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**Working Paper**

## Developing Countries in the World Economy

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to  
*Developing Countries in  
the World Economy*

By  
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## **Preface and Acknowledgments**

These two volumes *Modelling Developing Countries' Policies in General Equilibrium* and *Developing Countries in the World Economy* are a collection of mostly co-authored work at Universities and at the World Bank.

My years at the Research Department at the World Bank brought me a lot. The research department was instrumental in the development of general equilibrium modelling and the papers in volume I, *Modelling Developing Countries' Policies in General Equilibrium* owe a great deal to the atmosphere there. For anyone interested in developing countries, the World Bank was, and still largely remains, a place to be.

For the twenty years at the University of Geneva, I am thankful for the opportunity to enter into new collaborations and to start working on the political economy of trade and migration policies. Several papers in volume II are the result of these collaborations.

But my longest and closest affiliation--almost thirty years--has been with CERDI, the premier department in France for studying development, especially problems on Africa, and now with FERDI, its closely affiliated think-Tank that has just celebrated its tenth anniversary. Lectures and seminars at CERDI were the source of collaborations and served as springboard for work in progress. And now, at FERDI we are involved in the debate and design of sustainable development strategies and on how to finance them in an inclusive way. Some of the challenges ahead are raised in the papers in volume II, *Developing Countries in the World Economy*.

All of the papers have previously been published in academic journals or in books. I thank the publishers for the permission to reprint them. I thank Bob Stern for inviting (and prodding) me to reflect and put these volumes together and the staff at World Scientific Publishing for seeing through the production process. I also owe a great debt to my family, Isabelle, Lea, Elissa and Ines for their patience and support.

Looking back, I have had the good fortune of engaging in these collaborations. Reflecting on them, I have mostly been on the receiving side in the exchange of ideas. I owe my co-authors a great debt and feel fortunate that many a collaboration has turned into a lasting friendship. I dedicate these volumes to them.

Geneva, January 2015

## **Introduction to *Developing Countries in the World Economy***

The papers in this volume deal with developing countries' policies and how they faced the challenges they had to confront in the global economy in which they are playing an increasingly important role. During the 1980s, attention focused on how countries would adjust to an adverse external environment while reforming inefficient and, often inequitable, policies of the past. Quantifying the gains from successful adjustment and reduction in distortions was the order of the day. In the 1990s, as trade and communication costs were falling rapidly, and regional trade agreements were growing rapidly, political economy carried the day. More recently, attention has turned towards green growth and the potential conflicts between trade policies leading towards a more integrated world economy and environmental policies to conserve natural resources and mitigate climate change. Chapters in this volume cover selected aspects of these shifting concerns.

### **Part I. Reforms, Adjustment, and Growth**

Part I collects papers on challenges that faced developing countries in the rapidly shifting external environment of the 1970s and 1980s. Chapters 1 to 3 use a case-study approach and chapters 4 to 6 cross-country comparisons.

The first challenge—extensively debated at the time-- are the causes of what was perceived as failures in the policy packages of the 'southern cone' countries of Latin America—Argentina, Chile and Uruguay. All three were in a situation of economic and political crisis in the mid-1970s. Under military control, they embarked on what would, a decade later, have been called 'structural adjustment programs'. The packages were a mix of policies to stabilize the economy and of micro reforms to generate growth. What policies were adapted, what happened, and did these reforms fail? Chapters 1 and 2 analyze these reforms.

The second relates to countries in the Franc zone. While these countries faced the same shocks at the rest of the developing world, they shared a common currency, the CFA Franc backed by the Banque de France under conditions that induced a sense of monetary and fiscal discipline while also presumably favorable to foreign investment. In contrast with the Southern Cone countries that started from a closed capital account, CFA zone members already had a convertible currency but they had to adjust to the shocks under a fixed exchange rate. Chapter 3 analyzes the adjustment experience of Cameroon, Côte d'Ivoire and Senegal over the 1970s up until the mid-1980s.

The third deals with the adjustment challenge developing countries faced during the 1980s when the countries faced declining terms-of-trade, rising real interest rates on their external debt, and for middle-income countries, the drying up of commercial lending. These events required developing countries to effect a financial transfer towards industrialized countries. The IMF and the World Bank disbursed loans conditional on carrying out stabilization and structural reforms. These quick-disbursing loans were to generate 'adjustment with growth'. Here too, outcomes fell short of expectations. Chapters 4 and 5 relate aspects of that episode.

Chapter 6 explores fiscal spending episodes and subsequent growth for 107 (84 developing) countries over the 1972- 2006 period to examine the 'fiscal space' contention that extending public investment in capital expenditure --while simultaneously controlling the size of the government deficit --can raise growth.

Chapters 1 and 2 cover the Southern cone experience. Chapter 1 describes in detail the each package going into some depth on the macroeconomic outcome when all three had to abandon their ill-fated stabilization policy based on the *tablita* (the ledger on which each central bank would announce the rate of exchange rate devaluation for the coming month). Chapter 2 Uruguay' experience with the deregulation of the financial sector.

Chapter 1 dissects what must have been one of most comprehensive set of rapidly adopted (2-3 years) reforms in the 20<sup>th</sup> Century. The three started from a situation of extreme macro disequilibrium (high inflation and large fiscal deficits) combined with heavily controlled financial systems, extensive government intervention, and large anti-export biases. Within their first two years, the new economic teams inspired by the 'Chicago school' carried out orthodox anti-inflationary policies while differing on the order of liberalization of financial, goods and labor markets. Then, in what we called phase II, as inflation was still between 50% and 150%, all three adopted the *tablita* . The idea was to break long-standing inflationary expectations. Phase ended in a major financial crisis in 1981-2 in all three countries with large increases in external debt (much coming from private-sector capital flight as controls on capital flows had been removed).

Drawing on work carried for the project (see Corbo and Melo (1985)), the paper argues that some efficiency gains were realized in Chile and Uruguay (see chapters 2, 8 and 9) but that these initial gains were ultimately overshadowed with policy inconsistencies, implementation difficulties, and overlooked market frictions (interest rates and traded goods prices took longer to converge to world levels than anticipated). Key factors in the outcome was the use of the exchange rate to bring down inflation under an open capital account and, at the micro level, a lack of prudential regulation allowing firms to exploit negative real financial costs from borrowing in dollars.

Particularly influential in the design of reforms was the 1979 *tablita* blueprint by Carlos Rodriguez (1982), the basis for phase II stabilization (the blueprint was based on Dornbusch's over-shooting model where interest parity holds continuously for financial markets and the law of one price holds for tradables). Initial developments followed the blueprint with large capital inflows, a real exchange rate appreciation and negative real interest rates (as inflation was only falling gradually). However, the policies also went beyond the blueprint. In Argentina, the fiscal deficit was never tackled, and in Chile, wage indexation was inconsistent with the policy of pre-announcement of the exchange rate. As documented in figures 1 to 3 in the paper, the spread between peso and dollar denominated interest rates widened as confidence waned, capital flight ensued, and the *tablita* was abandoned. The end-result was that reforms under an open capital account exacerbated the negative effects on income inequality (see volume I chapter 10).

Chapter 2 analyzes Uruguay's opening sequence as the opening of the economy started with the capital rather than the current account. By 1974, the financial system was deregulated with domestic residents allowed to hold dollar-denominated accounts in the Uruguayan banking system. The paper examined whether, crisis notwithstanding, the dramatic switch in the regulatory regime led to the benefits expected from the literature on financial deregulation popularized by McKinnon and Shaw. After detecting some evidence of higher growth during the post-reform period, the paper studied the response of private savings and private investment to the reforms detecting in each case a structural break around the reforms, especially for private savings. Over the pre-reform 1962-73, period interest rates have the expected sign and explanatory power while in the 'open economy' period it is the real exchange rate that picks up explanatory power. In the open economy period, a real exchange rate appreciation encourages absorption by making traded goods less expensive. An upward shift in the investment function was also detected during the reform period but the standard variables (real interest rate variations and the accelerator mechanism) were not significant. In conclusion the quasi-laboratory experiment offered by the sharp and rapid financial reforms led to many outcomes predicted by proponents of financial reform but little evidence of improved efficiency in the allocation of credit across firms.

Chapter 3 contrasts the adjustment to external shocks in Cameroon, Côte d'Ivoire and Senegal during 1973-84 where adjustment called for a depreciation of the real exchange rate and/or a sharp reduction in spending. The paper starts with a description of the evolution of a common set of indicators (terms-of-trade, two indicators of external competitiveness, a decomposition of the evolution of the current-account deficit) for each country. . The description shows that differences in the real exchange rate paths was attributable to different patterns of external borrowing, public expenditure levels, and taxation of windfall gains from the commodity boom. A two-sector medium-term macro-model (exports not consumed domestically, the current account deficit equated with the government deficit and a semi-tradable sector competing with imports) tracks well the different adjustment responses to similar shocks. Regressions of the current account and the real exchange supported the model.

Chapters 4 and 5 assess the IMF and World Bank structural programs of the 1980s. Since the programs were aimed at restoring growth, emphasis was on the investment response to the reforms to see if the reduction in the expenditure-income gap came mostly from a reduction in expenditure or an increase in output. Chapter 4 focusses on growth and investment in a sample of 93 countries. Because of the short time period (only 3 to 5 years after receiving loans), it was not possible to control for self-selection into adjustment lending programs. However, after controlling for initial conditions and the size of the external shock, no differences in growth rates and investment rates were found for recipients of adjustment programs relative to the control-group. A closer look at output and investment rates for a smaller group of 14 countries that received a large amount of adjustment lending in a growth model where investment is the only constraint on growth also failed to detect any increases in the marginal efficiency of investment during the

adjustment period. On the other hand, the results showed large output losses coming from lower aggregate (private and public) investment.

Chapter 5 focusses on the core policy in these adjustment programs: a large depreciation of the real exchange rate (for the 83 countries examined, on average the real exchange rate depreciated by 40 percent over 1978-88). To be sure, a sharp deterioration of the real exchange rate was called for because of overly expansionary policies prior to 1982 (partly because of recycled petrodollars), but the sharp depreciation was supposed to elicit a strong tradable-sector response and remove pervasive distortions in the factor markets that had previously favored capital-intensive investments.

By 1988, recovery was only in sight for East Asian countries. Econometric evidence from a forward-looking investment model showed that the fall in investment in middle-income countries outside of East Asia was not caused by a rise in the cost of capital. Rather, investment was negatively related to debt and to foreign exchange availability indicators (suggesting that debt relief would raise investment as well as consumption) and to real exchange variability, a proxy for macroeconomic instability.

Two conclusions were drawn. The East Asian countries were resilient with a successful adjustment as they started from a situation reflecting 20 years of productivity-led growth under their outward-looking strategy—a rapid recovery that was repeated a decade later following the East Asian financial crisis. So for middle-income manufacturing exporters, the conclusion was that sustainable growth would be within reach if the micro-reforms could be sustained long enough. By contrast, for low-income primary exporters, the lack of export- supply and investment response attributable to uncertainty led us to conclude that there would be a high payoff to achieving macroeconomic stability first with partial debt relief and a postponement of microeconomic reforms as successful implementation could be jeopardized by uncertainty (25 years later one would put greater emphasis on institutional quality as a prerequisite for success!).

Chapter 6 uses 'event-analysis' (i.e. reorganizing data around events) to explore the relation between a significant change in fiscal spending—approximated by primary spending to purge non-discretionary expenditures—and subsequent average growth (definition of fiscal and growth events and robustness tests to the selection criteria are discussed in the paper). Subject to precautions in interpreting results, among developing countries, the probability that a fiscal event is followed by a growth event is higher for the middle-income countries in Latin America. The probability of a fiscal event not followed by a growth event is significantly higher in Sub-Saharan Africa suggesting that the success of a growth-oriented fiscal expenditure package might hinge on the quality of the institutional environment. Other patterns emerge. First, fiscal events followed by growth events devote fewer resources to general public services and/or are accompanied by a growing share of transport and communication expenditures while fiscal events not followed by a growth event are followed by a falling share of expenditure of transport and communication expenditures.



Controlling for other growth-related events, the probability that a growth event occurs in the five years following a fiscal event is increased as the associated fiscal deficit is limited.

## **Part II. Trade Policies, Market Structure and Market Access**

That high growth countries have integrated the world economy by trading more than laggards is accepted and the bulk of the evidence points towards trade being an engine of growth. Beyond geography-related factors (landlocked, small and/or distant from all markets), differences in trade performance can be assigned to three categories: countries' own trade policies (protection and/or direct discrimination against exports and non-tariff barriers (NTBs)); partners' policies impeding access (protection other than tariffs for industrialized countries); and behind-the-border measures that raise trade costs (deficient hard and soft infrastructure, etc...). The selected papers illustrate that the effects of the policies often go beyond what is immediately discernible.

Chapters 7 to 9 deal with developing countries' own trade policies. Chapter 7 is a case study of the market for natural vanilla in which Madagascar had a dominant position (and was at one time the leader of a cartel). The production and export of Malagasy vanilla was controlled by a marketing board (the vanilla marketing board (VMB)) which was supposed to protect small producers from fluctuations in the world market. The paper shows that this was not the case. It sets up a model of the vanilla market in which Madagascar has double market power: on the export side as the major supplier of vanilla on the world market and on the supply side via the VMA. Supply and demand elasticities are then estimated to simulate what would have been an optimal policy for Madagascar versus the one that was actually followed. Simulations also suggest that producers would have had over 10 times their revenues under a policy of *laissez-faire*. Not surprisingly, the VMA collapsed as unsold stocks that had accumulated over the years from Madagascar's high export taxes (and losing market share as Indonesia and other suppliers were entering the market) were eventually burned. In a follow-up paper (Cadot et al. 2009), we estimated that the elimination of the VMB might have contributed to lifting up to 20,000 individuals above the poverty line. In reality, as noted in the introductory quote to the chapter, as was the case with many marketing boards, the VMB ended up reflecting the disparity in political effectiveness between the urban political elites and the unorganized rural population resulting in the exploitation of the many by the few.

Chapter 8 and 9 report early micro evidence to the argument that protection reduces industrial sector efficiency as barriers to entry and the absence of foreign competition would lead to inefficient industrial structures with firms leading an 'easy life'. In some industries, monopolies or collusive oligopolies would earn excessive profits. Firms could also fail to reach scale efficiency and technical efficiency. And in markets characterized by Chamberlinian competition, trade protection would attract inefficiently small producers. Detecting these effects, however, requires access to firm level data and preferably access to a laboratory-like flavor where one can contrast an industrial structure under a protected trade regime and one in the same country under a liberalized trade regime.

At the time, Chile had embarked on an extensive trade liberalization. Moreover, Chile had two manufacturing censuses for 1967 and 1979 and the change in trade regime took place between the two censuses. In sum, we were fortunate to have both an interesting experiment since there was a dramatic variation in the trade regime between the two manufacturing censuses (1967 and 1979) and to have access to both censuses (in fact when Vittorio Corbo expressed his regret at not being granted access to the 1979 census he said he already had the 1967 census--which the Census bureau had apparently lost-- so a gainful exchange was rapidly concluded !). So even though other reforms and adjustments were ongoing (deregulation of the labor and financial markets), the changes in the trade regime were sufficiently large that one could detect trade-policy related changes in industrial performance in spite of measurement problems.

Chapter 8 focusses on aggregate industry performance focusing on evidence in support of the 'import-discipline' hypothesis that had been verified for some developed countries (changes in the distribution of plants were discussed in chapter 9). To give orders of magnitude of the changes between the two census years, in 1967, tariffs averaged around 50 per cent with many NTBs. By 1975, when reforms started, half of tariff rates were over 80 percent and NTBs were pervasive. By 1977 all NTBs had been removed and replaced with a 10 percent uniform tariff---no exceptions except for cars over 850cc !). This reduction in protection was certainly among the most drastic ever observed in such a short period in recent history. By 1977, Chile had one of the lowest and most uniform protection in the world. The chapter shows that the reduction in protection led to inter-industry specialization, an increase in concentration, and a decrease in profitability. Cross-section estimation of a simultaneous equation model of concentration and price-cost- margins for 1967 and 1979 showed that profits were highest in the most concentrated sectors. As to the 'import-discipline hypothesis', evidence in its support was found for 1979: after controlling for other factors, the penetration of imports reduced most the profitability of the highly concentrated sectors.

Chapter 9 studies changes in characteristics of the distribution of plants at the 3-digit ISIC level between the two census years to detect changes in scale and technical efficiency. Were returns to scale above unity getting closer to unity in the 1979 relative to 1967 and was technical efficiency increasing (i.e. plant dispersion from the frontier falling)? The paper discusses how measurement problems, missing data, and confounding factors were handled to allow concluding that the sectors undergoing the most reduction in protection showed the most improvement in productivity. Detailed examination of the distribution of plants in both census years revealed that small plants in the increasing returns region expanded or exited the market. Expansion in plant size thus partly accounted for the estimated reduction in returns to scale between the two census years even though reductions in protection probably also forced firms to price more competitively which would have also shown up as reduction in returns to scale.

Chapters 10 and 11 address impediments to access to developed country markets. Both are new barriers replacing tariffs as these melted away. Chapter 10 examines a neglected aspect of the Voluntary Export Restraints (VERs) that were negotiated outside the GATT between importing and

exporting countries. The received wisdom at the time was that the administration of VERs by exporting countries gave them rents--the price that importing countries had to pay to negotiate outside the GATT. It was (at least implicitly) accepted that exporting countries gained because they received the rents. Chapter 10 shows that, notwithstanding a rent transfer, exporting countries might lose as VERs forced firms out industries in which they were most productive. A general model is set up in which competitive firms supply to a restricted and an unrestricted market. Drawing on quarterly data of Taiwanese leather footwear exports over 1974-86, critical demand and supply elasticities are then estimated to study the welfare effects of the US VER on Taiwanese exports of leather footwear to the US during 1877-81. Simulations show that with an upward sloping supply curve (which is likely as industries under VERs were rapidly growing), the VER would result in a misallocation of resources as the VER breaks the equality of marginal revenue of factors from sales to the restricted and unrestricted markets. In addition to the possibility of welfare loss in spite of receiving rents from the restriction, the VER also raises industry profits while industries wages are reduced.

Chapter 11 deals with Rules of Origin (RoO) which are necessary to prevent trade deflection in the Free Trade Areas (FTAs) that have been spreading around the world. Suspicions about this legitimate objective of preventing screwdriver assembly were first raised by Anne Krueger (1999) in the context of NAFTA. Detailed scrutiny at the HS6 level on NAFTA reported in chapter 11 (also see complementary evidence in Melo (2015) chapter 19) confirms these suspicions. The paper shows that utilization rates by Mexican exporters to the US barely increased with preference margins (in textiles & apparel the preference margin was 10.4% but the utilization rate for 618 products was only 79%). A model relating utilization rates to the preference margin and to an index of the restrictiveness of the costs with the product specific RoO is then estimated. The results suggest that compliance costs, as captured by utilization of preferences are the highest for technical requirements followed by a regional value content with the least cost associated with a change of tariff classification. Interestingly, technical requirements and regional value content requirements at the tariff level happen to be the selected RoO criterion for those tariff lines with the highest preferential margins.

Chapter 12 addresses the "distance puzzle" which went against the widespread perception that the current wave of globalization should have led to a 'death of distance' as captured by a fall in the absolute value of the coefficient of distance in the gravity trade model when it is repeatedly estimated over time. After correcting for shortcomings in previous studies, repeated estimation over the period 1962-96 produced the robust result that the world is distance is dying (i.e. the absolute value of the distance coefficient is falling over time). However, this is only the case for bilateral trade between rich countries. The paper concludes that low-income countries might have become marginalized. (This result still holds in an update to data covering the period 1962-2006 published in the *Journal of Economic Surveys* in 2013.) Since the estimates control for geographic factors (landlockedness, multilateral resistance and other country characteristics including factors specific to bilateral trade), if one accepts the gravity model as the standard for estimating bilateral

trade, it could well be that behind-the-border impediments to trade are falling less rapidly in low-income countries.

### **Part III. Political Economy**

Regional trade agreements (Free trade Areas (FTAs) for the vast majority) and an increasing mobility of people are important developments in the current globalization (another is the relation of trade and the environment covered in in part IV). Until recently regionalism was discussed in relation to multilateralism and it did not take into account the political economy of trade liberalization (it is often easier to liberalize trade bilaterally or in a small group of countries than multilaterally). Chapters 13 to 15 discuss three aspects of this political economy. Likewise, the discussion on the mobility of labor considered people like capital, a factor of production. Then, following Mundell's reasoning, the arbitrage gains from trade could be achieved by a movement factors in the absence of trade in goods, or vice-versa. But in the case of the movement of labor, the political economy is important. Chapters 16 to 19 discuss the political- economy of migration. The papers take inspiration from the Swiss case where voting on immigration policy has taken place regularly and where the share of foreign population has risen from 6 percent in 1950 to 23 percent in 2012.

Chapter 13 written in 1991 for a co-edited book on the 'new' regionalism in which we argued that developing countries were engaging in FTAs with Northern partners, a new regionalism quite different from the first wave of South-South regionalism of the 1960s. The chapter starts with a review of the standard Vinerian analysis of the efficiency of preferential trade liberalization, noting that nothing more can be obtained on a preferential basis than on a non-discriminatory basis. However, the significance of the chapter is that it went on to discuss that a successful should be what we would call today 'deep' i.e. go beyond and FTA and beyond the multilateral agenda by developing regional institutions. A model is introduced in which the government is confronted with pressures from the private sector lobbying for policies that depart from those desired by the government, thereby imposing welfare costs on the government. In this set-up when two countries integrate, there are three channels through which delegation in decisions-making would alter economic outcomes: (i) a preference-dilution effect as factional interests have a smaller role in a larger political community (on the assumption that sector lobbies do not join forces across countries); (ii) a preference-asymmetry effect as the patterns of compromise at the regional level among members with different structures and preferences will lead to more efficient outcome for some, and to a less efficient outcome to others; (iii) an institutional-design effect as setting-up an institution from scratch may enhance efficiency for all members.

Chapter 14 is an example of the institutional design effect accompanying regional integration in the case of Mercosur. Prior to integration, as in many developing countries, Mercosur members granted duty drawbacks to exporters by reimbursing them for duties paid on their imported inputs. In a political-economy setting where tariffs and rebate systems are endogenously determined, the existence of duty drawbacks reduces the incentives for exporters to counter-lobby

against high tariffs on their inputs (with a full duty-drawback, tariffs on intermediates for exporters are irrelevant). With the creation of a regional bloc, duties on intra-regional exports are eliminated. In the case of a Customs Union like Mercosur, exporters are now beneficiaries of the area's Common External Tariff (CET), and at the margin their incentives to lobby against intermediate-goods protection rises on goods that are used heavily in sectors where intra-regional exports are large. The paper gives evidence that this is indeed what happened in the case of Mercosur where all members had duty drawbacks that they eliminated rapidly when integrating. The estimates suggest that in the absence of counter-lobbying, the CET would have been on average 3.5 percentage points higher with the top tariff reductions being in intermediates (see table 3).

The Mercosur study is an example of how 'deep' integration can give rise to a positive institutional design effect. It is also consistent with the positive appraisal of the new regionalism given in chapter 13 and by others who have also argued that this new regionalism was accompanied by a simultaneous reduction in MFN tariffs. A second conclusion is that with a CU, if it is accompanied by a formula for revenue sharing as in the case of the South Africa Customs Union (SACU), then the costly-to-satisfy RoO requirements can be eliminated. Unfortunately, almost all regional trade agreements among developing countries have difficulties going beyond FTA status because of the heterogeneity of interests among members (coastal and landlocked, resource-rich and resource-poor, large and small) produces a sharp trade-off between the benefits of internalizing the spillovers and moving away from the preferred national policy (loss of sovereignty).

Chapter 15 reviews what we know about the complex RoO used by OECD countries in their Generalized Systems of Preferences and how they impact on the Least Developed Countries (LDCs). Direct and indirect evidence drawing on the use of preferences by LDCs leads to the conclusion that RoO impose substantial compliance cost by design. The paper shows that the US and the EU, the two main protagonists in preferential trade agreements with LDCs impose complex RoO for products in which preferential margins are anything but negligible complementing the results reported for NAFTA in chapter 11. In sum, preferential agreements are two-handed: with one hand preferences are granted and with the other they are taken away with RoO that are in effect 'business owned' rather than 'business friendly'. Suggestions are given on how to simplify them and hopefully to harmonize them at the WTO.

Chapters 16 to 18 deal with immigration policies in receiving countries. Chapter 16 develops a model of the decision on immigration in corresponding to the case of a direct-democracy case (the Swiss case). It takes a pure trade theory view to the determination of attitudes towards immigration in a price-taking economy with three factors (capital, skilled labor and unskilled labor), two households (low and high skill) where attitudes towards immigration are entirely determined by economic self-interest. Decisions on letting in migrants are the result of voting as in the Swiss case. Among the propositions derived in this setting, it is shown that when capital ownership is evenly distributed within each group of households, low and high-skill households always have opposite attitudes towards immigration. More interestingly, the model shows that an increase in inequality (which has occurred) would result in a stiffening of attitudes towards capital-poor immigrants.

Chapter 17 surveys the literature on several aspects of the factors determining attitudes towards migration in industrialized countries. It uses a more realistic medium-term Ricardo-Viner economy. The paper distinguishes between infinitesimal and sustained migration and includes the case of an unequal distribution of capital. The discussion is then extended to the case of segregation against immigrants. Confining illegal migrants to the non-traded sector is likely to engender support for migration. So is segregation via a 'guest-worker' program in an efficiency-wage setting where working conditions are not the same between the primary and secondary sectors. The upshot of the survey is that natives are more likely to vote in favor of immigration if the government applies a 'guest-worker' system rather than a 'melting-pot' system.

Written when the EU was about to take in ten new members, chapter 18 offers lessons from the Swiss experience with a large absorption of immigrants (I am among them, having taken the Swiss nationality 15 years after joining the University of Geneva). The paper recounts the characteristics and the evolution of immigration in Switzerland and how the government navigated between economic interests seeking to avoid or to reduce immigration quotas and popular pressure to tighten them (the popular vote of February 2014 was the first time that popular pressure carried the day). Results from estimating a direct-democracy model for the year 2000 vote to restrict foreigners to less than 18 percent of the population show was highest among low-skill and right-wing voters. People from the extremes of the political spectrum were also more likely to vote as well as those with higher education. Comparing results from attitude surveys with those from actual voting also suggest that results from opinion polls are subject to a 'hypothetical bias' and hence probably over-pessimistic.

Climate change is the biggest challenge facing the world economy. Taking a trade perspective, chapter 19 discusses political economy difficulties lying ahead as up to a trillion dollars of rents would be up for capture as the price of fossil fuels is raised. The paper discusses the desirable properties and experience with Cap and Trade (CAT) systems, nationally (US) and regionally (EU) and also with the Clean Development Mechanism (CDM) under the Kyoto Protocol. In most cases, free (or close to free) allowances were necessary to buy political support. For the next climate agreement, efficiency and equity, but also political-economy considerations indicate that it will be necessary to dissociate who will pay from where emission reductions would take place. In spite of the difficulties with the CDM, a CAT seems to be the best alternative since compensation to help low-income and mostly low-emitters that will be most severely impacted by climate change would not have to go through the domestic political process in high income countries. The paper warns about the pressures for border tax adjustments and the waste and adverse distributional effects that will result from rent-seeking.

#### **Part: IV. Challenges Ahead: An Inclusive Globalization and Environmental Policies**

The chapters relate to challenges and expected positive aspects of globalization. On the positive side, absent a change towards more positive attitudes towards immigrants, an inclusive globalization would be one of general convergence through increased trade, and increased FDI on

the expectations that it would reduce migratory pressures through convergence in incomes and wages while increased openness should lead to less inequality and poverty reduction in developing countries. On the challenges side, our increasingly integrated world economy may be harmful for the environment. To state it in journalistic terms, globalization resulting in more trade would be good for growth, itself good for poverty reduction while more trade would be bad for the environment. The papers here touch on aspects on these linkages.

Chapter 20 revisits inconclusive results in the literature about the link between openness (understood as the ease with which goods and services and factors move across countries) inequality and poverty with a larger sample of developing countries than previous studies with a panel data set so that the effects of trade policy changes are confined to changes in a country's variables. Results show that, as predicted by factor-endowment theory, differences in factor endowments matter: trade liberalization is consistently associated with decreases in inequality in countries relatively well endowed with primary-educated (unskilled) labor but with increases in inequality in countries relatively well endowed with workers lacking basic education. However, the results are more tentative when the analysis is carried out with decile data rather than aggregate measures. Suggestive simulations of the effects of trade liberalization on aggregate measures of income inequality are reported.

The links between migration, trade and FDI are complex and have been mostly studied theoretically. Taking data on emigration by skill categories for 1990 and 2000, chapter 21 tests whether trade and migration substitutes as would be expected by an all-round reduction in trade costs? Applying the same reasoning FDI and migration should be substitutes since a reduction in barriers to investment should reduce migratory pressures. A skeleton Ricardo-Viner model with skilled and unskilled labor in which migration is exogenous but FDI flows respond to differences in rates of return suggests that high-skill migration should be positively correlated with FDI as the price of the non-traded goods would be raised while higher tariffs would be associated with lower FDI. Over the period 1990-2000, for a sample of 102 countries, controlling for several factors, an increase in the emigration rate of high-skill workers is robustly correlated with an increase in FDI while linguistic fractionalization is negatively correlated with FDI inflows. Further work on the trade-FDI-migration nexus is needed to confirm if the skill composition of emigrants matters.

Chapter 22 starts from the concern that the current trade and finance framework built around the Bretton Woods institutions is not designed to handle the increasing physical linkages between countries. Trade specialists are concerned that climate change negotiators will seek to impose limits on trade outside the WTO process while environmentalists and climate change specialists fear that international trade interests will thwart attempts to arrest the depletion of natural resources and undercut policies to reduce CO<sub>2</sub> emissions. Because natural resources are concentrated in low-income countries with weak institutions and the poor are concentrated on fragile land, there is a legitimate concern that the current open trading system could exacerbate the natural resource curse and prevent an inclusive green-growth path.

The chapter then identifies channels of interaction between natural resources, the environment and trade. The survey identifies four roles of trade in a green-growth development strategy: (i) an open World Trading System to help diffuse the technologies needed for the strategy; (ii) a carbon-credit trading system to separate where abatement takes place from who pays the costs (see also chapter 19); (iii) border tax adjustments to correct for carbon leakage; (iv) an enforcement mechanism to deter free-riding. The chapter closes with a discussion of principles to guide trade policies needed for the trading system to be supportive in our quest to control global warming.

Chapter 23 addresses the pollution haven argument by estimating a model of bilateral trade in which the Pollution Content of Imports (PCI) is broken down into fundamental determinants of trade and into environmental-related determinants (differences in factor endowments and an index of differences in environmental policies). While previous studies focused on a single country and a few pollutants, the estimates reported here are for 10 pollutants covering 79 4-digit manufacturing sectors in a sample of 48 countries. Decomposition results reported in the paper show consistently across pollutants a pollution haven effect (countries with lax environmental policies have a comparative advantage in polluting industries) and factor endowment effect in the opposite direction. Importantly, when the sample is split in two by per capita income, the results show that when taking into account intra-regional trade, the effects are small because much trade is among high-income low-polluting partners. Thus for the sample year (1986-88), differences in factor endowments in and in environmental policies only marginally affected the world-wide pollution content of world trade.

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*“Sur quoi la fondera-t-il l'économie du monde qu'il veut gouverner? Sera-ce sur le caprice de chaque particulier? Quelle confusion! Sera-ce sur la justice? Il l'ignore.”*

Pascal



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