

*MPIA Network Session Paper*

## **Trade Openness and Gender in Uruguay : A CGE Analysis**

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# **Trade Openness and Gender in Uruguay. A CGE Analysis.**

REVISED RESEARCH PROPOSAL

Presented to  
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By  
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## **Abstract**

In Uruguay, female employment is concentrated in few activities. Changes in specialization and trade might therefore have a strong impact on female/male employment and wages. The aim of this proposal is to assess the differentiated impact by gender of trade openness on employment, wages and poverty. The gender dimension will be introduced in the CGE model developed in Terra *et al* (2005). Labor will be not only disaggregated by skills, but also by gender. Additionally, labor supply will be endogenous, considering the decision about time allocation between market activities, unpaid activities and leisure activities. In order to analyze the effects on poverty and inequality, microsimulations will be run, using the gender gaps in wage and employment obtained with the CGE model.

## **1. Main research questions and core research objectives**

### *1. Presentation of the Uruguayan economy and trade policy*

Uruguay has a small territory of only 177.508 km<sup>2</sup>. Its strategic position on the Atlantic Ocean, between the two largest countries in South America (Argentina and Brazil) and at the entrance of the wide basin of the Paraná and Uruguay rivers had a significant influence in its shaping as an independent nation and still has a great importance today. Despite the limited size of its territory, Uruguayan development has been closely tied to the exploitation of natural resources. Mild temperatures during most of the year, availability of water resources, no high elevations make the Uruguayan geography quite appropriate for agricultural production (more than 90% of the land is suitable for cattle-raising or cultivation). A long stretch of beaches all along the coast and the existence of hot springs are other features of its geography that facilitate the development of tourism, another important economic activity.

During the first half of the 20<sup>th</sup> century the Uruguayan population (estimated in 3:241.000 at present) enjoyed a relatively high standard of living. If dollars are adjusted according to their purchasing power, GDP per capita in the fifties (US\$ 2.973) was comparable to that of several European countries at that time, like Belgium (US\$ 2.757) or Denmark (US\$ 3.023). Import-substitution policies were the core of the development strategy, giving rise to a local industry oriented to the domestic market. The state had a very significant role in the economic system and gradually became a very important source of employment opportunities. Income was distributed in a relatively progressive way, mainly through the existence of a very advanced and generous social security system. Education spread out, contributing to the development of a social environment where large inequalities (typical of other South American countries) were absent.

However, after 1955 the inward-looking model of development was exhausted, as the domestic market was very small to allow for scale economies and competition. Therefore, the manufacturing sector became highly inefficient, while the export sector was harmed by an overvalued domestic currency. Since then, the Uruguayan economy has been affected by successive ups and down which determined a very low long-run growth rate. Thus, the need to carry out significant reforms in the economic system became evident.

Starting in the mid-seventies, the country adopted several reforms included in the “Washington consensus”, oriented to increase the ties of the Uruguayan economy with the world economy, to achieve macroeconomic stability and to set the market as the mechanism of allocation of resources. This set of reforms did not include significant privatization or deep restructuring of the public sector. On the contrary, they focused on the liberalization and opening of real and financial flows.

From 1990 to 1998 the rate of growth increased to an average of 4.4% annual. However, by the end of the nineties, a large devaluation of the Brazilian currency and later on, the 2001 deep financial crisis in Argentina had strong negative effects on the Uruguayan economy. From 1998 to 2002 GDP fell more than 17%. Unemployment rose to an unprecedented 19,8% in 2002 despite a large emigration flow. The percentage of total population below the poverty line increased from 22% in 1995 to 32.5% in 2003.

In the last few years, Uruguayan economy has recovered. GDP has been rising since 2003, and unemployment fell. In the last trimester (August-September 2005) the unemployment rate was 12,3%. However, poverty and income distribution indicators do not show such an important improvement.

Trade openness in Uruguay took place in a gradual manner since the mid 1970s. This process was subject to advances and withdrawals, and was deepened and consolidated in the 1990s when tariff reductions were accelerated, non-tariff barriers eliminated and the MERCOSUR was created. The average tariff, that was 27.7% in 1990, fell to 9.9% in 1996 and was established at 12% in 1998, due to a decision of MERCOSUR to temporarily increase its external common tariff. In the region, wider, deeper and less discriminatory integration agreements were introduced. The old (bilateral) partial trade agreements through LAFTA were substituted by MERCOSUR, constituting a custom union in the term of five years. Tariffs applicable to intra region imports were reduced to zero and a common external tariff was adopted, comprehending most traded goods. At the present, MERCOSUR remains as an imperfect customs union and carries different negotiations with third trade partners (FTAA, European Union). However, the negotiation process has not been easy, as MERCOSUR countries do not share the same posture on bilateral agreements.

Through the nineties, the Uruguayan economy underwent significant changes in its production and employment patterns. Growth in international trade was accompanied by a resource reallocation across sectors. On the other hand, recent studies show that there were changes in relative factor remunerations. The relative remuneration of labor increased with respect to that of capital, the skilled workers wages increased with respect to those unskilled, and the gap between female and male wages shortened. In the same period, and through a reform of the Constitution, the share of the retired in total income grew drastically, which may have compensated the negative effects on income distribution of the widening in wage differentials (Romaniello and Terra, 1998; Miles and Rossi, 1999; Bucheli and Furtado, 1999; and Furtado and Raffo, 1998).

Imports did not only increase, but their composition was also diversified. However, the old specialization patterns, based on comparative advantages associated to the abundance of natural resources in agriculture and cattle, remained. Uruguay continued to be an exporter of food and textiles, and an importer of chemicals, machinery and equipment. Exports of services, particularly tourism, also increased significantly, partially compensating the balance of payments trade account deficit.

During 1990-96, the Uruguayan economy underwent a structural adjustment process that meant that manufacturing lost its importance in total output and employment. Manufacturing GDP, which represented 26% of total GDP in 1990, had a share of 19% in 1996. Nowadays is still low, representing around 18% of total GDP in 2004, although since 2002 manufacturing real GDP has presented an increasing trend. Until 1996, total GDP growth was associated to agriculture and cattle, to construction and to service sectors such as transportation and communications, retail, hotels and restaurants, most of which would be directly or indirectly linked to exports of goods and services (Romaniello y Terra, 1998).

Manufacturing also lost its share in the total employment of the economy. While in 1990 manufacturing employment was 21% of the total employment, in 1996 its share was reduced to 16%. Retail, restaurants and hotels and services to firms sectors absorbed the reduction in employment in manufacturing. This can be associated to hiring services by third parties on the part of manufacturing firms.

In summary, during the nineties a significant adjustment took place in the productive patterns of the Uruguayan economy. Manufacturing lost its weight in total output and employment, and sectors linked to exports of goods and services such as agriculture and cattle, retail and tourism increased theirs. The increase in exports of services may have partially contributed to

absorb employment displaced from manufacturing. Alongside, the changes in relative prices stemming from appreciation of the real exchange rate and growth in domestic demand arising from income growth may have contributed to the increase in employment in the retail, restaurants and hotels, financial services and services to firms sectors. However, devaluation in 2002 made traditional exports more competitive, and since then agriculture, manufacturing and transport has been increasing their level of activity.

## *2. Gender and labor market in Uruguay*

Since the middle of the 1980's, women's participation in the labor market has had an increasing trend meanwhile men's one present a little decline. As it is shown in table 1, for the group of 18 to 54 years old female participation rate rose from 62% in 1986-1990 to 72% in 2001-2004 and male rate decreased from 94% to 92%. Due to the differences in unemployment, the employment rate gap by gender is quite broad: in 2001-2004, female employment rate was 57% and male one reached 81%.

Although the presence of women in the labor market increased, the female unemployment rate has been persistently higher than male's. Unemployment is particularly high for non-skilled women who also suffer a relative high duration of unemployment. Additionally, non-participation in the labor market is higher for non-skilled women. Notice that the share of wage earners among men is lower than for women as reported in table 1; these figures reflect that men –and specifically the non-skilled ones- are more likely self-employed in low productivity activities. These facts are due to the high female opportunity cost of working related to men. One of its consequences is that the poorest exhibit lower rates of employment.

Table 1. Labor characteristics of the group of 18 to 54 years old.

	1986-1990	1991-2000	2001-2004
<b><u>Women</u></b>			
Participation rate	61.7	68.4	71.9
Unemployment rate	12,3	13,5	19,9
Employment rate	54.1	59.1	57.2
<b><u>Distribution of employment</u></b>			
Wage earners	73,7	75,3	75,5
Private sector	51,8	56,4	56,4
Public sector	22,0	18,9	19,1
Non-wage earners	26,3	24,7	24,5
Total	100,0	100,0	100,0
<b><u>Men</u></b>			
Participation rate	94.1	93.3	92.1
Unemployment rate	6,2	7,5	12,0
Employment rate	88.2	86.3	80.9
<b><u>Distribution of employment</u></b>			
Wage earners	74,0	71,0	66,9
Private sector	48,7	52,6	50,2
Public sector	25,3	18,4	16,7
Non-wage earners	26,0	29,0	33,1
Total	100,0	100,0	100,0
<b><u>Wage gap (log difference) *</u></b>			
All	0.146	0.098	0.009
Private sector	0.273	0.160	0.074
Public sector	-0.170	-0.086	-0.178

\* Only wage earners

There are several studies in Uruguay about gender issues, specially focusing on discrimination and segregation and use of time. We present a brief summary of its main findings.

#### a) Discrimination and segregation

Table 1 also reports the average wage gap measured as the difference of the male and female mean log hourly wage. The gap was positive at the beginning of the period and had a decreasing trend. In recent years, its value has been close to zero.

Different studies in Uruguay analyzed the gender wage gap and its decreasing pattern using data of different periods and for different samples of workers. Most of them compare the difference of the mean earnings and following the spirit of Oaxaca's proposal, decomposing it between two components. One is due to the difference of workers characteristics; the other one reflects the wage difference that is not explained by independent variables but by the coefficients of the earnings equations. This last component is interpreted as a measure of discrimination. The broad conclusion of these studies is that the raw gap cannot be totally explained by the first component.

Rivas & Rossi (2000) studied the mean gap in 1991-97 for full-time workers (wage earners and self-employed) of 25 to 55 years old. They concluded that the decline of the raw gap was mainly due to an improvement of women's human capital and, in a less extent, to a decrease of segregation. Anyway, at the end of the period, the discrimination component took account for more than 100% of the raw gap.

This overall picture does not fit for public wage earners. Rivas & Rossi (2002) compared private and public wage earners in the nineties and concluded that gender discrimination increased for the former but decreased for the latter. Amarante (2001) found that at the end of the nineties, there was not evidence of discrimination in the public sector.

Other studies focused on segregation. Using a classification of 75 occupations of wage earners for the period 1986-1999, Amarante & Espino (2001) found that the segregation level had had an increasing trend in the private wage earners sector; meanwhile, segregation was lower and stable in the public sector. Besides, Amarante y Espino (2002) studied the effect of crowding. They found that female wage decreases with female weight in the occupation but the sign is the opposite when considering male wage. They suggested that this

result might be due to the fact that the classification of occupations is not good enough to split among different hierarchies. Bucheli & Sanromán (2004) used another strategy to have some insight about the barriers to promotion: they estimated quantile regressions and calculated the difference between actual female wage and the wage that would have prevailed if their characteristics were rewarded as to male, for different positions of the wage distribution. They obtained that this gap increase with the quantiles suggesting that women could be facing lower mobility than men.

The distribution of women and men is also different among sectors. Table 2 reports the percentage of women in industries classified according CIIU3 (2 digits) in 2000. This figure is only 2,2% for construction and reaches 90,3% for domestic service. Moreover, female employment is highly concentrated in few activities: domestic service, retail, health and education represent nearly 60% of total female employment, mainly oriented to the internal market. Table 2 also presents information on external protection and trade, which will be analyzed in section 2.

Table 2: Percentage of female employment and trade indicators by sector<sup>1</sup>

CIU3	Sector	% women	Average protection	Import penetration	Export propensity
95	Domestic service	90,3	0,0	0,0	0,0
18	Garments, leather	88,8	22,4	16,8	29,8
80	Education	79,4	0,0	0,0	0,0
85	Health	73,1	0,0	0,0	0,0
91, 93, 99	Other services	71,5	0,0	1,4	0,0
17	Textiles	50,1	18,3	24,7	44,2
52, 55	Retail, hotels and restaurants	49,9	0,0	0,8	0,4
65 to 74	Services to enterprises	45,2	0,0	2,4	2,2
15, 16	Food, beverage, tobacco	34,0	17,7	9,8	22,5
21, 22	Paper, editing, book binding	33,4	13,8	18,8	9,3
64	Post and telecommunications	33,1	0,0	6,1	6,9
75	Public administration and defense	31,9	0,0	0,0	0,2
19	Tanning	29,7	19,1	28,4	13,7
92	Leisure activities	29,4	0,0	0,0	0,0
24, 25	Chemicals, plastic, rubber	29,1	14,0	44,9	16,5
61, 62	Transport by air or water	28,8	0,0	84,1	79,3
31, 32, 33	Electric devices	26,6	15,5	62,6	4,5
23	Petroleum and coal derivatives	26,1	2,6	24,3	9,3
40, 41	Electricity, gas, water	23,9	0,0	1,4	0,3
51	Wholesale	23,2	0,0	0,0	0,0
36	Furniture	17,2	20,1	17,1	4,5
34, 35	Car and other vehicles fabrication	14,2	17,8	71,7	33,2
26	Non metallic mineral products	13,6	13,5	17,1	10,9
1, 2, 5, 9	Primary activities	12,0	9,7	4,7	10,1
60, 63	Transport and connected activities	10,2	0,0	6,6	7,0
20	Wood	9,3	11,5	15,2	4,7
50	Car sales	8,5	0,0	0,6	0,1
27, 28, 29	Machinery and equipment	8,0	15,9	57,8	16,4
11 to 14	Mining	6,0	4,8	65,5	4,5
37, 90	Garbage elimination	5,2	0,0	0,0	0,0
45	Construction	2,2	0,0	0,0	0,0
	<b>Total</b>	<b>42,7</b>			

Source: CHS, Ministry of Economy and Finance and Input/Output table

## b) Time at work and at home

There are several studies in Uruguay about female participation in the labor market and time assigned to remunerated work. Based on household surveys of the eighties and nineties, using the standard econometric techniques, they show that the participation rate increases with education level, and decreases with household income and age. Besides, it is lower for married women and for women with children in charge, although the probability of participation increases when children grow (Diez de Medina, 1992; De Soria, Rivas y

<sup>1</sup> Import penetration and export propensity coefficients are calculated for 1997 because it is the last year for which there are official data available. However, there was no significant changes between 1997 and 2000. The aggregation level of our SAM is not enough to show gender specialization. One of the purpose of this project is to build a new SAM with an adequate aggregation level.

Taboada, 2001). The same conclusions arise when the analysis focus on working hours. In an analysis of couples the probability of women working is lower when they live with inactive elderly people and higher when the husband is unemployed (Bucheli 2002).

However, unpaid work has been less studied. In 2003 the first survey on use of time and unpaid work was carried out in Uruguay. The main results are reported in Aguirre and Batthyány (2005). Leisure time is not considered, and time is classified in remunerated activities and unpaid activities. The last ones include time spent in domestic tasks, self-consumption, family care and voluntary work. According to this study, women assign 67% of their time to unpaid activities, while men assign 31%.

## *2. Gender and trade openness*

In principle, a country may benefit from an increase of trade and from productive specialization. The productive efficiency is increased due to a better resource allocation and at the same time, welfare increases through an improvement of consumption possibilities. Furthermore, when imperfect competition exists, openness may report additional benefits, through the access to a larger variety in consumption of differentiated goods, the use of economies of scale, and the fall in prices induced by diminishing monopoly rents in more competitive markets. However, international trade leads to changes in relative prices of goods, in relative demands of productive factors, and as a consequence, in their relative remuneration. Though international trade brings about an improvement in a country's general welfare, it generates also winners and losers through its impact on income distribution.

Rodrik (1997) argue that government can design domestic policies, which should help all sectors in a society to be able to capture the advantages of globalization. However, to implement such policies, a rigorous analysis of their costs and benefits is required, identifying the winning and losing groups, with special attention, in the latter case, to the most vulnerable. In theory, in developing countries (with low skilled labor force and low wages), an increase in trade would lead to an improvement of relative wages of the less skilled workers and a reduction in wage differentials.

However, not all developing countries are affected equally, as the impact of trade openness is strongly associated to the pattern of usage of productive resources by the contracting or the expanding sectors. On other side, Terra *et al* (2005) have shown how changes in trade patterns with main partners have different effects on specialization and relative wages of factors, specially labor disaggregated by skill level. The authors show that in the case of Uruguay an increase of trade flows with Argentina produce a reallocation of resources towards sector intensive in skilled labor, not contributing to the reduction of wage gaps.

The impact of trade openness on the situation of women depends therefore on their position in the labor market. If international trade raises the demand of goods in which the female labor is employed intensively, then its demand and relative wages will rise. On the contrary, if such demand falls, then female wages and employment may fall as well. The impact of trade openness on female employment depends, then, on the intensity of its usage by export oriented, non-tradable or import competitive industries, and on its skill level.

As it was presented before, female employment is highly concentrated in a small group of activities that are mainly oriented to domestic market. For that reason, in the nineties female labor force seemed to be favored by the trade openness process, as labor demand shifted

towards sectors that intensely use female and skilled work. Skill level of women rose, and wage gap –as shown- decreased. However, in the years following 2002 recession, economic growth in Uruguay has been led by sector intensive in male work (agriculture, manufacturing, transport and communications). This, in turn, may increase the wage gap again.

### *3. Objectives*

The impact of trade policies on the labor market and gender depends on the nature of the policy but also on the structural features of the labor markets, particularly the adjustment mechanisms. The proposed study intends to estimate the effects on specialization, trade, employment and wages stemming from the changes in trade policies with the main MERCOSUR partners and with the rest of the world. Specially, this proposal is meant to find out how female labor market would be affected by changes in trade openness with different partners. There will be a special effort to take into account women participation in labor market and also self-consumption work, and to estimate the effects on poverty and income distribution. In addition, it would try to assess policy options to lower the costs associated to this process, and to compensate the poorest and less qualified women in the scenarios were they could be most harmed by the process.

The specific objectives of the research would be:

- a) to review studies and statistics on gender and labor market in Uruguay in order to classify sectors according to the behavior of agents and present imperfections;
- b) to estimate elasticities of substitution among leisure, social reproduction work and market work (subject to access to microdata);

- c) to build a computable general equilibrium (CGE) model that specifically considers gender dimensions of labor market, using an appropriate aggregation level for this objective;
- d) to estimate how trade policies in the nineties affected female participation in labor market, simulating a rise in levels of protection;
- e) to design a simulation strategy that estimates how deepening of trade openness with different markets will affect female participation in the future;
- f) to simulate the impact of trade policies on poverty and inequality, through microsimulations undertaken with the Continuous Household Survey, that takes into account differences among male and female workers.

## **2. Knowledge gaps and scientific contribution of the research**

Gender studies in Uruguay focus on some aspects of the phenomenon, leaving important issues behind. For example, there are few studies about female unemployment and its determinants, as well as the way women devote their time to domestic and market work. Nor there is a system to monitor the distributive impacts of trade reforms. When these impacts are expected to be different among male and female labor and among skilled and unskilled workers, it is necessary to study them. We find that developing a CGE model that takes into account all these issues, and combining it with microsimulations in order to assess the impact on poverty and income distribution, could contribute to reduce the knowledge gap.

It would be the first gender-concerned CGE model developed in Uruguay. This further accumulation on labor market and trade will not only shed light into new problems, but it

would also consolidate a working team composed by researchers from different areas within the DE-FCS and contribute to their capacity building.

### **3. Policy relevance**

Traditionally, the gender dimension has been absent in the design of economic policies in Uruguay. Specifically, although trade policies might have a significant impact on relative wages and employment of different types of workers, policymakers have never considered gender issues.

Recently, gender dimension has become more and more important in Uruguay, to the point of becoming a main issue for the recent government. In March 2005 the Ministry of Social Development was created, with the aim of implementing specific policies to alleviate poverty. The role of Women Institute (Instituto de la Mujer) acquired more importance and all the Ministries were asked to take actions to promote gender equality.

In this context, this paper would provide a quantitative analysis of the impact of different policies on gender in labor market and contribute therefore to the general discussion on the subject, which has been traditionally ideological and scarce.

### **4. Methodology**

**Presentation of the specific techniques that will be used to answer the research questions and how exactly they will be used to do so**

The research will be carried out combining CGE model simulations with a microsimulations methodology. The work will start from the CGE model elaborated in Laens and Terra (1999; 2000) and Terra *et al* (2005) and the effort will focus on gender issues. In order to assess the impact of trade policies on gender dimensions of labor market, we will simulate on one side an increase of tariffs and other protection measures with Argentina, Brazil and the Rest of the

World, and on the other side a deepening of trade openness with the rest of the world. The first simulation scenarios is a backwards experiment, that will try to reproduce the situation before trade reforms in the nineties.

In order to reach these goals, the following tasks will be carried out:

- a) Bibliographic review and synthesis of research work that discuss the structural features of the Uruguayan labor market with the purpose of modeling appropriately gender dimensions of labor market.
- b) Estimation of employment by gender, activity, trade openness and skill with the purpose of having an adequate aggregation level of the SAM to the objectives of this work.
- c) The Central Bank of Uruguay is preparing more recent input-output tables to be published within the next months. This, together with the SAM elaborated in the DE-FCS, will be the starting point to construct a new gendered- SAM. With this purpose, the aggregation by sectors and the decomposition of labor according to gender and skill will be revised, according to the requirements of the model.
- d) The gendered SAM will not only have activities related to market, but also social reproduction activities and leisure activities, subject to access to microdata from survey on time use carried out in 2003. The general procedure to build the new SAM will follow Fontana and Wobst (2001).
- e) Construction of the model. The model by Terra *et al* (2005) will be adopted and different contributions of the literature on CGE models and their application to gender issues will be considered (Fontana and Wood, 2000; Fontana, 2002 and 2003; Fofana *et al*, 2003; Siddiqui, 2005).

- f) Simulations. The simulation strategy will be defined with the purpose of assess the impact of trade openness on macroeconomic and labor market variables, and poverty indicators. The following simulations will be carried out:
- i. A backward experiment to simulate a higher tariff structure trying to assess the situation of female labor previous to trade opening process. Three different simulations will be carried out: tariff increase with Argentina, with Brazil and with the rest of the world.
  - ii. Until 2001 Uruguay applied reference prices on some products, over which the external tariff was applied. This customs valuation mechanism worked actually as a non trade barrier that supposed a higher protection level to textiles and garments, industries with high participation of female employment. There are estimations of the equivalent *ad valorem* tariffs to these barriers in Terra, Bittencourt *et al* (2005). Therefore, to the backwards experiment we will introduce the equivalent tariffs of the reference prices in textiles and garments in order to simulate an increase of other protection measures.
  - iii. Simulations of trade policy options such as a further openness of Uruguayan economy, eliminating trade barriers with the main partners of MERCOSUR and with the rest of the world.

The simulations with the CGE model can only provide a picture of the effects of particular policies at the macro or sectoral level. Therefore, in order to simulate the effects of trade policies on poverty and inequality, microsimulations will be carried out.

## **5. Data requirements and sources**

As it was already mentioned, the Social Accounting Matrix required for the model will be rebuilt and updated with data from the new input-output matrix of the Central Bank of Uruguay and the SAM prepared for year 2000. In order to include a proper level of aggregation of activities (including female intensive activities and male intensive activities), and a classification of labor according to gender and skill, other data sources will be necessary: national accounts and trade statistics from the Central Bank (BCU); the Economic Activity Surveys, the Economic Census of 1997, the Continuous Household Survey and the Income and Expenditure Survey from the National Statistics Institute (INE).

The gendered SAM will also include social reproduction activities and leisure activities. Access to this data is more difficult, as there is only one survey on use of time, which was carried out only in urban regions of Gran Montevideo<sup>2</sup>. Besides, as the survey is quite recent, access to microdata is restricted. However, effort will be made in order to get access to this data and include other activities than market ones.

## **6. Dissemination strategy:**

**How and where research results will be disseminated to academics, policy-makers and the public: publications, policy briefs, seminars, conferences, etc. (see PEP's consultation and dissemination strategy for ideas)**

It is of our interest to have a widely dissemination of the results of the project. Bearing that in mind, we will present the research findings in two differentiated levels. First, in the academic level, we will present them to other researchers specialized in the area, both national and international. Then, we will focus on presenting them to policy makers and general public in

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<sup>2</sup> Urban areas represent 95% of total population, and 59% of urban population live in Gran Montevideo.

Uruguay and Latin America, in a style and language accessible to them. Two general strategies will be followed: presentations in national and international events, and different types of publications. In general, the dissemination strategy will follow the experience of the team's previous PEP project (pr-mpia-255).

In order to disseminate our findings to the academic researchers, we will prepare a working paper to be published in the DE-FCS Working Paper Series and in PEP working paper series, and also an article to present to an international journal. Our previous PEP project already integrates the DE-FCS Working Paper Series and has been accepted to be published as part of the PEP working paper series. This project was already presented in an internal seminar in DE-FCS, where the team received useful comments from other researchers. It was also presented in one international meeting –the 4<sup>th</sup> PEP General Meeting in Colombo- and at present is being evaluated for presentation in two more international events: GTAP Ninth Annual Conference on Global Economic Analysis (June 2006, Ethiopia) and World Bank Conference on Employment and Development (May 2006, Berlin).

But besides the dissemination among academics, we are interested in presenting our findings to policy makers and general public, as one of the objectives of the project is to suggest policy options regarding labour market segmentation by gender. In order to accomplish that, we will prepare a policy brief in a language that avoids technicalities and can be understood by non-specialized public. We are in fact preparing one policy brief for our previous PEP project that is going to be distributed among policy makers, interest groups, students, and other social sciences researchers. We are also planning a national conference that will be carried out in April/May, in which we will expose our main findings and invite other

researchers from Uruguay and Argentina to present other investigations in labour market and trade.

All the activities already undertaken and those that are at the planning stage for our previous PEP project are going to be part of the dissemination strategy of this new project.

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## **8. List of team members' prior training and experience in the issues and techniques involved.**

Two senior researchers and at least two research assistant compose the research team, all of them members of the DE-FCS staff. The coordinator of the project will be M. Inés Terra, professor grade 4, coordinating the International Trade Area. The other members of the team

will be Marisa Bucheli, professor and researcher, coordinating the Labor Economics Area, Rodrigo Ceni, research assistant at Labor Economics Area, and Carmen Estrades, research assistant at the International Trade Area. Three of the four members participated in the project “The effects of increasing openness and integration to the MERCOSUR on the Uruguayan labor market. A CGE modeling analysis”, financed by PEP Network and carried out in 2004-2005.

M. Inés Terra (female, 51) is Licenciada en Economía by the University of the Republic (Uruguay). She specializes in international trade, trade policies, economic integration and computable general equilibrium. She teaches a course on “General Equilibrium Models Applied to International Trade” in the Graduate Program at the DE-FCS. She has several publications with CGE models applied to trade policy issues. In 2003 she built a CGE model to analyze the impact of public services reform in Uruguay. She was the project leader of the previous PEP project, coordinating all the activities involved. She also worked on the CGE model and the design of simulations.

Marisa Bucheli (female, 46) is Licenciada en Economía by the University of the Republic (Uruguay) and Master en Economía by the Pontificia Universidad Católica de Río de Janeiro (Brazil). She is a candidate for Phd by the University of the Republic, Uruguay. She coordinates the Labor Economics area at the DE-FCS and teaches Labor Economics at the Diploma de Relaciones Laborales, Facultad de Derecho. She specializes in labor economics, income distribution and poverty. She has several publications on labor economics. Her contribution to previous PEP project –especially concerning labor market issues- was extremely important.

Rodrigo Ceni (male, 27) is also about to get his degree for Licenciatura en Economía by the University of the Republic (Uruguay). He has experience in several research projects. He is the lead researcher of a project financed by the Scientific Research Council of the Universidad de la República entitled *Socio-economic portrait of people living in the street*. He has a wide teaching experience as well. Although he has recently started in DE-FCS, his experience will allow him to participate actively in this project. His participation will train

him in gender, labor market, income distribution and trade issues, acquiring experience in CGE modeling, microsimulations and estimations of elasticities.

Carmen Estrades (female, 27) is working on her final dissertation for Licenciatura en Economía by the University of the Republic (Uruguay), developing a CGE model applied to energy issues. She has been working in DE-FCS for more than a year, enhancing her training in CGE modeling. She has participated in several projects that apply CGE models, including the project carried out in PEP Network. Her participation in PEP project contributed a lot to her capacity building. Within this project, she learned practically from zero about CGE modeling and GAMS programming. She contributed to the adaptation of SAM and the microsimulations. Before 4<sup>th</sup> PEP General Meeting, she had never assisted to an international event. The possibility that PEP Network offered to her was in that sense unique. Being part of a new project will allow her to continue her training in all these areas.

## **9. Expected capacity building**

**Description of the research capacities that team members and their institutions are expected to build through their participation in this project. This is an important aspect in the evaluation of proposals and should be presented in some detail. What techniques, literature, theories, tools, etc. will the team and their institutions learn or deepen their knowledge of? Please also indicate what tasks each team member would carry out in executing the project.**

Four outputs of this Project would have great importance for the participating researchers and their institution:

- Improving an important tool for quantitative analysis (the CGE model), which will enable to continue to explore trade policy scenarios and to analyze their impact on the Uruguayan labor market introducing the gender dimension. The development of a gendered SAM and a model focused on gender segmentation of labor market will create a useful tool for analysis and policy design related to gender and labor market that has not have a precedent in Uruguay.

- Microsimulation methodology learned in PEP Workshop in Colombo will be extremely useful for this project. The team is expected to deepen its knowledge in this important technique that is extremely useful for combining micro and macro analysis.
- The progress on the model developed in previous projects will allow to increase the experience and knowledge of the research team. A new project will consolidate a team that works with CGE modeling. This would be extremely important, as in Uruguay there are few people who work with this methodology, which is widely used in both academic research and policy design. As a matter of fact, only María Inés Terra and Silvia Laens are experienced enough to transmit it in Uruguay. At the same time, the learning obtained through the exchange of experience in different research areas will be deepened in this new project, which relates two issues that to the present were studied separately in Uruguay: gender and trade.
- Young researchers that are part of this project will have an active role during the research activities. At the moment, two young researchers are part of the team, although we do not discard to include more young assistants. As they are young students who will soon get their degree in Economics, their participation in a research project in an international network as PEP will give them invaluable experience that will allow them to develop their own projects in the future. For that reason, they are expected to participate in practically every stage during the research.

**10. Any ethical, social, gender or environmental issues or risks which should be noted.**

There are no ethical, social, gender or environmental risks which should be noted in this project.

**11. List of past, current or pending projects in related areas involving team members**  
(name of funding institution, title of project, list of team members involved)

Funding Institution	Title of project	Institution	Team members	Year
PEP	The effects of increasing openness and integration to the MERCOSUR on the Uruguayan labor market. A CGE modeling analysis.	DE-FCS CINVE	María Inés Terra Silvia Laens Marisa Bucheli Carmen Estrades	2004- 2005
IADB- Integration and Regional Program Department - Regional Operation Department I	MERCOSUR: asymmetries and strengthening of the Customs Union. Options for the CET.	DE-FCS CINVE	María Inés Terra Silvia Laens	2004- 2005
Tinker Foundation – MERCOSUR Network	The external agenda of MERCOSUR: the impact of three simultaneous negotiations.	DE-FCS CINVE	María Inés Terra Silvia Laens	2005
Ministry of Economic and Finance - Uruguay	Social Security and gender in Uruguay: an analysis of the differences of retirement access.	DE-FCS	Marisa Bucheli Wanda Cabella Alvaro Forteza Ianina Rossi	2005
ILO	The social security coverage in Uruguayan employment: 1991-2002		Marisa Bucheli	2004
World Bank- OPP	Development of a CGE model to analyze the ex ante macroeconomic impact of public services reform in Uruguay	DE-FCS	María Inés Terra Alvaro Forteza Héctor Pastori Andrés Pereyra Darío Sarachaga Pedro Barrenechea	2003
ILO	The composition of unemployment in Uruguay, 1999-2002		Marisa Bucheli Carlos Casacuberta	2003

Tinker Foundation – MERCOSUR Network	The MERCOSUR and the creation of the Free Trade Area of the Americas. This project was coordinated by DE-FCS & CINVE. Other institutions from the MERCOSUR countries participated in it. One of the papers uses a CGE model to analyze the impact of the FTAA on the MERCOSUR	DE-FCS CINVE	Silvia Laens M. Inés Terra	2002-2003
ECLAC	The impact of unemployment on wages. An estimation of wage loss in Uruguay		Marisa Bucheli Magdalena Furtado	2002
LATN-DE-FCS	Trade Liberalization in Latin American Countries and the Agreement on Textiles and Clothing in the WTO. A CGE model was used in this paper	DE-FCS	M. Inés Terra	2001-2002
UNDP	Uruguay: equity and poverty in the trade opening in the nineties. A microsimulation approach microsimulaciones		Marisa Bucheli Rafael Díaz de Medina	2001
IDRC-MERCOSUR Network	On the benefits of full integration to the MERCOSUR. The Uruguayan case A partial equilibrium model was used to analyze the impact of the elimination of non-tariff barriers on some sector in the MERCOSUR	DE-FCS	Héctor Pastori M. Inés Terra Marcel Vaillant	2000
World Bank-OPP	The completion of the MERCOSUR and its effects on the Uruguayan labor market. As part of this project, a CGE model was built and a paper was published	CINVE	Silvia Laens M. Inés Terra	1999-2000