

whitepaper

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Why should I consider sourcing Medical Supplies and Devices from Mexico versus other low cost global regions?

Major Considerations:

Total Delivered Cost

Whether you are producing a medical device or a wiring harness, evaluating “total delivered cost” is critical. What is it going to cost to land a product in the target market? While total labor cost (wages + benefits) comprise a portion of the variable costs, they tend to get a lot of the attention especially at the outset of an analysis. Mexico ranks 54th out of 163 countries when comparing gross annual wages for 2008/2009 and there are differences within the country depending upon location (e.g. border vs. interior).

Mexico's proximity to the U.S. market provides lower overall freight costs and can offer some insulation from fuel surcharges in the volatile oil markets. It is important to consider any offsetting effect that may exist when evaluating labor costs and distance from the target markets. In-depth analysis has shown that when comparing identical operating plants, freight as a percentage of total costs (excluding raw materials) varied as follows: Mexico = 10%, Honduras = 17%, Nicaragua = 33% .

Another consideration is the potential to source raw materials and finishing supplies locally which further reduce freight costs and support Return on Invested Capital (ROIC) objectives. Utilizing alternative suppliers within the medical device industry may require an initial investment for regulatory validations, but the payback can be measured and evaluated objectively. Due to the diversity of industries (apparel, automotive, avionics, hi-tech) located in Mexico, it is more likely that a manufacturer would be able to source a greater percentage of their raw materials in-country. Though the cost per unit of the raw material may be at parity with current pricing, when viewed as part of total delivered costs the advantages become quantifiable in terms of reduced freight expense and inventory carrying cost.

Supply Chain & Commercialization Costs

In addition to total delivered cost, the analysis needs to strongly consider the length of the total supply chain (manufacturing origin to end customer) which will impact customer service and time-to-market requirements for new product introductions and/or modifications. This is especially critical in a sole source situation. In simplistic terms, the farther away and more interruptible the inbound and outbound supply chain is from the manufacturing point, the greater the risk to on-going order fulfillment. Longer supply chains, by definition, require greater sustained inventory levels and operating overhead to mitigate supply chain interruptions in order to make them (hopefully) invisible to the end customer. Depending on the size of the operation, this can translate into millions of extra working capital (inventory) dollars that must be maintained in support of supply chains with as few as 3 to 5 extra days of lead-time requirement. Additionally, when supply chain interruptions do occur, the time required to recover will be shorter which can be critical for medical supplies and devices.

Time-to-market can also be negatively impacted within greater supply chain lengths. The turnaround time for prototype development, testing and new product introductions (pipeline fill) takes longer with greater distance from the target market. Mexico's proximity to the U.S. is obviously an appealing quality in regard to supporting supply chain length in order to land products into North America and beyond.

Medical Manufacturing

Any analysis evaluating the sourcing of medical supplies and devices in a particular region must consider a wide range of factors. Does the region have a base or history of producing medical products? The fact that other medical products are sourced from the region can be a positive sign of proven success. Since 2003, Mexico has increased imports of Medical goods into the U.S. by almost 100% and continues to outpace China by a 2-to-1 ratio according to the U.S. International Trade Commission.

While "medical goods" is a broad term, it does indicate the presence of an existing base and the associated support structures. The number of FDA registered facilities continues to grow along with the number of successfully certified sites within the ISO and CE MARK standards.

If one assumes that physical plant requirements can be met anywhere in the world, the challenge of resource availability becomes a key consideration. The ability to maintain a stable workforce and leverage the training investment required for regulatory compliance is of prime concern for medical manufacturers. Mexico has developed a strong base of technical and leadership resources supported by an extensive university system that stretches throughout the country. The continued industrial growth in Mexico over the last decades has developed resources with the requisite skills to learn and lead the manufacture of medical supplies and devices.

Business Climate

With Mexico's introduction of the Maquiladora business model in the 1960's, and enactment of significant national trade agreements such as the North American Free Trade Agreement (NAFTA), Mexico continues to be a prime supplier of products for sale to the U.S. and other global consumers. Long-standing Mexico manufacturing and growth has also promoted significant infrastructure investment along the border which over time has moved deeper into the interior of the country where certain operating expenses can be less costly.

The national unemployment rate in Mexico as of September 2009 was reported to be single digit with under-employment potentially as high as 25%. Labor quality is also positive in outlook due to sustained and growing manufacturing enterprises within Mexico's borders. Increasing education levels (Tertiary academic enrollment for men and women in Mexico has increased by 40+% from 1990 to 2007), along with a growing willingness to travel/move within Mexico's various states, bodes well for supporting stable and more flexible workforces.

Mexico also offers access to the "Shelter Plan" business model that provides the legal infrastructure, recruits a dedicated workforce, operates a shared services center, develops and manages the industrial park, and allows for quick start-ups and business sustainment. This unique partnership allows the client to focus on their core competency - manufacturing, while the shelter operator facilitates many of the other support functions.

Manufacturing in developing regions of the world is not without its issues. Governmental impacts and security threats can hamper any business enterprise. However, it is safe to say that when comparing other competing global regions, Mexico is significantly more of a "known quantity" to U.S. based manufacturing owners and operators.

Conclusion

First and foremost, there is no substitute for rigorous and detailed analysis before moving forward with any sourcing decision and, in the end, it must offer an on-going value proposition. The healthcare industry is under unprecedented pressure to reduce all forms of waste in order to lower overall costs. These pressures manifest themselves daily when a health care company attempts to win new business or defend existing business and contracts. The cost of goods produced can range from 50% to 60% of Total Cost and is a major factor in growing margins and driving top line growth.

The original question presented at the start of this article is much more complex than can be addressed in this small space. However, if you are being tasked with evaluating lower cost options, then Mexico has to make your "short list" of countries for business consideration.

About the author: John T. Cecilia is a former manufacturing executive with a large multi-national corporation with experience in health care manufacturing in the US, Mexico, Central America and Eastern Europe.