Would MERCOSUR's Exports to the EU Profit from EU Trade Liberalisation? Some General Insights and a Simulation Study for Argentina

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by

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Abstract:

In this study, MERCOSUR's past exports to the EU under the protectionist environment of the period between 1988 and 1996 are examined and an attempt is made to determine MERCOSUR's exports' growth potential in a liberalised EU market. A sectoral study is considered indispensable since tariff and non-tariff trade barriers vary strongly among sectors. The influence of the macroeconomic environment on MERCOSUR's exports is examined in a dynamic panel analysis. A simulation study based on a quite comprehensive evaluation of EU trade barriers is performed for the Argentinean case in order to evaluate the impact of EU trade liberalisation.

1. Introduction

In late 2001 trade talks between the EU and the MERCOSUR countries have become both more intensive and more substantive. The prospect of a possible free trade agreement (FTA) has been especially attractive for the MERCOSUR economies. However, their hope that these talks would proceed quickly has been dampened in 2002 due to the economic crises in Argentina, Paraguay and Uruguay. Resulting deviations from the common external tariff (CET) weakened MERCOSUR not only as a customs union (CU) but also as an economic bloc involved in trade negotiations.

From a political point of view the main questions are First, whether the EU is still willing to negotiate with a rather unstable Customs Union and Second, whether the EU will make major concessions in agricultural trade. These issues are of utmost economic importance for the MERCOSUR countries since agriculture and fishery make up about 2/5 of MERCOSUR's total exports to the EU[1] (Nunnenkamp, 2001).

Tough negotiations are to be expected for agricultural products (sugar, cereals, milk, and meat), for textiles and for leather products, as well as for industrial products (steel, ferroalloys, aluminium and other metals, fertilisers, chemicals, potash, plastics, PVC and synthetic rubber).

Even though there are many uncertainties influencing future negotiations between the EU and the MERCOSUR, the authors intend to evaluate the impact of a comprehensive trade liberalisation on MERCOSUR's exports with the objective to put possible successes and failures of the trade talks into perspective.

To this end past and future MERCOSUR-EU export flows will be considered in this study. MERCOSUR's past exports to the EU in the period from 1988 to 1996 (when

many trade restrictions were in place) will be examined and an attempt will be made to determine MERCOSUR's exports growth potential in a liberalised EU market. Five countries will be investigated, the four formal members of the MERCOSUR: Argentina (AR), Brazil (BR), Paraguay (PY) and Uruguay (UR), and Chile (CH), which became an associated MERCOSUR country in 1996. Bolivia, which signed an association agreement with MERCOSUR in 1995, was not sampled due to incomplete OECD data and due to its small economic size: Chile's contribution to MERCOSUR exports was 18.3% in 1996, whereas Bolivia's share was 1.3% in the same year.

The sampling period for which OECD export data are used runs from 1988 to 1996. The investigation is performed on a sectoral level (69 sectors, SITC Revision 2). The empirical investigation is based on a dynamic panel analysis. A sectoral study is considered indispensable since tariff and non-tariff trade barriers vary strongly among sectors. Besides, not all sectors are affected to a similar degree by changes of the exchange rate and international differentials in the inflation rate, the business cycle, and trade barriers .

Empirical evidence on the determinants of EU-MERCOSUR trade flows is quite scarce. Exporter income, importer income, population of the export and import country, infrastructure and the real exchange rate were found to be important and significant determinants of total bilateral exports in an augmented gravity model of bilateral trade flows between the EU and the MERCOSUR countries (Martínez and Nowak-Lehmann D., 2003). The role played by economic distance[2] and geographic distance[3] was investigated in detail by means of a panel analysis of EU-MERCOSUR trade flows using sectors as cross-sections (Martínez and Nowak-Lehmann D., 2002,

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[1] The MERCOSUR countries have a dominant net export position as far as agricultural trade is concerned. They dominate temperate export products (Valdés, 2002).
[2] Measured as the absolute difference in per capita incomes.

2004 forthcoming). In this study changes in economic and geographic distance were assumed to evolve slowly and to be relevant over the long run[4], whereas a decrease in EU and MERCOSUR protectionism could have an immediate impact on trade flows. Geographic distance turned out to have a significant negative impact on Footwear, Road Vehicles, Industrial Machinery & Equipment, Furniture and Vegetables & Fruit. Next, sectors or products were classified into 'Linder' goods and 'Heckscher-Ohlin' goods taking economic distance as criterion. Economic distance had a negative, but insignificant impact on 'Linder' goods. It had a positive, significant effect on 'Heckscher-Ohlin' goods, such as Fish, Furniture, Meat, Footwear and Vegetables & Fruit. The real effective exchange rate[5] had the expected positive and significant impact on sectoral exports in about half of the sectors analysed. The impact of EU trade liberalisation, however, was not explicitly modelled in this study. Toulan (2002), in contrast, investigated comprehensively the impact of market liberalisation on sectoral exports using Argentine industry-level data for 1990 and 1995. Market liberalisation was captured by four variables[6], but macroeconomic influences on sectoral exports were neglected. According to this investigation the elimination of export taxes and import tariffs had a positive influence on sectoral exports, whereas export subsidies did not have the expected positive impact on Argentine exports. Giordano and Watanuki (2000) performed a computable general equilibrium (CGE) analysis on the impact of a MERCOSUR-European Communities (EC) Free Trade Agreement. The study found that Argentina expanded exports to the EC by 11%, while in Brazil they would increase by 9%. MERCOSUR's agribusiness turned out to be the biggest winner as compared to industrial and service sectors.

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[3] Measured in miles/kilometres and infrastructure endowment.
[4] Income differences will melt down slowly and changes in infrastructure, which are captured in the geographical distance variable, will take a long time to evolve.
[5] In price notation.
[6] More precisely, changes in the levels of subsidies, taxes, tariffs and transport costs.

The food crops sector would gain by 19% followed by the food processing industry (+14%). A CGE analysis on the impact on EU protection on 10 Latin American sectors done by Borrell and Hubbard (2000) estimated the negative impact of EU trade barriers (EU Common Agricultural Policy (CAP)) on Latin American exports to be -63.5% for Meat, -45.1% for Milk products, -43.2% for Non-grains and -29.1% for Grains. EU CAP surprisingly had positive effects (between 6.4% and 17.6%) for Services, Other Primary products, Livestock, Construction, Manufacturing and Other food.

This paper tries to fill some of the gaps just mentioned by studying both the influence of changes in the macroeconomic environment and of EU-trade liberalisation on sectoral MERCOSUR exports. A dynamic[7] panel analysis is applied to explain changes in exports on the sectoral level over time and to capture the short-run and medium-run effects[8] of changes in the macro and the trade policy environment.

The paper is organised in the following way. In Section 2 recent developments in MERCOSUR-EU trade are presented. Section 3 contains an empirical study on the reaction of MERCOSUR's exports with respect to changes in the real exchange rate and EU's business cycle. The trade barriers imposed by the EU and their importance in the respective MERCOSUR countries are described in Section 4. In Section 5 the impact of EU trade liberalisation is simulated for Argentinean exports to the EU. Finally, Section 6 presents an outlook and the conclusions.

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[7] Gaisford et al. (2003) propagate the use of dynamic models, whereas they oppose the use of CGE models. CGE models are said to have the following flaws: 1) a high degree of aggregation, 2) ad hoc specifications for functional relationships, 3) they contain many 'black box' elements which lack transparency.
[8] We use a geometric lag model that is computed in its partial adjustment version.

2. Recent developments in MERCOSUR-EU trade

A very recent example of North-South integration is the MERCOSUR-EU trade agreement. Negotiations leading to this agreement started in 1995, with the signing of an Interregional Framework Agreement aimed at fostering economic co-operation and closer trade relations between the two regional blocs. A further objective was the creation of a Free Trade Agreement in 2005.

Until June 2001, the exchanges that developed in the agreement framework consisted in gathering information and in laying the grounds for future negotiations. Concrete negotiations only began in the second half of 2001, when questions related to tariffs and services started to be discussed.

Argentina, Brazil, Paraguay and Uruguay signed the MERCOSUR agreement in 1991 and it went into effect in 1995 becoming a Customs Union. Following the entry into force of the Common External Tariff (CET) on January 1, 1995, the MERCOSUR countries must maintain a common commercial policy. Bolivia and Chile are associated countries of MERCOSUR without full membership status. Bolivia and Chile signed the association agreements with MERCOSUR in 1995 and 1996, respectively. MERCOSUR has also been trying to promote Chile's[9] full membership and inclusion into the MERCOSUR-customs union in 2000. A point of concern for Chile was the fact that Chile's import tariffs were much lower than MERCOSUR's average external tariff. Chile's average import tariff is 9 per cent (to be lowered to 6 per cent in 2003) and MERCOSUR's common external tariff is 13% (Lateinamerika Jahrbuch 2001, 2001).

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[9] However, the MERCOSUR countries took offence at Chile's sudden disinterest in full membership at the end of 2000 and at her bilateral negotiations with the U.S.A. about a FTA. Cardoso, Brazil's president and MERCOSUR's chairman at that time, finally suspended further talks with Chile in December 2000.

MERCOSUR is considered as an emerging market offering good investment opportunities[10], with a population over two hundred million people (it represents half of the population of Latin America and Caribbean). In 1998 the EU accounted for some 33% of MERCOSUR's imports and 39% of its exports. The EU currently imports five times more from MERCOSUR than the US, making it the group's main trading partner. Trade in goods between EU and MERCOSUR has risen considerably in recent years, with the total value of trade flows between the two blocs rising from € 18.8 billion in 1990 to € 42.5 billion in 1998, an increase of almost 125% (European Commission, 2002).

On the side of the EU, incentives to engage in substantive negotiations with MERCOSUR will depend closely on the consolidation and progress of MERCOSUR as a Customs Union. Due to the crisis in Brazil which resulted in a devaluation of the real in 1999, Argentina, Paraguay and Uruguay sought exceptions from the common external tariff (MERCOSUR Report, 2001). This development not only weakened MERCOSUR as a Customs Union but will also have a negative effect on future negotiations. Especially the present crisis in Argentina[11] , which led to even more exceptions from the CET, has left doubts regarding the stability of MERCOSUR as a Customs Union and the solvency of Argentinean importers. On the other hand, support to the EU-MERCOSUR FTA is also dependent upon the prospects of the creation of the Free Trade Area of the Americas (Joao Seabra, 2000).

On the side of MERCOSUR, market access, trade expansion, international bargaining and credibility considerations are incentives playing a major role to engage in FTA negotiations with the EU. MERCOSUR has probably more to gain by

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[10] See also M. Joao Seabra (2000).
[11] The imminent crisis in Argentina in the period of 1999 to 2001 finally turned into an economic disaster at the end of 2001. Banks were first closed and then reopened, but a 'corralito' (bank withdrawal restriction of US$ 400 per month) was imposed. A painful devaluation of the Argentinean peso accompanied these developments in 2002.

joining the EU in a FTA rather than negotiating with North America, since MERCOSUR member countries already have relatively free access to the North American market. A FTA with the EU, in contrast, will improve access to that market and reduce its dependency on the U.S.A. (Panagariya, 1996). Since MERCOSUR's bargaining power and credibility might have diminished due to the latest developments in MERCOSUR countries, market access and trade expansion will be more difficult to obtain in the future. Bilateral negotiations might become an alternative strategy for economically sounder and stronger MERCOSUR countries, such as Chile. Chile seems to pursue this more 'bilateral' strategy. In 2002 it reached FTAs with the EU, South Korea and the U. S. A. It is now pushing for a bilateral trade agreement with Japan.

Ten years after the completion of the Uruguay Round the external trade regime of the EU still contains many trade impediments especially in agriculture and textiles and clothing. Against these quite meagre Uruguay Round achievements, LDCs asked for existing agreements with their promises for agricultural goods and textiles and clothing to be thoroughly reviewed, before any discussions are opened on any further issues in new trade rounds (Finger, 2001; Christian Aid, 2001). The WTO meeting in Cancun in 2003 eventually led to an outspoken confrontation between leading LDC export nations on the one hand and the EU and the U.S.A. on the other.

3. MERCOSUR's exports and the macroeconomic environment

A central theme in the empirical investigation (Sections 3-5) is the search for factors that impede MERCOSUR sectoral exports to the EU and that might be influenced by MERCOSUR action. Therefore, the empirical analysis is set up as follows: First, an analysis on the general real exchange rate elasticity of each single sector and the

dependence on the European business cycle (Section 3); Second, a rather qualitative evaluation of the extent of tariff and non-tariff barriers imposed by the EU (Section 4) and Third, a simulation of the impact of a hypothetical EU trade liberalisation examining the Argentine case (Section 5).

In the first part of the analysis emphasis is placed on the role played by relative prices (i.e. the influence of the exchange rate policy and the development of price levels in the MERCOSUR countries and the EU) and the business cycle in the EU. In this section changes in trade policy are treated as 'non-existent' since in the period under study there were no remarkable changes in that respect.[12] The potential impact of cuts in tariffs and subsidies, i.e. the impact of trade liberalisation, will be analysed in Section 5.

According to Figure 1 the MERCOSUR countries, with the exception of Brazil; experienced considerable appreciations[13] of their real exchange rates (er_areu, er_cheu, er_pyeu, er_ureu) in relation to the EU. The trend toward appreciation began in 1989 as far as Argentina is concerned and in 1990 as far as Chile, Paraguay and Uruguay are concerned. A comprehensive analysis of the Bolivian real exchange rate and its impact on export performance on the aggregate level was performed by Schweickert (2001).

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[12] Stepwise cuts in tariffs and subsidies were decided from 1995 on. Transition phases of 6 years/10 years were granted for DCs' agricultural/textiles and clothing products. However, there were no legal obligations to enforce this agreement.

[13] The authors use the price notation of the exchange rate. A fall of the exchange rate stands for an appreciation.

Figure 1: Real exchange rate development vis-à-vis the EU

ER_ARUE

ER_BRUE

ER_CHUE

ER_PYUE

ER_URUE
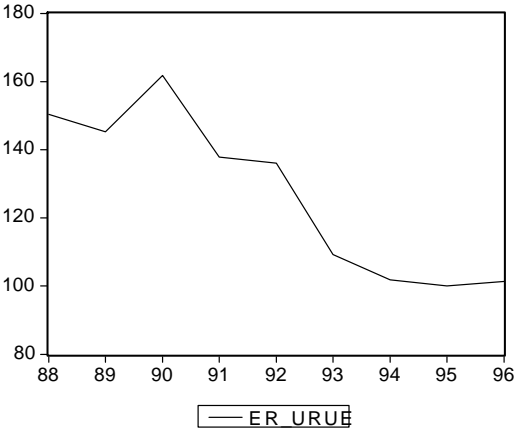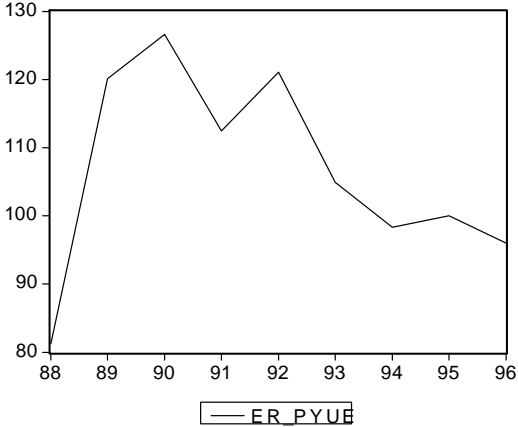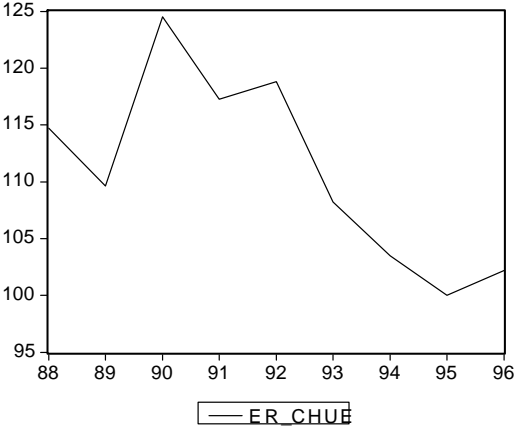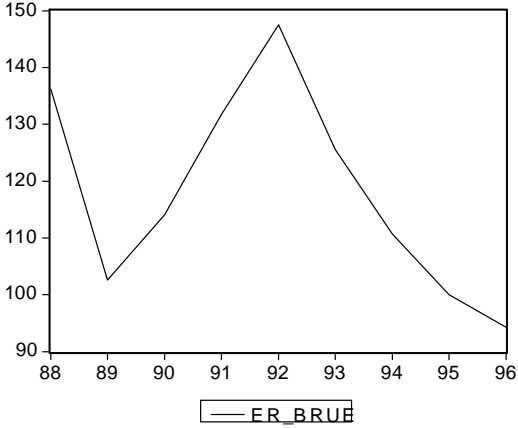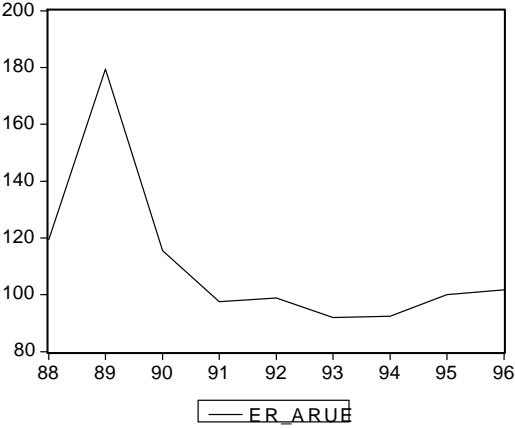
The model to evaluate the macroeconomic impact, i. e. the impact of the real exchange rate and the business cycle of the importing countries (EU) on export demand, is based on Goldstein and Khan (1978). It assumes imperfect substitution between domestic and foreign products (Francois and Reinert (1997). The model is first linearised by taking logarithms and then made dynamic by building in reaction lags, which are shaped as a geometric lag/Koyck lag with respect to the real exchange rate (Nowak-Lehmann D., 1997). This way, the impact of the real exchange rate in the more distant past is less than that of the real exchange rate in more recent years. As far as the series is concerned, we have a problem with the time series properties of our variables in this macroeconomic set-up. The variables are usually non-stationary (I(1)). However, if the variables are cointegrated, a model of the following form can be estimated[14]:

(1) $lx_{it} = \alpha + \beta_0 \lambda^0 ler_{it} + \beta_0 \lambda^1 ler_{i,t-1} + + \beta_0 \lambda^k ler_{i,t-k} + \gamma lymeu_{it} + u_{it}$

with

i = export sectors (i = 00,......., 97)[15], t = time (annual data; t = 1988, ..., 1996); lx = exports to the EU in logs[16], ler = real exchange rate in logs[17], lymeu = real income of the EU (trade weighted)[18] and $\beta_k = \beta_0 \lambda^k$ which attributes less importance to changes of the real exchange rate in the more distant past . λ^k stands for the weight of lag period k and decreases with increasing lag length and $0 \prec \lambda \prec 1$. u_{it} is the disturbance term which is $IID \approx (0; \sigma_u^2)$.

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[14] The authors tested for non-stationarity of <u>total</u> exports and the other variables in the regression in the period of 1961 to 1996 given that the time span of our panel data (1988-1996) was too short to do reliable unit root tests. All variables turned out to be I(1), but cointegrated, i.e. in long-run equilibrium. This result was assumed to hold also for the panel data.

[15] A maximum of 67 sectors appeared as export sectors.

[16] Sectoral export deflators were not available.

[17] It is assumed for the period of 1988 to 1996 that tariffs and subsidies did not change and therefore changes in the real effective exchange rate are totally due to changes in the real exchange rate (see WTO TRADE POLICY REVIEW of the EU, 1995)

[18] To keep the analysis simple this variable was assumed to be the same for each MERCOSUR country.

Estimation would be rather difficult in equation (1) given that (1) is not linear in the β_k's. To make the model linear in its parameters we put the base equilibrium model (without geometric lags) in its partial adjustment version (see Greene, 2000). We obtain the following equations which are now intrinsically linear regarding their parameters. The partial adjustment model for the MERCOSUR countries (five panel analyses were performed) is of the following form

Argentina:

(2) $lxar_{it} = \alpha' + \beta' lerar_{it} + \gamma' lymeu_{it} + \lambda lxar_{i,t-1} + v_{it}$

Brazil:

(3) $lxbr_{it} = \alpha' + \beta' lerbr_{it} + \gamma' lymeu_{it} + \lambda lxbr_{i,t-1} + v_{it}$

Chile:

(4) $lxch_{it} = \alpha' + \beta' lerch_{it} + \gamma' lymeu_{it} + \lambda lxch_{i,t-1} + v_{it}$

Paraguay:

(5) $lxpy_{it} = \alpha' + \beta' lerpy_{it} + \gamma' lymeu_{it} + \lambda lxpy_{i,t-1} + v_{it}$

Uruguay:

(6) $lxur_{it} = \alpha' + \beta' lerur_{it} + \gamma' lymeu_{it} + \lambda * lxur_{i,t-1} + v_{it}$

with $v_{it} = (1-\lambda)u_{it} = (1-\lambda)(\mu_i + \upsilon_{it})$. λ is incorporated in α', β' and γ'[19]. μ_i denotes the unobservable individual effect and υ_{it} denotes the remainder disturbance where $\mu_i \approx IID (0; \sigma_\mu^2)$ and $\upsilon_{it} \approx IID (0; \sigma_\upsilon^2)$ are independent of each other and among themselves.

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[19] $\alpha' = \alpha(1-\lambda)$, $\beta' = \beta_0(1-\lambda)$ and $\gamma' = \gamma(1-\lambda)$.

In a pure time analysis framework the parameters of this model (eq. (2)-(6)) can be estimated consistently and efficiently by standard techniques (OLS) according to Greene (2000).

In a panel analysis framework GMM estimation is recommended since things around the error term get more complicated (Baltagi, 2002; Verbeek, 2000). This is because the lagged dependent variable is correlated with μ_i and therefore correlated with v_{it} (this effect, however, will cancel out in a fixed effect model[20]), and because the lagged dependent variable is correlated with $\overline{\upsilon}_{i.}$ through $\upsilon_{i,t-1}$. With few observations over time this correlation may create an estimation bias. We do not apply GMM, but OLS instead for the following reasons: First, time-invariant disturbances quite often play the role of 'catch all' variables. If they really are of economic relevance, then clearly separate regressions will have to be run for each important time-invariant characteristic (subgroup). Concerning, the correlation with $\overline{\upsilon}_{i.}$, it has to be kept in mind that the correlation bias also depends on λ, and if λ is small, the bias gets smaller. Third, GMM estimators in our case were not able to deal with cross-section invariant variables such as lymeu.[21] Forthly, GMM estimators carry also a bias/efficiency trade-off depending on the number of moment conditions used (Baltagi, 2002).

The basic model (eq. (2) to (5)) with a common intercept and a common coefficient of the adjustment lag was estimated in two versions: version 1 with a common coefficient on the Mercosur-EU real exchange rate and a sector-specific coefficient on EU's business cycle and version 2, with a common coefficient on EU's real income and a sector-specific coefficient of the real exchange rate. The common coefficients

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[20] Compare Baltagi (2002, p. 13).
[21] According to own estimates GMM estimators seem to be more sensitive to less variability in the data than Pooled Least Squares estimators.

on the above-mentioned variables are supposed to reflect the average business cycle and real exchange rate elasticity.

Table 1, which summarises the results of the pooled analysis regressions for each country, reveals that the assumption of adjustment lags was important for four countries (with the exception of Paraguay). The adjustment coefficients carried the expected right sign and were significant at $\alpha = 1\%$ for Argentina, Brazil, Uruguay and significant at $\alpha = 5\%$ for Chile. The model has good explanatory power for all countries under study. R^2 adjusted was between 81.1 and 94.1. The number of sectors investigated varies in each country, since some countries, especially the smaller countries, do not export in all categories. [22]

Table 1: Real exchange rate and business cycle elasticities in the MERCOSUR[f]

Country	Number of sec-tors	Average real exchange rate elasticity (version 1)	Sectoral significance (**) of EU's business cycle (version 1)	Average business cycle elasticity (version 2)	Sectoral significance (**) of real exchange rate (version 2)	Adj. ment coeffi-cient (**), both versions	Adj. R^2 ($R1^2$ in version1 and $R2^2$ in version 2)
AR	67	0.48*** (t=2.63)	All 67 sectors are business cycle elastic	2.66** (t=2.39)	47 out of 67 sectors are real exchange rate elastic	Signif.	$R1^2$=91.8 $R2^2$=91.6
BR	68	-0.04 (t=-0.21)	None of the sectors is business cycle elastic	0.14 (t=0.15)	14 out of 68 sectors are real exchange rate elastic	Signif.	$R1^2$=94.1 $R2^2$=94.1
CH	65	1.51** (t=1.95)	All 65 sectors are business cycle elastic	5.76*** (t=3.39)	29 out of 65 sectors are real exchange rate elastic	Signif.	$R1^2$=89.0 $R2^2$=89.0
PY	56	3.32*** (t=3.05)	None of the 56 sectors is business cycle elastic	3.81 (t=1.21)	55 out of 56 sectors are real exchange rate elastic	Insignif.	$R1^2$=85.3 $R2^2$=85.3
UR	61	1.37** (t=2.40)	All 61 sectors are business cycle elastic	5.26* (t=1.76)	42 out of 61 sectors are real exchange rate elastic	Signif.	$R1^2$=81.2 $R2^2$=81.1

[22] The detailed regression output is available from the authors upon request.

Table 1 shows also that four countries (with exception of Brazil) dispose of a significant positive real exchange rate elasticity (taking the average of 56 to 68 sectors). The majority of sectors in Argentina, Paraguay and Uruguay and about half of the sectors in Chile display a significant positive reaction with respect to changes in the real exchange rate. This means that in these countries appreciations of the real exchange rate hurt the export sectors and depreciations of the real exchange rate could improve the export performance. Therefore, one can conclude that exchange rate policy in these countries could contribute to a better export performance.

As far as reactions of the business cycle are concerned, only three out of five countries seem to be dependent on the economic business cycle in the EU. This might be due to the high proportion of agricultural products in MERCOSUR exports. Agricultural or agriculture-based exports are known to be income inelastic.

To sum up, the performance of MERCOSUR exports is dependent on a competitive real exchange rate. A shift towards an increased processing of agricultural goods and towards the production of manufactured goods[23] could strengthen the overall income-elasticity of MERCOSUR exports and allow profiting from growth in the industrial countries.

This leads to the issue of whether other factors, i.e. external conditions, such as EU's trade policy, impede the growth of MERCOSUR exports and whether improvement of market access to the EU countries should be given a high priority in MERCOSUR-EU trade negotiations.

4. Extent and importance of trade barriers imposed on MERCOSUR exports

According to Supper (2001) the EU provides export subsidies and support on a large scale to its agricultural and livestock producers, as well as its food industry. Export

refunds amounted to US$ 5.5 billion in 1997. The main beneficiary is the livestock and dairy sector with 80 per cent of the total. Considerable export subsidies are also granted to cereals (US$ 620 million) and food industry products (US$ 650 million).

Even though the WTO Agreement on Subsidies and Countervailing Measures in principle prohibits industrial export subsidies, which are contingent on export performance, similar programmes intended to promote exports continue to play a significant role in developed countries. According to OECD estimates, its member states spend US$ 7.3 billion on such programmes (Supper, 2001).

In general, protection against agricultural products is much more pronounced than protection against manufactured goods. Protection is not only achieved by the imposition of import tariffs, but to a very large extent also by non-tariff measures (NTBs)[24]. Due to the existence and sometimes dominance of a multitude of non-tariff barriers, a weighting scheme based on UNCTAD-information on NTBs (Supper, 2001) has to be created. Table 2a lists the sectors or products which face very high or high non-tariff protection (column 3) and considerable tariff protection (column 4) from the side of EU.[25] The information on tariffs comes from two sources. One is the UNCTAD report written by Supper (2001); the other is WTO's Trade Policy Review of the EU of 1995, 1997 and 2000. Besides, a very good briefing note on sectoral protection was drawn up by Vaillant (2000).

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[23] Martínez-Zarzoso and Nowak-Lehmann D. (2002) report some progress on this process. Linder products increased their importance to the detriment of Hechscher-Ohlin products in the period of 1988 to 1996.

[24] NTBs cannot be quantified in a satisfying way because of a lack of information on their US$ or Euro amount concerning total trade and even sparser information on NTBs affecting MERCOSUR trade.

[25] The sectors not mentioned show only low or no protection.

Table 2a: EU's most protected sectors

Cl	Sectors affected by protection	Non-tariff protection	Tariff protection (t=tariff)[f]
00	Live animals chiefly for food	Very high	t=18%
01	Meat and meat preparations	Very high	t=51%
02	Dairy products	Very high	t=52%
03	Fish, crustaceans, molluscs, preparations thereof	High	t=12%
04	Cereals and cereal preparations	Very high	t=62%
05	Vegetables and fruit	Very high	Dependent on seasonal tariffs. average t=12%
06	Sugar, sugar preparations and honey	Very high	t=31%
07	Coffee, tea, cocoa, spices	High	t=7%
08	Feeding stuff for animals	High	t=37%
09	Miscellaneous edible products and preparations	Very high	t=25%
11	Beverages, fruit juices	High	Price dependent tariffs; Average t=25%
12	Tobacco and tobacco manufactures	Low	t=46%
22	Oil seeds and oleaginous fruit	High	t=3%
25	Pulp and waste paper	High	
26	Textile fibres and their waste	Very high	t=12%
32	Coal, coke and briquettes	High	
42	Vegetable oils and fats	High	t=25%
51	Organic chemicals	High	
56	Fertilisers, manufactured	High	
59	Chemical materials and products	High	
61	Leather, leather manufactures	High	
63	Cork and wood manufactures (excluding furniture)	High	
65	Textile yarn, fabrics, made-up articles, related prod.	Very high	t=11%
67	Iron and steel	High	
68	Non-ferrous metals	High	
69	Manufactures of metal	High	
75	Office machines&automatic data...	High	
76	Telecommunications&sound	High	
78	Road vehicles	High	
83	Travel goods, handbags	High	
84	Articles of apparel, clothing acc.	High	
85	Footwear	High	

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[f] An empty cell does not necessarily imply that tariffs are zero. A blank stands for very low tariffs. According to WTO's Trade Policy Review of the EU (2000) EU's average tariff for non-agricultural goods stood at 4.2% in 1999. Sources: WTO's Trade Policy Reviews (1995, 1997, 2000) and own elaboration

The average annual growth rates are significantly different in the categories: 'very high', 'high' and 'low' EU-protection. The average growth rate of the low protection sectors amounts to 17.09 per cent, whereas the growth rates of high and very high protection sectors are at 7.10 and 2.65 per cent, respectively (see Table b).

Table 2b: Classification of sectors according to degree of EU protection

'Very high protection' sectors (9 sectors)		growth rate: 2.65 (unweighted)
00	Live animals chiefly for food	-0.85
01	Meat and meat preparations	2.63
02	Dairy products and birds' eggs	0.94
04	Cereals and cereal preparations	2.06
05	Vegetables and fruit	4.47
06	Sugar, sugar preparations and honey	1.27
09	Miscellaneous edible products	19.31
26	Textile fibres and their wastes	-0.58
65	Textile yarn, fabrics, made-up articles	-5.37
'High protection' sectors (23 sectors)		growth rate: 7.10 (unweighted)
03	Fish, crustaceans, molluscs, preparations thereof	4.79
07	Coffee, tea, cocoa, spices	-3.19
08	Feeding stuff for animals	1.17
11	Beverages	35.94
22	Oil seeds and oleaginous fruit	-0.87
25	Pulp and waste paper	13.38
32	Coal, coke and briquettes	97.06
42	Fixed vegetable oils and fats	-1.80
51	Organic chemicals	1.72
56	Fertilisers, manufactured	18.66
59	Chemical materials and products	-5.50
61	Leather, leather manufactures	8.34
63	Cork and wood manufactures (excluding furniture)	9.71
64	Paper, paperboard, articles of paper	0.06
67	Iron and steel	3.16
68	Non-ferrous metals	1.13
69	Manufactures of metal	10.21
75	Office machines&automatic data processing	-3.21
76	Telecommunications&sound recording apparatus	-16.95
78	Road vehicles	-0.42
83	Travel goods, handbags and similar containers	-2.88
84	Articles of apparel and clothing accessories	-3.24
85	Footwear	-3.91

'Low protection' sectors (34 sectors)		growth rate: 17.09 (unweighted)
12	Tobacco and tobacco manufactures	4.34
21	Hides, skins and furskins	14.23
23	Crude rubber	53.47
24	Cork and wood	6.07
27	Crude fertilisers and crude materials	7.02
28	Metalliferrous ores and metal scrap	9.67
29	Crude animal and vegetable materials	6.02
33	Petroleum, petroleum products	60.44
41	Animal oils and fats	10.78
43	Animal-vegetable oils-fats, processed...	9.76
52	Inorganic chemicals	10.93
53	Dyeing, tanning and colouring materials	10.70
54	Medicinal and pharmaceutical products	6.98
55	Essential oils&perfume materials	5.98
57	Explosives and pyrotechnic products	38.16
58	Artificial resins, plastic materials	14.14
62	Rubber manufactures	9.10
66	Non-metallic mineral manufactures	7.87
71	Power generating machinery and equipment	12.39
72	Machinery specialised for particular industries	7.04
73	Metalworking machinery	44.38
74	General industrial machinery&equipment	17.68
77	Electrical machinery, apparatus&appliances	8.81
79	Other transport equipment	27.16
81	Sanitary, plumbing, heating+lighting fixtures	61.94
82	Furniture and parts thereof	40.07
87	Professional, scientific&controlling instruments	14.09
88	Photographic apparatus, optical goods, ...	13.50
89	Miscellaneous manufactured articles	2.23
91	Postal packages not classified accord. to kind	7.14
93	Special transactions not classified accord. to ..	1.19
94	Animals, live, zoo animals, dogs, cats	2.97
95	Arms of war and ammunition therefore	15.37
97	Non-monetary gold	19.43

Once the sectors most affected by EU protectionism have been identified, we check whether these sectors are of relevance in MERCOSUR's export trade and for MERCOSUR's economic development. Table 3 shows that the most dynamic sectors have very low export shares, all of them lying between 0 and 1 per cent. This feature

might indicate that low protection from the side of the EU accelerates the growth of exports.

Table 3 : MERCOSUR's fastest growing exporting sectors and their contribution to total exports (1988/9-96)

Cl.	Product category	Average annual growth (1989-96)	Export share (1988-96)	EU protection
32	Coal, coke and briquettes	97.06%	0.01%	high
81	Sanitary, plumbing,...	61.94%	0.01%	low
33	Petroleum, petroleum products	60.44%	0.46%	low
23	Crude rubber	53.47%	0.07%	low
73	Metal working machinery	44.38%	0.13%	low
82	Furniture and parts thereof	40.07%	0.47%	low
57	Explosives and pyrotechnic prod.	38.16%	0.00%	low
11	Beverages	35.94%	0.28%	high

Table 4 lists MERCOSUR sectors with the highest export shares and their level of protection. The majority of large sectors is classified in the categories Agriculture, Food and Beverages, Forestry, Fishery, Textiles and Metals that are subject to high or even very high protection from the side of the EU (see also Bouzas and Svarzman, 2000; Giordano and Watanuki, 2000, Vaillant, 2000). These sectors belong to the category of Heckscher-Ohlin goods, the trade of which is explained by differentials in resource endowments (labour, capital, human capital, natural resources). Traditional trade theory would assume a comparative advantage for sectors listed in Table 4. Strategic trade policy or exchange rate management, in contrast, do not seem to explain the observed export strength.

Table 4: MERCOSUR's biggest sectors and their dynamics (1988/9-1996)

Cl.	Product category	Export share (1988-96)	Growth dynamics (1989-96)	EU protection
08	feeding stuff for animals	14.40%	1.17%	high
05	vegetables and fruit	8.98%	4.47%	very high
28	metalliferrous ores ...	8.96%	9.67%	low
68	non-ferrous metals	8.08%	1.13%	high
22	oil seeds and oleaginous fruit	7.63%	-0.87%	high
02	dairy products	5.99%	0.94%	very high
61	leather, leather manufactures	2.71%	8.34%	high
03	fish, crustaceans, molluscs	2.56%	4.79	high

Table 4 suggests that MERCOSUR's largest export sectors suffer most in terms of growth from EU protection. However, these figures should be viewed with caution: A sector with a high export share could be of relatively high national importance and relative competitive strength. This strength might be the result of favourable resource endowment and might therefore be an indicator of comparative advantage (in the absence of policy). However, strength might well follow from the rational build-up of competitive strength by means of a whole set of policies (devaluation policy, industrial and technology policy, regional policy etc.). Interpretations of dynamic growth must be carefully done for similar reasons. Sector-specific industrial and technological policies might be the cause of above-average growth. A very low starting level might be another cause of above-average growth rates.

5. The impact of trade liberalisation on MERCOSUR's exports

The impact of trade liberalisation (from the side of the EU)[26] on MERCOSUR's exports will be quantified via a simulation study. Emphasis is laid on simulating the effects of protection (in terms of forgone exports) on MERCOSUR's 'most highly' and 'highly' affected sectors since only these product categories might significantly profit from free trade with the EU.

5.1 Assumptions underlying the simulation study

- In this study it is assumed that changes in EU's trade policy can be totally captured in the relative prices between the MERCOSUR and the EU. According to this assumption EU's trade liberalisation would be reflected in an improvement of MERCOSUR's price competitiveness. Competitiveness in product quality is not considered in this study.[27]
- Furthermore, liberalisation is assumed to be perfect and comprehensive: Thus, tariff liberalisation brings EU's tariffs down to zero (stage 1 of trade liberalisation, scenario 1) and additional abolition of export subsidies[28] brings EU's subsidy equivalents down to zero (stage 2 of trade liberalisation, scenario 2).

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[26] During the 5th Round of negotiations between the MERCOSUR and the EU (held in Montevideo from 2-6 July 2001) the European Union unilaterally presented to MERCOSUR the Tariff Offer and negotiation texts for goods, services and government procurement.
[27] Price competitiveness has priority for MERCOSUR's rather homogeneous export products. However, the impact of quality and health standards on MERCOSUR's exports remains to be tested by the authors.
[28] The elimination of the whole spectrum of non-tariff barriers has not been considered in this study.

- In the simulation that will be run, the actual price effect of non-tariff barriers (in the form of export subsidies) is assumed to correspond to a subsidy of 20 per cent in 'very high protection' sectors and of 10 per cent[29] in 'high protection' sectors.

- In the simulation study, price competitiveness is represented by the real effective exchange rate between MERCOSUR and the EU. The real effective exchange rate is determined by the nominal exchange rate (e), the price level in the EU as measured by the GDP deflator (P_{EU}), and the price level in the MERCOSUR countries, also measured by the GDP deflator ($P_{MERCOSUR}$). Also, subsidies in per cent (s) and the degree of tariff protection in per cent (t) imposed by the EU enter the formula of the real effective exchange rate. The term is computed on a trade weighted basis, (i.e. the export trade weights of the MERCOSUR countries stand for the importance of trade links with the respective EU countries). Increases in e, P_{EU} and decreases in s, t and $P_{MERCOSUR}$ are reflected in MERCOSUR's improved price competitiveness (see formulas in section 5.2.1).

5.2 The simulation procedure

The simulation study relies on a partial equilibrium analysis[30] (Francois and Hall, 1997). General equilibrium analyses are very hard to perform when many sectors are involved as in our case. EU protection concerns 32 sectors out of 67 sectors (in the case of Argentina).

The simulation study proceeds in three steps.

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[29] If all NTBs were taken into account, the subsidy equivalents might well approach 40% to 60%.
[30] P. Messerlin (2000) writes: ''The absence of available information on the relations between these [22 high protection products] products and services, and between them and the rest of the economy, has made necessary the use of partial equilibrium models for estimating the costs of protection, although such models cannot catch income effects….''

Step 1: A dynamic model is built which explains actual sectoral exports given existing EU trade barriers. The estimation results thereof are presented in section 5.2.1 (Table 5a and 5b).

Step 2: Real effective exchange rates under the scenario of trade reform 'stage 1' (scenario 1) and the scenario of trade reform 'stage 2' (scenario 2) enter the simulation based on the 'step 1' results. Forecast (=simulated) exports are computed for each year (1988 to 1996).

Step 3: Average export values are computed for observed and simulated exports for the period of 1988 to 1996. The impact of trade liberalisation is calculated in per cent. The simulation results can be found in tables 6a and 6b.

5.2.1 Determinants of actual export demand and estimation of actual coefficients

Actual export demand in step 1 (LX) is determined by the business cycle (real income) of the EU (LYMEU) and the actual sector-specific real effective exchange rate (LEERVH[31] and LEERH[32]). Actual real effective exchange rate figures are approximated figures. It is assumed that sectoral price developments follow the general price development by and large. This assumption is supposed to be valid for the majority of sectors, but probably not in each single case (e.g. non-ferrous metals, minerals). It is further assumed that adjustments to changes in real income and real effective exchange rates are imperfect and slow, thus suggesting a partial adjustment model (in analogy to the partial adjustment model in section 3). Only the Argentinean case is presented and OECD trade data for the period of 1988 to 1996 are used.

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[31] $REERVH = [e*P_{EU}*(1-0.2)]/[P_{MERCOSUR}*(1+t)]$; LREERVH is REERVH in logs.
[32] $REERH = [e*P_{EU}*(1-0.1)]/[P_{MERCOSUR}*(1+t)]$; LREERH is REERH in logs.

Table 5a: The impact of the actual real effective exchange rate in 'very high' protection sectors[33]

Method: Pooled Least Squares			
Sample(adjusted): 1989 1996			
Included observations: 8 after adjusting endpoints			
Number of cross-sections used: 9			
Total panel (balanced) observations: 72			
Variable	Coefficient	t-Statistic	Prob.
C	-83.69215	-1.574228	0.1207
LYMEU	3.688820	1.618725	0.1108
LXAREU?(-1)	0.594611	5.447924	0.0000
LEERVHAR_00 Live animals	0.661516	1.782765	0.0797
LEERVHAR_01 Meat&meat preparations	1.220853	3.063758	0.0033
LEERVHAR_02 Dairy products	0.425881	1.031865	0.3063
LEERVHAR_04 Cereals	1.068050	2.680888	0.0095
LEERVHAR_05 Vegetables&fruit	1.106135	2.995864	0.0040
LEERVHAR_06 Sugar	0.897497	2.382470	0.0204
LEERVHAR_09 Food products	0.486454	1.255407	0.2142
LEERVHAR_26 Textile fibres	1.001246	2.737581	0.0081
LEERVHAR_65 Textile yarn, fabrics	0.83919	2.315707	0.0240
R-squared	0.970924	Prob(F-stat.)	0.00000
Adjusted R-squared	0.965593	Durbin-Watson	1.9004514

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[33] In Argentina 9 out of 67 sectors are affected by 'very high' EU protection. A dynamic panel analysis is run where emphasis is put on the sector-specific impact of the real effective exchange 'LEERVHAR'. In the 'very high' non-tariff protection sectors the real effective exchange rate is computed as:

$REERVH = [e*P_{EU}*(1-0.2)]/[P_{MERCOSUR}*(1+t)]$ allowing for a sector-specific tariff (see table 2a, last column).

Table 5b: The impact of the actual real effective exchange rate in 'high' protection sectors[34]

Method: Pooled Least Squares			
Sample(adjusted): 1989 1996			
Included observations: 8 after adjusting endpoints			
Number of cross-sections used: 23			
Total panel (balanced) observations: 176			
Variable	Coefficient	t-Statistic	Prob.
C	-54.75399	-1.444719	0.1506
LYMEU	2.489429	1.531781	0.1277
LXAREU?(-1)	0.512568	7.354068	0.0000
LEERHAR_03 Fish, crustaceans, molluscs	0.921338	3.336206	0.0011
LEERHAR_07 Coffee, tea, cocoa, spices	0.521989	1.891243	0.0605
LEERHAR_08 Feeding stuff	1.110387	3.818660	0.0002
LEERHAR_11 Beverages	0.637481	2.227859	0.0274
LEERHAR_22 Oil seeds	0.964187	3.546959	0.0005
LEERHAR_25 Pulp&waste pap.	0.673410	2.492548	0.0138
LEERHAR_32 Coal, coke, briq.	0.307833	1.099847	0.2732
LEERHAR_42 Veget. oils&fats	0.789777	2.790355	0.0059
LEERHAR_51 Organ. Chemic.	0.677295	2.510671	0.0131
LEERHAR_56 Fertilisers	0.047565	0.155572	0.8766
LEERHAR_59 Chem. materials	0.500757	1.838732	0.0679
LEERHAR_61 Leather	0.849807	3.157346	0.0019
LEERHAR_63 Cork&wood man.	0.298198	1.063242	0.2894
LEERHAR_64 Paper&articles of	0.428687	1.557544	0.1214
LEERHAR_67 Iron&steel	0.690943	2.559599	0.0115
LEERHAR_68 Non-ferrous met.	0.659800	2.444727	0.0157
LEERHAR_69 Manuf. of metal	0.634844	2.342285	0.0205
LEERHAR_75 Office machines	0.496043	1.824453	0.0701
LEERHAR_76 Telecommunicat.	0.369010	1.330614	0.1853
LEERHAR_78 Road vehicles	0.679081	2.515059	0.0130
LEERHAR_83 Travel goods, bags	0.377693	1.360230	0.1758
LEERHAR_84 Apparel&clothing	0.588224	2.171953	0.0314
LEERHAR_85 Footwear	0.374600	1.357891	0.1765
R-squared	0.932914	Prob(F-stat.)	0.00000
Adjusted R-squared	0.921733	Durbin-Watson	2.02850

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[34] High EU protection affects 23 out of 67 Argentinean sectors. The sector-specific impact of the real effective exchange rate 'LEERHAR' is estimated by means of a dynamic panel analysis. In the 'high' protection sectors the real effective exchange rate is: $REERH = [e * P_{EU} * (1-0.1)]/[P_{MERCOSUR} * (1+t)]$, also allowing for a sector-specific tariff (see table 2a, last column).

Table 5 a and b show the impact of the actual real effective exchange rate and the business cycle on Argentinean exports. Both, in the 9 'very high' and the 23 'high' protection sectors, the actual real effective exchange rate carries the expected positive sign and is generally significant ($\alpha = 5\%$). The business cycle, in contrast, is not significant for $\alpha = 5\%$, but significant for $\alpha = 11\%$ ('very high' protection sectors), respectively $\alpha = 13\%$ ('high' protection sectors). The adjustment coefficient carries the expected positive sign and is significant, even for $\alpha = 0\%$.

To sum up: Since the actual real effective exchange rate is significant and positive, a simulation study on the impact of improved price competitiveness (achieved through trade liberalisation) seems indicated for Argentina.[35] All sectors that are characterised by a significant and positive price reaction can benefit from EU trade liberalisation.

5.2.2 The impact of trade liberalisation on Argentinean exports

In the following tables (Tables 6a and 6b) the impact of zero tariffs (scenario 1: trade liberalisation, 'stage 1', column 3) and zero tariff +zero export subsidies (scenario 2: trade liberalisation 'stage 2', column 4) is presented. The mean annual increase of exports in per cent is calculated for each sector. It is expected that complete liberalisation with zero tariffs and zero subsidies (scenario 2) promotes exports more than a 'simple' abolition of tariffs (scenario 1).

In the 'very high' protection sectors (see table 6a) the percentage increase of exports is around 27.46 per cent when tariffs are reduced to zero ('stage 1' trade liberalisation, column 3) and about 59.44 per cent when both tariffs and subsidies are

abolished (column 4). Complete liberalisation has a larger impact on exports than pure tariff-liberalisation, as expected. However, the simulation results also make clear that trade liberalisation on the EU side has a very strong impact on Argentinean exports. Given a real effective exchange rate elasticity of 0.97 (computed from table 5a, significant coefficients only), the impact of 'stage 1' trade liberalisation corresponds to a real depreciation of 28.31 per cent per annum and that of a 'stage 2' trade liberalisation is equivalent to a real depreciation of 61.28 per cent per annum.

Table 6a: The impact of trade liberalisation on exports in 'very high' protection sectors

		Impact of abolition of tariffs (scenario 1) (in terms of higher level of sectoral exports in per cent per annum)	Impact of abolition of tariffs &subsidies (scenario 2) (in terms of higher level of sectoral exports in per cent per annum)
Cl.	Sector		
00	Live animals	9.37%	26.97%
01	Meat & meat preparations	67.33%	120.60%
[02	Dairy products & birds' eggs	-33.17%	-27.33%]
04	Cereals & cereal preparations	67.53%	112.76
05	Vegetables & fruit	12.54%	45.06%
06	Sugar, sugar preparations, honey	25.39%	53.71%
[09	Miscellaneous edible products	5.53%	18.26%]
26	Textile fibres	8.95%	36.25%
65	Textile yarn, fabrics	0.74%	20.72%
	Unweighted average (based on	**27.46%**	**59.44%**
[...]	insignificant real effective exchange rate coefficients for $\alpha = 10\%$		

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[35] The real effective exchange rate was not sufficiently significant for many 'very high' and 'high'

In the 'high' protection sectors (see table 6b) the impact of trade liberalisation is much less perceptible. 'Stage 1' trade liberalisation has no plausible impact in most of the sectors analysed (except Fish, Feeding stuff for animals, Fixed Vegetable oils and fats). 'Stage 2' trade liberalisation has a larger impact (on average 6.35%) than 'Stage 1' trade liberalisation (on average -1.56%). The impact is positive as expected in more than half of the export sectors. However, we are not satisfied with the negative signs in table 6b. The negative signs might be due to a very low real effective exchange rate elasticity in the sectors concerned leading to unstable simulations. A negative impact of trade liberalisation / a positive impact of EU protection in some sectors was also explicitly stated by Borrell and Hubbard (2000). No mention was made in this respect by Giordano and Watanuki (2000) who refer to two[36] sectors (food crops and food processing) only.

Table 6b: The impact of trade liberalisation on exports in 'high' protection sectors

		Impact of abolition of tariffs (scenario 1) (in terms of higher level of sectoral exports in per cent per annum)	Impact of abolition of tariffs &subsidies (scenario 2) (in terms of higher level of sectoral exports in per cent per annum)
Cl.	Sector		
03	Fish, crustaceans, molluscs, preparations thereof	9.04%	20.61%
07	Coffee, tea, cocoa, spices, manufactures thereof	-1.04%	4.28%
08	Feeding stuff for animals	41.44%	59.39%

protection sectors in Brazil, Chile, Paraguay and Uruguay.
[36] Out of eleven sectors analysed.

11	Beverages	-5.99%	1.27%
22	Oil seeds and oleaginous fruit	-4.34%	5.92%
25	Pulp and waste paper	-4.91%	2.55%
[32	Coal, coke and briquettes	-35.84%	-33.81]
42	Fixed vegetable oils and fats	16.14%	26.56%
51	Organic chemicals	-5.66%	1.16%
[56	Fertilisers, manufactured	0.00%	0.94%]
59	Chemical materials and products	-9.62%	-4.91%
61	Leather, leather manufactures	-2.42%	7.12%
[63	Cork and wood manufactures	-8.99%	-5.88%]
[64	Paper, paperboard, articles of paper	-22.65%	-18.82%]
67	Iron and steel	-21.33%	-15.12%
68	Non-ferrous metals	-7.90%	-1.39%
69	Manufactures of metal	-12.52%	-5.77%
75	Office machines, automatic data processing equipment	-5.10%	-0.44%
[76	Telecommunications&sound recording apparatus	-28.49%	-25.58%]
78	Road vehicles	-6.19%	1.31%
[83	Travel goods, handbags	-0.89%	3.54%]
84	Articles of apparel & clothing accessories	-4.52%	1.34%
[85	Footwear	-18.17%	-15.0.5%]
	Unweighted average (based on significant REER coefficients)	**-1.56%**	**+6.35%**
[...]	insignificant real effective exchange rate coefficients for $\alpha = 10\%$		

In sum: Argentinian 'very high' protection sectors would profit perceptibly from trade liberalisation. It should be added that no simulations were performed for Brazil, Chile, Paraguay and Uruguay where simulation results would have been unreliable due to the fact that the coefficients of real effective exchange rate were not highly significant ($\alpha = 1\%$) in many 'very high' protection sectors.

The positive impact of trade liberalisation on MERCOSUR exports computed in this study is in line with the results obtained by Giordano and Watanuki (2000) and Borrell

and Hubbard (2000) via application of CGE models[37]. However, the results are not directly comparable since in the partial equilibrium framework 32 sectors were analysed whereas in the CGE framework only 11 sectors (Giordano and Watanuki, 2000) or 10 sectors (Borrell and Hubbard, 2000) have been considered. Secondly, the partial equilibrium model neglects income and feedback effects. Thirdly, our partial equilibrium results point to a rather low real effective exchange rate elasticity (unweighted average) of 0.97 in the 'very high' protection sectors and of 0.71 in the 'high' protection sectors. These elasticities are even remarkably lower for Live Animals, Dairy Products, Food Products, Beverages, Pulp & Waste Paper, Organic Chemicals, Iron & Steel, Non-ferrous Metals and Articles of Apparel & Clothing causing unstable simulations in the 'high protection' sectors.

Moreover, we also have to realise that our real effective exchange rate elasticities are hypothetical in the sense that we assume that relative prices (next to EU's real income) determine export demand. EU safety and health standards have been neglected as control variables so far. Nevertheless, regulations and standards will continue to impede MERCOSUR products in the EU market for good reasons (protection of consumers' health) and not so good reasons (pure protectionism) even after eliminating import tariffs and export subsidies. Under those circumstances one should reckon with much lower price elasticities than the ones calculated by the authors of this study at least in some sectors.

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[37] Toulan (2002) did not find a positive impact of export subsidies on Argentine sectoral exports by applying a partial equilibrium model. This model, however, neglects important control variables such as relative prices etc.

6. Outlook and conclusions

The analyses for the period of 1988 to 1996 revealed four things: First, a more competitive real exchange rate could improve MERCOSUR's export performance. Second, EU protection has had in general a very negative impact on MERCOSUR export growth rates. The most dynamic sectors were on average characterised by low EU-protection. 'Low protection sectors' grew much faster than 'high protection sectors', and 'very high protection sectors' grew the slowest. Third, EU trade protection also had a large impact on the export level in the 'very high protection' sectors as revealed by a simulation study for the Argentinean economy. Forthly, EU protection strongly affected MERCOSUR sectors with the highest export shares. These sectors are not only crucial for GDP growth, but are also the main suppliers of foreign exchange.

To conclude, the following proposals can be made against the background of actual outcomes of the Uruguay Round and from some of the findings revealed by the authors' econometric investigation:

• Some kind of exchange rate management seems to be advisable for the MERCOSUR countries. Permanent appreciation of the real exchange rate should be avoided. This would help export growth to some extent, depending on the specific exchange rate elasticities.

• The old Uruguay Round agreements of 1994 which contained several improvements for LDCs in general and the MERCOSUR countries (as exporters of agricultural products and textiles/clothing), should be reviewed with rigour and placed again on the 'after Cancun' agenda.

• Trade talks between the MERCOSUR and the EU should be pursued but seen from a realistic perspective. A Free Trade Agreement between the EU and

MERCOSUR that also includes sensitive goods (such as agriculture and textiles/clothing) will be difficult to reach given the experience of the last 10 years. EU concessions will depend on new regulations for services and intellectual property rights from the side of MERCOSUR.

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