

**HEALTH AND GROWTH: AN INTERNATIONAL AND REGIONAL
ANALYSIS**

A RESEARCH PROPOSAL

Presented jointly by

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to the PAHO Call for Proposals on

HEALTH, HUMAN CAPITAL AND ECONOMIC GROWTH IN LATIN AMERICA
AND THE CARIBBEAN (PHASE II)

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Health and Growth: **An International and Regional Analysis**

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1. Justification and Summary of the Joint Proposal

This proposal is a joint effort of three Latin American institutions to compete for the whole four-grant research initiative on “Health, Human Capital and Economic Growth” publicized by the Pan American Health Organization. The goal of this presentation is to offer four studies and a joint comparative chapter of conclusions as part of an ongoing research agenda to investigate on the role of the formation of human and social capital as a determinant of economic performance of individuals, countries and regions. The options offered to PAHO are the following:

1) Three individuals, independent research projects, which can be understood to have been submitted separately. These individual proposals share the introduction and conceptual framework but have distinct econometric objectives. The proposals are the following:

a) About Nutrition, Human Capital and Income - Regional Comparisons in Argentina, Daniel Maceira, section 4.1.

b) Nutrition and Human Capital in Mexico. Returns and Intergenerational Transmission, David Mayer, section 4.2.

c) Health, Nutrition and Poverty Traps in Peru, Martín Valdivia, section 4.3.

Each of these research projects will result in a stand-alone paper.

2) If the three of these projects are selected for funding by PAHO, the authors will write a fourth ‘bonus’ paper with a comparative discussion of the econometric results as well as the implications for policy associated to the results. This paper will benefit from the joint approach and methodology to be used in the previous three papers.

3) An additional research project is offered, namely a cross-country study of growth including nutritional indicators using databases such as FAO’s that includes country’s caloric availability. This study will identify worldwide patterns related to the existence of poverty traps and the thresholds associated to the presence of educational and health barriers to economic convergence.

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The aim of this joint proposal is to present empirical evidence relating human capital, health capital and economics providing a three-stage approach. The first one, based on an in depth literature review, will identify worldwide patterns related to the existence of poverty traps and the thresholds associated to the presence of educational and health barriers to economic convergence. Following Fogel (2001), we plan to include nutritional indicators in the typical growth and per capital GDP equations, using databases such as that of FAO that includes country's caloric availability. We will also keep looking for additional indicators. Methodologically, we plan to explore further the possibility of thresholds argued by Galor and Mayer (2001) by using quantile regressions that allow us to explore the differentiated impact of variables over the income distribution. In particular, we are interested in the changes in the relative importance of educational and health variables as we move along the income distribution.

A second stage will provide coordinated estimations of the relation between social capital and economic performance by using household surveys of three Latin American nations with differences in terms of economic performance, epidemiological and health priorities, and income distributions: Argentina, México and Perú. Three types of analysis are considered in this stage. One will concentrate on identifying the importance of the mechanisms of intergenerational transmission of poverty by looking at the role of mother's and household characteristics on the nutritional status of children under five years old. As in the previous stage, we will explore the differentiated effects of mother's health, education and household income as we move along the nutritional distribution. This type of analysis will be made for the three countries: Argentina, México and Peru. The second type of analysis explores the connection between long-term nutritional status (height) of adults and their productivity in the labor market and will also explore for differentiated effects of human capital variables (health and education) along the wage distribution. This study will be made only for Mexico and Peru. The Argentinian case study will also analyze the connection between regional differences in productivity and those in the height of an important sub-sample of individuals.

Finally, a bonus chapter will provide analytical conclusions as well as a discussion of political economy associated to the results and evidences found along the joint research.

Attached to the joint proposal are the CVs of the three researchers who will lead the initiative and a brief of each of the institutions to where the researchers are affiliated to.

2. Conceptual Framework

In the last decade, a series of studies have uncovered the importance of nutrition and health for economic growth. The role of nutrition has been highlighted in Nobel price winning studies by Fogel (1991, 1992, 1994[a], 1994[b]), who finds that nutrition, especially at young ages, has an important influence on health and longevity, and on the power of the human machine. Nutritional status when young has been shown to be reflected in adult height, weight and in the Body Mass Index. A large literature on stature has shown it to be a good measure of welfare (Steckel, 1995) and a faithful reflection of nutrition when young (Schürch and Scrimshaw, 1987). Nutritional deficiencies become firmly established by the age of 30 months (Larrea, Freire and Lutter, 2001).

Fogel's energy calculations on the human machine have a predecessor in the efficiency theory of wages. Early literature on underdevelopment addressed the possibility of a low productivity trap due to low nutrition (e.g. Leibenstein, 1957, Mazumdar, 1959, Mirlees, 1975, Stiglitz, 1976, Bliss and Stern, 1978, or Dasgupta and Ray, 1984, Dasgupta and Ray, 1986; Dasgupta, 1991). Empirical work documented substantial effects along these lines (for surveys see Barlow, 1979, Martorell and Arrayave, 1984, Strauss, 1985, Srinivasan, 1992, Behrman and Deolalikar, 1988). In very recent cross-country work, Arcand (2001) extends studies on the impact of health on economic growth by showing that nutrition has substantial effects on growth, both directly and indirectly through life expectancy and possibly schooling. His results include evidence for the existence of a nutritional-related poverty trap.

The strong empirical correlation that exists between aggregate measures of health and income has been recognized since Preston's 1975 cross-country study, which showed life expectancy to be positively correlated with income. In a more recent study, Pritchett and Summers (1996) also corroborate that countries with higher incomes enjoy higher health. In 'Global Divergence', (Mayer, 2002) shows that the evolution of life expectancy by groups of countries closely parallel's income per capita. The opposite causal relation running from health to income, productivity and economic growth has recently received considerable attention, partly because of the policy questions that it is related to (World Health Organization, 1999, 2001; Pan American Health Organization, 2001).

Devlin and Hansen (2001) find Granger causality running in both directions between health and GDP in OECD countries. These economic history findings have been confirmed by macroeconomic empirical studies of economic growth along the lines set out in Barro and Sala-i-Martin (1995). Bhargava et al. (2001) find, addressing issues of endogeneity and reverse causality, that adult survival rates have a positive effect on GDP growth rates in low-income countries. Bloom, Canning and Sevilla (2001) carefully distinguish health from education and experience and find that it has a positive, sizable effect on aggregate output. This effect continues to be felt several decades into the future (Mayer 2001a,b).

As part of the effort to improve and extend basic education services and to universalize primary schooling conducted by the UNDP, UNESCO, UNICEF and the World Bank, studies have been undertaken on the consequences on education that low nutrition can have (Levinger, 1992). Educational potential thus constitutes an additional channel through which nutrition acts. Nutrition sustains adequate energy levels for physical human activity and also has consequences for mental development and performance. The importance that minimum levels of infant and child nutrition have for adult life implied the possibility of a poverty trap in which in the absence of adequate funding for basic needs, education inequalities persist. This proposition, modeled by Galor and Mayer-Foulkes (2002), implies that nutrition may play an important role in the intergenerational transmission of human capital. Moreover, in the presence of poverty traps, well-meant aid policies may fail to attain their aim of eliminating poverty. Also, if they fail to overcome critical barriers the returns to nutrition and health may be underestimated in microeconomic studies meaning behavior subjected to the trap.

As mentioned above, studies on anthropometric indicators have made them reliable instruments for empirical research on these economic relations. New databases are available that include height and weight. These make it possible to evaluate whether

poverty trap mechanisms are indeed present. The impact of adult stature and weight on present income and the impact of household wealth and human capital on children's stature by social levels can be estimated to test for presence. Also, these estimates can serve to establish their relevance and thus to establish the range and types of applicable policies.

3. Empirical Strategy

Our research will focus on the role of indicators of nutritional status indicators, as measures of health status. Empirically, Fogel (2001) has clearly shown the great relevance that nutrition has had on British economic growth. (the combined effort of increase in dietary energy available for work, and on the increased human efficiency in transforming dietary energy into work output appears to count for about 50 percent over the last two centuries) Methodologically, Strauss & Thomas (1998) have stressed that a key virtue of these health indicators is the absence of measurement error that is systematically correlated with respondent characteristics. (such as income)

Fortunately, for the microeconomic analysis nowadays we have several surveys in Latin America and the Caribbean that include height and weight for children, and some of them also include those anthropometric measures for adult individuals. Those databases will be used to estimate: i) the impact of mother's health and education and household characteristics on the nutritional status of children under five, and ii) the impact of adult height on current income and the change of this impact over the income distribution within the country. For the regional analysis, we plan to use databases from FAO and others to obtain indicators of nutritional status, such as availability of calories, at country levels. This data will be used to evaluate the impact of health measures over GDP per capita and per capita growth rate in the cross-country analysis.

With respect to the effect of individual health on individual productivity, we will focus first on the estimation of the effects of health, as measured by the height of adult individuals, on the average hourly income obtained by wage-earners and self-employed individuals. In principle, it is assumed that the estimated Mincer wage equation has an unobservable health status variable as part of the set of explanatory variables, which is approximated by the observable health indicator.⁴ (stature)

Our objective is twofold. First, we analyze the nature of the interaction between the two classical measures of human capital, education and health, in a wage equation. Second, we examine the effects of health on wages for different quantiles of the wage distribution. To properly estimate these effects, we control for endogeneity and measurement error in the available health indicator by using a predicted value for health status with a health equation.

The health equation is obtained by solving a household model that has health in the utility function, and a particular production function for health. Individual health outcomes are, thus, a function of individual, family and regional characteristics. We use the fact that stature is mostly determined at early stages of life (0-3 years) to argue that endogeneity problems are not as important with this variable as would be the case with other health

⁴ Actually, these theoretical and empirical considerations are very similar as the ones indicated in Valdivia & Murrugarra. (1999) An important difference is that they take as indicator of health status, the days ill reported by adult individuals over the four weeks prior to the day of the survey, and not their stature.

variables such as the general self-reported health status indicator, or the number of days ill or disabled. (see Murrugarra and Valdivia, 1999) The wage equation is estimated using Lee (1983)'s MNL-OLS extension of Heckman two-stage procedure. The instruments used for the second step are the household's asset endowments and local labor market characteristics.

A central part of the proposed analysis is the estimation of differences in the effect of human capital variables, health and education, over the income distribution. To avoid splitting the sample by income groups, we follow Buchinsky (1994) and plan to estimate quantile regressions⁵. The quantile regression model can be represented in the following way:

$$y_i = x_i' \beta_\theta + u_{\theta i} \quad (2)$$

where θ denote the income quantile being estimated, and $x_i' \beta_\theta$ denotes the θ^{th} quantile. The parameters for the health status variables are interpreted as the effects on the θ^{th} quantile of income, not on the mean income as in the OLS case. This instrument is useful for several reasons. First, it provides information about the effects at each part of the income distribution, so it is possible to describe changes in the income distribution when a bad health stock occurs, using the Inter-quartile Range (IQR) as an estimate of the income variance (inequality). Second, the quantile estimator, when computed at the 50th percentile, provide the least absolute deviation (LAD) estimator, which is more robust than the OLS estimator in the presence of outliers.

It is important to mention that Murrugarra and Valdivia (1999) have already used this method, with days ill as the indicator of health status. Their results are presented in the table below and indicate that indeed health is more important at the lower end of the wage distribution, and the opposite trend is found for education. It would be very important to re-estimate this effects using height as a measure of health, considering that previous studies in other locations (Thomas and Strauss, 1998) find the relation between health and wages to be larger and more robust when using this indicator.

Log Hourly Earnings for Urban Male Wage Earners over the Wage Distribution
(t-student in parentheses)

	10	25	50	75	90
Years of schooling (x 10 ⁻²)	7.200** (2.20)	5.592* (1.58)	8.066** (3.23)	3.708 (1.00)	0.712 (0.12)
Years of schooling minus 6 (x 10 ⁻²)	-0.723 (-0.18)	0.915 (0.22)	-3.488 (-0.92)	1.529 (0.39)	5.975 (0.96)
Years of schooling minus 12 (x 10 ⁻²)	5.040** (1.83)	6.468** (3.59)	7.042** (2.94)	8.813** (4.11)	6.664** (2.31)
# of days sick-instrumented (x 10 ⁻²)	-2.619** (-3.79)	-1.471** (-1.91)	-1.469** (-2.31)	-0.866 (-1.32)	-0.436 (-0.43)

(*) Statistically significant at 10% level of confidence.

(**) Statistically significant at 5% level of confidence.

Source: Murrugarra and Valdivia (1999)

⁵ The formulation of the estimation model presented here is almost the same as the one showed in Murrugarra and Valdivia (1999)

For the cross-country analysis, we take the empirical analysis of growth rates proposed by Barro and Sala i Martin. (1995) They proposed a function for a country's per capita growth rate in period t , Dy_t , as

$$Dy_t = F(y_{t-1}, h_{t-1}; \dots) \quad (3)$$

where y_{t-1} is initial per capita GDP and h_{t-1} is initial human capital per person. (based on measures of educational attainment and health) The omitted variables denoted by \dots , represent an array of control and environmental influences, say, preferences for saving and fertility, government policies with respect to spending and market distortions, and so on. (p.421)

Again, here our objective is twofold. First, we analyze the nature of the interaction between the two classical measures of human capital, in this time education and health on an aggregate level, and the country's per capita growth rate. And then, we examine the effects of health on per capita growth rate for different quantiles of GDP per capita distribution and for quantiles of pre capita growth rate distribution.

For the Argentinean case, the comparison of results among the most populated thirteen urban centers will complete the income quantile analysis, by incorporating intra/country differences. The study of statistical significance in human and social capital coefficients between regions, and the analysis of fixed/random effects by urban concentration, would allow the identification of thresholds in areas with uneven economic development.

4. Case Studies

4.1 About Nutrition, Human Capital and Income - Regional Comparisons in Argentina (Daniel Maceira)

Objectives:

- 1- Evaluate association between social capital indicators (height and weight and educational levels) and household socioeconomic indicators.
- 2- Find determinants of household income, controlling by specific characteristics, including health financing and access. Identify differences across income quintiles for the thirteen most densely populated urban areas in Argentina.
- 3- Identify differences across urban centers, as measures of (lack of) equity, based on average income indicators and percentage of population with unmet basic needs, under the poverty trap theoretical framework.
- 4- Identify poverty transmission intergenerational mechanisms, and their differentiated impact for groups with nutritional gaps.

Methodology:

The methodology considers performing regression OLS analysis of panel data based on the 1994 household survey, complemented with additional information related to adult height and weight measures and income patterns across jurisdictions. Relative nutritional deficiencies can be identified by comparison with reference standard measures generated by the Argentine Society of Medicine, and the National Center for Health Statistics (NCHS).

Sources of Information:

- Instituto Nacional de Estadísticas y Censos (INDEC), Módulo para el Monitoreo de Metas Sociales – Encuesta Permanente de Hogares (EPH), May 1994.

This dataset captures information related to maternal and child health, based on the commitment assumed by Argentina during the 1991 United Nations World Conference.

INDEC collects data twice a year since 1972 in the thirteen most populated urban centers: Great Buenos Aires (the Federal District of Buenos Aires and the Conurbano Bonaerense, Great Rosario, Great Córdoba, Great Mendoza, Paraná, Neuquén, Salta, Río Gallegos, Corrientes, Gran Resistencia, San Luis-El Chorrillo, Santiago del Estero-La Banda, and Tucumán.

The questionnaire includes data at personal and household level. The 1994 survey includes additional information related to height and weight for children under six years old. From this dataset is possible to capture information related to employment and unemployment, type of occupation, mother's level of education (primary, secondary and graduate levels), housing characteristics (electricity, water and sanitation) and income levels (wages, rents, pensions and benefits), as well as demographic variables, including number of members of each household. The survey also allows working with variables associated to health care coverage, such as affiliation to health care insurance, pregnancy studies and information related to deliveries (place of delivery, financing and coverage). Finally, the survey also provides data associated to child health care and school food supplements.

- INDEC- Dirección Nacional de Cuentas Nacionales: The information from the 1994 survey will be combined with data related to Unmet Basic Needs per urban center, as well as Geographic Gross Product by province. It will allow comparisons not only between income quintiles within each jurisdiction, but also between urban areas with different average income levels.

- Ministerio de Defensa, Servicio Militar Obligatorio, physical exams, 1994. The information of under-six years old weight and height (W&H) information will allow the analysis of correspondence between income and house characteristics (as proxy of wealth) with measures of education and social capital in general. However, the hypothesis of nutrition as a component of social capital will need the definition of those measures as a proxy of adults' anthropometric standards. In that direction, the proposal includes the calculus of a ratio income/W&H of children per urban center with the same information available for eighteen years old people who perform their medical studies to participate of the military service. This additional source of information is available at provincial level.

4.2 Nutrition and Human Capital in Mexico. Returns and Intergenerational Transmission (David Mayer).

Objectives:

1. To evaluate the long-term impact of nutrition (indicated by adult height) on individual income, testing for differences across income levels.
2. To evaluate the impact of mother's health, education and especially early nutrition (indicated by adult height) on their children's nutrition (indicated height according to age) , testing for differences across income levels.

Comparisons across income levels will make it possible to establish the presence of poverty trap mechanisms.

Methodology:

1. For the first objective, we estimate a Mincer equation for income of wage earners and self-employed across the national sample of the Mexican Encuesta Nacional de Salud 2000. We shall apply the methodology developed by Schultz and others to correct for problems of endogeneity and heterogeneity, and use quantile estimates (or subdivision by quintiles) to obtain comparisons across income levels.
2. For the second objective, we use regression analysis to estimate children's nutrition in terms of mother's education, wealth, health, health access, and especially long-term nutrition (indicated by adult height). We test for differences across nutrition levels by using quantile regressions and across income levels by subdivision into income quintiles.

Data:

As mentioned above, we use the Mexican Encuesta Nacional de Salud 2000, which has modules on adult and child health, access to and usage of health facilities, including health insurance, and household income, wealth and composition. The health data includes the anthropometric measures mentioned above, risk factors, accidents and violence, reproductive health, biological measurements and diarrheic illnesses. This database can therefore be used to estimate the poverty trap mechanisms mentioned above: the impact of adult stature and weight on present income and the impact of household wealth and human capital on children's stature, by social levels.

The above proposal allows the analysis of the impact of differences in the health status of the population, measured in terms of anthropometric variables reflecting nutritional status, on the individual and intergenerational accumulation of human capital and therefore on long-term income dynamics. The measures and estimates used will document changes in health status over long periods of time and across different income groups. They will measure the likely impact of health and nutrition improvements on the accumulation of human capital, on income inequalities and on future income. Establishing comparative findings across social groups will have important implications for the implementation of poverty alleviation programs, especially if poverty traps are detected. It will also constitute a test of the hypothesis of income convergence/non-convergence across social groups in endogenous economic growth models.

4.3 Health, Nutrition and Poverty Traps in Peru (Martín Valdivia)

Objectives:

- 1- Evaluate the effect of nutritional indicators (height) over individual's income, and evidence the differences in the effect of human capital indicators among different income groups.
- 2- Evaluate the impact of health and education of mothers on the nutritional status of their children. (z-score) In addition, find which of the effects of those indicators is more relevant for different quantiles of children's nutritional distribution.

Methodology:

To attain our first objective we estimate a Mincer equation taking, as endogenous variable, the average hourly income obtained by wage-earners and self-employed individuals in urban Peru. The database we use comes from the 2000 Peruvian Living Standards Measurement Survey (PLSMS). For children's nutritional status (z-score height for age) we perform an OLS regression analysis taking the PLSMS and the 2000 Demographic Health Survey (DHS) databases in a separated way, so we can compare the results.

Sources of information:

As mentioned above, we plan to use two databases for the empirical analysis:

- The LSMS is a multipurpose household survey with a representative sample at the national level as well as for 7 regional domains. It collects information on many dimensions of household well-being, such as consumption, income, savings, employment, health, education, fertility, nutrition, housing and migration, incomes, expenditure, and use of public social services. The 2000 PLSMS includes a sample of 3997 households. (19957 individuals)
- The DHS is representative at the national level, at urban and rural zones, natural regions (coast, highlands, and tropical forest), departments, large cities and other urban areas in Peru. Its sampling design is probabilistic, stratified, multistage and independent for each department. It is composed by two different surveys: a household survey (with 28900 households interviewed) and an individual survey which collects information of women between 15 and 49 years old, (27843 individuals) and their children under 5 years old. The household survey, collects data regarding dwelling characteristics, (construction materials) access to basic utilities (drinking water, water disposal, electricity, etc.) and information on the ownership of selected assets. The individual survey collects information about fertility, nutritional status of mothers and their children, infant and maternal mortality, treatment and prevalence of breathing diseases and diarrhea, vaccination, access to child health care in the public and private sectors, among others.

4.4 Conclusions, Comparisons, and Policy Discussion

Recent microeconomic research addresses a whole series of ways in which health and economics interact. Amongst these are a series studies of health as an investment in human capital. However, in addition to its direct impact on productivity, health has other effects on both economic development and the demographic transition, reducing the depreciation rate

of human capital, making investments in education more attractive. In fact, good infant health and nutrition directly increase the benefits of education (World Bank, 1993; World Health Organization, 1999b, 2001).

In spite of this important theoretical consideration, the analysis of the effects of health on income-related variables has been less developed than the impact of educational variables, mainly because returns to health investments are harder to measure, since no index of individual health stock is available. Nevertheless, some empirical studies have exhibited the magnitude of the effect of health using different measures for it: life expectancy, mortality measures, nutrition-based indicators, among others.

The argument proposing the presence of thresholds related to health and education levels and the possibility of multiple equilibria and persistent income inequality triggers strong policy arguments that need to be addressed through empirical research. The core of this policy discussion is the role that nutrition may play in the intergenerational transmission of wealth. How do household wealth and human capital variables affect the new generation's stature? Is stature, which reflects nutrition when young, a determinant of income?

The combined proposal of a general international study with three methodologically-aligned country research cases allows different ways to analyze the relation between health status of the population and the individual and intergenerational accumulation of human capital. The measures and estimates used will document changes in health status across different countries worldwide, as well between nations, urban conglomerates and income groups. They will measure the likely impact of health and nutrition improvements on the accumulation of human capital and on income inequalities and on future income. Establishing comparative findings across social groups will have important implications for the implementation of poverty alleviation programs, especially if poverty traps are detected. It will also constitute a test of the hypothesis of income convergence/non-convergence across social groups in endogenous economic growth models.

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A N E X O S

Daniel Maceira, Ph.D.

Resume

Daniel Maceira is an Argentinean Ph.D. in Economics from Boston University. His research fields are health economics and industrial organization. He received his bachelor degree in Economics from the University of Buenos Aires, and completed his M.A. in Economics at the Institute Di Tella in Argentina. He was awarded with several educational scholarships from the Ford Foundation, the Government of Japan Scholarship Program, the Adenauer Foundation, the National Council of Scientific Research of Argentina (CONICET), and the Rosenstein-Rodan Scholarship at Boston University. With more than 14 years experience in the field of international health economics, Dr. Maceira has been working with a wide range of organizations including the Pan-American Health Organization, the Inter-American Development Bank, the World Bank, the Economic Commission for Latin America and the Caribbean, the United Nations Program for Development, and the Partnerships for Health Reform (PHR) Program, of Abt Associates, Maryland. He provides technical assistance to many developing countries, particularly in the Latin America and Caribbean region (i.e.: Dominican Republic, Honduras, Nicaragua, Colombia, Perú, Bolivia, Chile, and Argentina, among others). Additionally, he has conducted numerous research projects covering many topics in the international health area, such as: comparative studies on the organization of health systems and health insurance in Latin America and the Caribbean, the analysis of incentives and payment schemes in health service delivery, the design of mechanisms for monitoring and evaluating health sector reforms, the structure of different financing mechanisms in immunization programs, and the behavior of the pharmaceutical sector in Argentina. Maceira published several studies in both national and international journals. Currently, Dr Maceira teaches industrial organization and topics of microeconomics at the Master Program in Economics at the University of Buenos Aires and Health Economics at the Latin American University for Social Sciences, in Argentina. He is also a frequent participant and presenter at international conferences related to health and economics, with affiliation to several local and international institutions. He is currently senior researcher at the Center for the Study of State and Society (CEDES) a member of the investigative branch of the CONICET, and a participant of the Regional Health Sector Reform Initiative for Latin America and the Caribbean.

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Curriculum Vitae

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- Boston University, Ph.D. in Economics, May 1999
Fields: Health Economics, Industrial Organization, Labor Economics.
Dissertation Topic: Brand Loyalty, Price Response and Entry in Pharmaceutical Markets
without Patent Protection: The Argentinean Case.
- Instituto Torcuato Di Tella, MA in Economics. August 1987.
Thesis: "Organizational-Technological Change and Health Economics.
- University of Buenos Aires, Department of Economics, Bachelor in Economics. March 1986.

ACADEMIC AWARDS:

- The 4th International Conference on Priorities in Health Care, Ministry of Foreign Affairs, Oslo, Norway, September 2002.
- II Conference for the International Society for Equity in Health, Pan-American Health Organization/University of Toronto, Toronto, Canada, June, 2002.
- National Agency for the Scientific and Technological Promotion, Ministry of Education, Argentina, Grant for Young Researchers, November 2002.
- International Health Economic Association, Third Annual Conference - Pan American Health Organization/University of York, - York, England, 2001.
- CEDES, Visiting Researcher, November 1999 to date.
- Ibero-American Institute, University of Goettingen, Germany – Adenauer Foundation, Conference on Social Sectors in a Market Economy, Full Tuition, August-September, 1999.

- National Council for Scientific and Technological Research (CONICET), Ministry of Education, Argentina.
Member of the Career of Scientific Researcher; Assistant Researcher, since 1995.
- Boston University, Rosenstein-Rodan Scholarship, Ph.D. Tuition, 1995.
- Government of Japan/Inter-American Development Bank Scholarship Program,
Period: September 1991 - May 1992.
1st. Renewal: May 1992 - May 1993.
2nd. Renewal: May 1993 - May 1994.
- Ford Foundation, Scholarship, Period: September 1991 - May 1993.
- National Council for Scientific and Technological Research (CONICET), Argentina.
Junior Researcher Scholarship, March 1987 - March 1989.
Advanced Researcher Scholarship, March 1989 - March 1991.
Extension Advanced Researcher Scholarship, March - September 1991.
- Argentinean Health Economics Association, member, 1991.
- Raúl Prebisch Foundation Scholarship Program,
Seminars on Latin-American Integration, February 1988.

RESEARCH EXPERIENCE:

- Inter-American Development Bank, Social Sectors Strategy Department.
Evaluation of Health Reforms in Latin America and the Caribbean. Analytical Framework.
February – July 2002.
- The World Bank, Latin America Social Sector Department.
Argentina Health Sector Diagnosis: Inter-Provincial Equity and Behavior of the Public Sector. February – July 2002.
- Pan-American Health Organization, Vaccination Department.
Costing Methodology in Immunization Programs for Latin American and the Caribbean.
January – March 2002
- Inter-American Development Bank, Social Sectors Strategy Department.
Bolivia: Organization of the Social Security Institutions. Notes for a Monitoring and Evaluation Methodology. November – January 2002.
- Inter-American Development Bank, Southern Cone, Social Sectors Department.
Primary Health Care in Argentina: Incentives, Health Care Services Organization and Effectiveness, June - December 2000.
- Inter-American Development Bank, Country Department, Social Sectors Area.
Bolivia: Decentralization in Social Sectors, June - December 2000.
- Ministry of Health, Argentina.
Cost and Effectiveness Indicators. PROMIN (Maternal -Child Program). April - June 2000.

- George Washington University.
Costing of a basic package of health care services. A methodology for the Dominican Republic. January - April, 2000.
- Abt Associates, 'Partnerships for Health Reform' Project. Bethesda, MD, USA.
Health Care Reform in Rwanda: Social Insurance and Provider Payment Mechanisms. May 1999 – January 2001.
- World Bank,
Measuring the Impact of Reform in Education. Experiences from South East Asia.
March – July 1999.
- Abt Associates, 'Partnerships for Health Reform' Project. Bethesda, MD, USA.
Health Care Reform in Dominican Republic: Monitoring and Evaluation Indicators Project. February 1998 – January 2000
- Abt Associates, 'Partnerships for Health Reform' Project / Pan-American Health Organization.
Immunization Financing in Colombia. Impact of Health Care Reform.
November 1998 –February 2000.
- Abt Associates, 'Partnerships for Health Reform' Project. Bethesda, MD, USA.
Primer on Equity in Health Care. May 1998 – December 1999.
- Abt Associates, 'Partnerships for Health Reform' Project. Bethesda MD, USA.
Impact of Provider Payment Mechanisms in Developing Countries.
June 1997 – February 2000.
- Inter-American Development Bank, Office of the Chief Economist. Washington DC, USA.
Organizational Issues in Latin American Health Care Systems.
February 1996 – February 1997.
- General Sarmiento University, Buenos Aires, Argentina.
Behavior and Rationality in Economics. Topics in Industrial Organization.
June - October 1995.
- World Bank, Human Development Department. Washington DC, USA. Internship Program.
Role of the Government in Pharmaceutical Industry.
June - August 1995.
- National Auditing Office for Public Organizations. Buenos Aires, Argentina.
Quality Control Methodology in Drugs, Food and Technology.
July - August 1994.
- Economic Commission for Latin-America and the Caribbean (United Nations). Santiago, Chile. Industrial Re-Organization and Strategic Change in the Argentinean Automobile Industry. March - May 1994.
- Economic Commission for Latin-America and the Caribbean (United Nations). Buenos Aires, Argentina. Theoretical Aspects of the Argentinean Industrial Organization.

June - August 1993.

- United Nations Development Program (UNDP). Buenos Aires, Argentina.
Pharmaceutical Market and Patents in Latin America.
July - August 1992.
- United Nations Development Program (UNDP). Buenos Aires, Argentina.
Pharmaceutical Market and Patents in Argentina.
May - August 1991.
- Argentinean Ministry of Economics/Economic Commission for Latin-America and the Caribbean (United Nations). Buenos Aires, Argentina.
Resource Allocation in Health; Efficiency and Equity.
July 1990 - February 1991.
- Instituto Torcuato Di Tella/U.N.D.P. Buenos Aires, Argentina.
Social Public Expenditures in Argentina: Public-Private Health Care.
December 1989 - January 1990.
- Economic Commission for Latin-America and the Caribbean (United Nations). Buenos Aires, Argentina. Argentinean National Health Accounts.
June - September 1989.
- Economic Commission for Latin-America and the Caribbean (United Nations). Buenos Aires, Argentina. Technological Innovation and Health Markets, Buenos Aires, Argentina, 1988-89.
- U.N. Development Program (UNDP),
Effectiveness of Argentinean Public Expenditures.
December 1988 - May 1989.
- Economic Commission for Latin-America and the Caribbean (United Nations). Buenos Aires, Argentina. Argentinean National Accounts: Retail Margins in Local Trade.
June - December 1988.

TEACHING EXPERIENCE:

- Professor, "Industrial Organization,"
Masters Program in Economics. University of Buenos Aires, Economics Department.
Buenos Aires, 2001/2.
- Professor, "Advanced Microeconomics."
Masters Program in Economics. University of Buenos Aires, Economics Department.
Buenos Aires, 2000/1.
- Professor, "Health Economics,"
Postgraduate Program of the Institute for the Economic and Social Development,
Buenos Aires, Argentina, 2001.
- Professor, "Health Economics,"
Masters in Health and Social Sciences CEDES-FLACSO, Buenos Aires, 2000.
- Professor, "Health Economics",
Masters in Public Policy, San Martín National University, Buenos Aires, 2000.
- Professor, "Health Economics",
Masters in Public Health, University of Buenos Aires, Buenos Aires, 2000.

- Professor, "Micro-Macroeconomic Linkages",
General Sarmiento University, Department of Industrial Economics, Buenos Aires,
2000.
- Professor, "Advanced Microeconomics."
Masters Program in Economics. University of Buenos Aires, Economics Department.
Buenos Aires, 2000/1.
- Professor, "Industrial Organization",
Masters in Economics for Civil Servants, University of Buenos Aires, 2000.
- Visiting Professor,
"Topics in Industrial Organization: Vertical Integration and Transaction Costs
Economics". Economic Commission for Latin America and the Caribbean, United
Nations. Santiago, Chile, September 1995.
- Visiting Professor,
"Topics in Game Theory and Information".
Economic Commission for Latin America and the Caribbean, United Nations.
Santiago, Chile. May - June 1994.
- Assistant Professor,
"Development Economics".
MA Program in Economics and Public Policy.
Inter-American Development Bank/Instituto Torcuato Di Tella.
Buenos Aires, Argentina, 1991.
- Assistant Professor,
"Macroeconomics".
National Institute for Public Administration, Ministry of Economics.
Buenos Aires, Argentina, 1989.
- Teaching Assistant,
"Principles of Economics".
Engineering Department, National University of Buenos Aires.
Buenos Aires, Argentina, 1988-90.
- Teaching Assistant,
"History of Economic Ideas".
Economics Department, National University of Buenos Aires,
Buenos Aires, Argentina, 1986-88.

PAPERS ADMITTED FOR SEMINARS/PRESENTATIONS:

- The 4th International Conference on Priorities in Health Care,
"Market Structure and Provider Payment Mechanisms: Experiences from Mendoza,
Argentina", Oslo, Norway. September 2002.
- The 4th International Conference on Priorities in Health Care,
"International Mechanisms Supporting Immunization Programs: The Pan American
Health Organization Revolving Fund", Oslo, Norway. September 2002.
- The 4th International Conference on Priorities in Health Care,
"Equity and the Decentralization of Social Sectors in Bolivia", Oslo, Norway.
September 2002.
- The 4th International Conference on Priorities in Health Care,
"Social Sector Reforms in Latin America and the Role of Unions", Oslo, Norway.
September 2002.

- Association for Public Economic theory, 3rd. International Conference on Public Economics. Sorbonne, University of Paris,
“Income Distribution and the Public-Private Mix in Health Care Provision: The Latin American Case.”, Paris. July 2002
- II International Health Care Conference: Global Engagement in Creating Financially Viable Health Care Systems.
"Horizontal and vertical dimensions in LAC social insurance systems," Ankara, Turkey. July 2002.
- II International Health Care Conference: Global Engagement in Creating Financially Viable Health Care Systems.
"Market Structure and Provider Payment Mechanisms in Health Care: Experiences from Mendoza, Argentina," Ankara, Turkey, July 2002.
- II International Health Care Conference: Global Engagement in Creating Financially Viable Health Care Systems.
"Equity and the Decentralization of Social Sectors in Bolivia," Ankara, Turkey, July 2002.
- Conference on Social Choice and Welfare,
"Social Sectors Reform and the Role of Unions," Pasadena, California, July 2002.
- 2nd International Society for Equity in Health,
"Income Distribution and the Public-Private Mix in Health Care Provision: The Latin American Case." University of Toronto, Canada, June, 2002.
- International Health Economics Association, IV World Conference
"Horizontal and vertical dimensions in LAC social insurance systems," York, England, July 2001.
- International Health Economics Association, IV World Conference
"Entry and Price Response in Markets without Patent Protection: the Case of Pharmaceuticals in Argentina." York, England, July 2001.
- International Health Economics Association, IV World Conference
"Market Structure and Provider Payment Mechanisms in Health Care: Experiences from Mendoza, Argentina," York, England, July 2001.
- 28th Annual Meeting, Global Health Council
"The Pan-American Health Organization Revolving Fund"
Washington DC May 29-June 1, 2001.
- 128th Annual Meeting American Public Health Association
"Provider Payment Mechanisms in Developing Countries"
Boston, MA, November 12 - 16, 2000.
- 128th Annual Meeting American Public Health Association
"The Pan-American Health Organization Revolving Fund"
Boston, MA, November 12 - 16, 2000.
- Iniciativa Regional de Reforma del Sector de la Salud en América Latina y el Caribe

"Dimensiones horizontal y vertical en el aseguramiento social en salud de LAC."
Montelimar, Nicaragua, 10 -13 de julio de 2000.

- 27th Annual Conference Global Health Council
"Horizontal and vertical dimensions in LAC social insurance systems"
Arlington, Virginia, June 13 - 26, 2000.
- Foro Subregional Andino sobre Reforma de Salud
"Comparative Analysis of Social Insurance Systems in Latin America and the Caribbean." Santa Cruz, Bolivia, July 1999.
- International Health Economics Association, II World Conference
"Income Distribution and the Public-Private Mix in Health Care Provision: The Latin American Case." Rotterdam, the Netherlands, June 6-9, 1999.
- International Health Economics Association, II World Conference
"Entry and Price Response in Markets without Patent Protection: the Case of Pharmaceuticals in Argentina." Rotterdam, the Netherlands, June 6-9, 1999.
- International Health Economics Association, II World Conference
"Provider Payment Mechanisms in Developing Countries: The Argentinean Case."
Rotterdam, the Netherlands, June 6-9, 1999.
- Latin American Econometrical Society Annual Meeting.
"Income Distribution and the Public-Private Mix in Health Care Provision: The Latin American Case". Lima, Peru. August 1998.
- Economic Commission for Latin America and the Caribbean, United Nations.
"Strategic Behavior in the Argentinean Automobile Industry".
Santiago, Chile, June 1994.
- Economic Commission for Latin American and the Caribbean, United Nations.
"Topics in Game Theory and Applied Microeconomics".
Santiago, Chile, July 1993.
- XXV Annual Meeting of the Argentinean Economic Association.
"Institutions, Productive Organization and Competition: The Case of Imaging Diagnosis Services". Bahía Blanca, Argentina, November 1990.

PUBLICATIONS / WORKING PAPERS: (E: English, S: Spanish)

- "Social Sectors Reform in Latin America and the Role of Unions", (co-authored) Inter-American Development Bank, Research Department, Working Paper Series n.456, July 2001. (E)
- "Utilization, Cost and Financing of District Health Services in Rwanda," (co-authored), PHR Working Paper Series, forthcoming. December 2000. (E)
- "Dimensiones Horizontal y Vertical en el Aseguramiento Social en Salud de América Latina y el Caribe", Latin-American Initiatives (USAID-PAHO-PHR-FPMD-HSPH), Special Edition 3, 2001 (S-E).

- "Analysis of International Mechanisms Supporting Immunization Programs: The Pan American Health Organization Revolving Fund", (co-authored), Document no.1, The Bill & Melinda Gates Children's Vaccine Program (CVP) at the Program for Appropriate Technology in Health (PATH), Abt. Associates, Bethesda, Maryland, December 2000. (E)
- "Costs and Financing of Immunization Programs: Findings of Four Case Studies", (co-authored), Special Initiatives Synthesis Report No 26, Partnerships for Health Reform, Abt Associates, Bethesda MD, USA, May 2000. (E)
- "Financing and the Expanded Program on Immunization in Colombia: Impact of Reform and Decentralization", (co-authored) Special Initiatives Report 23, Partnerships for Health Reform, Abt Associates, Bethesda MD, USA, January 2000. (E - S)
- "Guía básica de política: Toma de decisiones para la equidad en la reforma del sector salud", (co-authored) Latin-American Initiatives (USAID-PAHO-PHR-FPMD-HSPH), Special Edition 2, December 1999. (S)
- "Income Distribution and the Public-Private Mix in Health Care Provision: The Latin American Case," Working Paper No.391, Office of the Chief Economist, Inter-American Development Bank, Washington DC, USA, November 1998. (E)
- "Provider Payment Mechanisms in Health Care: Incentives, Outcomes and Organizational Impact. Inputs for a Research Agenda in Developing Countries." Working Paper MAR2, Partnerships for Health Reform Project, Abt Associates, Bethesda MD, USA, September 1998. (E - S)
- "Fragmentation and Incentives in Latin American and Caribbean Health Care Services," Working Paper No.335, Office of the Chief Economist, Inter-American Development Bank, Washington DC, USA, December 1996. (S)
- "Organizing Social Services to Perform" (co-authored), Special Chapter in Economic and Social Progress in Latin America. 1996 Report. Inter-American Development Bank, Johns Hopkins University Press, Washington DC, USA, 1996. (E - S)
- "Industrial Re-Organization and Strategic Behavior in the Argentinean Automobile Industry, 1980-1993," Economic Commission for Latin American and the Caribbean, Working Paper No. LC/R.1501, Santiago, Chile, February, 1995. (S)
- "Institutions, Productive Organization and Competence: The Case of Imaging Diagnosis Services," in Economica, No.1-2, La Plata, Argentina, 1991. (S)
- "Notes on 'Theoretical-Empirical Analysis of Health Markets'", in Anales de la Asociación Argentina de Economía Política, Vol.IV, Argentina, 1991. (S)
- "Institutions, Productive Organization and Competence: The Case of Imaging Diagnosis Services," in Anales de la Asociación Argentina de Economía Política, Vol.II, Argentina, 1990. (S)
- "Infant Mortality and the Operation of Newborn Care Services: The Argentinean Case," (co-authored), in Desarrollo Económico, No.118, vol. 30, Argentina, 1990. (S)
- "The Structure of Health Markets in Argentina. Notes for a Debate," (co-authored), in Cuadernos Medico-Sociales, No.52, Rosario, Argentina, 1990. (S)

- "Technological and Organizational Change in the Small and Medium Argentinean Enterprises: The Medical Equipment Production Sector," Serie Seminarios No.4/90, Center of Economic Research, Instituto Torcuato Di Tella, Buenos Aires, Argentina, 1990. (S)
- "Health Economics and Microeconomic Behavior: The Newborn Care Services", in Anales de la Asociación Argentina de Economía Política, Vol.3, Rosario, Argentina, 1989. (S)
- "Technological Innovation in Developing Countries", Working Paper Nro.1 Fundación Raúl Prebisch: "La Economía de América Latina", Tesis Editors. Buenos Aires, Argentina, 1988. (S)

UNPUBLISHED PAPERS: (E: English, S: Spanish)

- "Revisión Metodológica y Análisis de la Información sobre Salud Materno-Infantil contenida en las Encuestas de Hogares de la Argentina," (co-authored), mimeo, Buenos Aires, 2001. (S)
- "Market Structure and Provider Payment Mechanisms in Health Care: Experiences from Mendoza, Argentina," (co-authored), mimeo, Buenos Aires, 2001. (E-S)
- "Prepayment Schemes, Monetary Incentives, and their Impact on Provider Internal Organization: The Case of Rwanda", (co-authored), mimeo, Washington, DC, 2001. (E)
- "Measuring the Impact of Reforms in Education. A Research Agenda," mimeo, Washington, DC, 2000. (E)
- "Role of the Government in Pharmaceutical Markets," (co-authored) mimeo, Washington DC, USA, 1995. (E)
- "Behavior and Rationality in Microeconomics. A proposal of research agenda," mimeo, Buenos Aires, Argentina, 1995. (S)
- "Recent Efforts in Reorganization and Decentralization of National Public Hospitals," (co-authored), in PRONATASS, Publication of the Joint Project: Argentinean National Government/ Inter- American Bank of Reconstruction and Foment, United Nations Program for the Development. Buenos Aires, Argentina, April 1992. (S)
- "Proposals for a Health Care Plan: Province of Buenos Aires," (co-authored)., mimeo, Buenos Aires, Argentina, July 1991 (S)
- "Diagnosis of The Public Health Sector in the Province of Buenos Aires," mimeo, Buenos Aires, Argentina, June 1991. (S)
- "Costs-Analysis in the Private Health Sector and Application of Cost-Methods in the Public Health Sector," Social Public Expenditure Project. Instituto Torcuato Di Tella/United Nations Development Program, Buenos Aires, Argentina, January 1990. (S)
- "National Accounting and Income Distribution in the Argentine Republic: The Health Sector", Economic Commission for Latin American and the Caribbean/Central Bank of the Argentinean Republic, Buenos Aires, Argentina, November 1989. (S)

CENTER FOR THE STUDY OF THE STATE AND SOCIETY ARGENTINA

The Center for the Study of the State and Society (CEDES) is a non-profit research center created in 1975. It focuses in basic and applied research in social science and the training of young professionals. Presently, the staff includes 25 professionals who work on research, graduate and undergraduate teaching, and provide technical assistance to public and private organizations and institutions. In addition, since 1979 CEDES has been offering a Training Program for Young Researchers, from which 50 students have already graduated. Researchers' work is widely published in books and articles in national and international scientific journals as well as in CEDES working papers. Working groups within the institution are organized in the following departments: Health, Economy and Society; Economics; Civil Society and Social Development; Politics and Communication; Higher Education; and Social Policies.

HEALTH, ECONOMY AND SOCIETY DEPARTMENT

The Health, Economy and Society Department, created in 1983, carries on the following activities: Research Program, Training Program, Consulting and Technical Assistance Dissemination, and Advocacy and Network Development.

RESEARCH PROGRAM

Research tracks include:

- Women's health and sexual and reproductive rights;
- Adolescence, health and rights;
- Reproductive health and gender equity;
- Quality and efficiency of health services;
- Ideology of health professionals;
- Health related behaviors and health care;
- Masculinity, sexuality, reproduction and health;
- Public and politic dimension of reproductive health;
- Health economics;
- Health sector reform and reproductive health; and
- Evaluation of public health policies and programs.

TRAINING PROGRAM

Department members carry out graduate and undergraduate courses in different national and foreign universities and institutions. The team has specialized in training in the fields of health economics; sociology of health; social research methodology; gender and health; reproductive health and qualitative methodology applied to the health/illness field; health financing and social security; health reform and public policies in Latin America and the Caribbean, and monitoring and evaluation health reforms and programs.

- **Regional Program on Social Research, Training and Technical Assistance in Reproductive Health and Sexuality;**
- **Training Program on Gender and Health Sector Reform;**
- **Resident Fellows Program; and**
- **Master in Social Science and Health**

CONSULTING AND TECHNICAL ASSISTANCE

Activities are oriented to academic institutions, NGOs and private and public institutions.

It aims at improving the research skills of health service providers and NGOs involved in health promotion. Technical assistance is provided at various stages: project design, data collection, data analysis and processing, strategies for dissemination of findings, and formulation of recommendations for health policy and program implementation.

DISSEMINATION, ADVOCACY AND NETWORK DEVELOPMENT

Activities are oriented towards disseminating research findings as a contribution to both social and specialized debate on public health policies and issues, particularly on issues related to the sexual and reproductive health and rights agenda. It also develops activities to promote academic exchange on appropriate theories and methodologies to approach health/illness issues and, particularly, the relation between health and gender in order to stimulate the quality of scientific production in these areas. Finally, activities to promote gender and social equity in sexual and reproductive health and rights are carried out.

In 1995 Department member created the Latin American Consortium of Reproductive Health and Sexuality Programs, together with the Reproductive Health and Society Program of the Colegio de México (México) and the Reproductive Health and Sexuality Program from NEPO (Núcleo de Pesquisas em População/Universidade de Campinas-Brasil). The main goal of this initiative is to exchange research and training experiences in this field and to hold regional workshops and develop comparative research.

The team also participates in academic networks dedicated to disseminating scientific knowledge in social sciences and health: Red Latinoamericana de Investigadores en Aspectos Sociales de la Reproducción Humana (Latin American Network of Researchers of Social Aspects of Human Reproduction) (CENEP/WHO) and International Forum of Social Sciences and Health. It is also part of rights promotion networks: Red Nacional por la Salud de la Mujer (National Network for Women's Health) (Argentina); Red de Salud de las Mujeres Latinoamericanas y del Caribe (Health Network of Women from Latin America and The Caribbean); Red Mundial de Mujeres por los Derechos Reproductivos (Women's World Network for Reproductive Rights); and Foro de la Sociedad Civil para las Américas (Forum of Civil Society for the Americas).

The members of the Department have been co-founders of organizations dedicated to the promotion of informed public debate on different aspects of health such as the Asociación Argentina de Ginecología y Obstetricia Psicósomática (AAGOP) (Argentine Association of Psychosomatic Gynecology and Obstetrics); Foro por los Derechos Reproductivos (Forum for Reproductive Rights); Asociación de Economía de la Salud (AES) (Association of Economy of Health), Mujeres Autoconvocadas para Decidir en Libertad (MADEL) (Self-Congregated Women for Free Choice).

David A. Mayer Foulkes

David A. Mayer is a professor-researcher at CIDE and a visiting professor at the University of Brown. He has doctoral studies at Stanford University, California at Berkeley University and a doctoral degree on Mathematics at the Universidad Nacional Autónoma de México. (UNAM) He has been appointed as National Researcher Level I and he belongs to the National System of Research. His principal research areas are 1) Endogenous growth – theoretical, empirical and numerical aspects; 2) Growth and health.

Publications:

- “The Long-Term Impact of Health on Economic Growth in Latin America”. In *World Development*, Vol. 29, No. 6, 2001.
- “On the Dynamics of Quality Student Enrolment at Institutions of Higher Education”. In *Economics of Education Review*, DTD, 2001
- Mayer, D. (2000) “On the Dynamics of Quality Student Enrolment at Institutions of Higher Education”, *Economics of Education Review*, forthcoming.
- Mayer, D. and Cordourier, G. (2000), “The Salary Gap and the Theory of Equality of Opportunities: A Gender Study for Mexico” *Trimestre Económico*, forthcoming.
- Mayer, D. (2000), “[A generalized fast algorithm for BDS-type Statistics](#)”, *Studies in Nonlinear Dynamics and Econometrics*, Volume 4, Number 1, April.
- Mayer, D.; Mora, H.; Cermeño, R., Barona, A.B., Duryea, S. (2000); “[Health, Growth, and Income Distribution in Latin America and the Caribbean: A Study of Determinants and Regional and Local Behavior](#)”, *Research in Public Health Technical Papers* No.18 April, 2000, Panamerican Health Organization.
- Mayer, D. (1998), “An extension of Rubinstein’s Negotiation Game”, *Aportaciones Matemáticas, Serie Comunicaciones* número 22, 1998.
- Mayer, D. (1997), “Immobilization of smooth convex figures: some extensions”, *Journal of Geometry*, VI, 1, 33-81.
- Mayer, D. (1997), “Sectoral Public Power and Endogenous Growth”, *Economía Mexicana*, VI, 1, 33-81.
- Hirshfeld, J., de Regil, M., Mayer, D., Sarfati, D. Banzinni, V. (1996), “Topical Citrex in the treatment of pseudomona keratitis in a rabbit model”, *Investigative Ophthalmology and Visual Science*, Vol 37, 3, ARVO.
- Mayer, D., and Feliz, R. (1996), “Nonlinear Dynamics in the Stock Exchange”, *Revista de Análisis Económico*, Vol 11 no 1, pp 3-21, June.
- Bracho, J., Mayer, D., Fetter H. and Montejano, L. (1995), “Immobilization of Mondrigo quadratic forms”, *J. London Math Soc. Second series*, Feb, V51, 189-200.
- Mayer, D. (1995), “A Statistical Correlation Dimension” *Journal of Empirical Finance* 2 277-293.
- Mayer, D. (1994), “An Alternative Correlation Dimension Statistic”, *Aportaciones Matemáticas, Serie Comunicaciones* 14 303-311.
- Mayer, D. (1994), “A characteristic polynomial factorization: extending some matrix eigenvalue estimates”. *Aportaciones Matemáticas, Serie Comunicaciones* 14 297-301.

CIDE's Brief

CIDE is a public institution dedicated to research and higher education in social sciences. With over 25 years of experience, the center's mission consists of the production and diffusion of knowledge about the most relevant aspects of current social issues as well as the contribution to the country's development by means of an specialized core of high quality educational programs. CIDE has three central functions:

- 1) The advance of scientific knowledge. This institution produces research in the following fields: administration, Economics, International Relations, Politics, Law, History, among others. The research is ruled by international quality standards and is, in a important proportion, empirical and/or applied.
- 2) The formation of professionals. CIDE has three bachelor's programs –Political Science/International Relations, Law and Economics- and three master's programs – Administration and Public Policy, Economics and Health Economics.
- 3) Generation and diffusion of socially useful knowledge. In addition to strictly scientific research, the CIDE produces research explicitly oriented to the improvement of public and private decision making.

This institution has 65 professors-researchers, 72% of them have doctoral degrees in the world's leading universities and 54% belong to the National System of Researchers. Among the politically relevant studies that CIDE is currently making, we have: the regulation of the energy sector, the administrative autonomy, the political and institutional reform and the health sector's reform.

Specifically, in the Economics area CIDE has specialized researchers in relevant fields, that contribute to the economic, scientific and educational development in Mexico. They maintain a balance between economic theory, empirical economics and their practical applications in the design of public policy. They assure high levels of academic excellence, the use of the most recent analytical tools available in the literature, and the publication in professional journals at the international level. This area develop six main themes:

- Human Capital, poverty and public policy
- Industrial Organization, technology and regulation
- Economic growth and development
- Macroeconomics and finance
- Game theory
- Agricultural economics and natural resources

In particular, human capital, poverty and public policy themes are related to health economics, educational economics, labour market, migration, urban and regional economics, housing policy and social assistance. Economic growth and development issues are related to inequality, endogenous growth theories, growth econometrics, growth determinants and institutions.

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EDUCATION

1999 Ph.D., Applied Economics, University of Minnesota, Minnesota, U.S.A.
1987 B. A. in Economics, Universidad del Pacífico, Lima, Peru.

FIELDS OF INTEREST

Microeconometrics

Health Economics

Poverty and Social Inequalities

Labor Economics

Rural Development

CURRENT APPOINTMENT AND RESEARCH EXPERIENCE

1993 - Grupo de Análisis para el Desarrollo (GRADE), Lima, Peru.
Principal Researcher

Research Project 13: “Building a Local Partnership to Raise Awareness on the Evolution of Health Inequities in Peru” Sponsored by the Canadian International Health Society and the International Development Research Centre (IDRC). With Rafael Cortez, Centro de Investigación de la Universidad del Pacífico and Marcos Cueto, Universidad Peruana Cayetano Heredia. (2002)

Research Project 12: “Evolución de la Equidad en Salud Materno-Infantil en el Perú: 1986-2000” Sponsored by Macro International Inc. and Instituto Nacional de Estadística (INEI). (2002)

Research Project 11: "Mobilizing Microsavings in Peru: Empowering the Poor Through their Financial Agents and Local Assets Markets" . Sponsored by the Ford Foundation (2001-2003)

Research Project 10: “Los Programas de Planificación Familiar y la Salud del Binomio Madre-Niño en el Perú” Sponsored by The Consortium of Economic and Social Research (CIES) and the International Development Research Centre (IDRC). (2001-02)

Research Project 9: “Inequidades en la Situación de Salud, Acceso y Gasto en Atención en Salud: Utilizando Datos Secundarios para Apoyar la Toma de Decisiones.” Sponsored by the Panamerican Health Organization, (PAHO) Division of Health and Human Development. (2000-01)

Research Project 8: “Comportamiento de los hogares ante transferencias públicas: lineamientos para la evaluación de impacto de los programas públicos para el alivio de la pobreza en el Perú”. This project is part of the Research Network on Best Practices for Poverty Alleviation Programs, sponsored by CIES-IDRC. (1999-01)

Research Project 7: “Sensibilidad de la Demanda por Servicios de Salud ante un Sistema de Tarifas en el Perú: Previo vs. Calidad?,” Sponsored by CIES-IDRC. (1999-00)

Research Project 6: “Household Behavior and the Provision of Public Health Services in Peru: Searching for Policy Lessons to Enhance Impact on Equity”, with the World Health Organization (WHO), PAHO, and the International Clearinghouse of Health System Reform Initiatives (ICHSR), the Initiative on Health Sector Reform. (1998-99)

Research Project 5: “A Dynamic Analysis of Household Decision-Making in Peru: Changes in Household Structure, Female Labor Participation, Human Capital and its Returns”, with the IADB Regional Research Network, Round 5 (1998-99).

Research Project 4: “Productivity of Household and Public Health Investments: The Peruvian Case”, with the IADB Regional Research Network, Round 4 (1997-98).

Research Project 3: “Salud, Nutrición, Productividad e Ingresos en el Perú”, with the Consortium of Economic Research (CIE) and the IDRC of Canada (1996-98)

Research Project 2: "Mercados Rurales de Factores y Desarrollo Agrario en una Economía de Libre Mercado II": Los Mercados Rurales de Trabajo en el Perú, sponsored by CIE-IDRC (1993-96).

Research Project 1: "Mercados Rurales de Factores y Desarrollo Agrario en una Economía de Libre Mercado I": Los Mercados Rurales de Crédito en el Perú, sponsored by CIE-IDRC (1993-96).

OTHER APPOINTMENTS

- 2002- Partnership for Health Equity in Peru
General Coordinator
Founding Institutions: GRADE, CIUP, UPCH
- 2001- Health Equity Gauges Initiative, Rockefeller Foundation.
Advisory Committee on Measurement Issues.
- 2000 Centro de Investigación y Docencia Económicas (CIDE), División de Economía, Mexico D.F.
Professor-Researcher and Academic Director of the Master in Health Economics.
- 1997 Universidad de Sao Paulo, Departamento de Economía y Sociología Rural, Piracicaba, Brazil.
Visiting Professor (April-May). Game Theory in Applied Economics.
Research Project: “Children’s Health and Public Infrastructure in General Equilibrium: An Empirical Analysis for Brazil”, with Prof. Ana Lucia Kassouf.
- 1996 University of Minnesota, Department of Applied Economics, Minnesota, U.S.A.
Visiting Research Fellow (March-June).
Research Project: "Policy Reform, Capital Mobility and Economic Development: Analyzing the Impact of Capital Inflows in Latin American Economies", with professor Terry Roe.
- 1993-1994 Universidad del Pacífico, Facultad de Economía.
Professor.
Economic Optimization Methods, II-93.

AWARDS AND HONORS

- 2001 Fundación Mexicana para la Salud. (FUNSALUD) Red Interamericana José Luis Bobadilla de Políticas de Salud. Jury for the IV Concurso Premio Internacional de Políticas de Salud, México D.F.
- 1991 Mac Arthur Interdisciplinary Program on Peace and International Cooperation, University Minnesota - Pre-Dissertation Fellowship.

- 1990-1994 Mac Arthur Interdisciplinary Program on Peace and International Cooperation, University of Minnesota - Ph.D. Fellowship.
- 1988-1990 Andean Peace Program, U.S. Agency for International Development - M.A. Fellowship.
- 1988-1990 University of Minnesota, Graduate School, Foreign Student Tuition Award.

LIST OF RESEARCH PAPERS AND PUBLICATIONS

- Valdivia, Martín (2002). *"Acerca de la Magnitud de la Inequidad en Salud en el Perú"*. Documento de Trabajo # 37, GRADE, Lima, April.
- Valdivia, Martín and Miguel Robles (2002) "Alternativas para la Pequeña Agricultura en el Perú". Análisis y Propuestas # 5, GRADE, January.
- Valdivia, Martín and Jaime Saavedra (2000). *"Household and Individual Decision-Making over the Life Cycle: A First Look at Evidence from Peruvian Cohorts."* IADB Regional Research Network Working Paper R-425, December.
- Valdivia, Martín and Edmundo Murrugarra (2000). "The Returns to Health for Peruvian Urban Adults by Gender, Age, and Income Class". In Savedoff, William and T. Paul Schultz (eds) *"Wealth from Health: Linking Social Investments in Latin America."* IADB, Washington DC, December.
- Valdivia, Martín and Edmundo Murrugarra (2000). *"Morbilidad Auto-Reportada y los Retornos a la Salud para los Varones Urbanos en el Perú: Enfermedad vs. Incapacidad"*. Documento de Trabajo # 31, GRADE, Lima, September.
- Valdivia, Martín and Jaime Saavedra (2000). "Income Smoothing over the Life Cycle: Family Living Arrangements and the Welfare of Peruvian Households". Documento de Trabajo # 186, CIDE, Mexico, July.
- Valdivia, Martín (1999). *"Asymmetric Information and Credit Markets in Peruvian Rural Economies"*. Ph.D. Thesis, Department of Applied Economics, University of Minnesota, August.
- Valdivia, Martín and Edmundo Murrugarra (1999). *"Wages and Health Determinants for Peruvian Urban Adults: Differences across Gender, the Life-Cycle and the Wage Distribution"* IADB Regional Research Network, Working Paper R-352, May.
- Valdivia, Martín (1998). "El Trabajo Asalariado en las Economías Rurales del Perú". In *Boletín de Opinión* # 33, pp. 110-118, Consortium of Economic Research. Lima, January.
- Valdivia, Martín and Miguel Robles (1997). "Decisiones Laborales en las Economías Rurales del Perú". In *Notas para el Debate* # 14: 79-131, GRADE, Lima, September.
- Valdivia, Martín (1996). "Ex-post Costly Monitoring and Access to Credit in Peruvian Rural Economies". In Sociedade Brasileira de Econometria, *Proceedings of the XVIII Encontro Brasileiro de Econometria*, Aguas de Lindoia, Sao Paulo, December 11-13, p. 839-857.
- Valdivia, Martín and Juan Pablo Silva (1996). "Acceso al Crédito en las Economías Rurales: Diferencias entre el Sector Formal e Informal en el Perú". In Seminario Permanente de Investigación Agraria (SEPIA), *"Perú: El Problema Agrario en Debate, SEPIA VI"*.
- Valdivia, Martín (1996). "Diversificación en un Modelo Dinámico de Hogares Rurales con Incertidumbre". In *Boletín de Opinión* # 28, Consortium of Economic Research, Lima, July.
- Roe, Terry and Martín Valdivia (1996). *"Policy Reform, Capital Mobility and Growth: Explaining the Post-Adjustment Outcomes in Latin America"*. US Department of Agriculture, manuscript, April.
- Valdivia, Martín (1995). "Del Banco Agrario a las Cajas Rurales: Hacia un Sistema Financiero Rural Eficiente?". In *Notas para el Debate* 13, GRADE, Lima, October.

- Valdivia, Martín y Víctor Agreda (1994). "El Sistema de Comercialización de Frutas: Los Casos del Limón, el Maracuyá y el Mango en el Norte del Perú". En J. Escobal, (editor) *Comercialización Agrícola en el Perú*, GRADE-USAID, Lima.
- Escobal, Javier and Martín Valdivia (1993). "El Sector Agrario ante el Proceso de Liberalización: Posibilidades y Limitaciones en una Economía de Mercado". *Pretextos*, 5: 53-77, DESCO, November.
- Roe, Terry and Martín Valdivia (1992). "Mexican Agriculture in an Economy-Wide Policy: Latitude for Special Treatment," *North American Journal of Economics & Finance*, 3(2): 99-115 JAI Press.
- Valdivia, Martín (1987). "Las Alternativas de Re-Estructuración Empresarial en la Agricultura de la Costa Peruana", *Apuntes*, N° 21, pp. 310-322, Universidad del Pacífico, Lima, September.

CURRENT RESEARCH

"Public Health Infrastructure and Equity in the Utilization of Outpatient Health Care Services in Peru." Submitted for publication to the peer-reviewed journal *Health Policy and Planning*, current status: 2nd round of revisions.

"Household Structure and Savings over the Life-Cycle in Peru," with Jaime Saavedra. Submitted for publication to the peer-reviewed *Journal of Development Economics*.

"Focalizando las Transferencias Públicas en el Perú: Evaluando Instrumentos de Identificación del Nivel Socio-Económico de los Individuos / Hogares," with Ana C. Dammert. Current version: June 2001.

"Costos de Transacción, Capital Gerencial y la Viabilidad de la Pequeña Agricultura en el Perú," with Miguel Robles. Current version: October 2001.

RECENT INTERNATIONAL SEMINARS, WORKSHOPS AND CONFERENCES

- Panamerican Health Organization (PAHO), Equity Health and Human Development, HDP Division. Toronto Regional Consultation on Policy Tools: Equity in Populations Health. Toronto, Canada. June 16-17, 2002.
- International Society for Equity in Health. 2nd International Conference, University of Toronto. Free Standing Presentation of the abstract "On Health Inequities in Peru". June 14-16, 2002.
- Rockefeller Foundation, Technical Workshop: "Measuring Health Inequities within a Health Equity Gauge". Kampala, Uganda. February 10-16, 2002.
- Panamerican Health Organization (PAHO), Division of Health and Human Development. Workshop: "Utilization of Scientific Information in Decision-Making for Health Equity." Cuernavaca, Mexico, June 5-7, 2001. Presentation of the results of the study "Inequities in Health Status, and Access to Health Care in Peru."
- WHO-TDR Workshop for the WHO/World Bank/UNDP Initiative on Health Sector Reform. Manila, Philippines. April 22-May 5, 2001. Presentation of the study "Public Health Infrastructure and Equity in the Utilization of Outpatient Health Care Services in Peru."
- PAHO, Division of Health and Human Development, Workshop. "Inequities in Health Status, Access and Expenditures in Health Care: Using Secondary Data to Support Decision Making", Lima, March 12-15, 2001.
- Inter-American Seminar on Economics. National Bureau of Economic Research, Inc.(NBER). Santo Domingo, Costa Rica, November 16-17, 2000. Presentation of the study: "Household

and Individual Decision-Making over the Life Cycle: A First Look at Evidence from Peruvian Cohorts.” Co-author, Jaime Saavedra.

- Workshop on “Demography of Poverty in Latin America”, CROP/CLACSO, Buenos Aires, November 9-11, 2000. Presentation of the study: “Household Structure and Poverty over the Life Cycle.”
- V Annual Meeting of the Latin American Economic Association (LACEA), Rio de Janeiro, October 12-14, 2000. Presentation of the study: “Household Structure and Savings over the Life Cycle: A First Look at Evidence from Peruvian Cohorts”.
- The Rockefeller Foundation and the Kaiser Family Foundation Workshop. “Monitoring Health Equity in Developing Countries”, Johannesburg, August 17-20, 2000. Participation as technical advisor in measurement and econometric issues.
- Panamerican Health Organization (PAHO), Division of Health and Human Development, Workshop. “Inequities in Health Status, Access and Expenditures in Health Care: Using Secondary Data to Support Decision Making”, Sao Paulo, January 17-21, 2000.
- Meeting of High Level Experts on Economics, Social Development and Health “Impact of the Investment in Health on Economic Growth, Household Productivity and Poverty Reduction” (PAHO/IADB/WB/UNDP/CEPAL), PAHO headquarters at Washington, D.C., October 1999. Presentation of the study “On the Returns to Health for Peruvian Urban Adults”.
- Seminar “El Impacto de las Reformas Estructurales sobre la Agricultura en América Latina. Expositor. Sponsored by CEPAL. Santiago de Chile, November, 1998.
- XVI Meetings of the Latin American Chapter of the Econometric Society, Lima, Peru, August 12-14, 1998. Presentation of the selected document: “On the Returns to Household Investments in Health: Differentiating by Age, Gender, the Life-Cycle and the Wage Distribution”, with Edmundo Murrugarra.
- Seminar on the Development of Protocols for the Initiative on Health Sector Reform (WHO/World Bank/UNDP), Cuernavaca, Mexico, July 6-10, 1998, organized by the Instituto Nacional de Salud Pública. Presentation of the Proposal: “Household Behavior and the Provision of Public Health Services in Peru: Searching for Policy Lessons to Enhance Impact on Equity”.
- Seminar *Promoción del Desarrollo Sustentable de los Sistemas Agrícolas Campesinos de la Región Andina Central*, organized by FAO-RIMISP in Quito, Ecuador, January 10-12 1997. Presentation of a lecture on "Structural Adjustment and Environmental Sustainability in Rural Andean Economies".

RECENT CONSULTANCIES

- Presidencia del Consejo de Ministros, Dirección General de Gestión Pública (PCM-DGGP) and USAID (2002). A study on “Towards a Monitoring System for the Decentralization Process in Peru.” Lima, august-november, with Máximo Torero.
- Interamerican Development Bank (2002). A study on: "Evaluación Económica y Socio-Ambiental del Programa de Modernización de Servicios Agropecuarios del Ministerio de Agricultura del Ecuador", Lima and Quito, June-August, with Miguel Robles.
- Presidencia del Consejo de Ministros, Dirección General de Gestión Pública (PCM-DGGP); USAID and Associates in Rural Development (ARD) – 2002. A study on “Apoyando la Descentralización: Hacia una Tipología de Municipalidades.” Lima, january-april, with Máximo Torero.
- MINAG-MARENASS (2001-02). A study on “Línea de Base del Proyecto MARENASS.” Lima, Diciembre-Abril, with Manuel Glave.

- FAO-MINAG (2001). Consultant for the elaboration of the background document for the FAO-MINAG Seminar on “Perú: Estrategia de Desarrollo Agrario al 2,010,” Lima, October 19, 2001, with Miguel Robles.
- Interamerican Development Bank (2001). Consultant for the elaboration of the document “La Reforma del Sector Agrario en el Perú: Balance y Agenda Pendiente,” with: Miguel Robles. Lima, June-July.
- Interamerican Development Bank (2001). Consultant for the elaboration of the following documents “Strengthening the Institutional Framework to Improve Social Policy Management” and “Public Safety Nets: Strategy for Design and Operation,” with: Jaime Saavedra, Javier Escobal and Máximo Torero. Lima, February - March.
- Panamerican Health Organization (PAHO) (2000). A study on "Desigualdades en el Suministro, Uso y Gasto en Agua Potable en América Latina: Análisis de Situación de 11 países." Co-author Miguel Robles. Lima, August-December.
- Ministry of Health, Support Program for Food Security (1999). A study on “Identification of the Socio-economic Level and Epidemiological Risk of Peruvian Households”. Lima, September-November.
- Ministry of Health, Project 2000 (1998-99). Design of the System of Tariffs and Exemptions for Publicly Provided Health Services in Peru. Lima, August-December.
- The World Bank (1997). Co-authoring of the document “Long-Run Strategies for Peruvian Agricultural Development” with Javier Escobal, Alberto Pascó-Font and Mateen Thobani. Lima, November-December.
- Universidad de Sao Paulo, Departamento de Economía y Sociología Rural (1997). Project: “Public Investment and Children’s Nutrition in Brazil” with Ana Lucia Kassouf, Piracicaba, April-May.
- Fondo Nacional de Compensación y Desarrollo Social (FONCODES), 1996-97. Design of FONCODES Long Run Strategy to Alleviate Extreme Poverty in Peruvian Rural Areas, with Pedro Francke and Carlos Sarria. Lima, October-March.

August, 2002

GRADE's Brief

GRADE, Grupo de Análisis para el Desarrollo (Group of Analysis for Development), is a private non-profit Research Center established in 1980 in Lima, Peru, with the mission of contributing to Peruvian and Latin American development through the study of economic, environmental and social issues.

During the last two decades, GRADE's staff has been researching Peru's most critical problems, producing results that directly contribute to the design and implementation of successful development policies. Applying cutting edge theoretical perspectives, methodologies and tools, GRADE researchers combine objective analysis with sound empirical evidence on the nature and causes of economic and social processes. Through these efforts, staff researchers are able to make informed recommendations to policy makers, private sector leaders and the general public, providing both in-depth analysis of the country's problems and effective strategies for overcoming the obstacles to successful policy implementation.

To ensure the positive impact of our work, GRADE encourages its staff to devote much of their time to providing technical assistance and consulting to various public and private agencies whose work is focused on policy-making. In order to keep the general public informed about social policy and development issues and to promote debate and consensus in policy-making, GRADE issues publications and organizes conferences, seminars and other communication activities with the participation of public authorities, businessmen and academics.

Research work is supported by a Library. To support its research and outreach programs, GRADE has built a specialized research library whose catalogue currently lists more than 15,000 books, documents and articles focused on the fields of economics, agricultural economics, education, the environment, and natural resources. A computer network and permanent access to the Internet links GRADE researchers between themselves and with the rest of the world. An efficient financial accounting system fulfills project administrative requirements and allows the institution to successfully manage development and research project funds. GRADE researchers actively participate in several Peruvian and international research institution networks.

GRADE's staff currently includes 13 senior researchers and about 15 assistant researchers. Among GRADE's priorities is to support the continuing studies of these young researchers, facilitating and supporting their efforts to obtain admission to graduate programs at prestigious universities abroad and financial support and encourages their return to the country to continue with their research work.

Through all of these activities, GRADE seeks to become an indispensable forum for discussion on economic and social policy and to increase its current contribution to development policy-making both nationally and regionally.

GRADE's work is organized in seven areas. I) Employment, Poverty and Equity, ii) Education, Health and Human Development, iii) Rural Economy and Development, iv) Environment and Natural Resources, v) Industrial Organization and Regulation vi) Macroeconomic Analysis, and vii) Project Evaluation and Social Programs. To learn about GRADE's activities in each area, visit <http://grade.org.pe/>

The following is the current list of GRADE researchers excluding assistant researchers, research assistants and trainees for a total of 25.

Armando Cáceres

Senior Researcher (With License), PhD (c) in Economics, Columbia University

Santiago Cueto

Senior Researcher, PhD in Educational Psychology, U. de Indiana

Javier Escobal

Senior Researcher, PhD (c) in Economics, New York University

Manuel Glave

Senior Researcher, PhD in Economics, U. Illinois en Urbana-Champaign

Patricia McLauchlan de Arregui

Senior Researcher, M.A. in Sociology, John Hopkins University

Alberto Pascó-Font

Senior Researcher, PhD in Economics, University of Pennsylvania

Jaime Saavedra

Senior Researcher, PhD in Economics, Columbia University

Máximo Torero

Senior Researcher, PhD in Economics, University of California - Los Angeles (UCLA)

Martín Valdivia

Senior Researcher, PhD in Economics, University of Minnesota

Juana Kuramoto

Associate Researcher, PhD (c) in Innovation and Technology, Maastricht University

Miguel Robles

Associate Researcher, M.A. in Economics, Universidad Católica de Chile

Néstor Valdivia

Associate Researcher, Doctoral Candidate in Sociology, El Colegio de México

J. Guillermo Ferrer

Visiting Researcher, Master of Science in Curriculum Development and Educational Technology, and in Educational Administration and Policy, University at Albany, State University of New York

Hugo Ñopo

Visiting Researcher, PhD Student in Economics, Northwestern University

Claudia Galindo
Consultant, Graduate Student in Education Theory and Policy, Penn State University

Ena Garland
Consultant, PhD (c) in Economics, Boston University

In addition GRADE has an Administrative Support Area that includes a General Manager, an Assistant Manager, an Accountant, an Accounting Assistant, Librarian and her assistant, a receptionist, four secretaries and two messengers/porters.

To obtain further information on GRADE's activities, personnel, publications, news, visit the institution's homepage: <http://grade.org.pe/>