The Port of Veracruz, Mexico: Essential for Economy and Trade

The Port of Veracruz is the busiest port on the Gulf of Mexico, and the third busiest port in the country. Connected to central Mexico through both road and rail transit, it is the principal cargo gateway for Mexico City and much of the central area of the country. Veracruz is an essential port for the import and export of a significant amount of goods: 42% of the nation’s cars and 50% of Mexico’s foodstuffs pass through the port.

Port Expansion

In order to remain competitive with both regional and international ports, the Port of Veracruz must be able to handle ships larger than what the current facilities allow. This led to the planning and implementation of an aggressive expansion project, including the construction of a new port zone that is estimated to take ten to twenty years to complete and cost over US $1.2 billion. The project will be implemented over two phases: the first from 2009-2014 and the second from 2015-2019. It is expected to increase the port’s capacity from 35.6 million to over 100 million tons per year by its projected completion date in 2019. Additionally, the port expansion hopes to attract a considerable amount of public and private investment, create upwards to 70,000 jobs, enhance local transportation, sanitary and communications infrastructure, and grow other sectors of the economy including tourism.

An Opportunity for Research

The aforementioned quote provides insight into concerns that some stakeholders have regarding the current production and transportation of goods through Mexican ports. During this time of transition, it is likely that the Port of Veracruz and the surrounding region will face new hurdles with economic development in both the short- and long-term. This presents an opportunity for UAX to explore a wide range of issues regarding the port’s role in the regional economy and how port operations can be maximized during the expansion and thereafter. There are several critical factors to consider when implementing an ongoing research project, such as the possibility of forming a partnership with another academic institution or stakeholder organization and the ability to secure research funding.

A multi-methodological qualitative approach was utilized for this project. The research design—comprised of a literature review, case study analysis, semi-structured interviews, and site visits—was centered on addressing the three research questions stated below.

RESEARCH QUESTIONS

What topics regarding ports and economic development are most important from an operational perspective and are of greatest interest to stakeholders?

Which research topics could most likely attract funding support for investigating the relationship between efficient port operations and economic development?

For what research topics does UAX hold a comparative advantage to investigate based on their faculty, capacity, and role as a university?
Analysis and Findings

After conducting a thorough literature review, interviews, and site visits to the Port of Los Angeles and ports in the State of Veracruz, recurring themes became evident among the majority of stakeholders involved with port operations. These were framed into three distinct research topic areas: Security & Technology, Infrastructure, and Governance. Using the data collected on the Port of Los Angeles/Long Beach complex as a point of reference, this project sought to identify distinctions found in the ports of Veracruz along the lines of the three topic areas. In doing so, it would be possible to draw conclusions and provide clear and concise recommendations for potential research projects that UAX could explore.

SECURITY & TECHNOLOGY

The key difference between the Port of Veracruz and the Port of LA is the level of automation at security checkpoints. Through the use of technology such as radio frequency identification (RFID) as well as tamper-resistant biometric cards via the Transportation Worker Identification Credential (TWIC), the Port of LA is able to assess the identity of cargo and drivers that enter the port. The SPARCS technology system enables the Port of LA to keep track of all containers that enter and exit, as well as track their location as they move throughout the port. TWICs enable drivers to be unmonitored as they travel through the port, as the groundwork for verifying their security clearance has been completed on the front end. This is in stark contrast with the Port of Veracruz, which utilizes personnel to check the credentials of every truck that enters, monitor the trucks while in the port, and physically check each container during the customs process. Despite this inefficiency, port officials did not express a desire to go beyond the minimum required standards for security.

EVALUATIVE CRITERIA

These criteria helped establish a framework for evaluating data collected through the research. They were also utilized to formulate conclusions and recommendations for future research.

Likelihood of stakeholder involvement. Any proposed research project must focus on a topic that key stakeholders identify as relevant.

Comparative advantage. Research in which UAX has the capacity to complete and can capitalize on its status as a private university.

Potential policy impact. Research and recommendations that would actually have an impact on policy and considered for implementation.

Feasibility of obtaining funding. Research that can be aligned with the interests of potential funding sources.
Research found that a number of aspects of the Veracruz infrastructure system could use future investigation into improving efficiency. Using the case study of Los Angeles, differences in how procedures and systems are run were noted. Improvements in highway, rail, and zoning developments will greatly benefit the Port of Veracruz and allow for greater throughput. Surface improvements in expectation for greater traffic and the possible widening of freeway links in the area and towards Mexico City could also prove to be a boon for the economic development of the state and country. Wider, linked freeway systems as well as carpool and dedicated trucking lanes in Los Angeles show a model of how this can be done. Veracruz State does not have a high degree of interconnectivity with road and rail links not highly developed. The next step in the process then is to research the question of how to best accomplish this goal of interlinking and improving infrastructure and transportation systems in Veracruz.

GOVERNANCE

Both Mexican ports and the Port of Los Angeles/Long Beach have mixed governance structures. Publicly owned ports are administered by public agencies, but the majority of port operations are managed by private third parties. In both systems, private investors are allowed and encouraged. While these are similar governance systems, there are also key differences. For example, the United States does not have a distinct national port authority. In contrast, the Mexican government serves not only as the national port authority, but it also has a leading role in port planning and development through the National Development Plan.

There are advantages to both centralized and decentralized port planning and strategy. In Veracruz, stakeholders described issues with redundant government agencies and some difficulties coordinating between the federal, state, and local levels. In Los Angeles and Long Beach, having decision-making power concentrated at the local level helps reduce the difficulties of coordination. Stakeholders in Veracruz described political partisanship in public agencies as a challenge for consistent policymaking and implementation. For the Ports of LA/LB, the Mayor appoints the Commissions but these appointments must be confirmed by the City Councils. While this system does not ensure nonpartisanship, requiring confirmation from the City Council and limiting terms may help to increase accountability.

Identifying Potential Research Questions & Funding Sources

After evaluating the data that was collected via the research methodology, it became evident that there were many potential research projects that UAX could pursue. However, the capacity for designing an academic research project is based on the availability of resources, which shows variation between the three research topic areas. In identifying prospective research questions to investigate, it also became necessary to highlight sources of funding that may be available depending upon the research topic and other factors.

For Security & Technology, UAX could consider conducting an analysis of the impact that current security measures and technological systems have on port efficiency. This could come in the form of a qualitative and/or quantitative analysis (e.g. cost-benefit analysis) to assess the impact of the implementation of newer technologies and/or advanced security measures at the ports. If the issue is framed in a manner that emphasizes increased efficiency instead of security, maybe such a project will be more interesting to key stakeholders. As for funding, UAX could investigate opportunities from international agencies such as the World Bank and the Inter-American Development Bank (IDB), which currently funds a project in Mexico to identify current bottlenecks in logistics systems.7

On research question relating to Infrastructure could focus on how transportation and logistics can be improved through the overhaul of existing systems. This would involve investigating the strengths and weaknesses of the current system to discover where improvements would be best utilized. In addition, a cost-benefit analysis

“The expansion plan has to be complimented with infrastructure development, such as highways from Veracruz to Tampico. We lack that highway now, making cargo displacement complicated.”

– Staff for the Undersecretary of Planning, State of Veracruz
March 16, 2011

“Our institutional infrastructure is efficient but we could make it better. Most major institutions such as ports are federal, but we are trying to make them on a state-level.”

– Official at the Secretariat of Economic Development of the Ports in Veracruz State
March 16, 2011
is also suitable as it would show the inputs and outputs of the port expansion and operation and its subsequent financial advantages and disadvantages. Using this model would allow for the balancing of funds and help allow the port to maximize economic gain. The Multilateral Investment Fund (MIF) currently supports public-private partnerships in Mexico focused on infrastructure development. UAX could potentially pursue funding from MIF for a public-private partnership to work with the State of Veracruz for the research questions related to infrastructure. There are also research organizations in the United States that could be valuable partners. One of these is the METRANS Transportation Center, a transportation research partnership between the University of Southern California and California State University-Long Beach. These organizations could potentially leverage their resources to assist in research design and the search for funding.

For Governance, research could be done using an input-output model to analyze the appropriateness of the Mexican port governance structure given its background, structure, and strategy, and how those contribute to outputs such as efficiency and effectiveness. Another possibility involves an examination of the bureaucratic structure of federal, state, and local agencies that oversee the ports to identify areas of overlap and make recommendations to increase efficiency. As in earlier topics, evidence for funding this research has been found within entities like the World Bank and IDB.

While these projects present UAX with an opportunity to design research that will be attractive to potential research partners and funders, accomplishing this goal is based on different circumstances and preferences that could make one topic more favorable than others. To identify a dominating alternative to pursue, decision analysis was utilized via the creation of a criteria alternative matrix (CAM). Referencing the four evaluative criteria established in our methodology, each of the three research topic areas were evaluated and a decision was made based on which appeared to dominate the others according to these factors. Our analysis revealed that if either Stakeholder Involvement or Comparative Advantage holds more value for UAX, then they should design a project focusing on Governance. However, it can easily be said that if Policy Impact is of greatest value, then a project on issues relating to Infrastructure would be most suitable. The selection of one alternative does not reduce the value of the others. The choice is based on the information and circumstances that the research has uncovered at this point.

**Recommendations**

Based on the evaluative criteria utilized in our analysis, we recommend the following three potential projects as best suited for UAX to consider for future academic research:

**Analyze the governance model of the ports of Veracruz and create recommendations to suggest improvements for increasing efficiency.** UAX could analyze the current organizational structure that manages ports in Veracruz, identify inefficiencies, and suggest improvements to develop port governance.

**Conduct analysis of current traffic trends and make recommendations for improvements such as dedicated truck lanes to increase operational efficiency.** UAX could analyze current traffic patterns of highway & rail systems, making recommendations to increase the speed of transportation.

**Analyze the potential of the port expansion as a vehicle for entering new markets.** UAX could analyze potential new goods and trading partners and develop an analysis of the needs the port would have in order to use the expansion to establish these relationships.

Our research has identified other possible topics to pursue if UAX is interested. We believe that the aforementioned projects are most favorable due to high stakeholder interest, their potential impact on policy formulation, their ability to attract funding, and UAX's comparative advantage in its ability to conduct academic research.

**REFERENCES**

5. Op cit. 3.