

# Martha Ramírez Valdivia

Director - Office of International Relations at Universidad de La Frontera

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## Experience

**Director - Office of International Relations at Universidad de La Frontera**

August 2014 - Present (1 year 5 months)

**Communications Chair at ASQ Chile**

February 2014 - Present (1 year 11 months)

**Consultor at Qualitas**

December 2012 - Present (3 years 1 month)

**Campus Coordinator / UFRO at Melton Foundation**

December 2009 - Present (6 years 1 month)

**Assistant Professor at Universidad de La Frontera**

August 2001 - Present (14 years 5 months)

**Program Director : Magíster Sistemas de Gestión Integral de la Calidad at Universidad de La Frontera**

August 2010 - July 2014 (4 years)

**Project Engineer at Enterprise Systems Center - Lehigh University**

1998 - 2001 (3 years)

**Quality Control National Coordinator at Ministerio de Economía, Industria y Comercio**

1992 - 1993 (1 year)

**Professor at Universidad Nacional de Ingeniería**

1988 - 1993 (5 years)

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## Volunteer Experience

**Presidenta Damas Rotarias 2014-2015 at Rotary Club Araucanía**

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## Languages

**English**

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## Skills & Expertise

**Quality Systems Design**

**Data Envelopment Analysis**  
**Discrete Event Simulation**  
**Healthcare improvement**  
**GAMS**  
**Operations Research**  
**Industrial Engineering**  
**Optimization**  
**Data Mining**  
**University Teaching**  
**LaTeX**  
**Statistics**  
**Innovation Management**  
**CPLEX**  
**Qualitative Research**  
**Balanced Scorecard**  
**Decision Analysis**  
**Value Stream Mapping**  
**Teamwork**  
**Engineering**  
**Microsoft Office**

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## Publications

**An estimate of potential blueberry yield using regression models that relate the number of fruits to the number of flower buds and to climatic variables**

Scientia Horticulturae January 2012

Authors: Martha R., Salvo, S., Muñoz, C., Ávila, C., Bustos, J., Silva, C., y Vivallo, G.

**A Multiple Stage Approach for Performance Improvement of Primary Healthcare Practice**

Journal of medical systems May 2011

Authors: Martha R., Sergio Maturana, Sonia Salvo

**Evaluación de la percepción de calidad del servicio de alimentación en casinos concesionados**

Revista Ingeniería Industrial 2009

Authors: Martha R., Lorena Schafer, Sonia Salvo

**¿Seis sigma en hospitales chilenos?**

Revista OIKOS December 2007

Authors: Martha R., Sheylla Pinto de la Sota, Alfredo Serpell, Luis Enberg

**Más allá de la gestión estratégica en educación superior: aplicación del cuadro de mando integral**

Revista OIKOS December 2008

Authors: Martha R., Mauricio Zapata, Jaime Bustos

**Development of a Software Tool to Improve Performance of Packaging Operations through Short Interval Scheduling**

Packaging Technology and Science October 2003

Authors: Martha R., Peter H. Christian, Patricia Frederick, Burcin Aksoy, Emory W. Zimmers Jr

**Design and implementation of a cellular manufacturing process: A simulation modeling approach**

International Journal of Industrial Engineering : Theory Applications and Practice 2000

Authors: Martha R., Christian, Peter ; Govande, Vinay ; Zimmers Jr., Emory W.

**Achieving hospital operating objectives in the light of patient preferences**

International Journal of Health Care Quality Assurance October 1997

Authors: Martha R., Thomas Crowe

**Simulation Service Quality System: An Approach to Health Care Facilities**

University of Missouri-Columbia 1995

Authors: Martha R.

**QUALITY INDICATOR FOR CHILEAN HEALTHCARE CENTERS**

Healthcare Systems Process Improvement Conference February 18, 2012

Authors: Martha R., María José P., Claudio Hernán R., Silvana A., Juan Daniel Piña, Juan José O., Ana Moraga

**Desarrollo de un indicador de la calidad de atención en Centros de Salud Familiar para la medición de la eficiencia técnica**

Ingeniería y Desarrollo July 2015

Authors: Martha R., Jennifer M., Ana M.

Using indicators to evaluate the quality of primary healthcare provided by family healthcare centers plays an important role in improving the service and evaluating its performance. The objective of this work is to develop and validate an indicator for primary healthcare quality service in Chile which is also consistent with the Integrated Healthcare Model with Emphasis on the Family and the Community; it also provides a new variable to evaluate Technical Efficiency. It is developed based upon a detailed literature review, gathering of primary and secondary data, survey applications, focus groups and expert opinions. It is made of two elements: structure and process, divided into four weighted dimensions which outcome is one quality indicator. We present the results of the calculation for the designed indicator based on 259 Chilean Family Healthcare Centers, which is validated through four centers, obtaining values of 0.461, 0.876, 0.640, and 0.880, respectively. The CESFAM with the highest value has a better relative quality since there is no standard CESFAM to compare. It is concluded the indicator is valid, useful and consistent; the Pearson Correlation Coefficient analysis and Cronbach's Alpha values confirm these results. Further studies require estimating the value of the indicator at national level.

**Measuring the Efficiency of Chilean Primary Healthcare Centres**

International Journal of Engineering Business Management Special Issue: Healthcare Technology and Management May 2015

Authors: Martha R., Jennifer M., Jaime B.

This paper examines whether different approaches for estimating the technical efficiency of a primary healthcare centre —PHC— can have significantly different results. Although effective regulation demands the development of measures for establishing good operation levels, few studies have compared results from a data envelopment analysis #DEA# and stochastic frontier analysis #SFA# in a PHC. Furthermore, to the best of our knowledge, no studies have used Chilean nationwide data. Efficiency refers to the relation between the number of output units per input unit. Effectiveness evaluates the outcome of medical care and can be influenced by efficiency. The data that were used in this study came from 259 Chilean municipalities.

We included two outputs - medical and check-up visits - and three inputs - staff, general service and drugs expenses. For the DEA, we used a variable return to scale output-oriented model. Before applying the SFA, a principal component analysis #PCA# combined the two outputs. The results were similar for both methods: the SFA efficiency averages were 70.89% and 65.83% and the DEA averages were 68.37% and 54.46% for the urban and rural municipalities, respectively. In addition to defining a frontier of “best practice”, this study merged the PCA with the SFA to form an innovative approach to combining outputs.

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## Education

### **Pontificia Universidad Católica de Chile**

PhD, Operations Research, 2005 - 2010

### **University of Missouri-Columbia**

MSc, Industrial Engineering, 1993 - 1995

### **Universidad Nacional de Ingeniería (NI)**

Ingeniero Industrial, Ingeniería industrial, 1986 - 1990

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## Projects

**Proyecto FONIDE FE111007: “Avanzando en la identificación de factores que explican un mejor rendimiento escolar en estudiantes y establecimientos chilenos, en las áreas de matemática, ciencias y lenguaje: propuesta para el diseño de políticas públicas”.**

2011 to Present

Members: Martha R., Sonia S., Daniela V.

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[Contact Martha on LinkedIn](#)