Chile's Free Trade Agreements: How Big is the Deal?[1]

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Abstract

Chile put into place broad free trade agreements (FTAs) with its two major trading partners: the EU (effective 2003) and the US (effective 2004). This paper quantifies their economic effects for the Chilean economy, stemming from the conventional trade components (lower tariffs and higher market access) and other aspects of the latter broad FTAs, including improved intellectual property rights, factor productivity gains, and their fiscal consequences (tax compensation, larger customs expenditure). The paper also considers that the country risk premium may decline and aggregate investment may rise in response to the institutional stability and policy credibility enhanced by the FTAs. Simulation results are reported for steady states and dynamic transition paths, based on a three-sector dynamic general equilibrium model for an open economy inhabited by infinitely-lived representative agents. The model is calibrated to the Chilean economy and the actual features of both trade agreements. Due to Chile's high initial trade openness, the reported effects of FTAs on resource allocations, relative prices, expenditure composition, welfare, output, and agregate consumption do not exceed 1% in any given period. On impact, the largest gains come from a lower risk premium that leads to a temporary consumption and investment boom, which is reverted in the long run as a result of larger net foreign liabilities. In steady state, the gains from improved factor productivity dominate all other effects.

Key Words: Chile, Free Trade Agreements.
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On Chile's FTA with the U.S.:

"Regarding growth, the FTA will add zero"
Sebastian Edwards, interviewed in El Mercurio (2003).

"The FTA ... causes a strong increase in output (10.02%)"
Coeymans and Larraín (1994), pp 383.

1   Introduction

Since the early 1990s Chile has negotiated and implemented preferential trade agreements (PTAs) with several countries and regions. Among the latter, the most important are the recent free trade agreements (FTAs) with the European Union (effective since 2003) and the United States (effective since 2004). Chile's PTAs have complemented continued unilateral trade liberalization, reflected in a gradual lowering of its almost uniform ad-valorem tariff rate, from 11% in 1998 to 6% in 2003 and thereafter. Except for few remaining tariff and non-tariff barriers on selected agricultural goods, as a result of price bands, Chile's sector-specific barriers and non-tariff restrictions are virtually non-existent.[1]

Considering Chile's high degree of trade openness, the economic effects of Chile's PTAs with countries and regions are likely to be small in comparison to those observed in countries with higher barriers to trade. On the other hand, low general tariffs also reduce the likelihood that the welfare costs from trade diversion effects of PTAs more than offset the welfare benefits from trade creation and larger market access.

The FTAs implemented recently by Chile with the EU and particularly with the U.S. comprise several dimensions of international integration that go well beyond the traditional, narrow scope of trade liberalization and market access of goods. They refer to a broad set of laws, regulations, and administrative practices related to trade in services, capital flows, property rights, health and safety standards, environmental regulation, and regulatory and judicial transparency, among others. Therefore these broad FTAs also lead to a wide range of potential growth and welfare effects that go well beyond conventional trade creation and diversion effects. Moreover, it is possible that the legal and regulatory changes and new administrative practices required by broad FTAs, consistent with industrial-country policies and regulations, have a positive effect on institutional development and policy stability, hence contributing to stronger policy credibility and lower country risk premiums. This may raise the international demand for Chilean liabilities, contributing to larger capital inflows and lower interest rates, boosting investment and growth.

Several studies conducted over the past dozen years – before the negotiations were closed and the agreements came into effect – provide quantitative estimates of

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[1] As domestic production of luxury cars is nil, a luxury consumption tax on cars acts as a *de facto* tariff.

possible economic effects of Chile's FTAs with the U.S. and the EU.[2] Coeymans and Larraín (1994), Hinojosa-Ojeda et al (1997), and Brown et al (1998, 2001) estimate the effects of the FTA with the U.S. SIA Chile-EU (2002) assesses the impact of the FTA with the EU. Harrison et al (1997, 2001, 2003) estimate the separate and joint gains of Chile's agreements with NAFTA, the EU, and MERCOSUR.

The latter studies develop and use multi-sector computable general-equilibrium (CGE) models for Chile and/or for a world economy comprised by several regions and countries, including Chile. The models allow for rich sector disaggregation and hence provide estimates of potential production, expenditure, and trade effects at the sector level, as well as aggregate output and welfare consequences of Chile's FTAs. The models are static in the sense that production and expenditure decisions are not intertemporal and assets are not optimally accumulated over time. Hence, their results should be interpreted as long-run effects of Chile's FTAs. However, some of the latter studies model not only the net trade gains from FTAs but also consider indirect gains due to higher aggregate capital, in response to (an exogenously determined) lower country risk premium and a corresponding permanent decline in the cost of capital.

Regarding quantitative results, a common pattern is observed across the five afore-mentioned sets of studies. First, conventional welfare and output level effects due to the traditional trade channels (trade creation net of diversion, and considering improved market access) are relatively small. The long-term output gain of the FTA with the U.S. is estimated at a narrow range that extends from 0.26% (Hinojosa-Ojeda et al, 1997) to 1.23% (Harrison et al, 1997) of Chile's pre-FTA GDP. Harrison et al (2003) also estimate welfare effects of Chile's actual and hypothetical FTAs with its major trading partner regions. Their welfare estimates (as a fraction of Chile's GDP) of combined free trade with NAFTA, MERCOSUR, the EU, and the rest of South America ranges between 2.66% and 5.71%, evaluated at an initial current uniform tariff of 6%.[3]

Second, the studies that consider indirect gains reaped from larger capital investment in response to lower country risk (and hence lower capital cost and/or larger foreign investment) show a large dispersion in their reported results. Considering both direct trade effects and larger capital stock effects, the overall estimated net output level gain ranges from 0.5% of Chile's GDP for the FTA with the EU (SIA Chile-EU), to 5.15% of GDP for the FTA with the U.S. (Brown et al 1998), and to 10.02% of GDP, also for the agreement with the U.S. (Coeymans and Larraín 1994).

Considering the large dispersion of simulation results and views about the economic effects of Chile's FTAs – reflected by the above mentioned quotations by dis-

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[2]Cabezas (2003) provides a useful comparative summary of these studies.

[3]Harrison et al (2003) interestingly illustrate the well-known theoretical result that the sign of the net welfare and output effects of FTAs is ambiguous. This study shows that a FTA with MERCOSUR is welfare deteriorating for Chile at an initial uniform tariff of 11% (prevalent in the mid 1990s) but turns into a welfare-improving agreement at the current uniform tariff of 6%.

tinguished economists – the purpose of this paper is to provide a fresh look on this issue. We report new estimates for Chile's combined effects of its FTAs with the EU and the U.S., considering both their narrow trade aspects and several of their wider non-trade dimensions. In addition to the consequences of lower tariffs in Chile and in the trading partners, we consider the effects of improved property rights (crackdown on piracy of intellectual property), TFP gains from trade expansion and EU cooperation funding, VAT compensation for lower tariffs, larger customs administration expenditure, and lower country risk premiums.

We set up a three-sector dynamic general equilibrium model for a small open economy, inhabited by representative infinitely-lived agents that face an upward-sloping supply of foreign capital, reflecting an endogenous country risk premium. The model is calibrated to the main features of Chile's actual trade agreements with the EU and the U.S. and to the base year 2002. We include estimates of the likely consequences of the agreements on selected variables.

The paper is organized as follows. Section 2 briefly describes Chile's FTAs with the EU and the U.S. Section 3 presents the dynamic general equilibrium model and its calibration for Chile. Model simulation results for the FTAs are reported subsequently, first for steady-state effects and then for the dynamic effects, on the composition of output and consumption, trade, the real exchange rate, aggregate consumption, output, and welfare. Section 5 concludes.

2 Brief Description of Chile's PTAs

Chile has pursued an active policy of negotiating PTAs with several countries and regions since 1991, complemented by unilateral trade liberalization. PTAs are in place within ALADI and with MERCOSUR (comprised by its four full members Argentina, Brazil, Uruguay, and Paraguay). Chile has implemented bilateral PTAs with Peru, Colombia, Venezuela, Ecuador, and Bolivia. Bilateral FTAs are in place with Canada, Mexico, and Central America (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua). After long negotiations, Chile signed FTAs with its two major trading partners: the EU (in effect since February 2003) and the U.S. (in effect since January 2004).

Further FTAs signed with EFTA and Korea will be implemented soon. Future trade negotiations may lead to trade agreements with additional countries, including New Zealand, Singapore, India, China, and Japan. Of Chile's total trade in 2003, 55% took place with countries that have trade agreements that either are already in place or will be implemented shortly.

Chile's broad FTAs with the EU and, particularly, with the U.S., extend well beyond the elimination of trade barriers. They encompass adoption of standards and norms in trade of goods and services (including tariff and non-tariff barriers, export subsidies, rules of origin, and customs procedures), health and security standards, trade restrictions, government procurement, foreign investment and capital flows,

business services and visits, financial services, telecommunications, electronic trade, market competition, intellectual property rights, labor market regulation, environmental protection, transparency in legal and judicial changes, and conflict resolution.[4]

FTAs are the outcome of lengthy individual negotiations with many country-specific features; hence important differences are observed among them. One main difference is that the agreement with the EU includes a "positive list" that establishes quotas for each product that can be imported at a zero tariff. The agreement with the U.S. establishes eventual attainment of free trade; therefore it includes a list of products for which tariffs are gradually reduced to zero.

Chile's agreement with the EU involves three components: trade agreement, economic cooperation, and political association. The first component relates to trade of goods and services (with a separate treatment of fishing and wine). Tariffs are lowered within the limits of the quota imposed for different products. Temporary protection increases with compensations that are allowed in case the domestic sector is "damaged". WTO guidelines must be followed when anti-dumping restrictions are imposed. The principle of most favored nation is applied to financial services, but capital flows restrictions are allowed. Economic cooperation funding by the EU (technical assistance, technology transfers, joint research projects, and promotion of investment) is expected to increase.

Chile's FTA with the US does not include economic cooperation and political association but is much more comprehensive regarding economic policies and institutions than the agreement in place with the EU. Free trade with the U.S. is attained over a transition period that extends from zero to 12 years, as reflected by product-specific time schedules of trade liberalization. For Chile it imposes abolition of luxury taxes on cars (in 5 years) and price bands on agricultural products (in 12 years). For the U.S. the agreement imposes gradual elimination of subsidies on agricultural exports and of quantitative restrictions on Chilean exports. Safeguards can only be applied during the 12-year transition period for agricultural products, but for 10 years in the case of bilateral safeguards. Regarding anti-dumping policies, both parties agree to follow WTO rules. In terms of investment, financial and non-financial services, and telecommunications regulation, the FTA agreement confirms principles that are already in place. It also confirms multilateral agreements concerning intellectual property rights protection that had already been signed by Chile. The FTA accelerates implementation of regulations to protect intellectual property rights and their enforcement. Chilecompromise to honor its actual environmental and labor-market regulations. On the other hand, the U.S. offers cooperation for the reduction of environmental damage in agriculture, mining, and forestry, as well as advice on the use of clean fuels, and environmental supervision and enforcement.

In sum, both broad FTAs adopted by Chile in the recent past include provisions with potentially important effects on relative prices, resource allocations, consump-

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[4]The appendix lists the general areas and specific contents of Chile's FTAs with the EU and the U.S.

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tion, investment, trade, output, and welfare, that stretch well beyond the consequences of a narrow trade liberalization. We focus now on a suitable model to assess the wider consequences of broad FTAs.

3 Modelling Trade Effects

This section presents the dynamic stochastic general equilibrium (DSGE) model that is used to quantify the effects of FTAs on different variables. FTAs are modelled here as changes in the tax and tariff structure of the economy and the accompanying changes in fiscal policy.

3.1 The Model

The DSGE model considers three sectors (exportable, importable, and non tradables).

3.1.1 The Households

The economy is inhabited by a representative agent who maximizes the expected value of lifetime utility as given by

$$\mathcal{E}_0 \sum_{t=0}^{\infty} \beta^t u\left(c_{m,t}, c_{n,t}\right), \tag{1}$$

where $c_{m,t}$ and $c_{n,t}$ represent period t consumption of an importable (m) and a non tradable good (n). The other good produced in this economy is not consumed at home; we denote this good as the exportable good (x).

The maximization of (1) is done subject to the budget constraint[5]

$$\left(1 + \tau_m\right)\left(1 + \tau_{c_m}\right)c_m + \left(1 + \tau_{c_n}\right)c_n p + \left(1 + \tau_m\right)\left(1 + \tau_{c_m}\right)i + \left(1 + \widetilde{r}\right)b \leq \tag{2}$$
$$\left(1 - \tau_k\right)\left(1 + \tau_m\right)\left(1 + \tau_{c_m}\right)rk + b_{+1} + F + \pi_x + \pi_m + \pi_n.$$

where τ_m is an import tariff, τ_{c_n} and τ_{c_m} are taxes on the consumption of non tradables and importables, p is the relative price of the non tradable good in terms of the importable good (used as numeraire), b is the amount of foreign debt that the private agent contracted from abroad on the previous period, $\widetilde{r}$ is the (net) interest rate paid on that debt, τ_k is a tax on capital income levied by the government, r is the rental rate of capital stock that is given to the firms of the three sectors, π_x, π_m, and π_n are the profits of the exportable, importable and non tradable sectors, F is a lump sum transfer from the government to households, and i is investment, which satisfies the standard law of motion for capital:

$$k_{+1} = \left(1 - \delta\right)k + i, \tag{3}$$

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[5]For brevity, time t subscripts are eliminated.

where δ is the depreciation rate of the capital stock and k is the capital stock. As k is expressed in units of the importable good, it is also subject to the same taxes of the importable good destined to consumption (tariffs and the value added tax).

The problem of the representative consumer can be summarized by the value function that satisfies:

$$V\left(s_{h}\right)=\max_{c_{m},c_{h},b_{+1},k_{+1}}\left\{u\left(c_{m},c_{n}\right)+\beta\mathcal{E}\left[V\left(s_{h,+1}\right)\right]\right\},\tag{4}$$

subject to (2), (3), and the perceived laws of motion of the states s_h.[6]

The first-order optimality conditions are:

$$
\begin{aligned}
p^{-1} &= \frac{u'_{c_m}}{u'_{c_n}}\frac{\left(1+\tau_{c_n}\right)}{\left(1+\tau_m\right)\left(1+\tau_{c_m}\right)} \\
1 &= \beta\mathcal{E}\left[\frac{u'_{c_m,+1}}{u'_{c_m}}\frac{\left(1+\tau_m\right)\left(1+\tau_{c_m}\right)}{\left(1+\tau_{m,+1}\right)\left(1+\tau_{c_m,+1}\right)}\left(1+\widetilde{r}_{+1}\right)\right] \\
1 &= \beta\mathcal{E}\left[\frac{u'_{c_m,+1}}{u'_{c_m}}\left[\left(1-\tau_{k,+1}\right)r_{+1}+1-\delta\right]\right].
\end{aligned}\tag{5}
$$

The first intratemporal optimality condition states that the relative price between importables and non-tradables must equate the ratio of marginal utilities between both goods. The next two (intertemporal) conditions are the standard Euler equations that state that the marginal rate of substitution between consumption today and tomorrow, must equate their relative price, evaluated at the cost of foreign borrowing and the rate of return of capital investment, respectively.

3.1.2 The Firms

Three sectors with an equal number of representative firms produce the exportable, importable, and non tradable goods. All sectors require capital as the only explicit production factor.[7] Next we state the problems faced by the firms.

The Importable Good. The profits of the representative firm are determined by

$$\pi_m = \left(1+\tau_m\right)f\left(z_m,k_m\right)-\left(1+\tau_m\right)\left(1+\tau_{c_m}\right)rk_m,\tag{6}$$

where z_m is a productive shock and k_m is the amount of capital demanded.

The problem of the representative firm can then be summarized by the value function that satisfies:

$$V\left(s_{m}\right)=\max_{k_{m}}\left\{\pi_{m}+\beta\mathcal{E}\left[V\left(s_{m,+1}\right)\right]\right\},\tag{7}$$

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[6] We define $s_h = \left(\tau_m, \tau_{c_m}, \tau_{c_n}, p, \widetilde{r}, \tau_k, r, k, b, F, \pi_x, \pi_m, \pi_h\right)$.
[7] This setup is consistent with a model in which labor is sector specific.

subject to the perceived laws of motion of the states s_m.[8]

The first-order optimality conditions are

$$f'_{k_m}(z_m, k_m) = (1 + \tau_{c_m}) r, \tag{8}$$

which states that the marginal cost of new capital must equate its marginal value.

The output of this sector can either be consumed or used as capital in any of the three sector.

The Exportable Good. The profits of firms producing the exportable good are determined by

$$\pi_x = (1 - \tau_x) qf(z_x, k_x) - (1 + \tau_m)(1 + \tau_{c_m}) rk_x, \tag{9}$$

where τ_x is an export tax levied by the rest of the world, q is the relative price of exportables in terms of importables, z_x is a productive shock, and k_x is the amount of (importable) capital demanded by the exportable sector.

The problem of the representative firm can then be summarized by the value function that satisfies:

$$V(s_x) = \max_{k_x} \{\pi_x + \beta \mathcal{E}[V(s_{x,+1})]\}, \tag{10}$$

subject to the perceived laws of motion of the states s_x.[9]

The first-order optimality condition is

$$(1 - \tau_x) qf'_{k_x}(z_x, k_x) = (1 + \tau_m)(1 + \tau_{c_m}) r, \tag{11}$$

This equation presents the optimality condition equivalent to (14).

The Non Tradable Good. The profits of the representative firm are determined by

$$\pi_n = pf(z_n, k_n) - (1 + \tau_m)(1 + \tau_{c_m}) rk_n, \tag{12}$$

where z_n is a productive shock and k_n is the amount of (importable) capital demanded by the sector.

The problem of the representative firm can then be summarized by the value function that satisfies:

$$V(s_n) = \max_{k_n} \{\pi_n + \beta \mathcal{E}[V(s_{n,+1})]\}, \tag{13}$$

subject to the perceived laws of motion of the states s_n.[10]

The first-order optimality conditions are

$$pf'_{k_n}(z_n, k_n) = (1 + \tau_m)(1 + \tau_{c_m}) r, \tag{14}$$

which state the optimality conditions of the sector that have to same interpretation of (11).

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[8] We define $s_m = (\tau_m, \tau_{c_m}, r, z_m)$.

[9] We define $s_x = (\tau_x, \tau_m, \tau_{c_m}, z_x, q)$.

[10] We define $s_n = (\tau_m, \tau_{c_m}, p, z_n)$.

3.1.3 The Government

In this model, it is assumed that the government has no explicit objective function to maximize but satisfies the following constraint:

$$
\begin{aligned}
g + F \ = \ & \tau_m \left(c_m + i - f \left(z_m, k_m \right) \right) + \tau_{c_m} \left(1 + \tau_m \right) \left(c_m + i \right) \\
& + \tau_{c_n} c_n p + \left(1 + \tau_m \right) \left(1 + \tau_{c_m} \right) \tau_k r k,
\end{aligned}
\tag{15}
$$

It is further assumed that a fraction $\varkappa_t$ of the total government expenditures are used to consume the non tradable good produced in the economy.

3.1.4 Market-Clearing Conditions

Define the production of the exportable, importable, and non tradable goods by:

$$
\begin{aligned}
y_x \ &= \ f \left(z_x, k_x \right) \\
y_m \ &= \ f \left(z_m, k_m \right) \\
y_n \ &= \ f \left(z_n, k_n \right).
\end{aligned}
\tag{16}
$$

The market clearing conditions are:

$$
\begin{aligned}
p y_n \ &= \ p c_n + \varkappa g, \\
CA \ &\equiv \ - \left(b_{+1} - b \right) = \left(1 - \tau_x \right) q y_x + y_m - c_m - \left(1 - \varkappa \right) g - k_{+1} + \left(1 - \delta \right) k - \tilde{r} b,
\end{aligned}
\tag{17}
$$

where the first equation describes the equilibrium in the non tradable good market and the second the equilibrium in the importable good market, which shows that the current account (CA) balance must be compensated by the capital account balance.

To avoid having to model the world credit market, and following Bhandari et al (1990), Turnovsky (1997), and Osang and Turnovsky (2000), we assume that the country faces an upward-sloping supply schedule for debt:

$$
\tilde{r} = \tilde{r} \left(b \right), \quad \tilde{r}' > 0.
\tag{18}
$$

3.1.5 Competitive Equilibrium

A competitive equilibrium is a set of allocation rules $c_m = C_m \left(s \right)$, $c_n = C_n \left(s \right)$, $k_{+1} = K \left(s \right)$, and $b_{+1} = B \left(s \right)$, $k_{x,+1} = K_x \left(s \right)$, $k_{n,+1} = K_n \left(s \right)$, and $k_{m,+1} = K_m \left(s \right)$, a set of pricing functions $r = R \left(s \right)$, and $p = P \left(s \right)$, and the laws of motion of the exogenous state variables $s_{+1} = S \left(s \right)$, such that

- Households solve the problem (4), taking as given s and the form of the functions $R \left(s \right)$, $P \left(s \right)$, and $S \left(s \right)$, with the equilibrium solution to this problem satisfying $c_m = C_m \left(s \right)$, $c_n = C_n \left(s \right)$, $k_{+1} = K \left(s \right)$, and $b_{+1} = B \left(s \right)$.

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- Firms of the exportable, importable, and non tradable sectors solve the problems (7), (10), (13), taking as given s and the form of the functions $R(s)$, $P(s)$, and $S(s)$, with the equilibrium solutions to these problems satisfying $k_{x,+1} = K_x(s)$, $k_{n,+1} = K_n(s)$, and $k_{m,+1} = K_m(s)$.

- The economy-wide resource constraints (17) hold each period, and the factor market clears:

$$K_x(s) + K_n(s) + K_m(s) = K(s).$$

3.2 Functional Forms and Calibration

With the generic model specified, next we present the functional forms and the criteria used to choose specific values of parameters.

3.2.1 Functional Forms

Next, we group functional forms in terms of Preferences, Production Technology, Government, and Exogenous Prices.

Preferences We consider the following functional form:

$$u(c_{m,t}, c_{n,t}) = \theta_m \ln c_{m,t} + \theta_n \ln c_{n,t},$$

with $\theta_m, \theta_n > 0$ and $\theta_m + \theta_n = 1$.

Production Technology The production functions are assumed to be Cobb-Douglas:

$$f(z_{i,t}, k_{i,t}) = e^{z_{i,t}} k_{i,t}^{\alpha_i},$$

where α_i is the compensation for capital as a share of output of sector i for $i = x, m, n$.

The productivity shocks (z_i) are assumed to follow AR(1) processes:

$$z_{i,t+1} = (1 - \rho_i) \overline{z}_{i,t+1} + \rho_i z_{i,t} + v_{i,t+1}, \quad v_{i,t+1} \backsim \mathcal{N}\left(0, \sigma_i^2\right),$$

where we allow for changes on the level of the productivity shocks $(\overline{z}_{i,t+1})$ as a consequence of the FTAs.

Fiscal Variables Here we assume that the government is not optimizing any explicit objective function but instead that its expenditures follow the rule:

$$\ln g_{t+1} = (1 - \rho_g) \overline{g}_{t+1} + \rho_g \ln g_t + v_{g,t+1}, \quad v_{g,t+1} \backsim \mathcal{N}\left(0, \sigma_g^2\right),$$

where we allow for changes on the level of government expenditures $(\overline{g}_{t+1})$ as a consequence of the FTAs.

The other variables that conform the fiscal variables (taxes and tariffs) are considered to follow AR(1) processes in order to allow for a slow adjustment to their new values after the FTAs.

Exogenous Prices   Next we describe the functional forms chosen for the laws of motion of two external variables: terms of trade (q) and the borrowing rate $(\widetilde{r})$ discussed in (18).

Terms of trade are assumed to follow the following law of motion:

$$\ln q_{t+1} = \left(1 - \rho_q\right)\overline{q} + \rho_q \ln q_t + v_{q,t+1}, \quad v_{q,t+1} \backsim \mathcal{N}\left(0, \sigma_q^2\right),$$

where, as there is no obvious reason for considering otherwise, the unconditional expectation of the (log of) terms of trade $(\overline{q})$ is not affected by FTAs.

Finally, as discussed above, we assume that the country faces an upward-sloping supply schedule for debt and model it as:

$$\widetilde{r}_{t+1} = \left(1 - \rho_r\right)\overline{r}_{t+1} + \left(1 - \rho_r\right)\varphi\frac{b_t}{y_t} + \rho_r\widetilde{r}_t + v_{r,t+1}, \tag{19}$$

where $\varphi > 0$ and $\overline{r}_{t+1}$ is set contingent on FTAs.

3.2.2   Calibration

Once the laws of motion are specified, we differentiate deep parameters from those that are considered to be affected by FTAs. Table 1 presents the values of the parameters that are assumed to be unchanged by FTAs and Table 2 the values of the parameters before and after FTAs.

Preference			
$\beta = 0.97$	$\theta_m = 0.243$	$\theta_n = 0.757$	
Production Function			
$\alpha_x = 0.45$	$\alpha_m = 0.5$	$\alpha_n = 0.3$	$\delta = 0.06$
Technology Shocks			
$\rho_x = 0.9$	$\sigma_x = 0.01$		
$\rho_m = 0.9$	$\sigma_m = 0.01$		
$\rho_n = 0.9$	$\sigma_n = 0.01$		
Fiscal Variables			
$\varkappa = 0.92$	$\rho_g = 0.8$	$\sigma_g = 0.03$	
Exogenous Prices			
$\overline{q} = 0.25$	$\rho_q = 0.86$	$\sigma_q = 0.01$	
$\varphi = 0.06$	$\rho_r = 0.9$	$\sigma_{\widetilde{r}} = 0.001$	

Table 1: Deep Parameters

The parameters θ_m and θ_n are chosen so as to reproduce the share of consumption on importables and non tradables over total consumption in steady state.[11]   The

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[11]The consumption of importables was estimated as the difference between the GDP of tradables minus total exports plus imports of consumption goods.

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subjective discount factor (β) was set to make it consistent with a 3% annual real interest rate.

The ouput-factor elasticities in each sector (α) were set to match the sectorial capital shares taken from national accounts (with a downward adjustment, as national accounts figures include the retribution to independent workers). The depreciation rate was set to 6%, while the constants of the production functions, government expenditures, and terms of trade were set to match the participation of each sector in total GDP. The autorregresive coefficients and volatilities of the shocks were set to match the autocorrelation of output and to adjust the speed of convergence to the steady state (more below).

According to the features of the FTAs discussed on section 2, we proxy the effects of FTAs by:

- **Reducing import tariffs**: The new tariff was computed by substracting from the actual average tariff the share of imports from US and EU times the tariffs for the imports from those economies.

- **Increasing the value added tax** (to compensate the import tariff reduction): The new value added tax was obtained from the model by computing the increases in τ_{c_m} and τ_{c_n} (value added tax) necessary to compensate for the reduction on import tariffs. The value thus obtained was of an increase of 0.75%.[12]

- **Decreasing the export tax** (to capture the effect of increased market access or reduced import tariffs on Chilean exports): The average export tax before the FTA was calculated using the actual tariffs faced by Chilean exports in the U.S. and EU, and assuming a 10% tariff in the rest of the world (with the exception of Mexico and Canada which are assumed to be zero). The export tax after the FTA corresponds to 10% times the share of Chilean exports to the rest of the world (that is, excluding the countries with which Chile has FTA already in place).

- **Increasing government expenditures** (to capture the effect of higher cost of administration by the customs office): In contrast to unilateral trade liberalization, FTAs impose additional roles for the domestic customs administrator. Among them are the implementation of the schedules for gradual tariff reductions on different goods and services, certification and verification of rules of origin, enforcement of piracy control to protect intellectual property, and the enforcement of health and safety requirements. A recent projection by the National Customs Service (Dietert 2004) estimates that a cumulative increase of 10% (distributed in 4 years) of the Service's annual budget is required to expand

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[12] The government increased the value added tax by 1%, from 18% to 19%. Part of this increase was said to be required to finance additional social programs.

its duties derived from complying with Chile's FTAs. This implies a cumulative rise of the budget (at $22,720.9 m. or 0.0456% of 2003 GDP) by 0.0045% of GDP, attaining a share of 0.05% of GDP after four years. Additionally, the Agriculture and Livestock Service (SAG) has asked for a 25% increase in its overall budget (El Mercurio, 2004). This is the amount that is said that this office needs to conduct sanitary and phytosanitary checks of the increased exports of the sector. The annual budget of SAG for the year 2003 was of $40,521.6 m. The increased expenditure would then be equivalent to 0.10% of GDP. Therefore, as a consequence of the rise in customs administration expenditure and monitoring measures, total government expenditure rises by 0.15%.

- **Increasing the consumption tax on importables** (to capture the effects of increased property rights protection): One feature of the FTA with the U.S., is the protection of intellectual property rights of copyrights and patents. According to US authorities neither Chilean copyright law nor patent law meet international standards. Thus Chile committed to take steps conducive to eliminate piracy in software, music, and motion pictures. The United States International Trade Commission (USITC) estimates the cost of Chilean piracy to the U.S. industry at about US$80 m.[13] This figure corresponds to 0.7% of the consumption of importables. Changes in patent protection by Chile have an uncertain effect on the price of pharmaceuticals. If the law applies to new products, no changes in the price of existing medicines should be expected. If the law applies to existing products, their prices should rise. Here we only consider an increase of 0.7% of the value added tax on importables.

- **Increasing total factor productivity in all sectors** (to capture the effects of higher economic cooperation on local R&D, and of higher trade integration due to larger exposure of the local economy to technological advances elsewhere): FTAs can have a direct impact on TFP through two channels. First, there may be R&D spillover due to more imports from trade partners (Coe and Helpman, 1995; Keller, 1998). This channel considers that more trade rises the number of intermediate inputs used and, through this, the total stock of knowledge generated by domestic and foreign R&D activities. In that framework, total factor productivity is a function of both domestic R&D and foreign R&D times the import share of GDP, as a measure of integration with the rest of the world. This latter effect could be as large as the former, depending on the degree of openness. To calibrate the model we assume that economic cooperation with EU will increase the domestic resources allocated to R&D in 0.75%,[14] and the import share of total GDP will increase by 1.5%;[15] thus increasing TFP. Using

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[13]See USITC (The United States International Trade Commission, 2003).

[14]Equivalent to the EU providing 4 millions dollars per year for research project (0.75% of the domestic R&D activities).

[15]This number is aproximately what comes as output of the theoretical model.

Coe and Helpman's estimates, the combined effect on TFP amounts to a 0.5% increase in the TFP of the three sectors in our model.

- **Decreasing country risk**: Regarding the interest rate at which Chileans can borrow ($\widetilde{r}$ in our model), in steady state, it must be equal to the reciprocal of the subjective discount factor 3.1%=1/0.97). The parameters of (19) were calibrated as follows: The parameter φ was fixed at 0.06 using the results of Albagli and Schmidt-Hebbel (2004) who estimate a model for Chilean country risk as a function of standard risk determinants and a dummy that takes a value of 1 at the time the FTA were announced. The impact of the FTA could not be measured precisely. The estimated reduction on the country risk due to the FTA was found to vary from 0 to 78 basis points. Here we assume that the FTA contributes to a 40 basis point decrease in the international rate that is relevant for Chile. The value of $\overline{r}$ previous to the FTA was calculated taking $\widetilde{r}$ equal to 3.1% and a debt to GDP ratio equal to 0.3 (which is slightly higher than the the value of the ratio for the year 2002, 0.371). Thus $\overline{r}$ is equal to 1.293% before the FTA and 0.893% after it.

Before	After
Domestic taxes	
$\tau_m = 0.039$	$\tau_m = 0.02$
$\tau_{c_m} = \tau_{c_n} = 0.18$	$\tau_{c_m} = \tau_{c_n} = 0.1875$
Market access	
$\tau_x = 0.057$	$\tau_x = 0.051$
Property rights protection	
$\Delta\tau_{c_m} = 0$	$\Delta\tau_{c_m} = 0.007$
Higher administration costs	
$\overline{g} = 1.75$	$\overline{g} = 1.773$
Increases in TFP	
$\overline{z}_x = 4.88$	$\overline{z}_x = 4.904$
$\overline{z}_m = 0.67$	$\overline{z}_m = 0.673$
$\overline{z}_n = 2.75$	$\overline{z}_n = 2.764$
Country risk	
$\overline{r} = 0.01293$	$\overline{r} = 0.00893$

Table 2: Values of the Parameters before and after FTAs

4   Results

To quantify the potential effects of the FTAs on the economy, we distinguish the long run effects (comparing steady states with and without FTAs) from the short

run dynamics. The first are obtained by computing the steady states of the models with and without FTAs. The short run dynamic effects require that we impose initial conditions, solve the model (find the policy functions of the control variables and the laws of motion of the endogenous state variables), and characterize the transition to the new steady state.

According to our specification, the policy functions of the control variables cannot be obtained analytically and we have to resort to numerical methods. We use a first-order approximation to the policy function using perturbation methods. This method has been proven superior to traditional linear-quadratic approximations (Schmitt-Grohé and Uribe, 2004).

Next we present the results of both exercises.

4.1   Long Run Effects

Table 3 presents the results of 7 exercises: tariff reduction in Chile $(\Delta\tau_m)$, tariff reduction in US and the EU $(\Delta\tau_x)$, change in the VAT to compensate the tariff reduction $(\Delta\tau_{c_m}$ and $\Delta\tau_{c_n})$, reduction in piracy $(\Delta\tau_{c_m})$, increases in the administrative costs of the customs service (Δg), increases in TFP (Δz), and the combined effect of these changes. The table shows the percentage change in the variable of interest: consumption of each good (c_m, c_n), physical production in each sector (Y_x, Y_m, Y_n), the reciprocal of the real exchange rate (p), government lump sum transfers as a fraction of GDP $(F$, as a proxy for additional pressures on the government budget), real imports (M), total real consumption (C), total real output (Y), and welfare compensation (TU).[16]

The first column shows the impact of a reduction on the average tariff (from 3.9% to 2%). *Ceteris paribus*, this reduction increases the consumption of importables and, due to an income effect, the consumption of non-tradables. The reduction in the price of the capital good (importable) rises the value of the marginal productivity in the exportable and non-tradable sectors, while keeping it constant in the importable sector (see equations 8, 11 and 14). Therefore Y_x and Y_n increase and Y_m remains constant. Total real output (at constant prices) increases by 0.53% and welfare rises by 0.25%. Consistent with the tariff reduction, the real exchange rate depreciates. Finally, as the government collects less distortionary taxes, it has to lower F.

The second column (proxying market access) shows the reduction of the export tax from 5.7% to 5.1%. It has the same effect of a positive (and permanent) productivity shock on the sector (or equivalently a positive shock on terms of trade). It raises income and therefore consumption, imports, tax collection, and welfare. It also

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[16]To abstract from changes on relative prices, total consumption (C) and total output (Y) are measured at the initial relative prices (before FTA). TU is defined as the subsidy (tax if negative) in terms of consumption of importables and non tradables that would be needed to compensate (take from) the consumer in order for him to be indifferent between the situation before and after the change is made.

Variables	$\Delta\tau_m$	$\Delta\tau_x$	ΔVAT	$\Delta\tau_{c_m}$	Δg	ΔTFP	Combined
c_m	0.75	0.87	-0.24	-0.39	-0.13	1.04	1.91
c_n	0.09	0.36	-0.29	-0.10	-0.21	0.93	0.80
Y_x	1.52	0.52	-0.52	-0.48	0.00	0.91	1.96
Y_m	0.00	0.00	-0.63	-0.59	0.00	1.00	-0.22
Y_n	0.28	0.22	-0.25	-0.13	0.03	0.76	0.91
p	-1.18	0.50	0.05	0.29	0.08	0.10	-0.16
F	-0.54	0.11	0.61	0.21	-0.18	0.13	0.34
M	1.60	1.18	-0.53	-0.50	-0.00	0.91	2.67
C	0.25	0.48	-0.28	-0.17	-0.19	0.96	1.06
Y	0.53	0.26	-0.35	-0.26	0.02	0.82	1.02
TU	0.25	0.48	-0.28	-0.17	-0.19	0.95	1.06

Table 3: Change in steady state values (percentage points)

induces a real exchange rate appreciation.

A change in value added tax, *ceteris paribus*, from 18% to 18.75%, to keep the fiscal budget balanced, reduces consumption and output of all sectors. Despite the endogenous increase in the lump sum transfer, the net welfare effect is negative, while having a negligible effect on the real exchange rate.

The implicit increase in tax due to the elimination of piracy has the effect of a specific tax on importable goods (consumption and capital). This effect reduces the value of marginal productivity in all sectors (see equations 8, 11 and 14), the amount of capital used in each sector, and thus total output. This new tax introduces a negative real income effect that reduces consumption and welfare. The effect on the consumption of the non-tradable good is mitigated by the change in the relative price between importables and non-tradables: the real exchange rate appreciates.

In terms of welfare deterioration, increased government expenditures is roughly equivalent to the increased tax on importables. As in our model an important part of g goes to non-tradables, Y_n raises and the real exchange rate appreciates. Private consumption of both goods decline as F is negative to compensate the increase in g.

The largest effect in this exercise comes from TFP, as reported in the sixth column. The favorable productivity boost raises output in all sectors, with a positive effect on real income, real consumption, lump sum transfers and welfare. The real exchange rate appreciates.

The final column shows the effect of all the changes at once, thus providing the long run effects of the FTAs. The agreements are welfare improving, since consumption in all goods increase. Production of exportables and non-tradables rises while production of importables falls. The final effect on real output and real consumption are estimated at 1%. That is, the long run effect of FTAs is a permanent increase of 1% in the level of output, measured at initial prices.

The effects of a potential decline in the country risk premium are discussed below.

4.2 Impact and Dynamic Transition Effects

In the long run, we model FTAs as permanent changes in the levels of tax rates levied on different sectors or as multiplicative shocks on their production functions. Thus, to quantify the long run level effects of the agreements we concentrated on comparisons between two steady states.

Three issues are overlooked in the long run analysis: First, because of their nature, FTAs are expected to produce gradual and not instantaneous changes in the variables that intend to capture them. Second, potential costs and benefits of FTAs have to be evaluated considering the period in which they go into effect (initial condition are very different from steady-state conditions). Finally, the structure of the economy determinates the speed of convergence to the new steady state and the transitional dynamics.

Next we describe the methodology used to compare the transitional dynamics of the variables of interest due to the FTAs. Let s_0 be the values of the state variables in the initial period (that we calibrated to replicate the Chilean economy in the year 2002).[17] Let $G_i(\cdot)$ be the policy functions of the control variables and $S_i(\cdot)$ the implied laws of motion of the state variables for scenarios $i = B, A, R, CR$. B is the "before" FTAs scenario. A is the "after" FTAs scenario (that combines all broad FTA features other than risk premium reduction, corresponding in the long run to the Combined effects of column 7 in Table 3). CR is the "country risk" scenario that considers only the reduction of the country risk premium. R is the scenario that combines all broad FTA features with the risk premium reduction (i.e. R reports the linear combination of results under A and CR).

Using the policy functions, laws of motion, and initial conditions in all scenarios, dynamic simulations are carried out for all variables of interest. Then, we compare the dynamic trajectories of each variable under any with those of scenario B.

Table 4 and Figure 1 report the impact and dynamic-transition effects for Chile under the three post-FTA scenarios.[18] Table 4 reports impact effects at year 1 (equivalent to 2003; pre-reform base-era zero is 2002), medium-term effects at year 10, and long-term effects at year 50. As a result of the persistence of policy changes, productivity shocks, and cost of foreign borrowing, combined with the discrepancies between initial conditions and steady-state conditions, the economy converges slowly to its steady-state equilibrium. Along the transition path, the cost of foreign borrowing declines gradually from an initial level of 5% (at year zero or 2002) toward a steady-state level of 3%, the inverse of the subjective discount factor.

The impact effects of scenario A (combined FTA effects except for risk premium

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[17]Notably, we set the initial interest rate for borrowing from abroad ($\tilde{r}$) at 5% (instead of the value of 3.1% assumed for the steady state) and the level of b so as to obtain a debt-GDP ratio of 0.371. We also set taxes, tariffs, and government expenditure at the values before the FTAs (described in Table 2). Finally, we set the productive shocks in all sectors at -0.005.

[18]The consistency of the results was checked by simulating the transition for up to 1000 periods and comparing the results with their respective steady states.
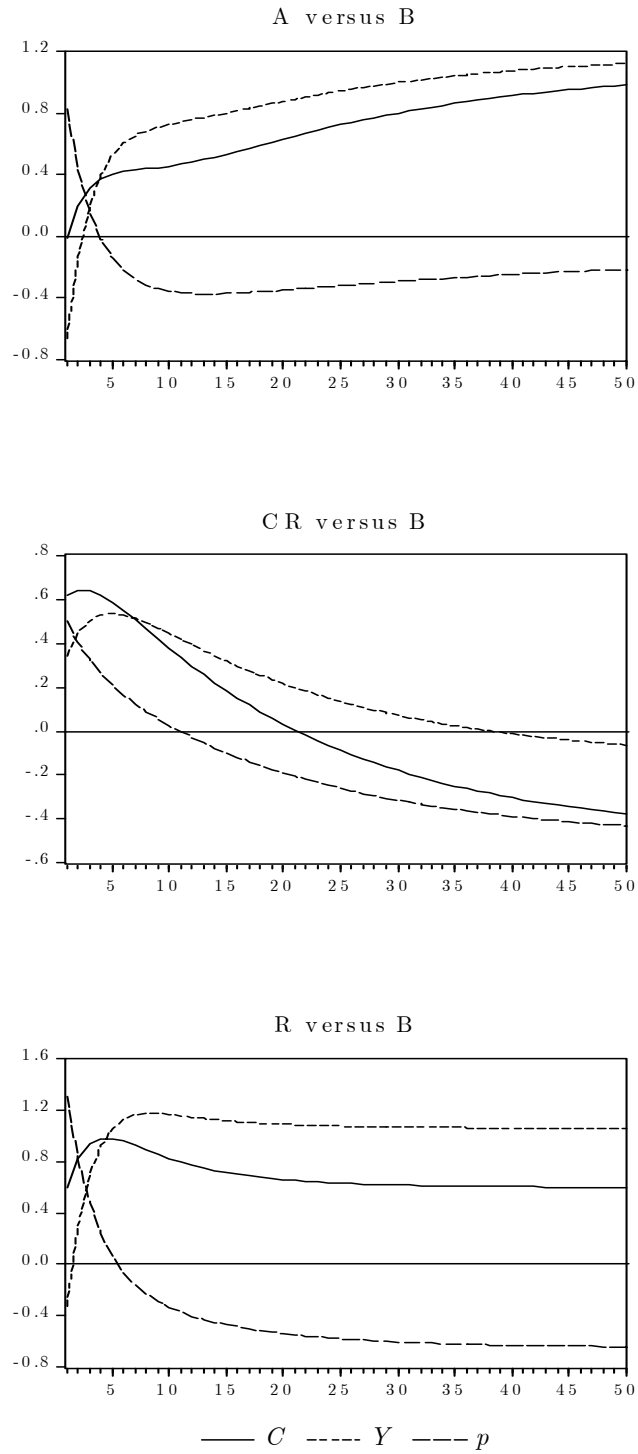
Figure 1: Differential Effects of FTAs on Selected Variables (percentage points)

	A vs. B			CR vs. B			R vs. B		
	1	10	50	1	10	50	1	10	50
c_m	0.85	1.09	1.77	1.00	0.40	-0.70	1.84	1.48	1.06
c_n	-0.28	0.25	0.71	0.50	0.37	-0.27	0.20	0.62	0.44
Y_x	-1.15	1.43	1.88	0.29	0.61	0.08	-0.87	2.04	1.96
Y_m	-2.02	-0.67	-0.31	0.35	0.74	0.09	-1.68	0.05	-0.22
Y_n	-0.30	0.49	0.85	0.36	0.33	-0.14	0.06	0.81	0.71
p	0.82	-0.36	-0.22	0.50	0.02	-0.43	1.31	-0.34	-0.64
C	-0.01	0.46	0.98	0.62	0.38	-0.38	0.60	0.83	0.60
Y	-0.66	0.73	1.12	0.34	0.44	-0.06	-0.32	1.17	1.06

Table 4: Transition (percentage points, years after FTAs start)

reduction) reflect lower output and a real exchange rate appreciation as a result of the increased government expenditures and VAT taxation. Consumption on non tradables decreases and imports increase. Quickly afterwards, the expansionary effects of trade liberalization dominate the contractionary effect of higher VAT taxation on consumption. At year 10 (or 2012), aggregate consumption and output have increased by 0.46% and 0.73%, respectively, and the exchange rate has depreciated by 0.36%. Subsequently all key variables converge monotonically toward their steady-state values, which were reported in the last column of Table 3.

Under scenario CR, the 0.4% decline of the country risk premium reduces the cost of borrowing quicker than under the B or A scenarios. This causes a small boom in consumption and investment, leading to higher accumulation of foreign liabilities. Hence the possible credibility gain of FTAs reduces for a temporary (but prolonged) period the cost of capital and of borrowing, quickening the adjustment of interest rates from their initial (2002) level of 5% toward the steady-state value of 3%. On impact, aggregate consumption and output rise by 0.62% and 0.34%, respectively, and the exchange rate appreciates by 0.50%, in response to the spending boom. Over time, the economy accumulates more foreign debt, which has to be serviced with higher interest payments abroad. Hence at the new steady state (when the cost of borrowing has declined to 3%), consumption and output are lower than in the pre-FTA (B) scenario and the exchange rate is more depreciated. The welfare effects depend on the value of the discount factor, as consumption is initially higher and the lower than under the B scenario. With the discount factor considered here, welfare is improved under the CR scenario. Finally one should recall that this scenario is based on a 40 basis-point reduction in Chile's country risk premium, a parameter estimate that lacks robustness and may vary between zero and 78 basis points.

Our third scenario (R) combines scenarios A and CR and compares them to scenario B. The hump-shaped (non-monotonic) dynamic response of aggregate output and consumption of scenario CR is intensified by its interaction with the monotonic response of C and Y of scenario A. On impact and during the first two decades,

consumption and output respond most strongly under this scenario. But toward the steady state, the effects for C and Y are diminished by the increasingly negative income effect due to higher net foreign liabilities. Once again, the negative effect of the increased VAT and government expenditures dominate the other changes in the short run.

5   Concluding Remarks

Chile has put into place broad free trade agreements (FTAs) with its two major trading partners: the EU (effective 2003) and the US (effective 2004). This paper provides estimates of their economic effects for the Chilean economy, stemming from the conventional trade components (lower tariffs and higher market access) and other aspects of the latter broad FTAs, including improved intellectual property rights, factor productivity gains, and their fiscal consequences (tax compensation, larger customs expenditure). The paper also considers that the country risk premium may decline and aggregate investment may rise in response to the institutional stability and policy credibility strengthened by the FTAs.

We set up a three-sector dynamic general equilibrium model for a small open economy, inhabited by representative infinitely-lived agents that face an upward-sloping supply of foreign capital, reflecting an endogenous country risk premium. The model has been calibrated to the main features of Chile's actual trade agreements with the EU and the U.S. and to base year 2002, including estimates of the likely consequences of the agreements on selected variables.

Simulation results for key sectors and aggregate variables are reported for steady states and dynamic transition paths under three scenarios. In scenario A we have shown the response of the Chilean economy to the combined FTA effects other than the risk premium reduction. Long-term (steady-state) GDP, aggregate consumption (C), and welfare rise by approximately 1% under this scenario. Imports and exports grow by 2.7% and 2.0% respectively, and the real exchange rate depreciates by 0.2%. The composition of output and consumption changes according to the FTA-induced changes in tariffs, taxes, and relative prices. Most of the long-term benefits – 91% of the gain in C and 80% of the gain in Y – stem from one FTA externality: the rise in production efficiency (TFP) that stems from higher trade and EU cooperation. Dynamic transition effects build up gradually over time, after negative impact effects at year 1. This effect is due to an initially stronger effect of VAT and government expenditures increases over the benefic effects of tariff reductions.

Under scenario CR we have considered a 40 basis-point reduction in Chile's country risk premium stemming from higher institutional stability and policy credibility. Therefore the cost of borrowing falls quicker from the initial (2002) 5% to the long-term 3% than under the pre-FTA scenario. This causes a small boom in consumption and investment, leading to a higher accumulation of foreign liabilities that has to be serviced with higher interest payments abroad. Hence, consumption and output are

lower than in the pre-FTA scenario in the new steady state.

The final scenario has combined scenarios A and CR, reflecting a linear combination of the two preceding cases. The hump-shaped (non-monotonic) dynamic response of aggregate output and consumption of scenario CR is intensified by its interaction with the monotonic response of C and Y of scenario A. On impact and during the first two decades, consumption and output respond most strongly. But toward the steady state, the effects for C and Y are diminished by the increasingly negative effect due to higher net foreign liabilities.

How do our results compare to those reported by the preceding literature on Chile's trade agreements? First, we have considered a larger number of components and consequences of Chile's broad FTAs than the preceding studies summarized in section 1. Second, we have calibrated our model to the actual features of the FTAs and their fiscal financing, and to the Chilean economy in 2002. Third, our model allows to consider impact, dynamic transition, and steady-state effects of FTAs, while previous studies – based on static optimization – focus only on steady-state effects.

Regarding our results for all combined FTA effects other than the risk premium reduction, our steady-state effects (1% gain in Y, C, and welfare) are of the same order of magnitude than preceding studies. Effects are small because the FTA-induced changes are generally small, too.

However, our simulation results for the country-risk reduction are different in nature and effects than those reported in previous papers. First, a lower country risk premium causes a temporary consumption and investment rise that is reversed in the medium to long term as foreign liabilities are accumulated and the economy converges to the (exogenous) steady-state interest rate. Second, the magnitude of the consumption and output response is much smaller than in most preceding studies.

Are Chile's free trade agreements with the EU and the U.S. a big deal? We have to respond to this question in the negative when comparing our results to those of some of the preceding studies. But our results should come as no surprise. Small changes elicit small benefits. However, an alternative perspective leads to the opposite conclusion. Chile's broad FTAs have been big deals when compared to their costs. A permanent increase in 1% of aggregate private consumption and GDP are very significant benefits when put on the balance with the costs incurred by Chile during a decade of trade negotiations with the United States and the European Union.

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Appendix

Features of Chile's FTAs with the EU and the U.S.

MAIN FEATURES OF CHILE'S FTA WITH THE UNITED STATES	
Tariffs	- Total elimination of tariffs over 12years - Elimination of luxury tax (4years) - Elimination of price bands - Elimination of agricultural subsidies to goods exported to Chile over 12 years - Elimination of quantity constraints
Rules of origin	- More flexible than in other FTAs - Allows self certification
Customs mechanisms	- Improving customs mechanisms and facilitation of customs procedures
Sanitary and phitosanitary measures	- Comply with WTO agreements
Technical barriers to trade	- Comply with WTO agreements - Experts' committees – consultation to solve disputes

Trade defense	- Restricts safeguards
	   - Only during transition period
	   - Cost rebate with other measures
	      to compensate safeguards
	- Antidumping and compensatory measures
	   - Comply with WTO agreements

Government procurement	- Most favored nation treatment (already
	   effective in Chile)
	   - US allows Chile to participate in
	      public purchases
	- Rules for government procurement:
	   Publication – information – rules – tender offers

Labor	- Ratify ILO treaties - Domestic regulations according to ILO standards - Cannot become barriers - No weakening of legislation - Labor Affairs Council (consultation - arbitration) - Labor cooperation mechanism (info - recommendations - monitoring)

MAIN FEATURES OF CHILE'S FTA WITH THE US (continued)	

Investments	- Most favored nation treatment
	- Non-discriminatory treatment compared
	  to domestic investors
	- Insurance against expropriation and destruction
	- No performance requisites, neither to accept nor to
	  grant advantages to invest
	- Consultation to monitor compliance
	- Right to adopt extraordinary measures in case of
	  crisis (restrictions on capital flows)
	- Investor- government dispute settlement:
	  Arbitration – proceedings – binding clauses

Non-financial services	- Most favored nation treatment - Non-discriminatory treatment compared to domestic producers - Temporary entry facilities to business relations - Visa facilities

Financial services	- Most favored nation treatment
	- Non-discriminatory treatment compared to domestic
	  producers
	- Transparency in regulations
	- Financial Services Committee
	    - Dispute settlement – Arbitration
	- Freedom to set regulations, but no discrimination

Telecommunications	- Ratification of already signed commitments with WTO - Establish rights, obligations, and access - Most favored nation treatment - Non-discriminatory treatment compared to domestic producers - Pro-competition regulation - Independent regulatory organization - Transparency

E-trade	- No tariffs on products than can be unloaded from the
	  Internet
	- Most favored nation treatment
	- Non-discriminatory treatment compared to domestic
	  producers
	- Importance of cooperation

Transparency	- Communication - publication - courts - procedures
Dispute settlement	- Proceedings

MAIN FEATURES OF CHILE'S FTA WITH THE US (continued)	
Competition policies, designated monopolies, and state enterprises	- Compatible with Chilean legislation - Adopt laws to maintain pro-competition organizations - Cooperation area of competence - Non-discriminating rules fostering competition for state enterprises and designated monopolies - Transparency – consultation

Intellectual property rights	- Ratify or adhere to multilateral agreements. Compliance with the agreements have to be attained by 2007 (2009) and with no expiration dates
	    - Trademark protection
	    - Internet domains
	    - Geographical indications
	    - Copyrights
	    - Satellite signals
	    - Patents (develop system over 4 years)
	- Most favored nation treatment
	- Non-discriminatory treatment compared to domestic producers
	- Cooperation of intellectual property bureaus
	    - Proceedings - indemnities - precautionary measures - border measures

Environment	- Independence, but with commitment to protect environment
	- Not changed to encourage or discourage trade
	- Environmental Affairs Council (monitor chapter - cooperation)
	- Consultation – arbitration – rules of procedure
	- Recognition of international environmental agreements
	- Cooperation
	    - Record pollutant emissions and transfers in Chile
	    - Reduce mining pollution (US to assist Chile)
	    - Improve compliance and supervision of environmental regulations
	    - Share experiences
	    - Reduce agriculture contamination (Chile)
	    - Reduce emissions of methyl bromide
	    - Enhance protection and management of wild life
	    - Increase use of clean fuels

MAIN FEATURES OF CHILE'S FTA WITH THE EUROPEAN UNION	
Tariffs	- Exemptions to tariff elimination in some agricultural and fishery products - Possibility of increasing tariff in case of damage to domestic production, but with conditions and compensations established - Elimination of non-tariff barriers - Most favored nation treatment for tax burden and other regulations
Customs mechanisms	- Facilitate and speed up mechanisms – customs' cooperation
Technical barriers to trade	- Regulations - committee - transparency

Trade defense	- Safeguards
	    - WTO agreements
	    - Procedures (information - investment - revision - commission)
	- Antidumping and compensatory measures
	    - Comply with WTO agreements

Government procurement	- Public procurement - Non-discriminatory treatment compared to domestic producers - Transparency - announcements - procedures
Non-financial services	- Elimination of barriers - Most favored nation treatment - Non-discriminatory treatment compared to domestic producers - Future revision of circulation of individuals
Financial services	- Most favored nation treatment - Non-discriminatory treatment compared to domestic producers - Maintains regulatory authority - Special financial services committee - Specific rules for dispute settlement - Liberalization of capital movements (possibility of safeguards when jeopardizing monetary or exchange rate policy)
Telecommunications	- Independent regulator - Pro-competition measures - Simplification and availability of interconnection

MAIN FEATURES OF CHILE'S FTA WITH THE EU (continued)	
E-trade	- Cooperation
Dispute settlement	- Procedures
Competition policies, designated monopolies, and state enterprises	- Domestic pro-competition rules - Information on regulatory changes between parties - Conflicts: consultation - information - confidentiality - Technical assistance
Intellectual property rights	- Ratification of multilateral agreements