

**THE ECUADOREAN PARTICIPATION  
IN THE ANDEAN PACT:  
MACROECONOMIC AND SECTORAL IMPACT**

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**Working Paper #226 - June 1996**

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This document was prepared as part of the Stanford University, USAID, and ILDIS research project “Andean Integration and Economic Liberalization.” The institutional support of FLACSO, UNDP, and UNDESD and the comments made by José Samaniego and the team of Stanford University, USAID, and ILDIS are appreciated, as is the collaboration of María Herrera. The opinions presented are the exclusive responsibility of the author.

## **ABSTRACT**

Protection of Ecuadorean industry, even after the tariff reform of 1990, has continued to be important for the nonbasic needs industries, which have a very low level participation in the Andean group (GRAN), but little protection has been provided for the basic needs industries, which have extensive participation in the Andean group. In light of these facts, this paper uses a macro neostructuralist model to evaluate whether the opening of the Ecuadorean economy to the Andean group will generate development of the basic needs consumer sector, at least in the initial stage, with positive effects on growth, income distribution, and external adjustment of the Ecuadorean economy. However, it is important to recognize that Ecuador may need special trade conditions with respect to the rest of the Andean countries or else go through a significant technological change (substitution of imported inputs for domestic inputs) and/or institutional change to ensure the success of this process.

## **RESUMEN**

La protección de la industria ecuatoriana, aún después de la reforma tarifaria de 1990, ha seguido siendo importante para las industrias de necesidades no básicas; las cuales tienen un muy bajo nivel de participación en el Grupo Andino. Escasa protección ha sido provista, sin embargo, a las industrias de necesidades básicas, las que tienen significativa participación en el Grupo Andino. A la luz de estos hechos, este texto usa un macro-modelo neoestructuralista para evaluar si la apertura de la economía ecuatoriana al Grupo Andino, al menos en el estadio inicial, generará desarrollo en el sector de necesidades básicas, con efectos positivos en el crecimiento, la distribución del ingreso y el ajuste externo de la economía ecuatoriana. No obstante, es importante reconocer que Ecuador puede necesitar condiciones de comercio especiales con respecto al resto de los países andinos o, en su defecto, atravesar un importante cambio tecnológico (sustitución de insumos importados por insumos domésticos) y/o cambio institucional, para asegurar el éxito de este proceso.

The Andean Pact was formed in 1969 as an answer to the stagnation of the Latin American Association of Free Trade (ALALC) and to the development needs of the Andean countries. The Pact seeks to harmonize policies and reduce tariffs and to rationalize production across member countries by encouraging the development of those industries within each country that are already well developed or thought to be well developed. This strategy is consistent with the import substitution model that predominated in Latin America during the 1970s. According to this view, the government should intervene to coordinate economic policies and regional development plans in order to direct the market toward the proposed goals. The consequence of this model is that protected rent activities develop, mainly in the industrial sector, which are financed in part by resources generated by primary commodity-intensive exports. Therefore, the initial stage of the Andean Pact was characterized by a closed regionalist model with a protected rent sector.

The external debt crisis that Latin America experienced during the '80s has led to the application of adjustment policies by the Andean countries. These policies reduced the trade preferences exercised among the Andean countries and led to trade reduction during the mid-'80s. However, the Andean Pact reactivated itself with the "Quito Protocol," signed in 1988 and later modified by the "Galápagos Declaration" (1989), the "La Paz Accord" (1990), and the "Caracas Accord" (1991). This last document resulted from a review of the "Cartagena Agreement." The emphasis shifted from closed regionalism (inward integration) to open regionalism (outward integration) with the rest of the world. With the establishment of the free trade zone and the subregional tariff union, special emphasis was given to the development of private initiatives and innovative rent-seeking activities—instead of protected rent—which aim at reaching an efficient allocation of resources and exploiting the competitive advantages of the subregion. It is envisioned that, in this way an adequate insertion into the world market will be achieved. This is the goal of open regionalism, where regional economic agreements are seen as an intermediate step towards integration with the world economy. It implies the reduction of both policy and natural barriers to inter-regional trade. In consequence, transaction costs also shrink; there is a downward shift in the cost curve, which increases returns as well as the level of investment. In this process, it is essential that several social groups have greater access to the market in order to augment its size. In consequence, a regional agreement leads to a situation where there is pure trade creation "because it has relied not upon the erection of external barriers but the reduction of internal barriers to exchange" (Reynolds, Thoumi, and Wettmann 1993, 42; see also Garay 1991). Given this context,

this paper will evaluate the impact of regional integration on the Ecuadorean economy and several key sectors. The first part evaluates the level of protection of each manufacturing sector and its participation in the Andean Group; the second part uses a neostructuralist model to evaluate the impact of Ecuadorean participation in the Andean Group in each sector, as well as its social impact, in terms of income distribution.

## **1. The Ecuadorean Economy in the Context of Subregional Integration**

The evolution of the Ecuadorean economy follows patterns similar to those observed in the rest of the Andean countries. The path of agro-export production oriented toward the world market—and marginally to the Andean Group—which characterized the Ecuadorean economy during the first half of this century, changed due to an increase in available resources coming from oil production. The import substitution model was pursued, thanks to the resources of the oil boom, and allowed domestic industry to receive credit under favorable conditions. Due to other factors, a protective tariff regime and hence the generation of protected rents were made possible. This regime induced the creation of capital-intensive industry oriented mainly toward the local market of middle- and upper-class sectors. Given the small size of this market, the installed capacity of these industries was underutilized and this sector experienced very limited growth.

During the 1970s the abundance of resources increased consumption by the domestic population to such levels that imports were greater than exports and the foreign debt increased significantly. At the end of the '70s oil prices fell and the foreign debt increased to such an extent that it required the implementation of the first adjustment package in 1982. A similar adjustment process took place in the rest of the Andean countries. Hence, trade preferences among them were eliminated and trade was reduced. In the case of Ecuador, exports to the Andean Group in relation to total exports diminished by 2–3% between 1984 and 1986. This situation was reversed in 1990 and 1991 when exports to the Andean Group reached levels of 6.9% and 7.1%, respectively, thanks to the new agreements signed among the Andean countries which triggered the Andean Pact. A similar sequence of events affected Andean imports.

The renewal of the integration of the Ecuadorean economy with the Andean countries is part of the process of opening the Ecuadorean economy to the rest of the world. Since 1990 this project has been implemented through a process of tariff reform which implies an adjustment of the upper and lower limits of the old tariff (0% and 290%) to those of the new tariff (5% and 35%, respectively). This reduces the difference between Ecuador's tariffs and those of the rest of the world and eliminates the dissimilarity

between Ecuador and the countries of the subregion. It softens the impact of a possible commercial opening with the Andean countries (Ministerio de Finanzas 1990b and Rodríguez 1990). This situation also leads to innovation in rent-seeking activities as opposed to protective rents.

To evaluate the impact of the opening of the Ecuadorean economy in different industrial sectors, Creamer (1992) analyzed the effective rate of protection of the Ecuadorean industry during the first two stages of the tariff reform. Industry data was gathered on capital, intermediate goods, and basic and nonbasic consumer goods.<sup>1</sup> It was found that the most protected industries were those of capital goods, followed by nonbasic consumer goods industries, intermediate goods and lastly, basic consumer goods industries (see Graph 1). It is interesting to note the inverse relationship between the level of protection and the total exports of each sector directed toward the Andean group. It is possible to observe in Graph 2 that industries that produce capital and intermediate goods have lower percentages of participation in the Andean group even though they have high rates of protection. The extreme case is that of the nonbasic consumer goods industries which shows the second highest level of effective protection but an almost insignificant participation in the Andean group. Those industries that produce basic consumer goods contribute approximately 60% of exports directed to the Andean subregion and have the lowest level of effective protection (see Graph 3).

These results and the conclusions of Schydrowsky et al. (1985), who find that the most protected industries are the most inefficient, generate doubts about the former Ecuadorean industrial promotion policy. That policy was based on the belief that it was necessary to protect 'infant' industries such as capital and intermediate goods, up to the point where they were well developed and able to compete on the world market.

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<sup>1</sup> Basic consumer goods are highlighted because a large proportion of income is destined for their purchase, particularly when income decreases. That is, basic consumer goods display an income elasticity of demand of less than 1 ( $\epsilon < 1$ ). When income rises, demand elasticity tends to decrease ( $\epsilon > 2,3$ ) (see Vos 1987). According to this distinction, basic consumer goods are those that belong to the following divisions of activity: nutritional products excluding beverages (311), diverse foods (312), beverage industries (313), tobacco industry (314), clothing except for shoes (322), leather and leather products (323) and shoes (324). Nonbasic consumer goods constitute the rest of the final goods. Those products belong to the following divisions: textile manufacturing (321), furniture and wooden accessories (332), printing and publishing (342), petroleum derivatives (354), rubber product manufacture (355), plastic products (356), clay, ceramic, and porcelain products (361), and glass and glass products (362). Intermediate goods are those products that form part of the divisions that follow: wood and wood products excluding furniture (331), paper and paper products (341), industrial chemical substances (351), other chemical products (352), and other nonmetallic minerals (369). Finally, capital goods are those goods that fall into the following divisions: iron and steel (371), nonferrous basic metals (372), metal products (381), nonelectrical machinery (382), electrical machinery and supplies (383), transportation material (384), professional and scientific equipment (385), and other manufacturing industries (390).

**Graph 1**  
**Ecuador: Effective Rate of Protection by Sectors (1990–91)**

Source: INEC, Muestra Empresas Industriales, 1988a

**Graph 2**

**Ecuador: Effective Rate of Protection and Exports to the Andean Group  
by Goods (1991)**

Source: Creamer 1992 and SGP-CONADE 1991

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**Graph 3**

**Ecuador: Participation of Ecuadorean Exports in the Andean Group  
by Type of Goods (1991)**

Source: Creamer 1992 and SGP-CONADE 1991

The low level of effective protection of basic consumer goods industries, where such industries are labor intensive, resulted in an important presence of small producers, low participation of imported inputs, and high output and employment linkages with the rest of the economy (Vos 1987). This shows the distortion caused by the urban consumption subsidy, the bias toward industry, and the limited importance given to the agricultural sector. However, this distortion has decreased with the liberalization of basic consumer goods prices, thanks to the adjustment policies.

Despite the low level of effective protection of the basic consumer goods sector, its high participation in the Andean group suggests that this sector, mainly the food and beverage subsector, can become a productive pillar for Ecuador in the first stage of the integration process.<sup>2</sup> This has the above-mentioned positive effect in terms of output and employment. It also increases access to the market by different social groups. The other sectors, however, go through a process of technological change and industrial conversion that will increase their competitiveness in the international market. In this process there will also be a change from protected rent to rent realized through innovation.

The significant decrease in the effective protection of Ecuadorean industry implied by the new tariff regime and by participation in the Andean Common Market is worrisome if the new common external tariff of the Andean subregion, or that established among Colombia, Venezuela, and Ecuador, increases the gap between high tariffs for capital and intermediate goods and low tariffs for basic consumer goods, thus favoring the first group. This could be particularly harmful if the preferential conditions given to Ecuador were to be reduced.

In general, it is possible to say that the tariff reform might have the effect of reducing tariff differences and protected rents and homogenizing the levels of effective protection, although these differences will not disappear. Furthermore, the tariff reforms have served to prepare Ecuador for its insertion into the Andean Free Trade Zone, since the process requires the increased competitiveness of many industries formerly protected by the previous tariff regime. Nevertheless, it is expected that the most protected industries, those of capital goods, will require greater adaptation to the new external conditions relative to the basic consumer goods industries which have had and continue to have a lower level of protection. Furthermore, these industries present greater comparative advantages in terms of local resources (labor intensive and low use of imported inputs) than the capital goods industries and, even with the new definitions of

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<sup>2</sup> This is particularly true if the potential increase in demand that the Venezuelan and Colombian markets imply, with 30 million consumers in the first case and 50 million consumers in the second, is taken into account. The participation of Peru and Bolivia remains to be defined, since the former is temporally separated from the Andean Pact and the latter has more interest in Mercosur.

the common external tariff, they are very competitive within the Andean group. In the following section, the macroeconomic and sectoral impact of the Ecuadorean integration into the Andean group is evaluated through a macro neostructuralist model.

## 2. Andean Integration: Macroeconomic and Sectoral Impact in Ecuador

This section considers the impact of the opening of the Ecuadorean economy to the Andean subregion using the MENS (macro neostructuralist model for Ecuador) model previously developed by Creamer (1992) to analyze the impact of different macroeconomic policies on income distribution, inflation, and growth.

The present version of the macro neostructuralist model (MENS-PA) has been extended to include other features and sectors that are of central importance in the opening of the economy, mainly in the case of the Andean Pact. MENS-PA is a short-term macro neostructuralist model with emphasis on the demand effects and assumes a degree of idle installed capacity in most of the productive sectors (see Dutt 1990). Therefore, an increase in demand allows an expansion of production without strong inflationary effects. It also uses two hypotheses about price determination: cost-push and world market.

The data used come from a social accounting matrix (SAM), updated for 1990 (see Páez 1992), based on the national accounts (see BCE 1990) and the social accounting matrix developed by Alarcón, De Labastida, and Vos (1984).<sup>3</sup> This matrix, in the tradition of Robinson (1986), serves as a basis for the development of general equilibrium models. The distinctive feature of this matrix is the disaggregation between an intraregional and an extraregional market and the differentiation between imported inputs from Andean countries and those from the rest of the world.

The majority of the behavioral equations are calculated using the historical series of 1965 to 1989, fundamentally based on the national accounts published by the Central Bank of Ecuador (BCE 1990).

<sup>3</sup> The equivalence of the MENS-PA sectors, the MENS sectors, and the sectors of the input-output table is realized in the following manner:

<b>MENS-PA</b>	<b>Sectors Input-output table</b>	<b>MENS</b>
1. Agro-export	1, 4 and 5	Basic consumer sector (BCS)
2. Other agriculture and livestock	2, 3	BCS
3. Oil and mining	6, 7 and 8	Nonbasic consumer sector (NBCS)
4. Consumer industry	9, 10, 11, 12, 13, 14, 15	BCS and NBCS
5. Production industry	16, 17, 18, 19, 20, 21	NBCS
6. Infrastructure	22, 23, 25, 26	BCS and NBCS
7. Commerce	24, 30	NBCS
8. Services	27, 28, 29, 31, 33	NBCS
9. Government services	32	NBCS

The MENS-PA is used to study fiscal policy variables (direct and indirect taxes, refined oil price, public spending, and investment), international trade variables (inward or outward growth policy through the management of tariffs, export subsidies, and exchange rates), and income distribution variables (salaries and mark-up rates). The impact on the Ecuadorean economy is evaluated in terms of the rate of inflation and output growth, the distribution of income, consumption levels, private and public savings and investment, the fiscal balance, and the current account of the balance of payments at the intra- and extraregional level.

Given the base year of the model (1990), as well as the nature of the methodology utilized in which the emphasis is on a structural analysis of the cause-and-effect relationship, the results obtained in each simulation should be taken only as indicators of a tendency rather than as an exact forecast (the main features of the macro neostructuralist model applied to the Andean subregion are presented in appendix 1).

## **2.1 Results of the Simulations**

The simulations that follow (see Table 1) attempt to model the impact of Ecuadorean integration into the Andean group in terms of cost in a similar way to that done in the Cecchini report (see Cecchini et al. 1990); however, this analysis is not done for each main industry, as was the case in the study of the European Community (see CEC 1988). As an approximation of this kind of analysis, the input-output table is used to calculate the impact of changes in factor prices. The simulations that follow correspond to the potential policies or effects that may result when the Andean market is in full operation. These simulations are also an exercise in process, because they try to define alternative macroeconomic policies that facilitate the participation of Ecuador in the Andean Pact, maintaining external and internal equilibrium in the productive as well as in the social realm.

Up to the present, the Andean Pact has not had an effective common external tariff. Therefore, Ecuador did not have a powerful tariff incentive to trigger its trade with the neighboring countries. However, the reactivation of the Andean Pact and the implementation of the common external tariff have made regionally produced goods more competitive within the Andean market. This would imply a substitution of extraregional by intraregional imports. In the sections that follow these conditions are simulated by comparison with a base scenario in which there is no common external tariff nor special incentives for Ecuador. In the first simulation this incentive is simulated through a relative increase in the common external tariff of the Andean subregion for Ecuador. In the second



scenario there is the supposition that Ecuador may not have any special treatment in the Andean Group; however, it is able to undertake technological change that would decrease the reliance on imported inputs in Ecuadorean industry. This would reduce the pressure on the balance of payments that a potential increase of imports from the other Andean countries might have.

### **2.1.1 Substitution of extraregional imports for intraregional imports, elimination of tariffs on products of the Andean intraregional market, and relative increase of the common external tariff of the Andean subregion for Ecuador**

In this simulation the reactivation effect corresponding to the elimination of tariffs in the Andean subregion and the relative increase of the external common tariff of the subregion predominate. The first variable has a reactivating effect, but there is a deterioration of the balance of payments. Thanks to the last variable, exports rise, mainly those destined for the Andean Group. This occurs because Ecuadorean products, together with those from the other Andean Pact countries as well as the rest of the Andean products, are more competitive in the Andean market due to their lower price in relation to products from the rest of the world (after including the Andean tariff). This results in an increase in the rate of production and investment, which reinforces the reactivation effect. Production in the agro-export, production, and consumption industries show faster growth. As was established in the first section of this paper, industries related to the production of basic consumer goods may have an initial advantage in their participation in the Andean group.

The elimination of tariffs on Andean products reduces prices. Both effects, the increase in production and the reduction in prices, lead to an income increase across all social groups. The largest increase is observed in the low-income rural sector and, secondarily, in the high-income rural sector. There is an improvement in capital and labor income in the informal sector due to the importance of this sector in the production of food, a major component of the basic consumer sector. An income increase allows consumption to rise: mainly in the case of domestic consumption, secondarily in the case of the Andean subregion, and finally in the extraregional market. This effect is reinforced by a positive feedback loop, because a reduction in tariffs triggers the exports of those sectors related to the basic consumer sector, which predominantly raises the income of the low-income rural sector. This sector mainly consumes domestically produced basic consumer goods as the simulation shows. Hence, production is stimulated further.

Although an increase in tariffs has been simulated, fiscal income rises due to more intensive economic activity which augments imports and other sources of tax collection.

Similarly to the increase mentioned regarding Andean-bound exports in the external sector, imports from Andean countries also increase. However, imports from the rest of the world are reduced because they are substituted for by those from the Andean group which become more competitive. This is a change introduced exogenously due to the implementation of the common external tariff. Finally, there is a slight improvement in the balance of payments, because the effect of a favorable tariff from the Andean group for Ecuador is stronger than the impact of a tariff reduction on the goods that come from the Andean group. In this respect even though it is not possible to evaluate the impact in the whole Andean area, in relation to Ecuador the final effect is an increase of trade as has been suggested by Reynolds, Thoumi, and Wettmann (1993).

This scenario allows an internal reactivation in conjunction with an improvement of the external accounts. This is possible as long as Ecuador receives special tariff treatment in the Andean subregion, such as lower tariffs for selected products, which will allow rising exports. The likelihood that this special consideration will be maintained diminishes continuously. Moreover, as has happened in previous stages of the Andean Pact, special treatment for the least developed countries has existed, but in practice it has had minimal impact because the other countries have not respected it. Under these circumstances, it is necessary to consider other ways to dynamize the external sector of Ecuador under the Andean Pact, such as industrial transformation or technological change (next simulation), as well as adequate investment in human resources, to prepare the Ecuadorean institutions for subregional and international competition.

### **2.1.2 Substitution of extraregional imports for intraregional imports, elimination of tariffs for the products of the Andean intraregional market, and technological change that would decrease imported inputs.**

The results of this scenario are similar to those of the previous exercise. In this case, the possibility of a technological change that facilitates the substitution of imported inputs by those of domestic origin has a very important dynamic effect on the economy and allows a similar equilibrium in the external sector to that presented in the previous simulation where Ecuador receives preferential tariff treatment in the Andean subregion. This could happen because the reduction of imported input requirements incentivates the use of domestic resources, which stimulates the economy without putting a greater pressure on the balance of payments.

### 3. Final Comments

Reynolds (1992) and Dixit and Norman (1980) studied the possibility that countries that integrate their economies and equalize prices reach an 'efficient' solution because there is no trade diversion. The above simulations cannot evaluate the impact of the opening of the economy for all the countries of the subregion; however, it shows that the Ecuadorean economy can overcome the cost in terms of higher wages or imports with an improvement in exports and production to the Andean group.

From this perspective on the Andean subregion, it is also important to consider infrastructural changes (i.e., communications, transports, etc.) and institutional changes that facilitate the process of integration. Part of this latter effort must concentrate on the support of the capital market, the homogenization of legal systems and technical standards, the protection of intellectual property rights, the modernization of organizations through the training of human resources, support for research and development initiatives, and interinstitutional coordination (i.e., customs offices, industrial and trade promotion and financial organizations) to promote and liberalize trade at a subregional level.

A central factor in terms of institutional coordination at a subregional level is the harmonization of macroeconomic and social policies. In this regard, political support and promotion of forums for discussion and communication between technicians and policymakers are essential. Hence, the adequate coordination of policies in economic integration agreements can be seen as a positive-sum game. As the simulations have shown, there is a potential benefit for Ecuador from its participation in the Andean Pact. Although there are some costs of integration, these can be assimilated as long as Ecuador receives preferential tariff conditions or develops a process of technological transformation. If the other countries see the importance of the participation of Ecuador they must reach an agreement through the coordination of policies that are mutually beneficial. In general, it can be said that the Andean Pact must review the possibility of developing a special fund, with the support of international organizations, for the countries or sectors most affected by the integration process. In this way, it is possible for integration to have positive effects in terms of the improvement of production and trade, under equity conditions, and achieve the results of a positive-sum game as mentioned above. Moreover, Andean integration may be seen as an intermediate stage that prepares the region to open up to the rest of the world, as the literature on open regionalism proposes (see Reynolds 1992 and Reynolds, Thoumi, and Wettmann 1993).

Important benefits, for certain products, may be realized due to temporary advantages in terms of costs or natural resources. An example of this is Ecuadorean

basic consumer goods. These temporary advantages may serve as 'buffers' in the initial stage of tariff reform. However, more important is the development of new technologies and strategies that strengthen the competitive advantage (i.e., product differentiation) of each country and subregion and the development of cooperative relations among the Andean countries. Such development also encourages innovative rent-seeking activities. In this way, a potential weakness of the Andean Pact resulting from external or internal crisis is avoided. From this perspective, foreign investment can play a very important role. However, it is necessary to create adequate conditions such as a healthy market based on clear 'rules of the game' at a political and economic level that assures investors of stability and an adequate return in the long run. Investment among different countries of the subregion has begun to have results that can be seen, for example, in the financial sector or in the flower industries of Colombia and Ecuador.

A final aspect that must be considered in terms of the future of the Andean group is the regional affiliation with an economic bloc. It would also appear that even closer ties with North America can be achieved. The recent signing of the North American Free Trade Agreement (NAFTA) signals the real possibility of linking North America with the Andean countries through the Group of Three. The future integration of the Pacific treaties seems to be an important linkage in this process of free trade schemes that will give the Andean Pact access to wider markets in its process of opening to the world market.

#### **4. Conclusions**

1. The integration of Ecuador into the Andean group is part of the opening of its economy to the rest of the world. This also implies an important change in the development of the Ecuadorean economy because, on the one hand, industry has access to a larger market but, on the other hand, it must compete with the industries of neighbor countries in the initial stage and, later, with those of the rest of the world, changing from protected rent-seeking to innovative rent-seeking activities.

According to the tariff reform analysis, sectors with higher levels of effective protection show very limited participation in the Andean group. On the contrary, the basic consumer sector has the lowest protection among Ecuadorean industries and the highest participation in the rest of the Andean group. Moreover, this sector has important advantages because it is labor-intensive with low labor cost. The low level of protection has allowed this group to compete in an almost open context. Also, it is important to mention that this sector is characterized by low utilization of imported inputs, the predominance of small producers, and extensive linkages between production and

employment. Hence, the development of this sector facilitates access to the market by several social groups. It is likely that in the long run the composition of Ecuadorean exports may change, including the possibility of a higher level of industrial goods production. However, in the first stage, the production of basic consumer goods facilitates integration into the Andean subregional market.

2. Simulations show that Andean integration will probably lead to economic growth due to the increase in demand that the new market implies for Ecuador. The balance of payments outcome depends on exchange rate movements and the capacity of the country to answer to the increase in demand through a process of technological change and industrial conversion which results from the incentives produced by a larger market. It is evident that macroeconomic and social policy harmonization at the intraregional level increases national production, because it eliminates excessive protection of some sectors and stimulates trade, production, and employment growth. The results of a positive-sum game are thereby obtained. These benefits will compensate for the potential costs of the integration process to Ecuador, such as inflation or a deterioration in the balance of payments.

3. The participation of Ecuador in the Andean intraregional market is a potential impetus for technological transformation, industrial conversion, and modernization of private and public institutions which should lead to a significant increase in the productivity, quality, and efficiency of the Ecuadorean productive sector. It will also lead to a change in emphasis from protected rent-seeking to innovative rent-seeking activities. In the public sector, structural reforms must allow change from a controlling government, according to the interests of power groups, to government as a facilitator of development-supporting activities related to physical investment, technological development and human capital investment, in coordination with the private sector. This process will lead to an internalization of the benefits and costs that the private sector produces or receives from the government, the civil society, and the environment. Also it will generate a transformation in terms of technology, human resources, and managerial and organizational systems. This organizational transformation implies a review of objectives and patterns of behaviors by the institutions that face these new challenges. In this way, integration stretches beyond a strict commercial perspective and is understood, in a very wide dimension, to include different areas of human activity. This process requires a certain maturation period. It is likely that the high demands made by the process will push organizations to develop new entrepreneurial strategies such as product differentiation, cost leadership, or market focus (see Porter 1990) in order to be able to respond to the challenges of Andean integration and the opening of the economy.

**Appendix 1**  
**Model Description**

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<sup>4</sup> Unless indicated otherwise, the variable is expressed in constant prices.

## **Income and Employment**

**Consumption**

**Public Consumption**

**Private Investment**



## Government Investment

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<sup>5</sup> The dynamic version of the model has not been developed in this research.

## **External Sector**

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<sup>6</sup> Relative to what the Andean countries apply to Ecuador.





**Variation in Net Foreign Assets (dAIN)**

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