

## Reference model for business excellence logistics; application in Latin American countries

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### Abstract

The performance of business logistics is one of the fundamentals in supply chain management. It is not just about having good logistics to enter the markets, but it is necessary to maintain and increase competitiveness. Consequently, a reference model is required that reflects the main characteristics of the organization and logistics management of the main international companies. Through a benchmarking process with this model, each firm can identify the main

weaknesses on which it must work to accelerate the development of its logistics. The purpose of this article is to present the results of twenty years of study of logistics performance in Latin American companies through the application of the Logistics Reference Model (MLR).

Since 1998, this tool has been applied several times in Colombia, Bolivia, Ecuador and Cuba and has been improved and updated. In addition, the results of the tool are related to the Logistics Performance Index of the countries studied.

## Keywords

Logistic performance, reference model, Latin-American logistic, benchmarking and IDL. Q

## Acknowledgements

Add acknowledgement if need

## Biography / Biographies

**Vitor Mendes Caldana** began the academic career with a technician course in Electronics from Liceu de Artes e Ofícios (1999) followed by an undergraduate degree in Electronic Engineering from Universidade Presbiteriana Mackenzie in 2004. In 2016, finished the master's course in Industrial Engineering with the Quality of Engineering Education and its Relation to Regional Development as his area of research. As a technical profession, from 1999 until 2016, started in Caltronic Automação Industrial, a service-based company in Brazil that represents American and European automation equipment for the printing industry, and finished as Service and Projects Manager, serving not only Brazil but the whole of South America with services performed also in USA and China. During the professional career took several courses in USA and Europe to Automation and dedicated equipment maintenance. In 2016 left the company for full-time dedication to IFSP. In 2014 began his teaching career in FIEB as a substitute teacher for the Technical Course of Electronics. In 2016 moved to IFSP to start the electronics Technical Course in the city of Sorocaba and has been engaged with this project since. In these 4,5 years taught a variety of courses in electronics. In 2018 began his Research Group in Industry 4.0 and is currently working with colleagues in this research area as well as the project for the PhD.

**Jorge Kurita** attended Universidad Nacional de Asuncion in Paraguay, where he got his BS in Electromechanical Engineering. After graduation, he spent some time in academia working as faculty. During this tenure, he taught courses on heat transfer, fluid mechanics, and physics. In 2004 Dr. Kurita was granted the Fulbright scholarship to attend a graduate program on Mechanical Engineering at Michigan Technological University. He has finished his MS and then continued with a doctorate program. NASA and the NSF funded his doctorate research. Dr. Kurita's contribution to his field was well-published in several papers from high-impact journals. From 2011 Dr. Kurita worked as a development engineer II in the competitive automotive industry, Filtran LLC, located in Des Plaines, Illinois. As an experimental researcher, his experience helped Filtran develop special testing techniques never implemented before on filtration systems. In addition, Dr. Kurita worked in the CAE group, contributing to developing simulation techniques to help build state-of-the-art filtration systems. Dr. Kurita participated in developing OEM filters; some of them obtained awards from Jatco and GM. From 2016 Dr. Kurita is back to his alma mater as an assistant professor in Universidad Nacional de Asuncion. Later the same year, he is appointed to lead the research department of the School of Engineering. In 2017 he was appointed to be the Mechanical Engineering Department head at Universidad Nacional de Asuncion. In August of the same year, Dr. Kurita is awarded the "Distinguished Citizen by the City Council of Asunción" for his contributions to education in Paraguay's space sector. And in December of the same year, he was mentioned as "Outstanding Protagonist of 2017" by the newspaper Ultima Hora.

**Ahad Ali** is an Associate Professor and Director of Industrial Engineering Program in the A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering at the Lawrence Technological University, Southfield, Michigan, USA. He earned B.S. in Mechanical Engineering from Khulna University of Engineering and Technology, Bangladesh, master's in systems and Engineering Management from Nanyang Technological University, Singapore and PhD in Industrial Engineering from University of Wisconsin-Milwaukee. He has published journal and conference papers. Dr Ali has completed research projects with Chrysler, Ford, New Center Stamping, Whelan Co., Progressive Metal Manufacturing Company, Whitlam Label Company, DTE Energy, Delphi Automotive System, GE Medical Systems, Harley-Davidson Motor Company, International Truck and Engine Corporation (ITEC), National/Panasonic Electronics, and Rockwell Automation. His research interests include manufacturing, simulation, optimization, reliability, scheduling, manufacturing, and lean. He is member of IEOM, INFORMS, SME and IEEE.

**Donald M. Reimer** is the managing member of The Small Business Strategy Group, L.L.C and serves as an adjunct professor at Lawrence Technological University. Mr. Reimer holds a Bachelor of Science degree in Industrial Management from Lawrence Technological University and a Master of Arts degree in Political Science from University of Detroit/Mercy. He has been recognized as a professional management consultant with over 45 years of experience in working with closely held businesses. He has taught courses in entrepreneurship, management and corporate entrepreneurship and innovation for engineers. Mr. Reimer served as member of the Minority Economic Development Committee of New Detroit. He has served as a KEEN Fellow for The Kern Family Foundation. He is member of the Lawrence Tech Alumni Board of Directors and has elected a Fellow of the IEOM Society International. Mr. Reimer is a faculty advisor of the Student Chapter of the IEOM Society at Lawrence Tech.