

executive summary

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Executive Summary: Comparative Study on the Costs, Risks and Benefits of Manufacturing in Selected Latin American Locations

The objective of this field study was to determine and compare the total delivered costs of products that are produced in a semi-automatic, light manufacturing operation in the following Latin American countries and shipped to the US and Canadian markets for sale: Honduras, Nicaragua, Costa Rica, and Mexico. In Mexico the study further took a look at both a US/Mexico border location as well as one in its central region.

The authors based the study on a "hypothetical" manufacturing operation composed of a 70,000 square foot facility including manufacturing, warehousing and administrative space. The organizational structure supporting the operation includes 400 operators working on a two shift bases, along with a staff of 90 indirects. The 90 indirects included everyone from the plant manager to the janitor who on a daily basis supported the operators. It was also assumed, in order to more precisely define the freight and logistics costs, that roughly 80 percent of associated raw materials for the operation would be shipped from the Southeastern US to the different studied locations, and that roughly or virtually all of the finished product would be returned to the Southeastern United States for distribution.

Below the authors highlight by country some of the key findings from the study:

Nicaragua

Nicaragua posed logistical challenges to operating a manufacturing facility. The authors quickly realized that shipping the raw materials from the Southeastern United States to the location would require delivery to Puerto Cortes, Honduras, which is on the Caribbean coast of the country, transportation by land across Honduras and most of Nicaragua in order to be processed and then shipping back to Puerto Cortes by land. In addition to the distance, Nicaragua has in place restrictive curfews for night time transportation. Compared to the other report locations, Nicaragua's physical infrastructure rates poorly and the country lacks quality supply chain support. Accordingly, most of the manufacturing taking place today is in the apparel industry as Nicaragua's primary competitive advantage is unskilled, inexpensive labor.

Costa Rica

Costa Rica is currently home to both international electronic and medical device manufacturers. Of the studied locations, labor costs were the highest here but as well Costa Rica has the most educated labor force in Central America. Transport costs are also quite high because of its southern location relative to the other countries in the report. In terms of the matrix created by the authors to measure the non-financial factors of each location, Costa Rica rated the most favorable. The factors evaluated (which were weighted) included political stability, quality of

infrastructure, currency fluctuations vis-à-vis the US dollar, inflationary tendencies in the country, and technological support capability.

Honduras

Honduras, and in particular the city of San Pedro Sula, is home to the largest apparel cluster in Central America. It is supported by the port Puerto Cortes from which ocean freight is received and shipped to the south, southeastern and eastern US seaboard. Labor costs were found to be less than that of the US/Mexico border but not less than locations in Central Mexico. In terms of its rating vis-à-vis the factors included in the matrix, Honduras scored second to last, just ahead of Nicaragua.

Mexico

Due to its large size, the authors chose to evaluate two different locations in Mexico, one at the US/Mexico border, the traditional home of the Mexican maquiladora industry, and the other in the fast growing central region. It was determined that labor costs on the US/Mexico border are materially higher than those in central Mexico and are most similar to the labor costs in Costa Rica. The report confirmed that the transportation costs from the US/Mexico border to the southeast US were the lowest, with central Mexico coming in second ahead of the Central American countries. In terms of the author's factor matrix, the Mexico locations fared very well; only Costa Rica rated higher.

For further information about the findings and results of this study, please contact Doug Donahue: +1.210.828.8300 or ddonahue@entradagroup.com.