lack the basic education and time needed to complete the formal banking procedure. An effective way to overcome this problem is through a credit rating mechanism for SMEs. There are a several countries that offer such a facility. Countries such as China, Thailand, and Kenya, have adopted models for credit rating and credit distribution to farmers. The results show an increase in the incomes of these entrepreneurs and poverty alleviation. In addition, the credit rating mechanism has not only enabled the farmers to access mortgage-free loans, but also to increase the inflow of money into the banks through the increased savings of the same farmers.

Innovative Models for Lending: Several innovative models have been introduced at the product, process and institution levels to address the SME financing problems. In India, a Kisan Credit Card (KCC) scheme has been introduced to reduce the cost and administrative inputs for small loans. Other products include crop insurance, warehouse receipt financing, smart cards etc. There are also attempts to establish the Self-Help Groups (SHG) and bank linkage. In Thailand, Bank, Agriculture and Agricultural Co-operative (BAAC) introduced the concept of Joint Liability Group (JLG) to reduce the efforts in screening, administrating and enforcing. In India, a concept of Producer Companies (PCs) was introduced to combine the effectiveness of co-operatives and efficiencies of the company. An amendment was made in the companies act to give PCs a legal status. PCs bring in the farmers engaged in the production of the same produce to pool their resources and share the risks.

This also helps larger organizations to secure a reliable supply source of product without having to engage with individual farmers. While these initiatives have addressed a part of the problem in the short- run, they are still limited in their reach to the large population of the farmers.

Holistic Approach: Across the world, governments, banks and NGOs are working on solutions for a sustainable lending mechanism. Governments have taken steps such as increasing the financial resources available to SMEs and writing-off their bad debts. Banks are providing low interest rate loans and have dedicated funds for

agriculture. NGOs and private organization are trying to provide inputs on credit, market access, and the development of SHGs.

An example is the ICT-enabled agricultural platform called DrumNet in Kenya. The project's objective is the creation of an ICT-powered platform to facilitate cooperation between producers, buyers, agro-dealers, and banks. With enhanced transparency, better visibility, smoother transactions, easier access to credit, and risk sharing. financing becomes a more viable option. A similar example from India called the eFarm is an agri-supply chain platform linking farmers and consumers. Efforts such as these can help capture the advantages of existing KCC, PCs, JLG, SHG, Banks, MFIs and IT network.

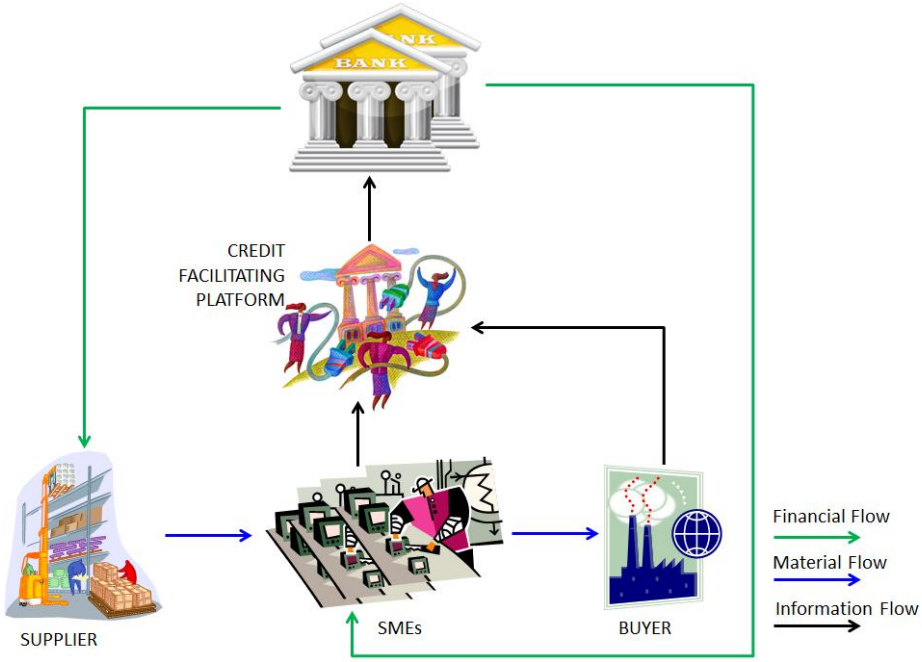

Figure 2: Proposed Credit Facilitating Platform

While the banks need to look into other means of financing such as warehouse financing – where the assets held in a warehouse can be used as collateral – SME entrepreneurs should similarly explore alternatives such as future options. At the same time, effective insurance schemes can mitigate the risk and make the system more reliable and sustainable. It is important to understand the power of SMEs and the role they can play in the various buyer-supplier relationships they engage in.

This relationship should be explored further to help the financing organizations design products suited to the various types of SME needs e.g. fixed assets and working capital. A credit facilitating platform shown in figure 2, for assisting the cash flow between traditional banking organizations and SMEs can help bridge the gap that micro financing organizations have tried to fill.

The issue of financing for SMEs cannot be addressed only by a few stand-alone initiatives but a holistic approach addressing the end-to-end flow of finance in the SME supply chain, and providing visibility and effective tracking. This will not only help the financing institutions to lend with confidence, but it will allow the tracking of the money spent on these investments and provide better insights into the credit worthiness of SMEs. These improvements will help lenders to make more informed business decisions.

NEXT STEPS

MISI seeks to develop a framework that links the SME needs for capital with the role the SME has in the Supply Chain. Based upon this goal, a Multi Criteria Decision Analysis Tool could be developed to help SMEs and financial organizations to gain insights into these business opportunities.

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About Us

The Malaysia Institute for Supply Chain Innovation (MISI): Located in Shah Alam, Malaysia near Kuala Lumpur, the MISI is the fourth center in the MIT Global SCALE (Supply Chain and Logistics Excellence) Network. The institute was launched as a joint initiative between the Massachusetts Institute of Technology (MIT) and the government of Malaysia in March 2011

The MIT Global Supply Chain and Logistics Excellence (SCALE) Network: The MIT Global SCALE Network is an international alliance of leading edge research and educational organizations, dedicated to the development and dissemination of global innovation in supply chain and logistics.

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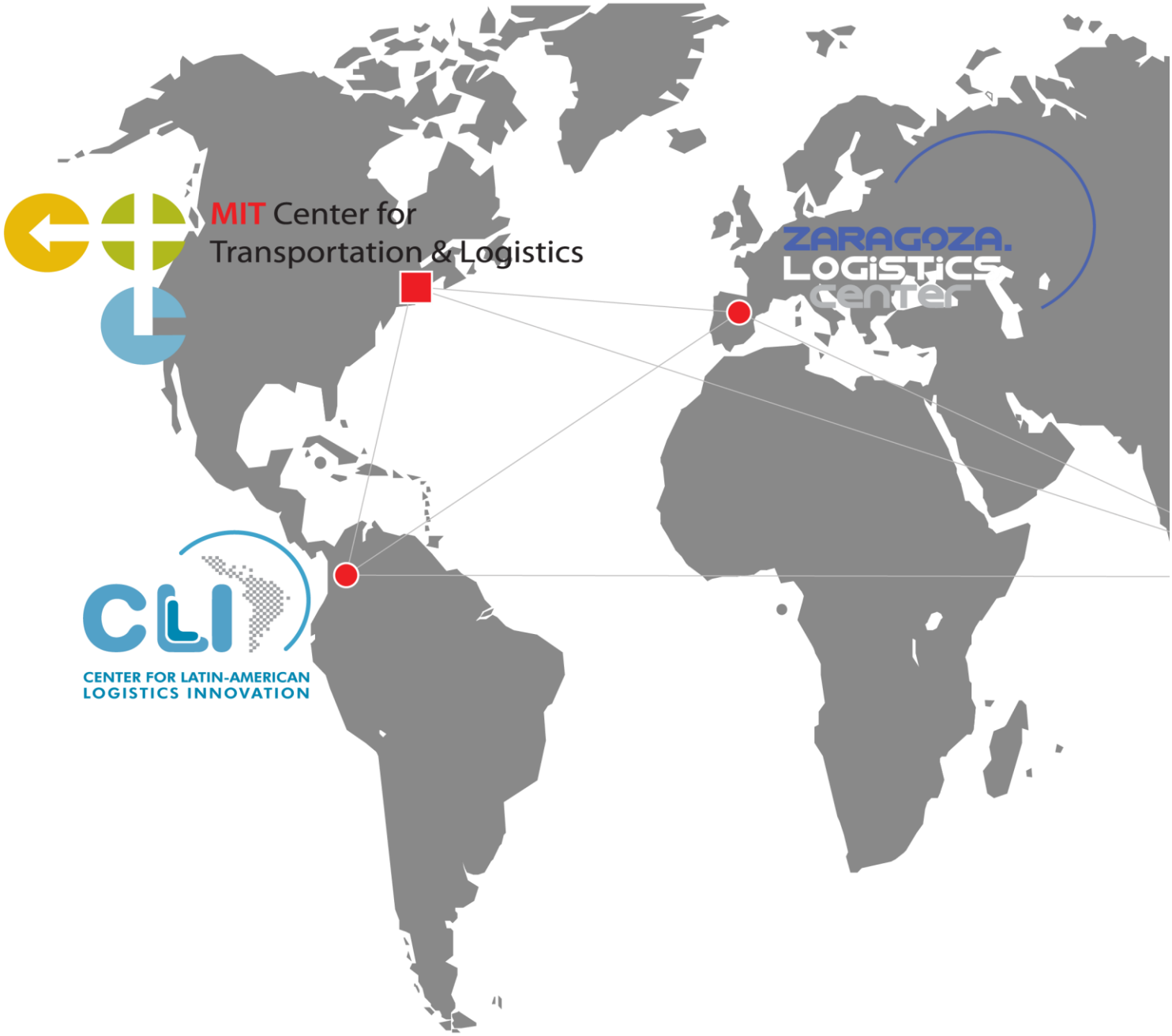

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