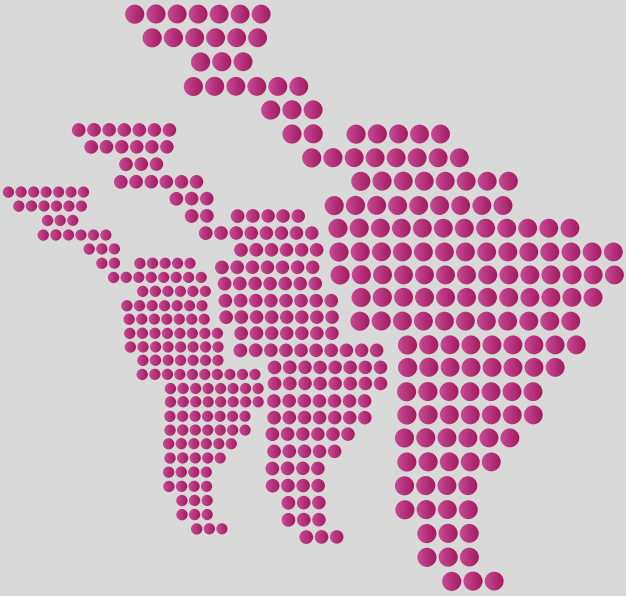
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Summary

ARTICLES

Women in Foreign Trade Policy: The Case of Chile (1990-2022)
Dorotea López Giral y María José Henríquez.....7

La inserción internacional de América Latina en el marco del crecimiento chino: el problema de la super elasticidad de importaciones
Damián Paikin y Maximiliano Albornoz.....37

The Treatment of Cultural Services in Central American Countries' Preferential Trade Agreements
Gilbert Gagné y Cassandre Nycz.....69

Trade Reforms, Capital Investments and the Feminization of Colombian Manufacturing Industries: 1981-2000
Jairo Isaza-Castro y Barry Reilly.....119

Women in Foreign Trade Policy: The case of Chile (1990-2022)

Mujeres en la Política de Comercio Exterior: El caso de Chile (1990-2022)

Dorotea López Giral*
María José Henríquez U.**

Abstract

Despite the gradual incorporation of women in different spheres of Chilean public policy since 1990, there is not enough research on the different impacts of this. For this reason, this article aims to provide some preliminary conclusions on the number of women, barriers that they face and identified the main topics where they worked in trade negotiations, between 1990 and 2022. The research is oriented to analyze Chilean Free Trade Agreements and at the World Trade Organization, focusing on the Chilean negotiation teams. Some initial findings demonstrate that there has been an increase in the entry of women as negotiators, especially in topics such as trade in services; however few women were appointed as chief negotiators, reflecting a persistent gender

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gap in the workplace and in decision-making. The research is being carried out on the basis of specialized literature and interviews with qualified informants.

Keywords: Trade negotiations – Women – Gender and trade policy – Free trade agreements – WTO.

Resumen

A pesar de la paulatina incorporación de la mujer en distintos ámbitos de la política pública chilena desde 1990, no existe suficiente investigación sobre los distintos impactos de ello. Por esta razón, este artículo pretende entregar algunas conclusiones preliminares sobre el número de mujeres, las barreras que enfrentan e identificar los principales temas en los que han trabajado en las negociaciones comerciales, entre 1990 y 2022. La investigación está orientada a analizar los Tratados de Libre Comercio chilenos y en la Organización Mundial del Comercio, centrándose en los equipos negociadores chilenos. Algunos hallazgos iniciales demuestran que ha habido un aumento en el ingreso de mujeres como negociadoras, especialmente en temas como el comercio de servicios; sin embargo, pocas mujeres fueron designadas como negociadoras principales, lo que refleja una persistente brecha de género en el lugar de trabajo y en la toma de decisiones. La investigación se está llevando a cabo a partir de bibliografía especializada y entrevistas con informadores cualificados.

Palabras clave: Negociaciones comerciales – Mujeres – Género y política comercial – Tratados de libre comercio – OMC.

Introduction

Since the return to democracy in 1990 and with greater force since the end of the 1990s, women have taken on a more prominent role in the public sphere in Chile. The first woman to be President of the Republic, Michelle Bachelet, was elected in 2005; there was a cabinet with gender parity during her mandate, and an increase—driven by the approval of a quota law, among other reforms— in the proportion of women in the legislature. Despite these trends, an aspect neglected in Chile, unlike in North American and European academia (D'Aoust, 2012; Hudson, Bowen, & Nielsen, 2015; Kelly et al., 1991; Manzano, 2001; McGlen & Sarkees, 2018; Peterson & Runyan, 1999; Tickner, 2001; Towns & Aggestam, 2018) has been the study of women's participation in foreign policy. The absence of research on Chilean women's role in international trade initiatives is particularly striking given the importance of this field within the general framework of Chilean foreign policy. Addressing this gap, this article offers some preliminary conclusions about the participation and impact of women negotiators in Preferential Trade Agreements (PTAs) and in the World Trade Organization (WTO), between 1990 and 2022.

It then turns to a review of trade policy in the context of Chilean foreign policy concerns, focusing on its evolution, key milestones, and the growing involvement of women in this process. It addresses the scanty literature that deals with women's contribution to Chilean foreign policy and the absence of studies analyzing their role in Chilean trade policy. Next, based on relevant global research, it examines the main arguments advanced at two levels of analysis at which the role of women negotiators can be recognized: the barriers women that have faced and their impact on processes of

negotiation. Finally, some preliminary findings of the study are advanced. The analysis is based on McGlen and Sarkees, who have studied the case of the United States drawing on interviews (McGlen & Sarkees, 2018). In line with Kelly et al. (1991), Smith (2020) and Duerst-Lahti (2008) who have all investigated the situation and influence of women in the public sector, it is essential to understand the actors' perspectives as individuals, which necessarily involves the use of testimony.

Due to the numerous negotiations and the importance of the WTO, the research focuses on the participation of women in bilateral or plurilateral PTAs (32 in all, some of which have more than 20 chapters), and on the WTO team, in particular its ambassadors.

This article reflects the first results of an ongoing investigation which seeks to give visibility to the women who have participated in the formulation and implementation of Chilean trade policy over the last thirty years.

Foreign policy and trade policy: women

Beginning in the 1990s, analysis of the foreign policy concerns of the Chilean state, both as a phenomenon and a process, reflected a political discussion whose main characteristic was the prevailing consensus over the development model and pragmatism. The early debate was marked by the issue of international reinsertion (Fermandois & 1991; Heine, 1991; Manzano, 2001; Rojas, 1993; Tomassini, 1990; Wilhelmy & Infante, 1993; Yopo, 1991). In line with this, various specialized articles on trade policy appeared that reflected its growing importance in the framework of foreign policy (Agosin, 1993; De la Cuadra & Hachette, 1992; Frohmann,

1991; Sáez & Valdés, 1999; Velasco & Tokman, 1993), with a special focus on the bilateral and plurilateral negotiations then underway as the country emerged from dictatorship (Armanet, Alamos, & O'Shea, 1996; Mols, Wilhelmy von Wolff, & Gutiérrez Belmedo, 1995; Wilhelmy & Lazo, 1997).

During the Pinochet regime, under the paradigm of liberalism, an aggressive trade liberalization plan was implemented. Since the country was partially isolated at the international level, the path followed was, on the one hand, unilateral reduction of existing tariff and non-tariff barriers (Ffrench-Davis, 2003); on the other, multilateral negotiations within the framework of the General Agreement on Tariffs and Trade (GATT), These strategies were complemented by active participation in the Tokyo Round (1973-1979) and the Uruguay Round (1986-1994), in which commitments were made that provided an anchor for these reforms (López & Muñoz, 2018). With the return to democracy, together with the decision to maintain and deepen the existing economic model, "the Government of Chile gave preference to bilateral free trade negotiations and discarded the possibility of joining subregional integration schemes such as Mercosur or the Andean Pact" (DIRECON, 2009, p. 74). In this way, the country set in motion a process of bilateral negotiation that would begin with Economic Complementarity Agreements (ECAs)[1], mainly in goods and in the region, within the framework of the Latin American Integration Association (ALADI), such as: Argentina (ECA 16) and Mexico (ECA 17) in 1991, and would continue with Colombia (ECA 24 - 1993), Venezuela (ECA 23 - 1993), Bolivia (ECA 22 - 1993), Ecuador (ECA

1 ECA is a denomination used by Latin American countries in the bilateral agreements that they enter into with each other to reciprocally open their goods markets, which are registered in the legal framework of the Latin American Integration Association (ALADI). They point to a greater opening of markets than the Partial Scope Agreements, but less than the Free Trade Agreements. In this type of agreement, all the products of both countries are negotiated.

32 - 1994), Peru (ECA38 - 1998) , Cuba (ECA 42 - 2008) and the Free Trade Agreement (FTA) with Central America (ratified between 2002 and 2012). This became known as "open regionalism", a concept whose meaning and effects have been a subject of debate since the mid-1990s (Rojas, 1993; Van Klaveren, 1994) and which guided Chile's model of economic insertion in democracy, as it sought PTAs with the major world markets. This strategy made it possible to give continuity to the model of market openness imposed by the dictatorship, while also differentiating itself from it. The most important negotiation during this stage was the one that the country began with Mercosur, even though at the same time it had the possibility of joining the United States (DIRECON, 2009; Lagos et.al, 2003; López & Muñoz, 2018). Academic writings evolved from a concern about the transition to the process of international economic insertion (Ffrench-Davis, 2003; López & Muñoz, 2007; Porras, 2003). Faced by the impossibility of joining the North American Free Trade Agreement (NAFTA), conversations began with Canada, which led to the signing of Chile's first FTA in 1997. Canada was a very convenient partner for this first experience, since it facilitated the formation of an important body of negotiators and kept open the possibility of joining NAFTA, an evident ambition of the Chilean economic team. A combination of teams from different ministries acted in this Treasury-led negotiation, in which some women can be identified as advisers, such as Catalina Bau, Liselotte Kana and María Eugenia Wagner.

The 2000s would be marked by the emergence of Asia —a region in which Chilean trade policy aroused positive interest— in the international arena, and China's entry in 2001 to the WTO. In April 2004, an FTA between Chile and South Korea materialized, and another in 2006 with the People's Republic of China. This agreement has remained under

permanent negotiation with the involvement of negotiators such as Ana Novik. That same year, negotiations of the Strategic Economic Association Agreement were concluded with Brunei Darussalam, New Zealand and Singapore, known as P4 (predecessor to the Transpacific Partnership (TPP-11) initiative. The scheme raised difficult issues for the women's team due to the negotiations with Brunei. In 2007, a PTA with India and the signing of the Economic Association with Japan PTA were finalized.

In the context of an updated Free Trade Agreement with Canada, an important advance was confirmed with the inclusion, for the first time in our history, of a chapter III N on gender and trade, later to be replicated with the Free Trade Agreement with Uruguay and other countries, in which women like Marcela Otero played a fundamental role. Agreements were later closed with Australia (2009), Malaysia (2012), Hong Kong, Vietnam (2014) and Thailand (2015). This policy has continued, Chile was the first to sign the Digital Economy Partnership Agreement (DEPA) in 2020 and is in the process of ratifying the TPP-11, as well as other modernizations (Subrei, 2021). Since 1990, 30 PTAs have been signed; with 65 economies[2], Chile has a network of agreements with the greatest access to world GDP, according to the OECD (2018). In 2022, agreements with Brazil and Ecuador came into force. TPP-11 is currently in the process of ratification and has raised a new challenge to trade policy.

Throughout this process, the Chilean negotiating teams have stood out for their professionalism that has been recognized by many countries, that engaged in negotiation

2 More information on www.subrei.cl

procceses . More and more women have served as negotiators, such as Alicia Frohmann and Luz Sosa as chapter heads.

Women and the analysis of their participation in foreign policy

At the end of the 1990s, while issues related to women's participation in international affairs had aroused interest around the world (D'Amico & Beckman, 1995; Genovese, 1993; Kelly et al., 1991), this was not the case in Chile. Research into the participation in foreign policy and influence thereon of different actors and interest groups in Chilean society aroused some attention (Bascuñan, 1993; Bustamante, 1991). The book edited by Artaza and Ross (2012), for example, revealed a thematic and regional vision in the classic tradition of Chilean foreign policy, but it did not include any studies highlighting the role of women as an object of study. The same is true of Robledo's text on the last 30 years of foreign policy since the return of democracy (Robledo, 2020). At the end of the 2000s, studies were published on the role of political parties and Congress, especially, in trade negotiations (Aranda Bustamante & Riquelme Rivera, 2011; Cook, 2012; Gamboa & Huneeus, 2008; Valdivieso, 2007), but without differentiating the participation of women. And although Artaza and Ross (2015) expanded the actors studied to include non-governmental entities, businessmen and unions, they did not consider women separately. The same omission can be seen in studies of public opinion as well as of elite viewpoints worked on during the 1990s and recently returned to in the form of interviews (Lopez, Muñoz, Ahumada, 2020; Morandé & Duran, 1993). Fuentes (2007) later reviewed the pending processes of institutional modernization at the Ministry and analysed the difficulties associated with this, exploring corporate resistance and technocratic work, but doing so in general terms and without addressing the issue of the representation

of women in posts of responsibility. In 2018 the book *Chile: actor del sistema multilateral (Chile, Actor of the Multilateral System)* included an article linking women in particular to foreign policy and dealt more broadly with gender and multilateralism. Written by the former minister of the Servicio Nacional de Mujeres (SERNAM, the National Service for Women), Laura Albornoz, the text reviews the history of women's political participation in the various multilateral and subregional agreements that Chile has signed, stressing the challenges faced at the inter-American level in achieving the goal of gender equality in Latin America and the Caribbean as 2030 approaches (Albornoz, 2018).

Shortly after, in the book *Nuevas voces de política exterior: Chile y el mundo en la era post-consensual (2021) (New Voices in Foreign Policy: Chile and the World in the Post-consensual Era (2021)*, Daniela Sepúlveda highlights the importance of a feminist foreign policy that includes the participation of women in key diplomatic positions. She establishes that this policy is a tool for break down cultural resistance in the conduct of foreign policy. Also, outlines that a feminist foreign policy allows discovering new critical approaches, that they do not see in the structures of domination/ traditional subordination necessary responses to challenges current foreign policy (Sepulveda, 2021). And as part of an analysis of the Chilean Foreign Service, Carola Muñoz considers that the main challenge is to incorporate a gender perspective in the Ministry (Muñoz, 2021). Because the development of feminist foreign policy could develop a new paradigm in foreign relations, cooperation, humanitarian assistance, and trade between states.

Also in 2021, Matthias Erlandsen, María Fernanda Hernández-Garza and Carsten-Andreas Schulz, argue that the

impact of presidencies led by women is conditioned by the chief executive's interest in gender parity. In the Latin American context they study the Chilean case during the two terms of Michelle Bachelet (Erlandsen, M., Hernández-Garza, M. F. and Schulz, C. A., 2021b), noting that although Bachelet increased the proportion of female ambassadors, women continued to be in a small minority. Certainly, advances in gender equality "did not carry over into the foreign service nor were they sustained over time since they were not institutionalized" (Erlandsen, M., Hernández-Garza, M. F. y Schulz, C. A., 2021 a).

The growing interest in the subject is reflected in the book *Mujeres y política exterior en América Latina (Women and Foreign Policy in Latin America)*, published in 2022. This work includes two studies that analyze the status of the issue in Chile: "Underrepresentation of women in Chilean diplomacy," by Anita de Aguirre and Marcia Covarrubias and "Gender and Chilean Foreign Policy: Understanding Institutional Barriers," by Natalia Escobar and Olivia Cook. In their conclusions, these studies reinforce ideas pointing to the existence of "mental resistance" to women's incorporation into foreign work that derives from cultural codes and patterns (Aguirre and Covarrubias, 2022) and the need for a multidimensional approach to the subject, which allows for the generation of sustained and gradual changes that can lead to greater institutionalization of gender equality (Escobar and Cook, 2022). In the chapter by Alicia Frohman, "La igualdad de género en las políticas de comercio internacional" ("Gender equality in international trade policies"), the relevance of the gender perspective and its non-neutrality in trade issues is addressed.

If, as we noted, research on the participation and influence of women in the formulation and implementation of Chilean foreign policy has been scarce, women's invisibility in trade policy, despite their importance in the country's foreign affairs concerns, is evident. Confirmation of the scarcity of studies on the matter reveals some field rich for research, since according to the specialized literature on the analysis of foreign policy in general (McGlen & Sarkees, 2018). Moreover, research on the impact of women as decision-makers in international affairs, in particular, has been especially limited (Bashevkin, 2014). Some works have concerned themselves with identifying the number of women in positions of power in institutions, rather than their effects and influence, especially in Western developed countries (Manzano, 2001; McGlen & Sarkees, 2018; Peterson & Runyan, 1999). We propose two levels of analysis at which women can be recognized as negotiators: first, their participation and the entry barriers they have faced; second, whether women negotiators make any difference to outcomes in PTAs or at the multilateral level.

Barriers faced by women negotiators

The barriers encountered by women in integrating into working life in general have been a topic of study (UNCTAD, 2015). Each day is more clear that it is not important only the gap in numerical representation, but it lends to how gender structures and permeates diplomatic institutions, rules, norms, and practices. Institutions (formal and informal) are structured by gender conceptions. As such, institutions contain collections of interrelated rules and routines that define appropriate actions in terms of relationships between roles and situations). Gender thus conceived helps shape the expectations and practices of individuals into relatively stable and predictable patterns.

Of particular interest for our study, Mesa and Gómez (2009) point out that the assumption of managerial positions and responsibilities continues to be a controversial field, in which women try to forge a path with difficulties that go beyond labour relations and involve personal, psychological and family considerations, including factors unique to the woman herself. They note that negotiation has historically been considered a male profession and is subject to discrimination in some parts of the globe, such as in the Arab world or in Japanese culture. Likewise, they argue that "women negotiators express experiences of inequalities in two senses: on the one hand, undervaluation or even rejection of negotiation schemes presented by women; and on the other, self-imposed limitations of the woman herself when assuming her role "(p.35). Kray, L & Kennedy, J. (2017) explore why the challenges women face remain so poorly understood and why negative stereotypes persist, with female strengths often being overlooked or seriously underrated. Various studies show that men tend to end up in more prestigious positions and assignments (e.g., Studlar and Moncrief 1999; Hawkesworth 2003).

Men and women are not simply differentiated, in other words, but also ranked hierarchically. Delving further, Lombana (2007) underlines the importance of including gender balance both in the economic models used to assess the impact on trade of economic integration as well as in the policies to be applied in integration schemes. Pursuing this, she points out that "the gender variable is not neutral and that its effects can establish important changes in economic policy and vice versa" (p. 10).

Influence of women in negotiations

Traditionally, foreign policy analysis has alternated between a focus on internal factors that affect decision-making such as public opinion or the public sector, and a concern with the dynamics of the international system. Less frequent has been study of the comparative influence of men and women in the foreign policy debate, a study unable to escape the question of whether or not gender has any effect on the matter (Tickner, 2001). Duerst-Lahti (2008) point out that there are noticeable contrasts in the participation of men and women especially in the areas of security and defense, the supposition being that women may be more inclined to peace and the reduction of military spending, as well as to feminist issues and their inclusion in policy agendas (Koch & Fulton, 2011; Tickner, 2001). Or, that women tend to define less aggressive strategies in terms of peace, but to be more competitive and less risk-averse when economic issue are involved (Smith, 2020). In sum, the research aims to answer if women have had different priorities, political preferences, and behaviours during negotiations or in the foreign service compared to their male colleagues (McGlen and Sarkees 1991, 1993, and 2001; Bahsevkin 2014). Bashevkin (2014) has noted a difference in the issues women prioritize: more related to gender issues and cooperation with the global south. Although one line of research maintains that the orientation of foreign policy decisions is gender-linked, some authors conclude that women have not necessarily been transformative leaders eager to promote a more feminist, innovative and disruptive agenda (D'Aoust, 2012; D'Amico & Beckman, 1995; Genovese, 1993). Given these differences of viewpoint, it is important to better understand the role of women in trade policy as part of foreign policy.

Despite the academic interest in gender and diplomacy, and the available literature on negotiators' behavior and its effects on negotiations, generally according to gender (Kray, L & Kennedy, J., 2017), there is little research available that traces and analyzes where women are located in the international negotiation process; and even less in trade agreements negotiation. As far as Chile is concerned, there is no such research. Most studies on the role of women and gender are mainly limited to the incorporation of gender provisions in FTAs and how women affect them (Bahri, 2020). This followed from the inclusion of these issues in the international agenda after the publication by the Commonwealth secretariat of the Gender and Trade Action Guide in 2007 led to the WTO's Joint Declaration on Trade and Women's Economic Empowerment, published in 2017 in congruence with the UN's Sustainable Development Goal (SDG) 5. In 1975, Rubin and Brown carried out the first analysis of gender in a negotiation, highlighting that female behavior is, on occasions, more inclusive than male; furthermore, that the former is less predictable and more reactive to the behavior of the other party than the latter (Rubin and Brown, 1975). In line with this, Cubillo et al (2014) seek to understand negotiating behavior in order to identify whether gender determines a distributive or inclusive manner of proceeding, focusing on the process from the subjects' first decision to their impact on the results of the negotiation. Although they find that gender is a variable that indeed influences the conduct of a negotiation, they conclude that it does not support a solely distributive or inclusive approach, but that this changes throughout the negotiation process, since most women start with decisions that favour their individual benefit. For Sánchez (2010) there are socially prescribed behaviours according to which women are more inclusive than men. The results of Eckel et al's research (2008) showed that, in general, women

tended to be less likely not to reach an agreement that men. Some authors argue that no significant differences have been found between negotiations made by men and women, although as Svedberg (2018) points out, institutional gender norms about appropriate "male" and "female" behavior may channel women in one direction and men in another in the diplomatic arena. Studies like that by Saorín & Canet (2006) analyze the effect of gender differences and the behaviours arising from them on the results of negotiation processes, while controlling for the influence of the context in which the negotiation process takes place, and with a specific focus on cooperation agreements. They emphasize that gender differences do significantly influence the negotiating behavior of the participating parties, as well as the result obtained in reaching agreements. Kolb and Coolidge (1991) argue that, in negotiations, women tend to relate more to others, while Florea et al. (2003: 230) agree that they provide a personalized component of empathy that is often underestimated in male-dominated environments. "Male" characteristics typically include assertiveness, competence, and dominance, while "female" characteristics involve cooperation and inclusiveness (Babcock and Laschever 2003; Aggestam 2018). Research by Mesa and Gómez (2009) shows significant differences in how the women in their sample interpret the role of negotiators, between those who see no relationship between gender and negotiation, those who perceive the gender-negotiation relationship as favourable to them, and those who perceive it as disadvantageous. Essentially, it is in these terms that the Chilean experience should be understood. From the literature, it is not evident that we should assume any distinct gender behavior in negotiations, but the existence of barriers in women's participation and the preference for the positioning of some issues in preference to others, are indeed evident.

The Chilean case: advances and some reflections

This research aims for an understanding that goes beyond the case of the first Chilean woman in the post of minister of foreign affairs, Soledad Alvear, and of Michele Bachelet as president, by considering those women who have served in important positions in trade negotiations as chief negotiators, whether of agreements, of chapters of agreements, or as part of negotiating teams.

The Andrés Bello Diplomatic Academy (ACADE) was created by decree in 1954 and, although, in strictly legal terms, there has never been any impediment for women to enter the Chilean Foreign Service, almost all current career women ambassadors entered the Ministry of Foreign Affairs (Minrel) only since the mid or late 1980s (Aguirre and Covarrubias, 2022).

With the return to democracy in Chile, women emerged gradually in leadership positions in technical areas, particularly in the Directorate of International Economic Relations (DIRECON, today's Subrei) and the Directorate of Borders and Limits (DIFROL). Although the participation of women in important decision-making positions was low during the 1990s, the ambassadors Silvia Balbontín (Chile's first career ambassador), Carmen Luz Guarda (ambassador to the WTO) and Moy de Tohá were an exception. In the government of Eduardo Frei (1994-2000), female political ambassadors were appointed, such as Graciela Fernández as Asia-Pacific Economic Cooperation (APEC) negotiator in Singapore. As mentioned already, a milestone was the appointment in 2000 by President Ricardo Lagos (2000-2006) of Soledad Alvear as minister of foreign affairs, whose influence has been studied (Muñoz, 2010). Subsequently, the government

of Michelle Bachelet (2006-2010) sought to send a signal with her announcement of a cabinet with gender parity and produced changes in terms of gender equality, but evidently not in international affairs. In 2017, during her second term (2014-2018), a Gender Equity Plan was launched, which sought to reduce the gaps between men and women. During this period, Ambassador María del Carmen Domínguez made significant efforts to promote gender equality and the empowerment of women. During the first term of Sebastián Piñera (2010-2014), the only directorates of the Ministry of Foreign Affairs led by a woman were the National Directorate of Borders and Limits (Difrol), headed by Ambassador María Teresa Infante, and the Directorate of International Economic Relations. (DIRECON), today an Undersecretariat, led by Ana Novik. In Piñera's second government (2018-2022), a woman, Ambassador Carolina Valdivia, was appointed for the first time to be undersecretary at the Ministry, in whose period of office gender chapters have been included in the negotiation of second and third generation Trade Agreements, and the Roadmap for the economic empowerment of women in the Pacific Alliance 2020-2030.

In Chile, the inclusion of women has steadily increased, as well as the search for instruments to enable them to reach decision-making positions. As mentioned, Chile has been a pioneer in the inclusion of the gender issue in many of its PTAs, in the Global Trade and Gender Arrangement, the Pacific Alliance and APEC. Although they have aspects that remain highly controversial, such as the absence of binding commitments, they have started a trend that, as in environmental and labour matters, can make a problem more visible. In 2016, the Gender Department was created in DIRECON headed by a woman; later, this division was transformed into the Department of Inclusive Trade, under

Marcela Otero. Its objective has been to promote international trade that addresses the issues of gender, micro, small and medium-sized enterprises (MSMEs), and native peoples in international trade.

In the WTO, two women have been appointed to represent Chile. The first was Carmen Luz Guarda, during the first years of democracy. The second, Ambassador Sofia Boza, who took over as representative in 2022, has had a high percentage of women in negotiating positions, such as Ana Novik, Olivia Cook, Marcela Otero, and others.

As far as chief negotiators in the top position are concerned, only one woman has held the position of Director of DIRECON, Paulina Nazal, who has had a long career and was one of the first women to negotiate property-related issues.

Chile has been involved in 33 negotiations up to 2023. When reviewing in greater detail, given that the negotiating teams have members recurring, the records show that there are actually 78 women and 97 men who they have continually composed these working groups. This shows that it is greater the number of men who have negotiated in Chile, and that the participation of these actors is more repetitive posts.

Until 2007, female participation did not exceed 40% in any negotiating team and was even null in the negotiations of the P4 Agreement and with Panama, carried out in 2006 and 2008 respectively. However, as of 2008, the first agreement negotiated with parity entered into force, the Economic Complementation Agreement between Chile and Cuba (ACE 42), which was signed in 1999. After this, there are 11 agreements in which the participation of women negotiators exceeds 40%, marking a turning point for the integration of

women in the negotiating field. An event of this nature has only happened again in 2021, with the entry into force of the Trade Integration Agreement with Ecuador, which was also negotiated by an equal number of women and men.

In this regard, the Global Gap Report of the World Economic Forum (2022) places Chile in position 105 out of 146 countries with greater inequality in this topic. Along these lines, although the figures show that women have gained access to positions within trade policy, there has been the tendency to prioritize male participation in team building. In this way, the main obstacle would no longer be their incorporation into this labour field as the first step, but rather narrowing this gap on the road to parity.

The disparity in the negotiating teams has been remarkable over the years. Specific, 81% of these have been made up mostly of men, while only 13% of them are made up of a higher percentage of women. Now, although it still holds This difference has undergone changes, especially during the last 15 years.

It is important to note that throughout these 33 trade agreements, heads of leadership have been iterated, so that in reality only 14 people have been heads of negotiation for these trade agreements. Of the above, it is recorded that 13 of these people have been men, while only one head of negotiation has been a woman, which corresponds to Paulina Nazal.

According to the Inter-American Development Bank (2022) in Latin America and the Caribbean, although women represent 52% of the public sector workforce, they have less presence in leadership positions. In the 15 countries analysed -including Chile-, women hold only 23.6% of level one posi-

tions in the hierarchy, equivalent to a minister, compared to 44.2% who reach level four position, equivalent to director.

Among the results obtained on negotiators' perceptions, barriers identified have included:

> i) The view that women's presence was always considered more challenging due to the frequency of travel and family complexities and care responsibilities. This helps as an argument not to appoint them in high decision positions in negotiations.
>
> ii) Resistance to the inclusion of women in groups that for a long time were male in composition, leading to them having to face sectarian behaviour and the groups' own dynamics, particularly in customs-related matters. This negotiation in the beginning where highly related to travelling and been away from home long periods of time.
>
> iii) In terms of issues, in that women were initially more involved in issues other than goods (the latter being a masculinized world), and for this reason women at this early stage featured much more in matters such as services, or environmental issues—initially considered of lesser importance.
>
> iv) The traditional glossing over of their participation, and their greater difficulty in getting their opinions noticed were identified by some of the interviewees.

Regarding their influence or differences in their behavior, the perception was: i) that they establish longer-term rela-

tionships, which generally lead them not to leave a negotiation without reaching an agreement; ii) that they are more creative and flexible in finding solutions, iii) that they propose new topics such as the chapters on gender issues.

On the WTO, there was a duality: the perception of a more inclusive environment for women in terms of their participation, but not in the inclusion of gender issues in the negotiations.

Fortunately, in Chile the teams have had some continuity, evidently a sign of the erosion of some of the barriers, while participation criteria increasingly take account of the gender perspective.

Conclusion

This article presented the first findings of a project that aims to research on women participation in trade negotiation in different dimensions: i) the identification of barriers found by women in trade negotiation, ii) the position levels in which women were appointed and iii) the influence in those negotiations. The case of Chile as one of the countries with more preferential trade agreements in the world becomes relevant to have more information that could be helpful to close the gap in research. Also, it might be useful to develop public policy in further trade negotiations. The data has been not easy to find and some of the interviews are still in the process. The gender focus has gone positioning itself increasingly in trade policy, both in the WTO as in agreements commercial.

Some barriers have been identified by the interviewees, such as the perception that by having to do more unpaid work and maternity, or sectarian behaviours, they are less

mentioned in the positions. Of particular interest is the greater presence of women in some issues, such as negotiations on services, which must be deepened.

The vertical segregation observed in Chile's trade negotiations, show an increase in the entry of women as economic negotiators but a decrease correlation with their participation as negotiation heads, reflects a gender gap persistent in the workplace and in decision-making. The growing participation of women as economic negotiators shows positive progress in gender inclusion in this field and shows that opportunities are being given for more women to enter the roles related to trade and international negotiations. However, the fact that there is a significant difference between the percentage of women negotiators (40%) and that of women negotiating managers (10%) indicates that there are barriers and obstacles that limit the promotion and representation of women in leadership positions.

The foreign feminist policy is one of the objectives of Chile, alone with the increasing signature of Gender and Trade chapters in its agreements and closing the participation gap between man and women in public policy decision making. For this reason, further investigation is needed in the different edges of foreign policy.

Bibliography

Aggestam, K. y Towns, A. (2018). The Gender Turn in Diplomacy: A New Research Agenda. *International Feminist Journal of Politics*, 21(1), 9-28.

Agosin, M. (1993). Beneficios y costos potenciales para Chile de los acuerdos de libre comercio. *Estudios Públicos*, 52(2), 101-126.

Albornoz L. (2028) Género y multilateralismo: Cómo transitar a un futuro deseado en Somavía, J., Oyarce & Yuraszeck, P. E. O. (Eds.) (2018). *Chile actor del sistema multilateral Una tradición nacional*. Academia Diplomática de Chile" Andrés Bello", Ministerio de Relaciones Exteriores.

Aranda Bustamante, G. & Riquelme Rivera, J. (2011). Los actores de la Política Exterior: el caso del Congreso Nacional de Chile. Polis. *Revista Latinoamericana* (28).

Armanet, P. A., Alamos, P. & O´Shea, L. (1996). *Las relaciones de Chile con los organismos multilaterales de la Cuenca del Pacífico*. Instituto de Estudios Internacionales, Universidad de Chile.

Artaza, M. & Ross, C. (2012). *La política exterior de Chile, 1990-2009. Del aislamiento a la integración global.* RIL editores.

Artaza, M. & Ross, C. (2015). *La política exterior de Chile, 1990-2009: del aislamiento a la integración global*. Volumen 2: RIL editores.

Bahri, A. (2020). Women at the frontline of COVID-19: Can gender mainstreaming in free trade agreements help?. *Journal of International Economic Law*, 23(3), 563-582.

Bascuñan, P. (1993). Los Partidos Políticos y la Política Exterior. *Revista Diplomacia*(12).

Bashevkin, S. (2014). Numerical and policy representation on the international stage: Women foreign policy leaders in Western industrialised systems. *International Political Science Review*, 35(4), 409-429.

Bustamante, F. (1991). La política exterior chilena y los partidos políticos. *Cono Sur*, 10(1), 33-36.

Cook, O. (2012). El Congreso Nacional en la política exterior de Chile, marzo 1990-marzo 2010. In M. y. R. Artaza, César (Ed.), *La política exterior de Chile* (Vol. 2012, pp. 239-262).

Cubillo Mora, M. & Sáenz Rojas, M.A. (2014). La mujer rural: El caso de las virtudes de Santa Cruz de Turrialba. *Revista de Ciencias Sociales* (Cr), 3(145), 123-132.

D'Amico, F., & Beckman, P. R. (1995). Women in World Politics: An Introduction (Westport, CT: Bergin and Garvey). In: Greenwood Publishing Group.

D'Aoust, A.M. (2012). Feminist perspectives on foreign policy. In *Oxford Research Encyclopedia of International Studies*.

De la Cuadra, S. & Hachette, D. (1992). Apertura comercial, experiencia Chilena. Universidad de Chile, Facultad de Ciencias Económicas y Administrativas

Direcon (2009). Chile: Veinte años de negociaciones comerciales.

Duerst-Lahti, G. (2008). *Gender ideology: Masculinism and feminalism. Politics, gender, and concepts: theory and methodology*, 159-192.

Eckel, C.C. & Grossman, P.J. (2008). Men, women and risk aversion: Experimental evidence. *Handbook of experimental economics results*, 1, 1061-1073.

Erlandsen, M., Hernández-Garza, M.F. & Schulz, C. A. (2021). Madame President, Madame Ambassador? Women Presidents and Gender Parity in Latin America's Diplomatic Services. *Political Research Quarterly*, 106591292199792. https://doi.org/10.1177/ 1065912921997922

Fermandois, J. (1991). De una inserción a otra: política exterior de Chile, 1966-1991. *Estudios Internacionales*, 433-455.

Ffrench-Davis, R. (2003). *Entre el neoliberalismo y el crecimiento con equidad: tres décadas de política económica en Chile*. JC Sáez Editor.

Frohmann, A. (1991). *Acuerdo de libre comercio Chile-EE.UU.: la perspectiva del movimiento sindical.* Center for Labor Research & Studies, Florida International University.

Fuentes, C. (2007). Diplomacia a vías paralelas. Respuestas institucionales a la internacionalización de Chile. *Ibero Americana* (Sweden), 37(1), 231-260.

Fuentes-Julio, C. (2022). *Mujeres y política exterior en América Latina: Un mundo de desigualdades en la historia de Chile*. Fondo de Cultura Económica.

Gamboa, R. & Huneeus, C. (2008). Gobierno y Empresarios en la Formación de la Política Exterior Chilena. El caso del Acuerdo de Asociación Chile-Unión Europea. *Cuadernos de Estudios Latinoamericanos*, 3, 29-54.

Genovese, M. A. (1993). *Women as national leaders.*

Hawkesworth, M. (2003). Congressional enactments of race–gender: Toward a theory of raced–gendered institutions. *American Political Science Review*, 97(4), 529-550.

Heine, J. (1991). *¿ Timidez o pragmatismo. La política exterior de Chile en 1990.*

Hudson, V.M., Bowen, D.L. & Nielsen, P.L. (2015). Clan governance and state stability: The relationship between female subordination and political order. *The American Political Science Review*, 109(3), 535.

Kelly, R.M., Guy, M.E., Bayes, J., Duerst-Lahti, G., Duke, L.L., Hale, M.M., Stanley, J.R. (1991). Public managers in the states: A comparison of career advancement by sex. *Public Administration Review*, 402-412.

Kennedy, J.A., Kray, L.J., & Ku, G. (2017). A social-cognitive approach to understanding gender differences in negotiator ethics: The role of moral identity. *Organizational Behavior and Human Decision Processes*, 138, 28-44.

Koch, M.T. & Fulton, S. A. (2011). In the defense of women: Gender, office holding, and national security policy in established democracies. *The Journal of politics*, 73(1), 1-16.

Kolb, D.M. & Coolidge, G.G. (1991). Her place at the table. *The Journal of State Government*, 64, 68-71.

Lagos, R. & Berardi, L. (2003). "El Tratado de Libre Comercio (TLC) con EE.UU. en el discurso del Presidente". *Análisis crítico del discurso: perspectivas latinoamericanas* 1: 151.

Lombana, J. (2007). Competitiveness and trade policy problems in agricultural exports: a perspective of producing, exporting countries in the case of banana trade to the European Union (Doctoral dissertation, Göttingen, Univ., Diss., 2006).

López, D. & Muñoz, F. (2010). [Review of Chile: Veinte años de negociaciones comerciales, by DIRECOM]. *Estudios Internacionales*, 43(165), 219–223. http://www.jstor.org/stable/41392139

López, D. & Muñoz, F. (2007). El sistema multilateral de comercio y la región. *Estudios Internacionales*, 39(156), 81-103.

López, D. & Muñoz, F. (2018). Trade Policy and Women in the Pacific Alliance. *Agenda Internacional*, 25(36), 133-150.

López, D, Muñoz, F. & Ahumada, J.M. (2020). State Neutrality, Business Elite and the Lack of Export Services Development in Chile: an Exploratory Qualitative Analysis. *Organizations and Markets in Emerging Economies*, 11(21), 152-172.

Manzano, I.R. (2001). Mujer, género y teoría feminista en las Relaciones Internacionales. Cursos de Derecho Internacional y Relaciones Internacionales de Vitoria-Gasteiz 2000, 282-283.

McGlen, N.E. & Sarkees, M.R. (1991). The Unseen Influence of Women in the State and Defense Departments. *Gender and Policymaking: Studies of Women in Office*, 81-91.

McGlen, N.E. & Sarkees, M.R. (2018). *Women in foreign policy*. The insiders: Routledge.

Milet, P. (2005). Chile-Perú: las raíces de una difícil relación. *Estudios Internacionales*, 59-73.

Mols, M., Wilhelmy von Wolff, M. & Gutiérrez Belmedo, H. (1995). A*mérica Latina y el Sudeste Asiático: perfiles de cooperación regional*. Universidad de Chile, Instituto de Estudios Internacionales.

Morandé, J.A. & Duran, R. (1993). Percepciones en la política exterior chilena: un estudio sobre líderes de opinión pública. *Estudios Internacionales*, 595-609.

Muñoz C. (2021) Nuevo ciclo de política chileno requiere una política exterior feminista, https://www.nuevapoliticaexterior.cl/2021/04/03/nuevo-ciclo-politico-chileno-requiere-una-politica-exterior-feminista/

Peterson, V.S. & Runyan, A.S. (1999). Global gender issues: Westview Pr.

Porras, J.I. (2003). La estrategia chilena de acuerdos comerciales: un análisis político: Cepal.

Portales, C. (1992). La política exterior chilena en el nuevo contexto político y económico internacional. *Cono Sur,* 11(1), 1-11.

Robledo, M. (2020). La crisis del largo ciclo neoliberal y de la política exterior chilena: Un análisis preliminar. Documentos de trabajo (Fundación Carolina): Segunda época(33), 1.

Rojas, F. (1993). Consolidando una inserción múltiple en el sistema internacional: la Política Exterior chilena en 1992. FLASCO.

Rojas, F. (2001). Chile: cambio político e inserción internacional 1964-2000. En P. Milet (Ed.), *Estabilidad, crisis y organización de la política: lecciones de medio siglo de historia chilena*. Santiago de Chile: FLACSO.

Rojas, F. (1993). Consolidando una inserción múltiple en el sistema internacional: la Política Exterior chilena en 1992. FLASCO.

Rubin, K.H. & Brown, I.D. (1975). A life-span look at person perception and its relationship to communicative interaction. *Journal of Gerontology*, 30(4), 461-468.

Sáez, S. & Valdés, J.G. (1999). Chile y su política comercial" lateral". *Revista de la CEPAL*.

Sepúlveda, D. (2021). Política exterior feminista: El próximo emprendimiento normativo de América Latina. Fundación Carolina.

Smith, K.E. (2020). Missing in Analysis: Women in Foreign Policy–Making. *Foreign Policy Analysis*, 16(1), 130-141.

Studlar, D.T. & Moncrief, G.F. (1999). Women's work? The distribution and prestige of portfolios in the Canadian provinces. *Governance*, 12(4), 379-395.

Subrei (2021). https://www.subrei.gob.cl.

Svedberg, E. (2018). East–West Negotiations. *Gendering Diplomacy and International Negotiation*, 259-275.

Tickner, J.A. (2001). *Gendering world politics: Issues and approaches in the post-Cold War era*. Columbia University Press.

Tomassini, L. (1990). La política exterior de Chile en América Latina. *Cono Sur*, 2(9), 1-5.

Towns, A. & Aggestam, K. (2018). *Gendering Diplomacy and International Negotiation*. Springer.

UNCTAD (2015) *Trade and Development Report 2015, Making the International Financial Architecture Work for Development*. Geneva: UNCTAD

Valdivieso, P. (2007). Congreso Nacional y política exterior chilena. Estado actual y algunas propuestas/Congress and foreign policy in Chile. Present situation and proposals. E*studios Internacionales*, 149-177.

Van Klaveren, A. (1994). Chile: la política exterior de la transición. *América Latina Internacional*, 2(1), 47-64.

Velasco, A. & Tokman, M. (1993). Opciones para la política comercial chilena en los 90. *Estudios Públicos*, 52, 53-99.

Wilhelmy, M., & Infante, M. T. (1993). La política exterior chilena en los años 90: El gobierno del Presidente Aylwin y algunas proyecciones ". Estudios Sociales, 75, 1.

Wilhelmy, M. & Lazo, R.M. (1997). La política multilateral de Chile en Asia-Pacífico. *Estudios Internacionales*, 3-35.

Yopo, B. (1991). Debate y consenso en la política exterior de Chile. *Cono Sur* 4, 10, 26-28.

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La inserción internacional de América Latina en el marco del crecimiento chino: el problema de la super elasticidad de importaciones

Latin America in the context of chinese economic growth: the problem of the super elasticity of imports

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Resumen

La demanda china de productos primarios reabrió un debate en Latinoamérica sobre la valoración de esta relación comercial. Por un lado, algunos analistas lo ven como una gran oportunidad para colocar los productos latinoamericanos. Por otro lado, se ha remarcado el peligro de desindustrialización y la pérdida de diversificación económica que está relación puede traer para la región. En este contexto, el trabajo pretende aportar un elemento más al debate, a partir de un análisis cuantitativo mediante la estimación las elasticidades bilaterales de comercio entre China y tres países de la región, Argentina, Brasil y Uruguay para el período

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1997-2019. Esta mirada permite entender en qué medida este comercio favorece (o no) el crecimiento de los países a partir de un análisis del impacto de la canasta importadora del socio frente a un incremento del ingreso nacional.

Palabras clave: Elasticidades – América Latina – Comercio Internacional – Desarrollo – China.

Abstract

The China's demand for primary products reopened a debate in Latin America on the valuation of this trade relationship. On the one hand, some analysts see it as a great opportunity to place Latin American products. On the other hand, others have remarked the deindustrialization of exports and the growing the commodities in the basket. In this context, the work intends to contribute a further element to the debate, based on a quantitative analysis through the estimation of the bilateral elasticities of trade between China and three countries of the region, Argentina, Brazil, and Uruguay for the period 1997-2019.

This view allows us to understand to what extent this trade favors (or not) the growth of the countries based on an analysis of the impact of the partner's import basket in the face of an increase in national income.

Keywords: Elasticities – Latin America – Development – China – International Trade.

1.- Introducción

Los debates sobre la forma de la inserción económica en América Latina son un tema recurrente tanto en las mesas académicas como políticas. Desde que en los años '50 del siglo pasado los teóricos estructuralistas cuestionaron con fuerza las lógicas de la especialización del comercio internacional y vincularon dicha división internacional del trabajo con la falta de desarrollo en la región, los debates no han cesado (véase Prebisch, 1959; Dosman, 2010).

Esta discusión ha ido generando distintas posiciones que, estilizadas, también dan cuenta de un conjunto de premisas que vinculan las factibilidades económicas con los modelos políticos y societales que cada corriente sostiene. Así diversas imágenes han ido recorriendo nuestra historia: Desde ser el granero o supermercado del mundo, hasta orientarse por la construcción de cadenas regionales de valor a partir de la coordinación de los complejos científicos tecnológicos, muchas han sido las ideas que se han construido para ejemplificar, desde la política, pero también desde la economía, el modelo de país deseado.

A nivel regional, este debate fue presentado en los últimos años como un motivo de quiebre entre los países. Particularmente se mencionaba con fuerza la presencia de un eje Pacífico, asociado al libre comercio y a experiencias como la Alianza del Pacífico, o el Nafta (actual T-MEC) y un eje Atlántico, con el MERCOSUR como bandera, vinculado a un modelo más proteccionista que atrajo, entre otros, a la Venezuela de Hugo Chávez y a la Bolivia de Evo Morales (Sanahuja, 2017). Hoy, tras cambios de gobiernos y convulsiones políticas en diversos países, esta fractura es difícil

de observar, pero sin embargo la lucha por las formas de inserción internacional asociadas a la ideología, perduran.

Es decir, que en el marco de las discusiones sobre las mejores estrategias para la inserción internacional de los países de la región permea con mucha fuerza un conjunto de premisas teóricas de cómo cada acción afectaría o beneficiaría al país. El problema es que, en ocasiones, estas conclusiones son planteadas sin construir por detrás herramientas que permitan observar la forma en que efectivamente se moverán las distintas variables en juego, cómo puede ser el impacto de determinado acuerdo comercial en la estructura productiva local, o el desarrollo de las exportaciones frente al crecimiento del socio. Así, la idea sobre como debe suceder el fenómeno reemplaza al análisis concreto de los datos.

En este contexto, el objetivo de este trabajo es sencillo y a la vez complejo. La propuesta es analizar el impacto comercial del crecimiento chino en la región a partir del estudio de las elasticidades bilaterales de comercio, haciendo foco en las elasticidades de ingreso por sobre las de precio.

Es decir, el trabajo se interroga sobre cuál será la reacción de las exportaciones latinoamericanas ante un crecimiento chino y, en sentido opuesto, cómo el crecimiento doméstico impactará en las importaciones chinas a la región En nuestra hipótesis, siguiendo a Jonhson (1958) sostenemos que la asimetría en las elasticidades de ingresos generará un intercambio desigual que actuará como techo para el crecimiento en los países de la región. Para testear esta hipótesis se tomarán los casos de Argentina, Brasil y Uruguay para

el período 1997-2019[1], dejando la puerta abierta a futuras aproximaciones a otros países.

La razón de porque estudiar el comercio con China no merece mayores comentarios. Luego de la reforma de 1978, China se ha transformado en un importante jugador en la geopolítica mundial debido a su poderío económico, demográfico, militar, político y comercial. Si el siglo XIX fue de Inglaterra, el siglo XX fue de Estados Unidos, el siglo XXI será de China (Chow, 2002; Shenkar, 2009). En particular, la demanda china de commodities para sostener su proceso de industrialización ha tenido un gran impacto económico y comercial en la región, convirtiéndose en uno de los fenómenos más relevantes con respecto al desarrollo productivo desde las teorías de posguerra sobre la industrialización vía sustitución de importaciones.

Con esta realidad de fondo, están aquellos que sostienen que América Latina tiene una estructura productiva complementaria a la China, con lo cual, habría ganancias en el intercambio para ambas naciones. Por otro lado, están aquellos que señalan que se estaría en un proceso de fragilidad externa y desindustrialización debido a la elevada dependencia de las materias primas y a la apreciación de los tipos de cambios (Frenkel y Rapetti, 2011). La cuestión de fondo es si China representara para Latinoamérica una oportunidad o una amenaza (Véase Lederman, Olarreaga y Perry, 2009), cuestión que, pese al paso del tiempo, aún no está saldada.

1 El comienzo del período a analizar se vincula con la disponibilidad de datos en los países seleccionados. Desde este año (1997) se pueden generar series homogéneas para el análisis, en especial para el Tipo de cambio real. El año final, 2019, es el último previo a la pandemia. Consideramos que los años 2020-2021 no pueden ser utilizados por los hechos extraordinarios que sucedieron.

La razón por la cual estudiar el caso a partir del uso de elasticidades de ingreso si merece mayor desarrollo El estudio cuantitativo del comercio mediante elasticidades es una de las áreas de investigación más proliferas en economía internacional desde la posguerra junto con los modelos gravitacionales (Imbs y Mejean, 2010). En la academia anglosajona la literatura académica es voluminosa mientras que, en Latinoamérica, el tema ha despertado mucho menos interés tanto en los hacedores de políticas como en los académicos. En consecuencia, el análisis empírico ha sido limitado. Comenzar a desandar ese camino es uno de los objetivos del trabajo.

La centralidad del uso de las elasticidades de ingreso se debe a su capacidad de simular el impacto del comercio internacional en el crecimiento económico y a su vez, proyectar las potenciales consecuencias, por ejemplo, de la firma de tratados internacionales centradas en rebajas arancelarias. De esta forma, observando la elasticidad ingreso tanto de las exportaciones como de las importaciones se puede obtener una mirada clara de que tipo de inserción internacional provocaría a un aumento del déficit comercial (o su contrario, el superávit) generando un freno (o un impulso) al crecimiento.

Con elasticidades ingresos de importaciones elevadas cualquier crecimiento económico actuará a la vez como una espada de Damocles en término no sólo de equilibro de divisas, sino también de diversificación productiva, sobre todo si su contraparte, la elasticidad de ingreso de exportaciones, se mueve mucho más moderadamente (como sostiene la Ley de Engel).

En este contexto, el trabajo se organiza de la siguiente manera. La sección 2 ofrece una breve reseña del marco teórico sobre elasticidades de comercio. La sección 3 presenta

los datos y los modelos a estimar. La sección 4 ofrece un análisis de los resultados obtenidos. Finalmente, la sección 5 suministra las conclusiones.

2.- Marco teórico sobre elasticidades y restricción externa

El estudio teórico y aplicado de las elasticidades de comercio ha sido desde la posguerra una de las áreas de investigación más activas en economía internacional. Dos enfoques han sido utilizados para el análisis cuantitativo del comercio y el crecimiento, uno denominado tradicional ("mainstream") y otro llamado alternativo ("heterodoxo"). El primero se relaciona a los aportes de Johnson, Houthakker y Krugman mientras que el segundo se basa en Harrod, Kaldor y Thirlwall.

2.1.- De la posguerra a Houthakker y Magee (1969)

La segunda guerra mundial puso al comercio internacional en el centro del interés académico. Con la creación del Fondo Monetario Internacional en 1945 producto de los acuerdos de Bretton Woods en 1944 aparece una de las áreas de investigación más importantes: los Staff Papers. Como señalan Blejer et al (1995) en el cincuenta aniversario de la institución, las elasticidades de comercio fue uno de los 3 temas centrales de interés para la institución.

Una de las preocupaciones en esos años de pre y posguerra, era el valor de las elasticidades precios de exportaciones e importaciones. Las estimaciones de aquellos años señalaban valores muy bajos apareciendo el concepto "Pessimism Elasticity" (Véase Orcutt, 1950; Krugman, 2016). Esto radicaba en el no cumplimiento de la condición Marshall-Lerner (la suma de elasticidades precios de exportaciones e importa-

ciones no era superior a la unidad: $\varepsilon_x + \varepsilon_m < 1$). Es decir, las devaluaciones podrían no corregir una balanza comercial deteriorada. En Latinoamérica, las relaciones entre devaluaciones y crecimiento se conocieron bajo el modelo de "stop and go" ("pare y siga"). En estos ciclos la balanza de pagos le imponía un techo al crecimiento de la economía (véase Gerchunoff, 2007).

En este contexto de crecimiento del comercio mundial, Johnson (1958) generó una gran controversia con un modelo de intercambio bilateral entre dos países. Bajo los supuestos de crecimiento a la misma tasa de inflación, precios relativos y PIB, aquel país que tuviera una elasticidad ingreso de importaciones mayor tendría un deterioro de la relación comercial. Es decir, sus importaciones crecerían por encima de sus exportaciones y tendría un déficit comercial. El desarrollo de Jonhson fue emblemático por dos motivos. Por un lado, el comercio podría ser desigual y perjudicar a uno de los socios comerciales (dejaría de ser mutuamente beneficioso y sería un juego de suma cero,). Esta línea fue desarrollada años después por los partidarios del intercambio desigual, como Emmanuel (desde un enfoque marxista). Por otro lado, el eje pasó de las elasticidades precios a las elasticidades ingresos. Si bien la condición Marshall-Lerner siguió siendo relevante, el ingreso ocupo una posición más importante que los precios relativos.

En continuidad con esta idea, el análisis de Houthakker y Magee (1969) se transformó con los años en un trabajo clásico por varios motivos. Primero, señala que las elasticidades ingresos son tan o más relevantes que las elasticidades precios. Segundo, obtienen que las elasticidades ingresos de importaciones suelen ser en algunos países más elevadas que las elasticidades ingresos de exportaciones. Esto era válido para Estados Unidos e Inglaterra mientras que lo contrario

sucedía con el país estrella de esos años, Japón, que tenía una elasticidad ingreso de exportaciones que duplicaba a la elasticidad ingreso de importaciones. Tercero, pronostica un profundo déficit comercial para Estados Unidos por el desbalanceado patrón de elasticidades de comercio.

Una enorme literatura empírica y econométrica aparece entre fines de los sesenta y especialmente durante los setenta, extendiendo el estudio clásico de Houthakker y Magee (1969) a otros países, periodos de tiempo, e incorporando otras variables. En términos generales, las elasticidades de comercio solo tenían como finalidad predecir o explicar una balanza comercial deficitaria. Junto con la condición Marshall-Lerner formaron parte del enfoque neoclásico de elasticidades de comercio.

2.2.- Thirlwall (1979) y el nacimiento de una ley económica

Una década después del articulo seminal de Houthakker y Magee, Thirlwall (1979) provocó una revolución en los modelos post-keynesianos sobre las relaciones entre balanza de pagos y crecimiento al introducir el estudio de las elasticidades de comercio dentro de una teoría general sobre el desarrollo económico que se conoció como modelo de crecimiento restringido por la balanza de pago. La conclusión general que ofrece el trabajo de Thirlwall es que el crecimiento depende positivamente de la elasticidad ingreso de exportaciones y el crecimiento de los socios comerciales, mientras que negativamente de la elasticidad ingreso de las importaciones. En un patrón de elasticidades como el latinoamericano (véase Albornoz, 2018), una restricción externa al crecimiento aparece en este contexto.

El modelo de Thirlwall apareció en un periodo de repliegue de las teorías keynesianas y de descredito de las políticas de demanda agregadas. A pesar de las poderosas predicciones de la Ley de Thirlwall, conectando balanza de pagos con crecimiento, es decir, equilibrio externo con equilibrio interno, el ambiente académico de la época no fue propicio para que lograse un reconocimiento más allá de los sectores o ambientes académicos *"no mainstream"*.

Reseñar la literatura sobre Thirlwall y sus derivados es prácticamente imposible. Así como sucedió con Houthakker y Magee (1969), una amplia cantidad de artículos académicos prolífero a partir del trabajo seminal de Thirlwall. Variables como los flujos de capitales, la deuda, los términos de intercambios, los productos, las relaciones norte y sur, etc, extendieron y ampliaron el trabajo original. La Ley de Thirlwall soportó el paso del tiempo con éxito a pesar de algunas críticas (Para una discusión, véase Blecker y Setterfield, 2019). Como señala Setterfield (2015), es innegable la notable resiliencia y vigencia de la Ley de Thirlwall a la diversidad de países, periodos de tiempo, metodologías de estimación y variables incluidas.

La obra de Thirlwall se inserta dentro de los enfoques que privilegian a la demanda sobre la oferta. De hecho, las exportaciones son uno de los componentes más relevantes para explicar el crecimiento económico. Esto contrasta con el enfoque ortodoxo que privilegia la oferta. Para Thirlwall, elevadas elasticidades ingresos de exportaciones (y reducidas elasticidades ingresos de importaciones) son las que impulsan el crecimiento liderado por el comercio exterior (Véase, Thirlwall, 2003). Mientras que, para el otro enfoque, sucede lo contrario. Esta discusión será retomada a continuación.

2.3.- Krugman (1988) y el triunfo del enfoque ortodoxo

La obra de Krugman se centra en comercio internacional y quizás por este motivo, ha opacado o ha contribuido de manera indirecta, a la falta de reconocimiento de la obra de Thirlwall. Tanto por omisión como por acción. Por omisión porque su artículo de 1988 evita al trabajo de Thirlwall y vuelve al análisis clásico de Johnson (1958) y Houthakker y Magee (1969). De ahí deriva su regla de 45 e inserta la explicación en cuestiones de oferta: competencia imperfecta, diferenciación de productos y retornos crecientes a escala. Por acción porque en su artículo (y en ninguno de los siguientes) no cita ni menciona a la obra de Thirlwall y sus seguidores. Es una constante en toda la literatura del mainstream, la ausencia de la teoría del crecimiento restringida por la balanza de pagos a pesar de que Krugman publicó dos artículos sobre la cuestión de la restricción externa. Uno sobre la crisis de balanza de pagos y otro sobre devaluaciones contractivas (Krugman y Taylor, 1976; Krugman, 1979).

Un aspecto llamativo del artículo de 1988 es que supone que el crecimiento es exógeno (a lo Solow) cuando ya habían aparecido los primeros modelos de crecimiento endógeno basados en el trabajo seminal de Romer (1986). De hecho, una de las críticas al estudio es que no explica que determina la tasa de crecimiento del producto, y está a las elasticidades. En realidad, señala que tiene que ver con cuestiones de competencia imperfecta, pero no deja de ser un modelo dentro de la familia solowiana.

Si bien el artículo de Krugman se centra sobre el tipo de cambio, señala que este tendría muy bajas oscilaciones porque existiría una regularidad empírica, un hecho estilizado, que denominó "regla de 45 grados". Algo que se podría extraer

del trabajo de Houthakker y Magee (1969) pero Krugman lo hace aún más explícito. Los países de alto crecimiento tendrían elevadas elasticidades ingresos de exportaciones. Pone como ejemplo a Japón que, en esos años, transitaba la última etapa de alto desempeño exportador antes del estancamiento a partir de los noventa.

Krugman establece unas relaciones entre el PIB doméstico y del resto del mundo, y las elasticidades ingresos de exportaciones e importaciones. Nuevamente, el centro de interés son las elasticidades ingresos y no las elasticidades precios. Algo señalado por Johnson (1958) y Houthakker y Magee (1969) varias décadas atrás. Las relaciones se expresan de la siguiente manera: $\frac{y}{y_f} = \frac{\eta_x}{\eta_m}$

El trabajo de Krugman apareció durante el nacimiento de los modelos de crecimiento endógeno, en términos académicos mientras que, en términos políticos, durante la caída del régimen comunista y el auge del ultra-capitalismo, algo que sucedería con la caída del muro de Berlín en 1989 y de la URSS en 1991. Las ideas de Krugman (relacionadas con competencia imperfecta, diversificación de productos y retornos crecientes) estaban más en tono con la época que se avecinaba (los noventa) que con las ideas en las cuales estaba inserta la Ley de Thirlwall (los setenta).

Thirlwall (1991) realiza una devolución, una réplica al trabajo de Krugman. Pero no hay respuestas. Ninguno de los autores en la línea de Krugman o Houthakker y Magee ofreció una explicación o inicio un debate entre las ideas de los dos modelos económicos. A pesar de que como señala, Garbacik (2010), matemáticamente ambos desarrollos son idénticos. Mientras que Thirlwall se enfoca en la demanda, Krugman lo hace desde la oferta. De hecho, la restricción

externa que propone el modelo de Thirlwall es de demanda, no de oferta, como señala Vernengo (2015).

Lo que está detrás del patrón de elasticidades, señala Thirlwall es la estructura productiva de la economía. Aquellos países que producen y exportan *commodities*, tendrían bajas elasticidades ingresos de exportaciones y altas elevadas ingresos de importaciones. Lo inverso sucedería con economías industrializadas que producen bienes con valor agregado, al estilo de Asia oriental (China principalmente de interés para nuestro estudio y otros como Corea del Sur y Japón).

3.- El modelo y los datos

Los estudios empíricos utilizan un modelo estándar para estimar elasticidades de comercio internacional (Goldstein y Khan, 1985). Se postula una función de demanda simple que relaciona cantidades, precios e ingresos, en términos logarítmicos, también denominada log-lineal (Véase Brooks, 1999; Goldstein y Khan, 1976). La literatura académica reciente adopta esta metodología (Berrettoni y Castresana, 2009; Guardarucci y Puig, 2012; Zack y Dalle, 2014 y 2016; Albornoz, 2018).

El objetivo de esta sección es presentar la estrategia de estimación que permitirá cuantificar el impacto de China en el comercio exterior de los países de América Latina. Es decir, si existe una super elasticidad de importaciones y si el comercio bilateral con China es beneficioso o perjudicial para los países de la muestra, en especial para Argentina.

En el caso de las importaciones, se postulan dos ecuaciones de comercio, (1) el modelo estándar clásico y (2) el modelo

incorporando la variable arancel a las importaciones, donde PIB es el producto doméstico y TCRB el tipo de cambio real bilateral.

$$\ln M_{i,t} = \beta_1 + \beta_2 \ln PIB_{i,t} + \beta_3 \ln TCRB_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\ln M_{i,t} = \beta_1 + \beta_2 \ln PIB_{i,t} + \beta_3 \ln TCRB_{i,t} + \beta_4 \ln Arancel_{i,t} + \varepsilon_{i,t} \quad (2)$$

Las importaciones suelen depender del PIB doméstico y del tipo de cambio real bilateral. Un incremento del PIB estimulará las importaciones, mientras que una suba del tipo de cambio real bilateral hará caer las compras externas, pero en una cuantía menor. Donde i representa al país en análisis (Argentina, Brasil o Uruguay).

En el caso de las exportaciones, el análisis es similar, postulándose las siguientes ecuaciones, donde (3) es el modelo estándar y (4) el modelo que incorpora la variable arancel a las importaciones.

$$\ln X_{i,t} = \beta_1 + \beta_2 \ln PIBChina_{i,t} + \beta_3 \ln TCRB_{i,t} + \varepsilon_{i,t} \quad (3)$$

$$\ln X_{i,t} = \beta_1 + \beta_2 \ln PIBChina_{i,t} + \beta_3 \ln TCRB_{i,t} + \beta_4 \ln Arancel_{i,t} + \varepsilon_{i,t} \quad (4)$$

La literatura ha ido incorporando nuevas variables explicativas, tanto para las exportaciones como para las importaciones, por ejemplo, la volatilidad del tipo de cambio real, el uso de la capacidad instalada, los derechos de exportación, los aranceles a las importaciones, etc. En este trabajo, junto con las variables "ingresos" y "precios" se incorporará la variable arancel. Adicionalmente se utilizarán variables binarias por trimestre para captar efectos estacionales.

Se utilizará la metodología de cointegración desarrollada por Engle y Granger (1987) para las estimaciones de corto y largo plazo de las ecuaciones de exportaciones e importa-

ciones. Es necesario que las series tengan el mismo grado de integración (se realizarán las pruebas de Raíz Unitaria para analizar el grado de integración de las variables, teniendo que ser las mismas de orden 1 en niveles y de orden 0 en primeras diferencias, como expresa la teoría econométrica) y en el caso que los residuos sean estacionarios (ruido blanco), las variables estarían cointegradas.

Enders (2010) señala que, si las variables son no estacionarias, pero están cointegradas, una regresión OLS produce estimadores "súper consistentes" de parámetros cointegrados βi y éstos convergen más rápidos que en un modelo de variables estacionarias.

Las ecuaciones (1) a (4) son las estimaciones de las relaciones de largo plazo para las ecuaciones de comercio de las cuales se extraen los residuos, que permiten construir un modelo de corrección de errores (ECM), también denominado de corrección al equilibrio (modelo de corto plazo).

Las ecuaciones de corto plazo vienen dadas por (5) y (6), las cuales se expresan en primeras diferencias e incorporan el término de corrección de errores, que son los residuos de las ecuaciones de largo plazo, desfasados un periodo. El signo de αi debe ser negativo y estadísticamente significativo, e indica cuanto del desequilibrio de corto plazo se corrige en cada periodo. De las ecuaciones (5) y (6) se estimarán dos modelos, uno sin la variable arancel y otra incorporándola.

$$\Delta \ln M_{i,t} = \alpha_1 + \alpha_2 \hat{e}_{t-1} + \sum_{j=1} b_j \Delta \ln PIB_{i,t} + \sum_{j=1}^{n} c_j + \Delta \ln TCRB_{i,t} + \varepsilon_{i,t} \quad (5)$$

$$\Delta \ln M_{i,t} = a_0 + \alpha_2 \hat{e}_{t-1} + \sum_{j=1} b_j \Delta \ln PIBChina_{i,t} + \sum_{j=1}^{n} c_j + \Delta \ln TCRB_{i,t} + \varepsilon_{i,t} \quad (6)$$

Urbisaia y Brufman (2001) señalan que los modelos con término o mecanismo de corrección de errores surgieron ante la necesidad de especificar relaciones con flexibilidad suficiente para captar el comportamiento dinámico de la economía, sin pérdida de información respecto a las relaciones de equilibrio de largo plazo.

Con respecto a los datos, se tomó el periodo 1997-2019, con observaciones trimestrales para Argentina y anuales para Brasil y Uruguay. Las fuentes de información fueron el Banco Central de la República Argentina (BCRA), el Instituto Nacional de Estadística y Censos (Argentina), el Banco Mundial y la CEPAL.

4.- Los resultados de las estimaciones y la super elasticidad de importaciones

El principal resultado del trabajo es la existencia de una "super elasticidad" ingreso de las importaciones para todos los países. Para el caso de Argentina, la misma fue de 5.5. Es decir que por cada punto que crezca el PIB argentino, las importaciones chinas lo harán en un 5,5%. Para Brasil y Uruguay los valores fueron de 7,4 y 5.3 respectivamente. Resultados similares pueden encontrarse en Zack y Dalle (2016) en su análisis del comercio bilateral de Argentina con sus principales socios comerciales.

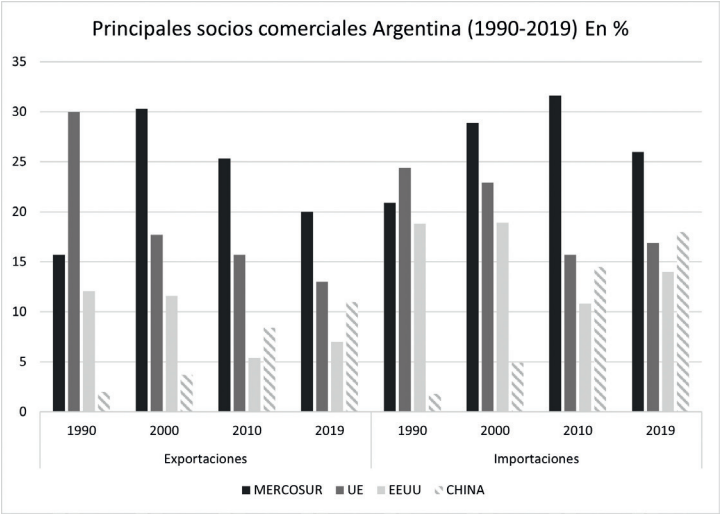
Con respecto a las elasticidades totales de Argentina (Véase la Tabla 1) en las dos variantes ("sin aranceles" y "con aranceles") se observa una baja elasticidad ingreso de exportaciones ("inelástica") y una elevada elasticidad ingreso de importaciones ("super elasticidad"). En términos económicos, cuando el PIB de China crece 1%, las exportaciones argentinas aumentarían por debajo de 1% mientras

que cuando el PIB de Argentina crece 1%, las importaciones desde China subirían por encima del 5%. Este patrón de elasticidades es muy adverso para Argentina y representa una debilidad para establecer intercambios comerciales mutuamente beneficiosos.

Este resultado es relevante al analizar la incidencia de China en el comercio argentino actual. El Grafico 1 describe la participación de China en las exportaciones e importaciones de Argentina. De ella surge que, durante la década del noventa, la participación china en las exportaciones argentinas era marginal explicando solamente el 2% del total, llegando al 4% al iniciar la década siguiente. A partir del ingreso de China en la Organización Mundial del Comercio y el renacimiento de las relaciones comerciales entre ambos países (debido a la demanda china de *commodities* como así también a la reorientación de la política exterior argentina en una lógica más confrontativa con los Estados Unidos y Europa Occidental), estos números vuelven a crecer alcanzando en 2010 al 8% y en 2019 al 12% respectivamente.

Sin embargo, este crecimiento parece poco si se lo compara con la participación china en las importaciones argentinas, la cual tras realizar un recorrido similar al de las exportaciones argentinas hasta el año 2000, tienen un gran crecimiento en la década subsiguiente. China como proveía el 14% de las importaciones en 2010 y el 18% en 2019. Como correlato evidente de esta situación, en este último año marcado (previo a la pandemia) el déficit comercial de Argentina con China alcanzó los US$8.000 millones. China es el socio comercial que representa la mayor sangría de divisas por año para Argentina. Es un patrón de elasticidades ingresos adverso al desarrollo.

Gráfico 1



Fuente: Elaboración propia en base a INDEC

Se establece la expresión "super elasticidad" para relacionarlo con el enfoque tradicional de oferta y demanda. En la teoría de la demanda, específicamente en el análisis de elasticidad ingreso-demanda, se señala que si la elasticidad es inferior a 1 el bien es "inferior" mientras que si es positiva el bien es "normal". A su vez, en este último caso, si la elasticidad está entre 0 y 1 el bien es normal "necesario" mientras que si la elasticidad es mayor a 1 se dice que el bien es normal "de lujo".

La elasticidad del arancel fue negativa y estadísticamente significativa tanto en las exportaciones como importaciones. Esto indica que la baja arancelaria estimularía el comercio internacional pero dado el patrón de elasticidades ingresos mencionado, el comercio se volvería desigual para Argentina y el mayor crecimiento de las importaciones con respecto a las importaciones provocaría una tendencia estructural al déficit

comercial, algo que los datos validan. Cuanto mas bajo sea el arancel a las importaciones, más alta será la elasticidad ingreso de importaciones.

Tabla 1. Elasticidades bilaterales de comercio para Argentina

EXPO (Sin aranceles)		
	Largo plazo	Corto plazo
PIB China	0.707***	2.757
	(0.061)	(1.770)
TCRB	1.011***	-0.092
	(0.209)	(0.443)
TCE		-0.578***
		(0.088)
Obs	92	91
R2	0.793	0.81

IMPO (Sin aranceles)		
	Largo plazo	Corto plazo
PIB Arg	5.542***	1.563***
	(0.119)	(0.334)
TCRB	-0.122	-0.660***
	(0.096)	(0.184)
TCE	-0.122	-0.484***
	(0.096)	(0.081)
Obs	92	91
R2	0.974	0.733

EXPO (Con aranceles)		
	Largo plazo	Corto plazo
PIB China	0.522***	1.25
	(0.061)	(1.723)
TCRB	0.601***	-0.076
	(0.185)	(0.444)
Arancel	-2.585***	-1.859**
	(0.452)	(0.842)
TCE		-0.753***
		(0.099)
Obs	92	91
R2	0.853	0.833

IMPO (Con aranceles)		
	Largo plazo	Corto plazo
PIB Arg	5.280***	1.622***
	(0.136)	(0.298)
TCRB	-0.264***	-0.653***
	(0.108)	(0.180)
Arancel	-0.717***	-0.231
	(0.254)	(0.484)
TCE		-0.549***
		(0.077)
Obs	92	91
R2	0.976	0.75

Fuente: Elaboración propia en base a datos de BCRA e INDEC

La Tabla 2 ofrece las elasticidades para el caso de Brasil. Nuevamente, se aprecia la dominancia del efecto ingresos sobre el efecto precios y la existencia de una super elasticidad de importaciones. La elasticidad ingreso de exportaciones fue de 2.4 (cuando China crece 1%, las exportaciones de Brasil crecen 2.4%), mientras que la elasticidad ingreso de importaciones fue de 7.4 (cuando el PIB de Brasil crece 1%, las importaciones desde China crecerían 7.4%). Con respecto al arancel, en todas las variantes resultó ser negativo y estadísticamente significativo, destacándose en las importaciones, donde el valor fue de 1.5 (la baja del arancel estimularía las importaciones desde China en un 1.5%).

Tabla 2. Elasticidades bilaterales de comercio para Brasil

EXPO (Sin aranceles)		
	Largo plazo	Corto plazo
PIB China	2.426***	7.533***
	(0.133)	(2.833)
TCRB	-0.497	-0.089
	(1.323)	(0.776)
TCE		-0.310**
		(0.127)
Obs	23	22
R2	0.947	0.327

IMPO (Sin aranceles)		
	Largo plazo	Corto plazo
PIB Bra	7.425***	8.842***
	(0.211)	(0.663)
TCRB	-1.448***	-0.423
	(0.607)	(0.396)
TCE		-0.406**
		(0.153)
Obs	23	22
R2	0.985	0.869

EXPO (Con aranceles)		
	Largo plazo	Corto plazo
PIB China	0.522***	1.25
	(0.061)	(1.723)
TCRB	0.601***	-0.076
	(0.185)	(0.444)
Arancel	-2.585***	-1.859**
	(0.452)	(0.842)
TCE		-0.753***
		(0.099)
Obs	92	91
R2	0.853	0.833

IMPO (Con aranceles)		
	Largo plazo	Corto plazo
PIB Arg	5.280***	1.622***
	(0.136)	(0.298)
TCRB	-0.264***	-0.653***
	(0.108)	(0.180)
Arancel	-0.717***	-0.231
	(0.254)	(0.484)
TCE		-0.549***
		(0.077)
Obs	92	91
R2	0.976	0.75

Fuente: Elaboración propia en base a datos del Banco Mundial y la CEPAL

Finalmente, la Tabla 3 describe las elasticidades bilaterales de comercio entre Uruguay y China, dato sumamente interesante en virtud del proclamado interés del gobierno de ese país de encarar un acuerdo de libre comercio con el gigante asiático. Los resultados generales son los usuales: el efecto ingreso dominando el efecto precios y las elasticidades ingresos de importaciones superiores a las elasticidades precios de exportaciones. Nuevamente, en el caso uruguayo también se obtuvo la "super elasticidad" ingreso de importaciones, con un valor de 5.3 (cuando el PIB de Uruguay crece 1%, las importaciones desde China suben un 5.3%), mientras que la elasticidad ingreso de exportaciones fue de 1.8 (cuando China crece 1%, las exportaciones de Brasil crecen 1.8%). En la variante con el arancel, en la ecuación de importaciones el coeficiente es negativo y estadísticamente significativo, -4.1.

Tabla 3. Elasticidades bilaterales de comercio para Uruguay

EXPO (Sin aranceles)		
	Largo plazo	Corto plazo
PIB China	1.843***	-3.592
	(0.150)	(2.104)
TCRB	2.598***	-0.29
	(1.010)	(0.382)
TCE		-0.639***
		(0.054)
Obs	23	22
R2	0.915	0.576

IMPO (Sin aranceles)		
	Largo plazo	Corto plazo
PIB Uru	5.343***	5.846***
	(0.428)	(1.053)
TCRB	-3.393***	-1.291***
	(1.570)	(0.651)
TCE		-0.158
		(0.099)
Obs	23	22
R2	0.886	0.552

EXPO (Con aranceles)		
	Largo plazo	Corto plazo
PIB China	2.171***	-0.94
	(0.218)	(2.040)
TCRB	1.231	-0.82
	(0.184)	(0.706)
Arancel	1.511**	1.046
	(0.672)	(0.819)
TCE		-0.657***
		(0.119)
Obs	23	22
R2	0.926	0.481

IMPO (Con aranceles)		
	Largo plazo	Corto plazo
PIB Uru	3.136***	3.430***
	(0.292)	(1.223)
TCRB	2.193**	0.591
	(0.980)	(0.905)
Arancel	-4.110***	-2.088***
	(0.479)	(0.850)
TCE		-0.590***
		(0.189)
Obs	23	22
R2	0.972	0.699

Fuente: Elaboración propia en base a datos del Banco Mundial y la CEPAL

En síntesis, se aprecia que los resultados obtenidos en este trabajo están en consonancia, tanto con la evidencia empírica

clásica (Houthakker y Magee, 1969; Krugman, 1988) como con los nuevos y recientes hallazgos en Latinoamérica (Castresana y Berrettoni, 2009; Guardarucci y Puig, 2012; Zack y Dalle, 2016). El efecto ingreso domina al efecto precios y las elasticidades ingresos de importaciones son superiores a las elasticidades ingresos de exportaciones.

Un hallazgo del trabajo que merece más análisis es la existencia de esta "super elasticidad" ingreso de las importaciones que se encontraron para los tres países. Mirando al futuro, una preocupación que emerge tanto de los datos como de las estimaciones econométricas es el creciente desequilibrio comercial entre los países reseñados debido a este patrón desigual de elasticidades bilaterales de comercio con China. A la inversa de las enseñanzas de la vieja CEPAL en la época de Prebisch, América Latina estaría yendo hacia el camino opuesto: primarizando sus exportaciones (la única fuente genuina de divisas en el largo plazo), quedando sujeto a la enorme volatilidad de los precios de las materias primas (tesis Prebisch- Singer). Aunque hoy el ciclo es positivo y expansivo (se ubica en la etapa favorable), los vientos pueden cambiar de forma inesperada. Como sostienen algunos autores, la consolidación de China como principal socio comercial de los países de Latinoamérica plantea el interrogante si habrá intercambios comerciales mutuamente beneficiosos. Es decir, si China representara una nueva oportunidad para la región, o una nueva amenaza, como sostienen otros autores. Esta área de investigación merece más análisis en el futuro, en especial desagregando por categorías y/o productos. En una región con baja calidad estadística, el desafío es considerable, pero vale la pena ir en esa dirección.

5.- Conclusiones

Enfrascada en su eterna discusión sobre modelos de desarrollo e inserción internacional, América Latina se encamina a un complejo escenario. Mientras asistimos a una transición geopolítica global y al intento de las potencias occidentales por sostener su influencia en el subcontinente, el crecimiento chino (no nuevo, pero si tendencialmente cada vez más importante) abre interrogantes sobre el destino de la región en un mundo hegemonizado por el Asia-Pacífico.

El diagnóstico sobre lo que eso significa para la región aún no está claro, aunque dos elementos parecen ser evidentes. Por un lado, el alto grado de complementariedad de ambas economías. Por otro lado, el profundo sesgo primarizador y deficitario de la relación al menos tal como se observa en su etapa actual para el caso de los países seleccionados. Ambas premisas, pueden servir entonces para planear escenarios futuros tanto venturosos como apocalípticos. Lo que se buscó en este trabajo es acercar una mirada fundada sobre ese porvenir en base a datos.

Para ello, el trabajo realizó estimaciones econométricas de elasticidades bilaterales de comercio entre los tres países de la región (Argentina, Brasil y Uruguay) con China. De este modo, se pudieron obtener resultados interesantes, particularmente lo que se ha denominado una "super elasticidad" ingreso de importaciones, que implica que por cada punto del PBI que crezca en estos países, las importaciones chinas lo harán en un valor superior al 5%.

Utilizando el modelo de Thirlwall, este patrón de intercambio comercial (con las canastas de exportaciones e importaciones compuestas tal como se observan actualmente

a partir de la lógica complementaria y primarizadora de la relación sino-latinoamericana), lleva inexorablemente a una restricción del crecimiento. Restricción que será mayor en tanto y en cuenta el peso del gigante asiático sea más decisivo en nuestras economías.

Esta situación se agrava, por ejemplo, ante el planteo desintegrador del MERCOSUR promovido en los últimos años ya que ha quedado comprobado que la baja arancelaria refuerza el fenómeno descripto, o la falta de acción conjunta de la Alianza del Pacífico (Levi Coral y Reggiardo, 2016). Es cierto que otros trabajos (Paikin, y Dulcich, 2017) ya han demostrado que el MERCOSUR actual, aún previo a las modificaciones arancelarias recientemente impuestas, no había sido una barrera para el ingreso chino en el comercio intra regional. De hecho, todos los datos aquí recogidos son de períodos previos a la flexibilización.

Sin embargo, fomentar la desintegración no parece de ninguna manera ir en el camino de la solución de este difícil panorama. La salida, en todo caso, debe ser pensada en conjunto, promoviendo cambios en los patrones de intercambio de modo tal de generar las bases para la construcción de una canasta exportadora que reaccione favorablemente ante el crecimiento del ingreso de los socios comerciales como China. Y eso se logra con la incorporación de mayor valor agregado y tecnología en la misma. Por supuesto, esto no es una tarea sencilla, ni a corto plazo, pero sin dudas es más factible sentarse a la mesa de discusión con China desde una voz unificada antes que desde la lógica bilateral. A esta unidad comercial habrá que agregar otras mesas más políticas que puedan ampliar los temas en debate para equilibrar intereses. Por ello, el sostenimiento de una agenda activa en la Comunidad de Estados Latinoamericanos y Caribeños (CELAC) es

una buena señal en tanto es el único foro que, como región, se sienta a la mesa con el gigante asiático.

En síntesis, el debate sobre el signo que tomará la mayor influencia china en las economías latinoamericanas aún está en el aire. Pero sin dudas, el planteo de nuevas lógicas de intercambio (y también la construcción de una nueva oferta atractiva por parte de los países de la región) serán determinantes para inclinar esta relación en el sendero del desarrollo con equidad.

Referencias bibliográficas

Albornoz, M. (2018). Elasticidades del comercio exterior en América Latina. Estimaciones para 1993-2014, Ciclos En La Historia, La Economía y La Sociedad, 50, 61-86.

Berrettoni, D. & Castresana, S. (2009). Elasticidades de comercio de la Argentina para el periodo 1993-2008.

Blecker, R. & Setterfield, M (2019). *Heterodox Macroeconomics*. Northampton: Edward Elgar Publising.

Blejer, M.; Khan, M. & Masson, P. (1995). Early Contributions of Staff Papers to International Economics. Celebrating Fifty Years of the International Monetary Fund". IMF Staff Paper, Special Edition, 42(4).

Brooks, T. (1999). Currency Depreciation and the Trade Balance: An Elasticity Approach and Test of the Marshall-Lerner Condition for Bilateral Trade between the US and the G-7. PhD Dissertation. The University of Wisconsin-Milwaukee.

Chow, G. (2002). *China's Economic Transformation*. New York: Wiley Blackwell.

Dosman, E. (2010). *La vida y época de Raúl Prebisch, 1901-1986*. Madrid: Universidad de Alcalá.

Enders, W. (1995). *Applied Econometric Time Series*. New York: Wiley.

Engle, R. & Granger, C. (1987). *Cointegration and Error Correction: Representation, Estimation and Testing.*

Frenkel, R. & Rapetti, M. (2011). Fragilidad externa o desindustrialización: ¿Cuál es la principal amenaza para América Latina en la próxima década? *Serie macroeconomía del desarrollo, 116, CEPAL.*

Garbacik, K. (2010). Thirlwall's Law and Krugman's 45-degree Rule: Mathematically Identical, Mutually Exclusive. Economics Undergraduate Honors Theses. Portland State University.

Gerchunoff, P. (2007). ¿Requiem para el stop and go?". Disponible en: https://nanopdf.com/download/requiem-para-elstop-and-go-requiem-para-el-stop-and-go_pdf

Goldstein, M. & Khan, M. (1976). Large Versus Small Price Changes and the Demand for Imports. IMF Staff Papers, 23(1), 200-225.

Goldstein, M. & Khan, M. (1985). Income and Price Effects in Foreign Trade. *Handbook of International Economics*, 2, 1041-1105.

Guardarucci, I. & Puig, J. (2012). Exportaciones en el Mercosur: Evidencia empírica sobre determinantes bajo el enfoque de las elasticidades del comercio exterior. RED Mercosur. Documento de trabajo Nº 3.

Houthakker, H. & Magee, S. (1969). Income and Price Elasticities in World Trade. *Review of Economics and Statistical,* 51 (2), 111-125.

Imbs, J. & Mejean, I. (2010). Trade Elasticities. *A Final Report for the European Commission. Economic Papers*, 432.

Johnson, H. (1958). *International Trade and Economic Growth: Studies in Pure Theory*. London: Allen and Unwin.

Krugman, P. & Taylor, L. (1978). Contractionary effects of devaluation. *Journal of International Economics*, 8, 445–456.

Krugman, P. (1979). A Model of Balance of Payments Crises", *Journal of Money, Credit and Banking,* 11 (3), 311-325.

Krugman, P. (1988). Differences in Income Elasticities and Trends in Real Exchange Rates. NBER. Working Paper N° 2761.

Krugman, P. (2016). The Return of Elasticity Pessimism (Wonkish). Recuperado de https://archive.nytimes.com/krugman.blogs.nytimes.com/2016/04/16/the-return-of-elasticity-pessimism-wonkish/

Lederman, D.; Olarreaga, M. & Perry, G. (2018). *China's and India's Challenge to Latin America: Opportunity or Threat?* Washington: The World Bank.

Levi Coral, M. y Reggiardo, G. (2016). La Alianza del Pacífico en el regionalismo sudamericano actual. *Revista Mexicana de Política Exterior*, 106, 108-204, SRE.

Orcutt, G. (1950). Measurement of Price Elasticities in International Trade. *The Review of Economics and Statistics*, 32(2), 117-132.

Paikin, D. & Dulcich, F. (2017) "El sexto socio del MERCOSUR. Un estudio sobre la penetración importadora china en el comercio intrarregional". *Revista Perspectivas en Políticas Públicas*, N° 12, julio de 2017, Lanús, Universidad Nacional de Lanús.

Palley, T.; Perez Caldentey, E. & Vernengo, M. (2021). *Thirlwall's Law at 40*. Edward Elgar Publishing.

Prebisch, R. (1959). Commercial Policy in the Underdeveloped Countries. *American Economic Review* 49 (2), 251-273. Revista de la CEPAL, 81, 157-174.

Romer, P. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy*, 94 (5), 1002-1037.

Sanahuja, J.A. (2017) Regionalismo e Integración en América Latina: de la fractura Atlántico – Pacífico a los retos de una globalización en crisis. *Revista Pensamiento Propio* 44, 29 – 75, CRIES.

Setterfield, M. (2015). The remarkable durability of Thirlwall's Law. *PSL Quarterly Review*, 64 (259), 393-427.

Shenkar, O. (2009). *El siglo de China*. Buenos Aires: Editorial Norma.

Thirlwall, A. (1979). The Balance of Payments Constraint as an Explanation of International Growth Rate Differences. *BNL Quarterly Review*, 32 (128), 45-53.

Thirlwall, A.P. (1991). Professor Krugman`s 45-Degree Rule. *Journal of Post Keynesian Economics*, 14 (1), 23-28.

Thirlwall, A.P. (2003). *Trade, the Balance of Payments and Exchange Rate Policy in Developing Countries*. Massachusetts: Edward Elgar Publishing.

Urbisaia, H. & Brufman, J. (2001). *Análisis de Series de Tiempo*. Buenos Aires: Ediciones Cooperativas.

Vernengo, M. (2015). Una lectura crítica de la crítica al modelo de Thirlwall. *Investigación Económica*, 74 (292), 67–80.

Zack, G. & Dalle, D (2014). Elasticidades del comercio exterior de la Argentina: ¿Una limitación para el crecimiento? *Revista Argentina de Economía Internacional*, 3, 31-46.

Zack, G. & Dalle, D. (2016). Elasticidades del comercio exterior de la Argentina: desagregando por socio comercial. *Revista Argentina de Economía Internacional*, 5, 3-19.

Anexo

Tabla A.1. Pruebas de raíces unitarias (ADF) para Argentina

Variable	Estadístico (Niveles)	P-Value	Estadístico (Diferencias)	P-Value
Expo	-1.07	0.72	-4.40	0.00
Impo	-1.05	0.73	-2.37	0.14
PIB Arg	-0.86	0.80	-2.67	0.07
PIB China	-1.15	0.69	-2.32	0.16
TCRB	-2.24	0.19	-2.59	0.09
Arancel	-1.72	0.41	-6.57	0.00

Fuente: Elaboración propia

Tabla A.2. Pruebas de raíces unitarias (ADF) para Uruguay

Variable	Estadístico (Niveles)	P-Value	Estadístico (Diferencias)	P-Value
Expo	0.00	0.95	-3.68	0.00
Impo	-1.34	0.61	-2.56	0.10
PIB Uru	-0.88	0.79	-4.03	0.00
PIB China	0.00	0.99	-3.70	0.00
TCRB	-2.49	0.11	-2.76	0.06
Arancel	0.00	0.99	-3.71	0.00

Fuente: Elaboración propia

Tabla A.3. Pruebas de raíces unitarias (ADF) para Brasil

Variable	Estadístico (Niveles)	P-Value	Estadístico (Diferencias)	P-Value
Expo	-1.37	0.59	-3.21	0.01
Impo	-1.07	0.72	-3.25	0.01
PIB Bra	-1.49	0.53	-2.22	0.18
PIB China	0.00	0.99	0.00	0.99
TCRB	0.00	0.99	0.00	0.99
Arancel	0.00	0.99	0.00	0.99

Fuente: Elaboración propia

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The Treatment of Cultural Services in Central American Countries' Preferential Trade Agreements*

El Tratamiento de los Servicios Culturales en los Acuerdos Comerciales Preferenciales del Países Centroamericanos

Gilbert Gagné**
Cassandre Nycz**

Abstract

Cultural products (including goods and services) encompass visual, performing and literary arts, as well as newspapers, magazines, books, films, video and music recordings, radio and television, either in traditional or digital format. To the extent that they reflect the cultural identities of states, their treatment in international trade has been debated as to whether, or the extent to which, they should be exempted from trade obligations. The proliferation of preferential trade agreements and of digital platforms has rendered the debate ever more salient. The article summarizes the provisions on

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cultural services in Central American countries' preferential trade agreements and discusses the scope of these provisions, in light of the cultural policy measures involved and states' ability to pursue cultural policies. The countries considered are those belonging to the Central American Common Market, namely Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. These countries share some characteristics which make them worth considering in regard to the trade and culture debate. They also vary widely with respect to the number and scope of their commitments and/or exceptions relating to culture within the preferential trade agreements to which they are parties. In turn, such significant variations are primarily attributable to the importance each Central American country attaches to the protection of its cultural sector.

Keywords: Central America – preferential trade agreements – cultural policies – cultural services – cultural provisions/commitments/exceptions.

Resumen

Los productos culturales (incluidos los bienes y servicios) abarcan las artes visuales, escénicas y literarias, así como periódicos, revistas, libros, películas, grabaciones de video y música, radio y televisión, ya sea en formato tradicional o digital. En la medida en que reflejan las identidades culturales de los estados, se ha debatido su tratamiento en el comercio internacional en cuanto a si deberían estar exentos de las obligaciones comerciales, o en qué medida. La proliferación de acuerdos comerciales preferenciales y de plataformas digitales ha hecho que el debate sea cada vez más relevante. El artículo resume las disposiciones sobre servicios culturales en los acuerdos comerciales preferenciales de los países

centroamericanos y discute el alcance de estas disposiciones, a la luz de las medidas de política cultural involucradas y la capacidad de los estados para llevar a cabo políticas culturales. Los países considerados son los pertenecientes al Mercado Común Centroamericano, a saber, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua y Panamá. Estos países comparten algunas características que los hacen dignos de ser considerados en el debate sobre comercio y cultura. También varían ampliamente con respecto al número y alcance de sus compromisos y/o excepciones relacionadas con la cultura dentro de los acuerdos comerciales preferenciales de los que son parte. A su vez, estas variaciones tan significativas se deben principalmente a la importancia que cada país centroamericano otorga a la protección de su sector cultural.

Palabras clave: Centroamérica – acuerdos comerciales preferenciales – políticas culturales – servicios culturales – disposiciones/compromisos/excepciones culturales.

1.- Introduction

Alongside visual, performing and literary arts, cultural products (including goods and services) comprise newspapers, magazines, books, films, video and music recordings, radio and television, either in traditional or digital format. To the extent that such products reflect the cultural identities of states, their treatment in international trade has long been debated as to whether, or the extent to which, they should be exempted from trade liberalization and its associated obligations[1]. The trade and culture debate essentially pertains to the difficulties of conciliating policy space and flexibility for public authorities in the conduct of cultural policies[2], on the one hand, and predictability and non-discrimination in international trade exchanges, on the other. The stance of governments and peoples on the debate rests on varying combinations of principles and interests[3].

In recent decades, the proliferation of preferential trade agreements (PTAs), upon which liberalization initiatives have rested with the stalemate of multilateral trade negotiations, and of digital platforms, through which cultural contents are increasingly created, distributed and accessed, have rendered the debate ever more salient. A key episode was the adop-

1 These mainly involve market access (MA), i.e., the conditions set by states for the provision of goods and services into their territory; and national treatment (NT), whereby a country must treat imported products no less favourably than domestic ones as regards internal taxes and regulations. The latter corresponds to the internal dimension of the non-discrimination principle, central in the international trading regime, while its external one consists of the most-favoured-nation (MFN) treatment, whereby any advantage a country gives to another must be extended to all other countries.

2 Cultural policy measures are of two main types: financial, such as subsidies; and regulatory, such as the ownership and/or management of cultural enterprises reserved to nationals, or local content quotas in broadcasting.

3 On the trade and culture debate, see, among others, Voon (2007); Shi (2013); Lee (2023).

tion within the United Nations Educational, Scientific and Cultural Organization (UNESCO) of the Convention on the Protection and Promotion of the Diversity of Cultural Expressions (hereafter the CDCE) (UNESCO, 2005). The Convention recognizes the dual – economic and cultural – nature of cultural products that, as vehicles of identities, values and meanings, must not be treated as solely having commercial value. It also reaffirms the sovereign rights of states to use a whole array of measures, financial and regulatory, in the pursuit of cultural policies, to foster cultural diversity in their territory and internationally[4].

Many states are disinclined to open their cultural sector and favourable to some form of cultural exception. The audiovisual sector is the one in which the fewest members of the World Trade Organization (WTO) have commitments, these most often subject to limitations. Cultural products also represent one of the few sectors regularly subject to special treatment in PTAs (Chase, 2015).

This article considers the PTAs negotiated by Central American states and belongs to a larger study on the treatment of cultural products in such agreements. It summarizes the provisions on cultural services in Central American countries' PTAs and discusses the scope of these provisions, in light of the cultural policy measures involved and states' ability to pursue cultural policies. The countries considered are those belonging to the Central American Common Market (CACM), i.e., Costa Rica, El Salvador, Guatemala,

4 The Convention was adopted with 148 states in favour, two opposed (the United States and Israel), and four abstentions (Australia, Honduras, Liberia, Nicaragua). As of August 2023, the Convention had 151 states parties. On the Convention, see Vlassis (2015). On the link between the Convention and trade agreements, see also Graber (2006).

Honduras, Nicaragua, and Panama[5]. These six countries are also the founding members of the Central American Integration System. Central America is worth considering in regard to the trade and culture debate. Since the turn of the century, these countries, whether as a group or on their own, have been quite active on the trade liberalization front, with PTAs covering both goods and services. With El Salvador and Nicaragua, the region includes two of the only 13 countries that undertook commitments in audiovisual services during the Uruguay Round of multilateral trade negotiations[6]. Besides, with Honduras and Nicaragua, the region includes two of only four countries that abstained during the vote on the adoption of the CDCE[7]. Alongside other countries of the Americas, Central American states favour the negative-list approach for trade negotiations on services, despite its implications for the conduct of cultural policies. It will also be seen that Central American states vary widely as regards the number and scope of their commitments and/or exceptions relating to culture within the PTAs to which they are parties.

5 On the cultural policies of Central American countries, see Mejía (2021). See also the periodic reports submitted by Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama as parties to the Cultural Diversity Convention (UNESCO, Diversity of Cultural Expressions).

6 WTO (1994a). Panama also has multilateral audiovisual commitments, but these followed its accession negotiations to the WTO. For new countries to join the WTO, not only should members consent, but the terms of accession must be agreed between the applicant and WTO members. Each WTO member state may submit specific demands to the applicant country, both with regard to tariff and non-tariff issues, even beyond existing WTO disciplines. In Panama's case, there were no audiovisual entries in its initial services commitments offer in February 1995, but, in April 1996, its services offer included such commitments, which were later part of its Accession Protocol. Between 1996 and 2013, 16 of 25 new WTO members made audiovisual services commitments, mainly as a result of US pressure (see Gagné, 2016, p. 25). In 2023, 40 WTO members had audiovisual commitments.

7 Nonetheless, all six Central American countries have become parties to the Convention.

The article argues that such significant variations are primarily attributable to the importance each Central American country attaches to the protection of its cultural sector. In a second section, key considerations on trade negotiations and cultural services are emphasized, as well as the principal provisions and exceptions pertaining to cultural products within the texts of Central American PTAs. The six subsequent sections deal with the cultural reservations or commitments figuring in the annexes of the PTAs to which each of the Central American states belongs. A conclusion follows.

2.- Trade Negotiations and Cultural Services

As of December 2022, the number of effective Central American PTAs covering goods and services amounted to 25[8]. Among these, nearly 45%, i.e., 11, have involved the whole or some of the Central American countries, while a little more than 55%, or 14 of the PTAs, are bilateral and concluded between a Central American state and another, non-Central American, country. Sixty per cent or 15 of the Central American PTAs have been concluded with other countries of the Americas, while the others are with either Asian or European countries.

By chronological order, these PTAs have been concluded between Central America and the Dominican Republic (CA-DR)[9], Central America and Chile (CA-Chile)[10], Cen-

8 This excludes the Nicaragua-Taiwan Free Trade Agreement of 2006, repealed in July 2022.

9 Yet, the services annexes are nowhere to be found, so only the core text of this agreement is considered.

10 The services annexes are part of bilateral protocols concluded between Chile and each of the Central American countries except Panama.

tral America and Panama (CA-PN)[11], Panama and Taiwan (PN-Taiwan), Central America and the United States (US) (CAFTA), Guatemala and Taiwan (GU-Taiwan), Panama and Singapore (PN-Singapore), Panama and Chile (PN-Chile), El Salvador - Honduras and Taiwan (ES/HD-Taiwan), Panama and the US (PN-US), the Northern Triangle and Colombia (NT-Colombia), Costa Rica and Singapore (CR-Singapore), Costa Rica and China (CR-China), Panama and Canada (PN-Canada), Panama and Peru (PN-Peru), Costa Rica and Peru (CR-Peru), Central America and Mexico (CA-Mexico)[12], Central America and the European Union (EU) (CA-EU)[13], Costa Rica and Colombia (CR-Colombia), Central America and the European Free Trade Association (EFTA) (CA-EFTA)[14], Honduras and Canada (HD-Canada), Panama and Mexico (PN-Mexico), Honduras and Peru (HD-Peru), Central America and Korea (CA-Korea)[15], Central America and the United Kingdom (CA-UK)[16].

11 The services annexes are part of bilateral protocols concluded between Panama and the other five Central American countries. In the agreement through which Panama acceded to the CACM in 2013, services exceptions were to follow, but are nowhere to be found. Rather, the bilateral protocols under the CA-PN continue to apply.

12 This agreement led to the termination of three previous PTAs: the Costa-Rica – Mexico Free Trade Agreement of 1994; the Mexico – Nicaragua Free Trade Agreement of 1997; and the Mexico – El Salvador, Guatemala and Honduras (Northern Triangle) Free Trade Agreement of 2000.

13 The 27 EU members are: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden.

14 Only Costa Rica and Panama belong to this agreement, although Guatemala signed an accession protocol in 2015. The EFTA members are: Iceland, Liechtenstein, Norway, and Switzerland.

15 Guatemala is not party to this PTA.

16 This PTA essentially repeats the provisions of the CA-EU following the UK's withdrawal from the EU.

The concerns over the treatment of cultural products in trade agreements essentially revolve around services. Most cultural products, notably audiovisual ones, come under the form of services[17]. These are also associated with key cultural policy measures, such as domestic content regulations in the media. Cultural goods are rarely subject to special treatment in trade agreements[18]. Beyond goods and services, another area with relevance to the cultural sector is investment. In the case of services and investment, states' specific commitments and/or exceptions within these fields are listed in the annexes to trade agreements. The United Nations Provisional Central Product Classification (UN CPC) code is widely used to identify the various sectors and sub-sectors, here of cultural services, for which states want to commit themselves, or to secure reservations, in trade agreements (United Nations, 1991).

Trade negotiations on services take place following two approaches or a combination of the two. These are known as the bottom-up or positive-list and the top-down or negative-list approaches. The use of either approach usually corresponds to states' preferences, but remains subject to agreement among parties to a trade deal. Positive lists often

17 Services can be traded under four modes of supply: mode 1 – cross-border, when a service is supplied from the territory of a country into the territory of another; mode 2 – consumption abroad, when a service is supplied in the territory of a country to the consumers of another; mode 3 – commercial presence, when a service is supplied through the establishment of a legal entity of a country in the territory of another (i.e., foreign direct investment); mode 4 – movement of natural persons, when a service is supplied by a national of a country in the territory of another. Between 80 and 90% of all services are traded under two modes of supply: cross-border (mode 1) and commercial presence (mode 3), which are also the dominant modes of providing audiovisual services. See Chase (2015, p. 228). Related to immigration policies, mode 4 is either subject to no commitments or 'horizontal' ones, while mode 2 hardly impacts cultural policies. Thus, the analysis of states' cultural commitments is to be limited to modes 1 and 3.

18 In their respective PTAs, the EU only excludes audiovisual services, and, although Canada exempts cultural industries, tariffs are abolished on cultural goods.

reflect states' caution to liberalize services, while negative lists usually result in larger liberalization. Indeed, under the latter, the sectors and measures not specifically exempted are liberalized by default[19]; whereas, under the former, only the sectors and measures specifically listed are subject to liberalization commitments[20]. As is the case throughout the Western Hemisphere, Central American states usually resort to the negative-list approach. In the few cases where the positive-list approach was used, this followed the preferences of their trading partners, i.e., the EU, EFTA, and China.

In terms of percentage of CACM countries' external trade[21], services account in 2022 for 15%, in Nicaragua's case, to up to 32% for Costa Rica. In all cases, except Nicaragua, services contribute favourably to the trade balance of these countries, i.e., when in deficit, the one for services is proportionately less than the one for goods, and, when in surplus,

19 Thus, only the sectors and measures in the exception lists or annexes are excluded. Exceptions in Annexes I allow states to maintain and renew measures in a given area. Yet, following the 'standstill' clause, any renewed or revised measure could not be more trade restrictive than the existing one; while, under the 'ratchet' clause, any subsequent liberalizing measure is to be automatically bound. Note that such clauses are also associated with positive-list negotiation modalities. Exceptions in Annexes II, also known as reservations for future measures, leave states with full discretion to not only maintain existing, but adopt new or more restrictive, measures in a sector or sub-sector. Negative listing also implies that, unless future services are exempted, all new ones are to be automatically bound.

20 These involve MA and NT. Then, states may set exceptions or conditions attached to their commitments. Thus, a sector or sub-sector included in a country's list of specific commitments does not automatically entail full compliance with such obligations. States rather decide, for each mode of supply, whether to undertake full commitments (i.e., without any limitations), partial commitments (i.e., inscribing in their schedules measures or types of measures inconsistent with MA or NT obligations to be maintained or adopted in the future), or no commitment at all (i.e., keeping flexibility to maintain or adopt any measure inconsistent with MA or NT obligations with regard to a given mode of supply). The positive lists are generally intended to be expanded through the successive addition of sectors and the further elimination of restrictions. Yet, this remains a difficult and, thus, not so frequent exercise.

21 Exports and imports of goods and services.

services contribute proportionately more to the favourable trade balance. In the case of El Salvador, the services sector has a surplus, while the overall external trade is in deficit. For Nicaragua, the deficit for services accounts for a little more than 19% of the overall trade deficit (World Bank). Such figures might help explain why CACM countries resort to the negative-list approach, although the latter is used by all Latin American states.

Beyond services and investment, the chapters and/or provisions on electronic commerce or digital trade, intellectual property, government procurement, telecommunications, subsidies, domestic regulations, movement of natural persons, and general exceptions, depending on their content, may also be of some relevance. Such provisions figure in the framework or core text of trade agreements. In the case of the PTAs considered in this article, the services and investment chapters or their key obligations do not apply to subsidies or grants bestowed by a party, including government-supported loans, guarantees, and insurance[22]. States parties, thus, retain great latitude to use financial measures for cultural policy purposes. Interestingly, under the CA-DR, the investment chapter does not apply to measures adopted for reasons of protection of cultural and environmental heritage (Art 9.02(2b)); while, under the PN-Singapore, the services chapter includes an article providing for the imposition, under specified modalities, of conditions on the supply of new services (Art 10.8). As in all of the EU PTAs, the audiovisual sector is excluded from the services and investment chapters under the CA-EU

22 Such an exception could not be identified in the CA-EFTA and in the investment chapters of the CA-DR, CA-Chile, PN-Chile, and CR-China. For the last three PTAs, bilateral investment treaties (BITs) already concluded between the parties continue to apply. Referring to every chapter, article or page number of specific provisions, commitments and/or reservations of the various PTAs analyzed in this article would be both lengthy and cumbersome. Yet, all PTAs are referenced, with web links, from which their contents can be accessed and verified.

and CA-UK. Reflecting Canada's practice, under the general exceptions chapters, cultural industries are excluded under the PN-Canada and HD-Canada.

Nearly half of the PTAs considered in this article, i.e., 12, have a chapter on electronic commerce. Beyond cooperation in this field, seven of them, i.e., CAFTA, PN-Singapore, PN-US, NT-Colombia, CR-Singapore, CA-Mexico, CA-Korea, explicitly provide for the non-discriminatory treatment of digital products among parties, except for the exceptions under the investment and services chapters listed in the annexes to these PTAs[23]. Under the CR-Singapore, the non-discrimination obligation does not apply to broadcasting (Art 12.4(6))[24]. Nearly three-quarters of the Central American PTAs, i.e., 18, comprise a chapter dealing with intellectual property. They refer to the rights and obligations under the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights and other multilateral intellectual property agreements, although the CA-DR, the CA-PN and GU-Taiwan only refer to the former. The PTAs with the United States (CAFTA, PN-US), the EU (CA-EU, CA-UK) and the CA-Korea provide for an extension of copyrights to 70 years.

Let us now turn to the exceptions and commitments taken by Central American countries relating to cultural services and contained in the annexes to their PTAs, distinguishing in each case between negative-list and positive-list ones.

23 Rather than the non-discrimination provision, the PN-Canada provides for the whole chapter not to apply to such non-conforming measures (art 15.02(3)).

24 Broadcasting is understood as the electronic transmission of a series of text, video, images, sound recordings, and other products scheduled by a content provider for aural and/or visual reception, and for which the content consumer has no choice over the scheduling of the series.

3.- Costa Rica

The 12 PTAs to which Costa Rica belongs include eight concluded between Central America and Chile (CA-Chile), the US (CAFTA), Panama (CA-Panama), Mexico (CA-Mexico), the EU (CA-EU), EFTA (CA-EFTA), Korea (CA-Korea), and the UK (CA-UK), as well as four Costa Rica concluded bilaterally with Singapore (CR-Singapore), China (CR-China), Peru (CR-Peru), and Colombia (CR-Colombia). The CR-China, CA-EU, CA-EFTA, and CA-UK have been negotiated under positive-list modalities.

3.1.- Costa Rica's Negative-List PTAs

Except for the CR-Singapore, radio, television and cinema[25] programs are governed by the following rules: 1) if commercials consist of jingles recorded abroad, a certain sum must be paid each time they are transmitted[26]; 2) only 30% of the filmed commercials projected in each television station or movie theatre each day may be of foreign origin; 3) the import of commercials outside the Central American area must pay a tax of 100% of their value[27]; 4) the number of radio programs and soap operas recorded abroad may not exceed 50% of those broadcasted by each radio station

25 There is no mention of 'film' or 'cinema' in the CAFTA and CA-PN, although the rules are the same.

26 For the second part of the sentence, the CAFTA rather mentions 'a lump sum must be paid every time the commercial is aired on domestically transmitted television'. This entry does not figure in the CA-Chile.

27 The CAFTA and CA-PN specify the import 'in a physical medium' of commercials 'aired on domestically transmitted television'. Interestingly, the former specification suggests that commercials in a digital format are not subject to the tax. Radio, film or television commercials made in any of the other Central American countries with which there is reciprocity in this matter are considered national.

daily; 5) the number of programs filmed or videotaped abroad may not exceed 60% of the total televised programs daily[28].

Under the early Costa Rican PTAs, i.e., the CA-Chile and CAFTA, only a Costa Rican national or enterprise with at least 65% of its capital owned by Costa Ricans may 1) obtain a license for or be awarded a free over-the-air broadcast television channel[29]; 2) obtain a license to operate radio, ham radio, and radio-television stations[30]; and 3) establish or manage an enterprise supplying wireless services[31]. The latter restriction is the only one figuring under the CA-PN. Under the CAFTA, only a Costa Rican national or enterprise with nominal capital stock and owned by Costa Rican nationals may obtain a license for ultra-high frequency radio broadcasting[32].

Under CAFTA, CR-Peru, CA-Mexico, CR-Colombia, and CA-Korea, wireless services may not be permanently removed from state ownership and may be supplied only by the public administration or private parties, according with the law or under a special concession granted for a limited period of time and based on conditions and stipulations to be established by the Legislative Assembly. Under CAFTA, directors and administrators of enterprises supplying radio

28 The CAFTA and CA-PN rather provide that the number of such programs 'may be limited to' 60% of the total televised programs daily.

29 The CAFTA specifies 'for signals that originate in Costa Rica'.

30 The CAFTA also mentions 'private broadcasting stations'.

31 The restriction does not apply to the setting up and operation of ham radio stations, although rights shall not be granted to a foreign national residing in Costa Rica when his/her country of origin does not grant that same right to Costa Rican nationals. Under the CA-Chile, only a Costa Rican may obtain a ham radio license.

32 The CA-Chile rather mentions Costa Rican nationals or foreigners with work or residence permits and further specifies that the state shall exercise surveillance and control of all wireless service installations.

and television services must be Costa Ricans by birth or have been naturalized citizens for at least ten years. The right to establish radio stations in Costa Rica for transmission or reception of official messages is permanently reserved to the state and is not subject to concession.

The CR-Peru, CA-Mexico, CR-Colombia, and CA-Korea further provide for concessions, authorizations and permits to be required to supply in Costa Rica telecommunications services, in the case of the first three, and radio and television transmission services by subscription, in the latter's case. Economic needs tests are required to grant such concessions, authorizations and permits. Under the CA-Korea, such services must be supplied through a commercial presence and residency requirements apply. For integrated terrestrial television systems by subscription, concessionaires must include in their programming the Costa Rican television channels that cover at least 60% of the national territory, meet a minimum of 14 hours of daily transmission, and whose signal reception meets the minimum requirements set out in the relevant regulation, have acceptable rates of audience and the corresponding transmission rights. The television services by subscription are to broadcast integrally, without modifications, including advertising of, the transmitted national channels.

Under CAFTA, mass media and advertising services may only be provided by enterprises incorporated in Costa Rica with nominative stock or established as *sociedades personales* under Costa Rican law. Under the CA-Panama, CR-Peru, CA-Mexico, CR-Colombia, and CA-Korea, mass media and advertising agencies may only be exploited by natural or legal persons in the form of sole proprietorship/ personal companies *(sociedades personales)* or enterprises of capital with nominative stocks. Such companies must figure

in the Public Registry. It is absolutely forbidden to encumber the shares and quotas of a company owning any media or advertising agency in favour of anonymous corporations *(sociedades anónimas)* with bearer shares or of natural or juridical foreign persons. The spots, advertisements, or filmed commercials used in programs sponsored by the state's autonomous or semi-autonomous institutions, the government of the Republic and all the entities receiving a subsidy from the state must be of national production[33]. Announcers of commercials for films, radio and television must register with the relevant public authority and foreign announcers must be residents to register. The diffusion of commercials is not authorized without such registration.

Under the CA-Chile and CAFTA, radio, film and television commercials are considered national when at least 90% of the jingle has been composed or arranged by Costa Ricans, at least 90% of the image has been drawn, photographed, printed, filmed or videotaped by Costa Ricans, and at least 90% of the technical personnel involved in the overall production are Costa Ricans. Commercials from the Central American region meeting these requirements and with proper documentation are considered national[34]. Under the CA-PN, a threshold of at least 75% applies for jingles and technical personnel, in favour of Costa Ricans or foreigners residing

33 Under the CA-Chile, the autonomous or semi-autonomous institutions of the state, the government of the Republic and all the entities that receive a subsidy from the state must dedicate their advertising and information budgets on television and radio to the sponsorship of artistic, cultural or informative national productions, without exceeding 70% of said advertising budget for television or radio, while the spots, ads or filmed commercials in the programs sponsored by such entities must also be of national production. Is to be considered a film or television producer a company employing at least 90% of national workers, whose legal representative is Costa Rican, and which has trained technical and intellectual personnel and the necessary equipment for the realization of the usual products of the genre.

34 This last specification does not figure in CAFTA.

in the country, with no condition for images, but one for at least 75% of the overall production to be carried out in the national territory. Commercials from the Central American region are considered national when complying with the above requirements, with proper documentation, and when there is reciprocity in the matter. Under the CR-Peru, CA-Mexico, CR-Colombia, and CA-Korea, commercial advertisements produced and edited in Costa Rica, with those from the Central American area with whom there is reciprocity in the matter, are considered national.

Under the CA-Chile, every show must enter the country promoted by a national company, which is responsible for and guarantor of the foreign company before, during, and after the activity. Under the CR-Peru, CA-Mexico, CR-Colombia, and CA-Korea, a person who hires or employs foreign artists must hire the same number of national artists for the same show, unless the respective majority union indicates that there are not enough Costa Rican artists to be hired.

Except as authorized, a journalist who is a foreign national may cover events in Costa Rica only if he/she is a resident of Costa Rica. The Board of Directors of the *Colegio de Periodistas* may grant non-resident foreign nationals a special permit to cover events in Costa Rica for up to one year and may extend that period, provided that doing so does not harm or conflict with the interests of members of the Colegio. If the latter decides that an event of international importance will occur or has occurred in Costa Rica, it may grant a non-resident foreign national with appropriate professional credentials a temporary permit to cover the event for the foreign media the journalist represents. Such permit may be

valid for up to one month after the event[35]. To join the Professional Associations of Journalists, all foreign professionals must prove that, in their home jurisdiction where they could practice, Costa Rican nationals can exercise their profession under like circumstances[36]. The CR-Peru and CA-Korea further provide that, when applying to join, foreign professionals must have been Costa Rican residents for a minimal number of years, usually two to five.

Under Annex II, Costa Rica has reserved its right to adopt or maintain any measure with respect to: the exploitation, administration, and provision of wireless, telecommunications, radio and television services (CA-Chile); electronic means and cultural industries (CA-PN); telecommunications, audiovisual (including broadcasting), and advertising services (CR-Singapore); radio and television (broadcasting[37]) (CR-Peru, CA-Mexico, CR-Colombia); radio and television, as well as motion picture promotion, advertising, and post-production services (CA-Korea). Under CAFTA, CR-Singapore, CR-Peru, CA-Mexico, CR-Colombia, and CA-Korea, there is also an MFN exemption in favour of cultural industries[38],

35 Among Costa Rica's negative-list PTAs, only the CA-PN does not include these stipulations.

36 The CA-Mexico and CR-Colombia also mention librarians.

37 Broadcasting is defined as 'the uninterrupted chain of transmission required for the distribution of television and radio signals to the general public, but does not cover contribution links between operators'.

38 These are defined as in the United States-Mexico-Canada Agreement, formerly the North American Free Trade Agreement, as 'persons engaged in any of the following activities: a) publication, distribution, or sale of books, magazines, periodical publications, or printed or electronic newspapers, excluding the printing and typesetting of any of the foregoing; b) production, distribution, sale, or display of recordings of movies or videos; c) production, distribution, sale, or display of music recordings in audio or video format; d) production, distribution, or sale of printed music scores or scores readable by machines; or e) radiobroadcasts aimed at the public in general, as well as all radio, television, and cable television-related activities, satellite programming services, and broadcasting networks'.

such as audiovisual cooperation agreements; and, under the CR-Singapore, relating to telecommunications and electronic commerce.

Table 1: Costa Rica's Main Regulatory Exceptions in Cultural Services

	CA-CL	CAF-TA	CA-PN	CR-SG	CR-PR	CA-MX	CR-CO	CA-KR
Property/management/licensing of broadcasting and advertising firms	x	x	x		x	x	x	x
Domestic content								
- Public radio	x	x	x		x	x	x	x
- Public TV	x	x	x		x	x	x	x
- Subscription TV								x
- Commercials	x	x	x		x	x	x	x
Journalism	x	x	x	x	x	x	x	x
Commercials	x	x	x		x	x	x	x
National artists					x	x	x	x
Audiovisual cooperation agreements		x		x	x	x	x	x
Audiovisual/ Broadcasting	x			x	x	x	x	x
Advertising				x				
Electronic means / Cultural industries			x					

** CL – Chile; SG – Singapore; PR – Peru; MX – Mexico; CO – Colombia; KR – Korea*
Source: Information drawn from services reservations under Costa Rica's negative-list PTAs.

As summarized in Table 1, Costa Rica has secured a rather broad array of exceptions in favour of the cultural sector, notably with domestic content requirements in public radio and television, as well as commercials; broadcasting and advertising enterprises reserved to national citizens or juridical persons; and audiovisual cooperation agreements. This applies to the CAFTA, which otherwise does not include any of the broad Annex II reservations found in the other Costa Rican PTAs. Such an exception for audiovisual and advertising services under the CR-SG may well explain the absence of most of Costa Rica's Annex I reservations in that agreement. The CA-PN even comprises a broad reservation relating to electronic means and cultural industries. Yet, to the extent that such reservations do not figure in CAFTA, their resort may run afoul of Costa Rica's trade obligations. States' PTA provisions, here toward cultural services, tend to apply indiscriminately, as it is rather impracticable to have different regulations in place for various trading partners. Hence, the most liberalizing of a country's PTA ends up setting the stage for what it could do to regulate its cultural sector.

3.2.- Costa Rica's Positive-List PTAs

Under the CR-China, Costa Rica has commitments in advertising (CPC 871), in the latter sector as well as printing and publishing (88442) under the CA-EFTA; while, under the CA-EU and CA-UK, also figure entertainment (only privately funded services) (9619), news and press agencies (962). While printing and publishing is subject to no limitations, advertising is unbound under mode 1, and, under mode 3, subject to the following limitations. Incorporation and specific types of legal entity are required. For the encumbrance of shares or quotas, anonymous societies and foreign natural or juridical persons shall be subject to limitations. Broadcasting in radio,

television and cinema of foreign commercials and jingles shall be subject to limitations, while broadcasters shall be subject to nationality, residency and registration requirements. Preferential treatment shall be granted to commercials from Central American countries. Commercial breaks, spots and commercials sponsored by the state, any other state institution or other entities supported by the state shall be subject to nationality requirements[39]. As for entertainment, as well as news and press agency services, they are unbound under mode 1, with no limitations under mode 3 in the former's case, while the latter is subject to conditions. These repeat the exceptions mentioned within negative-list PTAs in regard to the covering of events by journalists.

Table 2: Costa Rica's Main Commitments in Cultural Services

	CR-China	CA-EU	CA-EFTA	CA-UK
Advertising	x	x	x	x
Printing/Publishing		x	x	x
Entertainment		x		x
News and press agencies		x		x

Source: Information drawn from services commitments under Costa Rica's positive-list PTAs.

In cultural services, Costa Rica's commitments are rather modest, with these relating to four sectors, and to only two sectors in the CA-EFTA and one sector in the CR-China, as indicated in Table 2. Of these, only printing and publishing is not subject to limitations. The other three sectors are subject to

39 Under the CA-EFTA, the limitations are formulated in more detail, close to the formulation of the corresponding exceptions under Costa Rica's negative-list PTAs.

no commitments under mode 1 and, except for entertainment, to limitations under mode 3.

4.- El Salvador

The PTAs to which El Salvador is a party comprise those concluded with Central America: CA-Chile, CA-PN, CAFTA, CA-Mexico, CA-EU, CA-Korea, CA-UK, alongside those between El Salvador, Honduras and Taiwan (ES/HD-Taiwan), as well as the Northern Triangle and Colombia (NT-Colombia). Among these, only the CA-EU and CA-UK are with positive lists.

4.1.- El Salvador's Negative-List PTAs

Concessions and licenses for free reception broadcasting services should only be granted to Salvadoran nationals born in the country or enterprises organized under Salvadoran law whose equity capital is at least 51% owned by Salvadorans. Under the CA-PN, it is further provided that broadcasting stations must be managed by responsible operators, Salvadorans by birth, duly authorized. Only a Salvadoran citizen could be an announcer for a radio station.

At least 90% of the production and recording of any commercial advertisement for use in El Salvador's public communications media must be carried out either by Salvadorans, under the CA-Chile, CA-PN and ES/HD-Taiwan, or by enterprises organized under Salvadoran law, as provided in the CAFTA, NT-Colombia, CA-Mexico, and CA-Korea[40]. In case of reciprocity in this matter, a commercial advertisement produced or recorded by Central American nationals or enterprises may be

40 The latter PTAs also include a description of public communications media as over-the-air television and radio broadcasts as well as printed material originating in El Salvador. Under the CA-Mexico, it is further specified that 90% of such ads must be produced and recorded by national elements.

used in the Salvadoran media. Commercial advertisements not fulfilling the above requirements can be circulated in El Salvador's public media when they relate to international products, brands, or services imported into or produced in the country under license, subject to a fee.

No foreign artist may give paid performances of any kind without the prior express authorization of the *Ministerio de Gobernación*, which must first seek, within 15 days, the advisory opinion of the legally established craft union of the artistic field in which the artist[41] is involved. Foreign artists should pay, to the relevant union, a performance fee deposit of 10% of the gross income to be earned in the country or, if not possible, an adequate amount as a security deposit. No foreign artist or group of artists may perform in El Salvador for more than 30 days consecutively or intermittently within a year from the date of the first performance. Foreign circuses or other similar shows should pay to the relevant circus union a performance fee equal to 2.5% of the gross income to be earned daily from ticket sales. The fee shall be paid in full through the withholding system. All foreign circuses must be authorized by the appropriate Ministry and, once authorized, notify the *Asociación Salvadoreña de Empresarios Circenses (ASEC)* and pay the latter 3% of the gross income earned from ticket sales for each performance, as well as 10% of total earnings from sales to the audience, inside the circus, of flags, caps, tee shirts, balloons, photographs, and other paraphernalia. The foreign circus must pay an adequate amount as a security deposit to ASEC. A foreign circus entering El Salvador may only work in the city of San Salvador for 15 days, which may be extended only once for a further 15 days. A

41 An artist is any person acting in El Salvador, individually or in a company consisting of one or more persons, to give performances in music, song, dance or readings, or to present shows, whether in person (i.e., live) or before a large or small audience or on radio or television.

foreign circus having performed in the country can only return to El Salvador after at least one year from the date it left the country. Lastly, in the case of public performances involving the live participation of artists of any kind, the participation of Salvadoran nationals should be equivalent to 20% of the number of participating foreigners.

Under Annex II, in the CA-Chile, El Salvador keeps latitude with respect to the cross-border provision of audiovisual services, as described the industrial classification element; while, in the CA-PN, the exception also refers to investment in such services. Under the CA-Korea, El Salvador reserves the right to adopt or maintain any measure: in audiovisual services, such as motion picture and video tape production and distribution, motion picture projection, and sound recording; as well as in creative industry, i.e., the production of creative content, such as music, theatre, literature, photography, animation, video and computer games (including online), and software development.

Table 3: El Salvador's Main Regulatory Exceptions in Cultural Services

	CA-Chile	CA-PN	CAF-TA	ES/HD-TW	NT-CO	CA-MX	CA-Korea
Management/licensing of public broadcasting firms	x	x	x	x	x	x	x
Commercials	x	x	x	x	x	x	x
Foreign artists	x	x	x	x	x	x	x
Foreign circuses or other similar shows	x	x	x	x	x	x	x
Audiovisual	x	x					x
Creative industry							x

TW – Taiwan; CO – Colombia; MX - Mexico

Source: Information drawn from services reservations under El Salvador's negative-list PTAs.

On the whole, El Salvador's exceptions for culture are fairly modest, as synthesized in Table 3. Beyond reserving free reception broadcasting services to Salvadoran nationals and enterprises, the other exceptions, although figuring in all Salvadoran PTAs, only relate to commercial advertisements, foreign artists and circuses. Broader Annex II reservations, as for audiovisual and creative industry, are only to be found under the CA-Chile, CA-PN, and CA-Korea.

4.2.- El Salvador's Positive-List PTAs

Under the CA-EU and CA-UK, El Salvador has commitments in advertising; printing and publishing; entertainment; news and press agencies; libraries, archives, museums (CPC 963). For advertising, under mode 1, a minimum of Salvadoran content is required in the production and recording of any commercial advertisement for use in the country's public communications media. In the case of entertainment, for modes 1 and 3, foreign artists who give paid performances must seek authorization of the *Ministerio de Gobernación*, and pay fees in advance, or an adequate amount as a security deposit, to the relevant union(s), when applicable. Foreign circuses or other similar shows should pay to the relevant circus union a performance fee and be authorized by the appropriate Ministry. Foreign circuses should also pay an additional fee based on the gross income earned from ticket sales for each performance, as well as the total earnings from sales to the audience of flags, caps, tee shirts, balloons, photographs, and other paraphernalia. The foreign circus is required to pay an adequate amount as a security deposit. There are limitations on the number of performances of foreign artists and circuses in El Salvador. Finally, there is a minimum requirement of Salvadoran participation vis-à-vis foreigners in the case of public performances involving the live participation of artists.

Unsurprisingly, such limitations echo some of the exceptions already seen under the Salvadoran negative-list PTAs.

Salvadoran PTA cultural commitments are limited, even if more ambitious than Costa Rica's, as summarized in Table 7. El Salvador has committed itself in five sectors, while only two, i.e., advertising and entertainment, are subject to limitations[42].

5.- Guatemala

Together with its bilateral PTA with Taiwan (GU-Taiwan), Guatemala belongs to the CA-Chile, CAFTA, NT-Colombia, CA-PN, CA-Mexico, CA-EU, and CA-UK, the latter two with positive lists.

5.1.- Guatemala's Negative-List PTAs

Prior authorization from the *Dirección de Espectáculos* is required to contract with foreign groups, enterprises, or artists. To perform in Guatemala, foreign artists or artist groups must have a consent letter from any of the relevant legally recognized non-governmental artist unions in the country. In mixed performances, made up of one or more films and variety shows, preference is to be given to Guatemalans if the circumstances of the cast, schedule, and contract so permit. Under the more recent CA-Mexico, prior authorization to contract with foreigners is not mentioned, while the exception rather stipulates that a consent letter is required for each performance by foreign artists in Guatemala.

42 These commitments are also larger than those El Salvador made under the General Agreement on Trade in Services (GATS), essentially relating to advertising, as well as radio and television transmission (CPC 7524) (WTO, 1994b).

Table 4: Guatemala's Main Regulatory Exceptions in Cultural Services

	CA-Chile	CAF-TA	GU-Taiwan	NT-CO	CA-PN	CA-Mexico
Foreign artists/ groups	x	x	x	x	x	x

CO – Colombia
Source: Information drawn from services reservations under Guatemala's negative-list PTAs.

Guatemala's cultural exceptions are strikingly modest, as revealed in Table 4, only pertaining to entertainment.

5.2.- Guatemala's Positive-List PTAs

Guatemala has taken commitments under the CA-EU and CA-UK in the same five sectors as El Salvador. For entertainment, under mode 1, prior authorization from the *Dirección de Espectáculos* is required to contract with foreign groups, enterprises, or artists.

As indicated in Table 7, if, like El Salvador, Guatemala has committed itself in five sectors, in its case, only entertainment is subject to limitations. Overall, these commitments relating to the cultural sector remain limited.

6.- Honduras

Honduras is party to the CA-Chile, CAFTA, ES/HD-Taiwan, CA-PN, NT-Colombia, CA-Mexico, CA-EU, CA-Korea, and CA-UK; alongside two bilateral agreements, with Canada (HD-Canada) and Peru (HD-Peru). Here again, the CA-EU and CA-UK are with positive lists.

6.1.- Honduras' Negative-List PTAs

Only Honduran nationals by birth may hold senior management positions in newspapers or free over-the-air broadcast (radio and television) media, including the intellectual, political, and administrative orientation. The CA-Chile, however, only mentions that to exercise the functions of director, deputy director and editor-in-chief of newspapers, it is required to be Honduran. Foreign music artists who wish to perform individually or as a group in Honduras must register for each performance with, and pay 5% of the contracted fee to, the Artist Union of Honduras, while the manager or leaser shall, if possible, contract local artists to perform during the same performance. In the CA-Korea, Honduras has taken an Annex II reservation in the audiovisual sector related to animations, video games, motion pictures, and video tapes.

Table 5: Honduras' Main Regulatory Exceptions in Cultural Services

	CA-CL	CAF-TA	ES/HD-TW	CA-PN	NT-CO	CA-MX	HD-CN	HD-PR	CA-KR
Management of social com. media	x	x	x	x	x	x	x	x	x
Foreign music artists	x	x	x	x	x	x	x	x	x
Audiovisual									x

CL – Chile; TW – Taiwan; CO – Colombia; MX – Mexico; CN – Canada; PR – Peru; KR - Korea
Source: Information drawn from services reservations under Honduras' negative-list PTAs.

As summed up in Table 5, the exceptions Honduras secured in favour of culture are remarkably modest, relating to foreign artists, yet larger than Guatemala's, with nationality requirements for the senior management of audiovisual and printed media. One PTA, the CA-Korea, includes an Annex II reservation within the audiovisual sector.

6.2.- Honduras' Positive-List PTAs

Under the CA-EU and CA-UK, Honduras has full commitments in advertising; printing and publishing; libraries, archives, museums[43]; and limited ones in entertainment, as well as news and press agencies. In the latter two sectors, mode 1 is unbound. Mode 3 has no limitations in the case of entertainment, while for news and press agencies, only Honduran nationals may exercise senior management of newspapers or free over-the-air broadcast (radio and television) news media, including the intellectual, political, and administrative orientation.

In the Central American PTAs with the EU and UK, as for El Salvador and Guatemala, Honduras has committed itself in the same cultural sectors, as synthesized in Table 7, while its commitments are subject to limitations in two of these: entertainment, news and press agencies. With these two sectors unbound for mode 1, Honduras' commitments are less liberalizing than El Salvador's.

7.- Nicaragua

Aside from its bilateral PTA with Taiwan, which it recently repealed, Nicaragua belongs to the CA-Chile, CAFTA,

43 For advertising, there are some limitations under mode 1, but none pertaining to the cultural sector.

CA-PN, CA-Mexico, CA-EU, CA-Korea, and CA-UK. The agreements involving Europe, i.e., CA-EU and CA-UK, are the only ones concluded under positive-list modalities.

7.1.- Nicaragua's Negative-List PTAs

Licenses for operating free over-the-air television and radio broadcast services (known under Nicaraguan law as social communications media) may only be granted to Nicaraguan persons. In the case of enterprises, Nicaraguan nationals must own 51% of the capital. The CA-PN further provides that only natural or legal persons, incorporated in Nicaragua and domiciled in the country, may be granted, or make use of, licenses for radio and free over-the-air television services. Under the CA-Chile, CA-PN, and CA-Mexico, a license granted by the regulatory authority (TELCOR) is required to install, operate or exploit a public network of telecommunications for the provision of television services by subscription. Companies directly marketing radio and television satellite signals and providing carrier services satellites must secure signal landing agreements with, and licenses from, TELCOR.

Enterprises supplying radio and television broadcast services in Nicaragua shall only resort to announcers who are Nicaraguan nationals for narration, commentary, and live broadcast in sports or similar commercial programs. Regardless, foreign nationals could serve as announcers if the laws of their own countries allow Nicaraguan nationals to supply such services. The provisions of this measure shall not apply to the broadcast of programs by foreign announcers when the transmission of such programs is aimed exclusively at other countries.

Foreign artists or musical bands may perform in Nicaragua solely through a prior contract or government agreement. Foreign artists who perform shows or reviews of a commercial nature must include a Nicaraguan artist or group performing similar shows and who must be paid. Foreign artists or artistic groups not wishing to include a national artist in their program must pay 1% of the show's net receipts to the Nicaraguan Institute of Culture (NIC) unless the foreign artists or groups' country of origin does not impose such tax to Nicaraguan artists or artistic groups. Foreigners selected for the design and construction of public, pictorial, or sculptural monuments erected in Nicaragua should do so in association with Nicaraguan artists[44].

In the CA-Chile and CA-PN, the above paragraph begins by mentioning that to produce an international film in Nicaragua, any foreign natural or legal person must contribute 5% of the production's total value to the NIC, thereby to increase the National Film Promotion Fund (NFPF), as specified under the CA-PN. International film productions made in Nicaragua should comprise a minimum of 10% of technical, creative, and artistic Nicaraguan personnel, except for those co-produced with Nicaraguan filmmakers.

The CA-Mexico and CA-Korea rather provide that co-productions with Nicaraguan filmmakers must have at least 30% of artistic, technical, and creative national staff and the production a no less than 10% Nicaraguan economic participation. Foreign film productions should comprise at least 20% of technical, creative, and artistic Nicaraguan

44 In the CA-Mexico, one rather reads that the design and construction of such Nicaraguan monuments is to be awarded through competition to national artists and, when necessary, to foreigners associated with national artists. The CA-Korea includes the two entries.

personnel. In case producers do not want to include national personnel, they must pay in cash 5% of the production's budget in the country to the NFPF. Foreign productions temporarily entering the country for making films must pay a filming duty to the Fund. Any foreign natural or legal person performing any type of audiovisual or film production in any format must be registered at the National Cinematheque of Nicaragua. Once the production is finished, a copy of it must be deposited in the Cinematheque's Film Archive. Audiovisual advertising works carried out wholly or partially outside of Nicaragua must apply to the Cinematheque for the authorization of their exhibition in the national territory. A quota of 20% of national production applies in the case of such works exhibited or transmitted in cinemas, television, or cable television. The CA-Korea also specifies that, in the case of the co-production of cinematographic works carried out with national professionals or residents of the states belonging to the Latin American Cinematographic Coproduction Agreement, the directors of such productions must be either nationals or residents of the states parties to the Agreement or co-producers from Latin America, the Caribbean, other Spanish-speaking or Portuguese-speaking countries.

Under Annex II, Nicaragua has taken an exemption from MFN treatment concerning the one-way satellite transmission of direct-to-home and direct broadcasting satellite television services and digital audio services. In the CA-Chile, Nicaragua has taken a further MFN exemption with respect to cultural matters. In that same PTA, there is also a reservation toward measures related to advertising in programs broadcasted from outside the Nicaraguan territory.

Table 6: Nicaragua's Main Regulatory Exceptions in Cultural Services

	CA-Chile	CAF-TA	CA-PN	CA-Mexico	CA-Korea
Licensing of public broadcasting services	x	x	x	x	x
Foreign artists/groups	x	x	x	x	x
National announcers	x	x	x	x	x
International audiovisual/film (co)productions	x		x	x	x
Satellite TV and digital audio	x	x	x	x	x
Cultural matters	x				

Source: Information drawn from services reservations under Nicaragua's negative-list PTAs.

Overall, the Nicaraguan exceptions for culture are rather limited, as indicated in Table 6. The number and scope of Annex I reservations are closer to El Salvador's, notably as regards broadcasting services and foreign artists. Yet, among Central American countries, Nicaragua distinguishes itself with a series of conditions relating to financial contributions, percentage of national personnel or production, registration, in the case of international audiovisual/film productions and co-productions. The two Annex II exceptions consist of MFN exemptions and only one applies to all of the PTAs.

7.2.- Nicaragua's Positive-List PTAs

Nicaragua has commitments, with no limitations under modes 1 and 3, in advertising; printing and publishing; libraries, archives, museums. In entertainment, mode 1 is

unbound, while mode 3 has some limitations[45]; whereas in news and press agencies, mode 1 is fully liberalized and mode 3 is unbound.

Table 7: El Salvador, Guatemala, Honduras and Nicaragua's Main Commitments in Cultural Services

	CA-EU	CA-UK
Advertising	x	x
Printing and publishing	x	x
Entertainment	x	x
News and press agencies	x	x
Libraries, archives, museums	x	x

Source: Information drawn from services commitments under El Salvador, Guatemala, Honduras and Nicaragua's positive-list PTAs.

As for its Northern Triangle partners in their PTAs with the EU, the Nicaraguan cultural commitments remain modest, as summarized in Table 7[46].

8.- Panama

Panama is party to 12 PTAs. Some have been concluded bilaterally by Panama with: Central America (CA-PN), in this case assorted with five bilateral protocols (with El Salvador (CA/ES-PN), Honduras (CA/HD-PN), Costa Rica (CA/CR-PN), Guatemala (CA/GU-PN), Nicaragua (CA/NI-PN)), Taiwan (PN-Taiwan), Singapore (PN-Singapore), Chile (PN-Chile), the United States (PN-US), Canada (PN-Cana-

45 Unbound for ancillary theatrical services (not elsewhere classified) (CPC 96193) and ballroom, discotheque and dance instructor services (96195).

46 These differ from Nicaragua's GATS commitments, which only pertain to the audiovisual sector, more precisely, motion picture and video tape production and distribution (CPC 9611) and motion picture projection (9612) (WTO, 1994c).

da), Peru (PN-Peru), Mexico (PN-Mexico)[47]; while others have been negotiated under the aegis of the CACM, i.e., the CA-EU, CA-EFTA, CA-Korea, and CA-UK. Seven of these are strictly bilateral, while five have been concluded with a grouping, including the one between Panama and Central America. Three, i.e., the CA-EU, CA-EFTA, and CA-UK, are with positive lists.

8.1.- Panama's Negative-List PTAs

Concessions to operate public radio or television stations in Panama may be granted to natural persons, who must be Panamanian nationals, or to enterprises, with at least 65% of their shares owned by Panamanians[48]. It is also stipulated in substance that each of the senior managers and directors of enterprises operating public radio or television stations must be Panamanian nationals. Under no circumstances may a foreign government or state enterprise supply, by itself or through a third party, public radio or television services or hold a controlling interest, directly or indirectly, in an enterprise supplying such services[49]. A license is required for announcers to make advertisements within Panama to be broadcasted in public radio or television. Such licenses are reserved to Panamanians or nationals of other states where reciprocal rights are granted.

47 Note that Panama does not belong to the CA-Mexico, concluded before its accession to the CACM.

48 This does not apply to paid public radio and television and, thus, more than 50% of the capital of such concessions may be foreign owned.

49 In the CA-PN, the protocols with El Salvador, Guatemala, Honduras, and Nicaragua, as well as the PN-Taiwan, PN-Singapore, and PN-Chile further provide that all concessionaires of public telecommunications services and their subsidiaries are forbidden from operating public radio and television services while they are operating public telecommunication services under a temporary exclusivity regime.

All of Panama's PTAs, except the PN-US, provide for the following exceptions. An employer hiring a foreign orchestra or musical group is required to hire a Panamanian orchestra or musical group to perform at each one of the locations where the foreign orchestra or musical group performs. This applies for the duration of the foreign orchestra or musical group's contract. The Panamanian orchestra or musical group should receive at least USD 1,000 per performance and each member no less than USD 60 of this amount. A Panamanian artist performing alongside a foreign artist must be hired on the same terms and with the same professional considerations. This applies, but is not limited, to promotions, publicity, and advertising of the event, regardless of the media used[50]. The hiring of a foreign artist for promotions, or the charitable donation or exchange of the services or works of a foreign artist, is only to be approved if it does not adversely affect or displace a national artist. In any case, such hiring must be submitted for evaluation by an expert to determine the value of the service and work provided for the payment of union fees and dues. Advertising announcements for television and cinematography produced in foreign countries may only be permitted if dubbed in Spanish by Panamanian nationals possessing an announcer's license and through the payment of a fee in accordance with the duration of transmission, projection, and use.

In the CA-PN, the protocols with Costa Rica, Guatemala, and Nicaragua, alongside the PN-Taiwan and PN-Singapore provide that the owners, publishers, directors, editors-in-chief, deputy directors, managers and assistant managers of the domestic communications mass (audiovisual and printed) media must be Panamanian nationals. When the owners or

50 Besides the PN-US, the exception relating to the hiring of a national and foreign artist does not figure under the CA/HD-PN and CA/CR-PN.

publishers are juridical persons, their shareholders, partners, directors and officers should be Panamanians. The PN-US, PN-Canada, PN-Mexico, and CA-Korea rather stipulate that for printed publications, such as newspapers or magazines, 100% of the ownership of such enterprises must be held, directly or indirectly, by Panamanian nationals; and the managers, including the publishers, editors-in-chief, deputy directors, and assistant managers, must also be Panamanians.

Finally, the Panamanian government has essentially ensured that the profession of journalist in the country may only be practiced by Panamanian nationals. This is further reinforced through an Annex II exception in favour of the journalist profession in the CA/ES-PN, CA/NI-PN, and PN-Peru. Within the latter, Panama has also taken a reservation relating to investment in, and the administrative or managerial personnel of, printed media. The PN-Singapore includes a broad exception, drawn from Australia's PTAs[51], pertaining to the creative arts, cultural heritage and other cultural services, as well as broadcasting. Yet, its impact could only be limited as it figures in none of the other Panamanian negative-list PTAs.

51 'Creative arts' include: the performing arts – including theatre, dance and music – visual arts and craft, literature, film, television, video, radio, creative online content, indigenous traditional practice and contemporary cultural expression, and digital interactive media, and hybrid arts work using new technologies to transcend discrete artform divisions. See Gagné and Jean-Desnoyers (2023, pp. 44-46).

Table 8: Panama's Main Regulatory Exceptions in Cultural Services

	CA/ ES	PN-TW	PN-SG	PN-CL	CA/ HD	PN-US	CA/ CR	CA/ GU	CA/ NI	PN-CA	PN-PR	PN-MX	CA-KR
Property/ management/ licensing of communications mass media	x	x	x	x	x	x	x	x	x	x	x	x	x
Foreign artists/ musical groups	x	x	x	x	x		x	x	x	x	x	x	x
National announcers	x	x	x	x	x	x	x	x	x	x	x	x	x
Journalism	x	x	x	x	x	x	x	x	x	x	x	x	x
Creative arts and cultural heritage			x										
Broadcasting			x										
Printed media											x		

TW – Taiwan; SG – Singapore; CL – Chile; CA – Canada; PR – Peru; MX – Mexico; KR – Korea
Source: Information drawn from services reservations under Panama's negative-list PTAs.

As found in other Central American PTAs, Table 8 shows that Panama has reservations for communications mass media, foreign artists, national announcers, and the profession of journalist. The first apply to the management and licensing/concessions of radio and television stations, and in seven PTAs (including three protocols under the CA-PN), to ownership and, beyond, to printed media. As for Nicaragua, there are less exceptions in the PTA with the United States. Broad Annex II exceptions figure in only two of the PTAs. Like its Central American partners, except for Costa Rica, the Panamanian exceptions tend to be modest.

8.2.- Panama's Positive-List PTAs

In its three positive-list PTAs, Panama has committed itself in advertising, printing and publishing, news and press agencies. In the case of advertising, NT is unbound under the CA-EFTA; while for printing and publishing, as well as news and press agencies, it is stipulated under mode 3 that an enterprise producing a print publication must be 100% owned by a Panamanian national and its managers must also be Panamanians. Under the CA-EU and CA-UK, entertainment is unbound under mode 1, while mode 3 is subject to the requirement for an employer hiring a foreign orchestra or musical group to hire a Panamanian one to perform at each of the locations where the foreign one performs for the duration of the latter's contract. A national artist performing with a foreign one must be hired on the same terms and with the same professional considerations, notably regarding the promotions, publicity and advertising of the event in various media. Lastly, under the CA-EFTA, audiovisual services are subject to commitments, more precisely, motion picture and video tape production and wholesale distribution (CPC 96112); motion picture projection (96121); radio and

television (9613), exclusively arrangements for the showing and screening of EFTA audiovisual services, subject that the medium for showing these is limited to Panamanian providers; as well as sound recording. The audiovisual entry essentially corresponds to the country's GATS commitments in the sector[52].

Table 9: Panama's Main Commitments in Cultural Services

	CA-EU	CA-EFTA	CA-UK
Advertising	x	x	x
Printing and publishing	x	x	x
Motion picture and video tape production		x	
Motion picture projection		x	
Radio and television		x	
Sound recording		x	
Entertainment	x		x
News and press agencies	x	x	x

Source: Information drawn from services commitments under Panama's positive-list PTAs.

Like Costa Rica, Panama has committed itself in four sectors under the CA-EU and CA-UK, as indicated in Table 9. A key difference, though, is in the CA-EFTA, where Costa Rica has commitments in only two sectors and Panama in seven. If entertainment is not committed, the Panamanian government has commitments in four sub-sectors of audiovisual services. As the latter were already committed under the GATS, they

52 Other Panamanian GATS cultural commitments are in advertising, printing and publishing (WTO, 1997). As for El Salvador and Nicaragua, these are different than those under their positive-list PTAs. Beyond, Costa Rica and Guatemala have no GATS commitments relating to culture, while Honduras has limited ones in advertising (CPC 87120) (WTO, 1994d).

do not entail any further obligations from Panama beyond its accession protocol to the WTO.

9.- Conclusion

The Central American countries show a highly different scope of obligations relating to culture, depending on both the negotiation modalities of their PTAs and the states concerned. While the commitments are, overall, modest in the PTAs with positive lists, the negative-list ones entail a significant, in some cases near complete, liberalization of the cultural field. With the general exclusion of subsidies, Central American states maintain wide latitude to use financial measures for cultural policy purposes. Under the CA-EU/UK and CA-EFTA, Central American states have often partial commitments in four or five cultural sectors, while EU and EFTA countries have committed themselves in most of these sectors in their respective PTAs.

The negative-list PTAs reveal wide differences as to the number and scope of exception measures in favour of culture, essentially those of a regulatory type. On one side, Guatemala has only one, minor cultural reservation. With another exception for entertainment, alongside one concerning the senior management of social communications media, Honduras comes next in its degree of liberalization of the cultural sector. The latter is quite similar with respect to El Salvador, Nicaragua, and Panama. On the other side, by securing a larger range of regulatory measures, Costa Rica is the Central American country that has best preserved its ability to conduct cultural policies.

The type of Annex I cultural regulatory exceptions among Central American states is broadly similar, with restrictions

and royalties to the benefit of national artists or their unions, the senior management and/or concessions for broadcasting stations reserved to nationals or domestic firms. The latter type of measures does not, though, guarantee a more significant level of domestic content is such media. Costa Rica and El Salvador have restrictions for advertising, while Costa Rica and Panama have ones for journalists. Nicaragua has reservations in favour of international audiovisual or film productions and co-productions. Costa Rica is the only Central American country to have secured national content quotas in public broadcasting.

Costa Rica, El Salvador, Nicaragua, and Panama have various Annex II exceptions. Thus, Costa Rica has MFN exemptions in favour of audiovisual cooperation agreements. Some of these reservations are quite broad, applying either to electronic means and/or cultural industries/matters, audiovisual and/or broadcasting, encompassing the digital dimension. Yet, such exceptions only figure in a limited number of these states' PTAs, therefore raising issues as to their impact.

With the possible exception of Costa Rica, Central American states have deprived themselves of any significant possibility to protect their cultural sector through regulatory measures. In light of the negative-list approach used for nearly all of their PTA services negotiations, Central American countries have entered into obligations simply by not including policies and measures in their lists of exceptions. It is practically impossible to pull back on such commitments, even if a state came to realize that their application proved prejudicial to its cultural identity. Thus, a state that did not secure exceptions in favour of either domestic content quotas or audiovisual co-production agreements, as is the case for all Central American states except Costa Rica, will not be

able subsequently to adopt such measures despite their importance for the development of its own cultural expressions. Although all CACM countries are parties to the CDCE, the high degree of liberalization of the cultural sector in their PTAs runs afoul of its key tenets. The Convention underlines the importance for states of preserving flexibility to use a wide set of instruments, regulatory and financial, to respond to the challenges to their cultures, notably owing to trade negotiations and technological developments.

The high degree of liberalization of the cultural sector across Central American states may be attributable to one or more of the following factors. For Chase (2015, pp. 238-42), smaller countries, whose domestic cultural industries are less politically powerful or less exposed to commercial pressure, show less concern for the cultural sector and, thus, are most likely to liberalize audiovisual trade. Cultural industries are rarely national champions in the commercial sense, nor are they disproportionately large providers of jobs or particularly crucial to a country's overall economic output (Goff, 2007, pp. 3). The lack of cultural expertise or sensitivity among trade negotiators, the lack of pressure from professional cultural associations – often loosely organized and representing a poorly developed industry – as well as the greater influence of other more powerful sectors may also have led CACM countries not to protect their cultural sector (Vlassis and Richieri Hanania, 2014, pp.28).

A key question pertains to the reasons for the significant variations in the number and scope of states' regulatory exceptions for cultural policies in Central American PTAs. One may wonder if such exceptions were the object of tough bargains and/or entailed concessions in other sectors. In view of their similarity as small developing countries, none

of the Central American countries enjoys much more bargaining power or leverage in its dealings with bigger states or groupings, such as the United States, the EU, Mexico, or Korea. A look at the PTAs reveals that the overall importance of exceptions for different sectors, other than cultural, also varies greatly across Central American states. In fact, a greater number and scope of cultural reservations is most often accompanied by a greater number of exceptions in different areas. The number and scope of cultural trade reservations are as well fairly consistent, regardless of the partner with which a PTA was negotiated. There is a lesser number of exceptions in the PTAs with the United States (CAFTA and PN-US), but the usual cultural exceptions proper to each Central American state figure in these PTAs. Thus, rather than negotiation dynamics, the varying number and scope of the reservations relating to culture secured by Central American states in their PTAs mostly result from each state's trade policy choices and the importance attached to cultural policy considerations.

Relatively few PTA negotiations have been documented, while the cultural sector is either not or only tangentially addressed. For instance, why are Salvadoran artists and circuses protected the way they are? In the case of Costa Rica, has the relatively greater importance of services in its external trade played a role in the greater protection of its cultural sector? So, in order to know more about the reasons for the generally high degree of cultural liberalization across Central American states parties to PTAs and yet, in some cases, diverging outcomes of PTA negotiations relating to the cultural sector, further research at the domestic level would be warranted.

References

Chase, K. (2015). Audiovisual Goods and Services in Preferential Trade Agreements. In Andreas Dür & Manfred Elsig (Eds.), *Trade Cooperation: The Purpose, Design and Effects of Preferential Trade Agreements* (pp. 218-245). Cambridge: Cambridge University Press.

Gagné, G. (2016). *The Trade and Culture Debate: Evidence from US Trade Agreements*. Lanham, MD: Lexington Books.

Gagné, G. & Jean-Desnoyers, C. (2023). Cultural Services in Australia and New Zealand's Preferential Trade Agreements. *Journal of World Trade*, vol. 57, no. 1, pp. 31-54.

Goff, P. (2007). *Limits to Liberalization: Local Culture in a Global Marketplace*. Ithaca, NY: Cornell University Press.

Graber, Ch. (2006). The New UNESCO Convention on Cultural Diversity: A Counterbalance to the WTO? *Journal of International Economic Law*, vol. 9, no. 3, pp. 553-574.

Mejía, M. (2021). Cultural Management: The Central American Perspective. In Raphaela Henze & Federico Escribal (Eds.), *Cultural Management and Policy in Latin America* (pp. 53-68). New York: Routledge.

Lee, J. (2023). *Culture and International Trade Law: From Conflict to Coordination*. Leiden and Boston: Brill Nijhoff.

Shi, J. (2013). *Free Trade and Cultural Diversity in International Law*. London: Hart Publishing.

UNESCO (2005). Convention on the Protection and Promotion of the Diversity of Cultural Expressions, adopted 20 October 2005, entered into force 18 March 2007. <https://unesdoc.unesco.org/ark:/48223/pf0000246264/PDF/246264eng.pdf.multi>.

UNESCO (s/f) Diversity of Cultural Expressions. Periodic Reports. <https://en.unesco.org/creativity/governance/periodic-reports>.

United Nations, Department of International Economic and Social Affairs. (1991). Provisional Central Product Classification. Statistical Papers ST/ESA/STAT/SER.M/77. New York: United Nations.<https://www.wto.org/english/tratop_e/serv_e/cpc_provisional_complete_e.pdf>.

Vlassis, A. (2015). *Gouvernance mondiale et culture: de l'exception à la diversité*. Liège: Presses Universitaires de Liège.

Vlassis, A. & Richieri Hanania, L. (2014). Effects of the CDCE on Trade Negotiations. In Lilian Richieri Hanania (Ed.), *Cultural Diversity in International Law* (pp. 25-39). London and New York: Routledge.

Voon, T. (2007). *Cultural Products and the World Trade Organization.* Cambridge: Cambridge University Press.

World Bank Open Data, Trade (s/f) <https://data.worldbank.org/topic/trade>.

WTO (1994a). General Agreement on Trade in Services, adopted 15 April 1994, entered into force 1 January 1995. <www.wto.org/english/docs_e/legal_e/26-gats.pdf>.

WTO (1994b). El Salvador: Schedule of Specific Commitments, GATS/SC/29, 15 April. <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/SCHD/GATS-SC/SC29.pdf&Open=True>.

WTO (1994c). Nicaragua: Schedule of Specific Commitments, GATS/SC/63, 15 April. <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/SCHD/GATS-SC/SC63.pdf&Open=True>.

WTO (1994d). Honduras: Schedule of Specific Commitments, GATS/SC/38, 15 April. <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/SCHD/GATS-SC/SC38.pdf&Open=True>.

WTO (1997). Panama: Schedule of Specific Commitments, GATS/SC/124, 1 October. <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/SCHD/GATS-SC/SC124.pdf&Open=True>.

Preferential Trade Agreements

Canada–Honduras Free Trade Agreement (HD-Canada), 5 November 2013. <https://www.international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/honduras/fta-ale/index.aspx?lang=eng>.

Canada – Panama Free Trade Agreement (PN-Canada), 14 May 2010. <https://www.international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/panama/fta-ale/index.aspx?lang=eng>.

Central America – Chile Free Trade Agreement (CA-Chile), 18 October 1999. <http://www.sice.oas.org/Trade/chicam/chicamin.asp>.

Central America – Dominican Republic Free Trade Agreement (CA-DR), 16 April 1998. <http://www.sice.oas.org/Trade/camdrep/indice.asp>.

Central America – Panama Free Trade Agreement (CA-PN), 6 March 2002. <http://www.sice.oas.org/Trade/capan/indice.asp>.

Colombia – El Salvador, Guatemala and Honduras Free Trade Agreement (NT-Colombia), 9 August 2007. <http://www.sice.oas.org/TPD/COL_Norte/Text/Index_s.asp>.

Costa Rica – China Free Trade Agreement (CR-China), 8 April 2010. <http://www.sice.oas.org/Trade/CRI_CHN_FTA/Texts_Apr2010_e/CRI_CHN_ToC__PDF_e.asp>.

Costa Rica – Colombia Free Trade Agreement (CR-Colombia), 22 May 2013. <http://www.sice.oas.org/Trade/COL_CRI/COL_CRI_Index_s.asp>.

Costa Rica – Peru Free Trade Agreement (CR-Peru), 26 May 2011. <http://www.sice.oas.org/Trade/CRI_PER_FTA_s/CRI_PER_ToC_s.asp>.

Costa Rica – Singapore Free Trade Agreement (CR-Singapore), 6 April 2010. <http://www.sice.oas.org/Trade/CRI_SGP_FTA/Index_s.asp>.

Dominican Republic – Central America – United States Free Trade Agreement (CAFTA), 5 August 2004. <https://ustr.gov/trade-agreements/free-trade-agreements/cafta-dr-dominican-republic-central-america-fta/final-text>.

EFTA – Central America Free Trade Agreement (CA-EFTA), 24 June 2013. <https://www.efta.int/free-trade/Free-Trade-Agreement/Central-American-States>.

El Salvador – Honduras – Chinese Taipei Free Trade Agreement (ES/HD-Taiwan), 7 May 2007. <https://fta.trade.gov.tw/fta_salvadory_honduras.html?1>.

EU – Central America Association Agreement (CA-EU), 29 June 2012. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2012:346:FULL&from=EN>.

Guatemala – Taiwan Free Trade Agreement (GU-Taiwan), 22 September 2005. <https://fta.trade.gov.tw/fta_guatemala.html?1>.

Korea – Central America Free Trade Agreement (CA-Korea), 21 February 2018. <https://www.customs.go.kr/engportal/cm/cntnts/cntntsView.do?mi=7308&cntntsId=2332#>.

Mexico – Central America Free Trade Agreement (CA-Mexico), 22 November 2011. <http://www.sice.oas.org/Trade/CACM_MEX_FTA/Index_s.asp>.

Mexico – Panama Free Trade Agreement (PN-Mexico), 3 April 2014. <http://www.sice.oas.org/TPD/MEX_PAN/Draft_MEX_PAN_FTA_s/Index_PDF_09.05.2014_s.asp>.

Panama – Chile Free Trade Agreement (PN-Chile), 27 June 2006. <http://www.sice.oas.org/Trade/CHL_PAN_FTA/Index_s.asp>.

Panama – Peru Free Trade Agreement (PN-Peru), 25 May 2011. <http://www.sice.oas.org/Trade/PAN_PER_FTA_s/PAN_PER_ToC_s.asp>.

Panama – Singapore Free Trade Agreement (PN-Singapore), 1 March 2006. <https://www.enterprisesg.gov.sg/-/media/esg/files/non-financial-assistance/for-companies/free-trade-agreements/PSFTA/Legal_text//PSFTA_Legal_Text.pdf>.

Panama – Chinese Taipei Free Trade Agreement (PN-Taiwan), 21 August 2003. <http://www.sice.oas.org/Trade/PanRC/PANRC_s.asp>.

Peru – Honduras Free Trade Agreement (HD-Peru), 29 May 2015. <http://www.sice.oas.org/Trade/CACM_PER/HND_PER/HND_PER_Index_s.asp>.

United Kingdom – Central America Association Agreement (CA-UK), 18 July 2019. <http://www.sice.oas.org/TPD/CACM_GBR/Texts/CACM_GBR_Agt_MS_32.2019_s.pdf>.

United States – Panama Trade Promotion Agreement (PN-US), 28 June 2007. <https://ustr.gov/trade-agreements/free-trade-agreements/panama-tpa/final-text>.

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Trade Reforms, Capital Investments and the Feminization of Colombian Manufacturing Industries: 1981-2000

Reformas comerciales, inversiones en capital y feminización de las industrias manufactureras colombianas: 1981-2000

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Abstract

We exploit a natural experiment provided by the trade liberalization that occurred in Colombia at the beginning of the 1990s to see its possible effects on the gender composition of the workforce across manufacturing industries. To control for the effects of changes in capital technology, our econometric panel data strategy controls for three different types of capital stock per worker (namely, machinery, office equipment and transport equipment) and compares estimates drawn from a variety of instruments. We also control for changes in market competition within different manufacturing industries with the implementation of a concentration index variable in order to measure the degree of market power. Our findings

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point out that the Colombian manufacturing industries that became more exposed to trade flows increased their share of female employment in a more pronounced way with respect to those that remained less exposed. This effect, however, appears to be stronger in the case of highly skilled workers. As predicted by microeconomic theory, we observe lower female shares of jobs in manufacturing industries with higher levels of industry concentration. Our results are also consistent with the literature that predicts an increasing feminization of employment as a result of a the massification of emerging computer technologies since the end of the 1980s.

Keywords: Female intensity – Trade liberalization – Panel data – Colombia.

Resumen

A partir del experimento natural proporcionado por la liberalización comercial que ocurrió en Colombia a principios de la década de 1990, en este articulo analizamos hasta qué punto este fenómeno puede explicar el aumento de la participación del empleo femenino que registrado en las industrias manufactureras. Para controlar por los efectos del cambio tecnológico y la intensidad en el uso de la tecnología, nuestra estrategia de datos de panel econométricos controla tres tipos diferentes de stock de capital por trabajador (a saber, maquinaria, equipo de oficina y equipo de transporte) y compara estimaciones obtenidas mediante el uso de diferentes instrumentos. También controlamos los cambios en la competencia del mercado dentro de diferentes industrias manufactureras con la implementación de una variable de índice de concentración que mide el grado de poder de mercado. Nuestros hallazgos señalan que las industrias manufactureras colombianas que quedaron más expuestas a los flujos comerciales

aumentaron su participación en el empleo femenino de manera más pronunciada con respecto a las que permanecieron menos expuestas. Este efecto, sin embargo, parece ser más fuerte en el caso de los trabajadores altamente calificados. Como predice la teoría microeconómica, observamos una menor participación femenina en los puestos de trabajo de aquellas industrias manufactureras con niveles más altos de concentración industrial. Nuestros resultados también son consistentes con la literatura que predice una creciente feminización del empleo como resultado de la masificación de las tecnologías informáticas emergentes desde finales de la década de 1980.

Palabras clave: Feminización del empleo – liberalización comercial – datos de panel – Colombia.

1.- Introduction

Developing countries witnessed an increasing feminization of employment since the 1980s, while their economies became more open to trade. Economic policies in general, and trade liberalization in particular, have a differentiated effect on women as a result of both asymmetries in the distribution of rights over economic resources and gender-based segregated roles in the labor market economy and the household (Bahri, 2021; Pavese, 2021; Fontana, 2003). While the increasing female labor force participation can be regarded as a long-term development trend, there is also a body of literature concerned with the effects of trade liberalization on the gender composition of employment.

The economic literature offers some clues about the interactions between trade and gender differences in the labor market. According to the Stolper-Samuelson theorem within the Heckscher-Ohlin-Samuelson trade model, trade liberalization increases the demand for the most abundant factor of production. If women represent the abundant factor in exporting industries, their returns will grow faster as the expansion of exports boosts the demand for more female labor. A number of studies have explored the relationship between trade liberalization and the gender composition of employment, particularly in manufacturing industries where both employment and tariff data tend to be more accessible. Wood (1991) is one of the pioneer studies to investigate the relationship between trade liberalization and the gender composition of the labor force. He found that increasing exports in industrialized countries are strongly correlated with growing demand for female labor in developing countries. The experience from developed economies indicates that both trade and industrialization are closely interrelated to

the gender composition of economic activities. In the same vein, Goldin (quoted in Galor and Weil (1996)) explains that the necessity for fine motor skills in textiles during the industrialization in the United Kingdom and the United States, and more recently in the electronics industry in Asian economies, represent examples of absolute and comparative advantage of female over male labor along the pathway of economic development.

More recently, Gupta (2021) explored the relationship between the trade liberalization reforms in India at the beginning of the 1990s and its impact on the female share of employment. She found that firms more exposed to import competition as a result of tariff cuts tended to reduce more their female share of employment, a finding attributed to India's labor legislation that prohibits women from working long hours and overnight shifts.

Similarly, Saraçoglu et al. (2018) evaluated the changes in the share of female employment in manufacturing across a sample of 31 countries between 1995 and 2011 using structural decomposition and factor content analyses. Their findings indicate that low-technology sectors drive most of the change in the gender composition of employment in manufacturing, and that the decreasing share of female employment in low-technology sectors observed in developed and middle-income countries can be attributed to trade diversion towards China. Using also structural decomposition methods, Kucera and Tejani (2014) evaluated changes in the feminization of manufacturing employment. They found persuasive evidence in emerging and recently industrialized economies that employment refeminization has been occurring in tandem with technology intensification in manufacturing. In a more recent study (Tejani & Kucera, 2021), the same authors

concluded that technological upgrading in export-oriented industries is negatively associated with female intensity in manufacturing employment.

However, there is still a vacuum in the existing knowledge on how trade liberalization, as well as technological change, affect the gender composition of employment across manufacturing industries. As globalization is also expected to affect the competitive structure of the labor market across manufacturing industries, there are potential unaccounted implications in terms of workers' bargaining power that affect female labor intensive sectors more exposed to trade (see: Williams and Kenison, 1996, Williams, 1987, Darity and Williams, 1985).

This paper exploits a natural experiment provided by the trade liberalization that occurred in Colombia at the beginning of the 1990s to see its possible effects on the gender composition of the workforce across manufacturing industries. To control for the effects of changes in capital technology, our econometric strategy features three different types of capital stock per worker (namely, machinery, office equipment and transport equipment) and compares estimates drawn from a variety of instruments. We also control for changes in market competition within different manufacturing industries with the implementation of a concentration index variable to measure the degree of market power. We implement a number of panel data techniques including fixed-effects instrumental variables (FE-IV, hereafter) and the dynamic IV approach developed by Arellano and Bover (1995) and Blundell and Bond (1998) in order to address potential endogeneity problems on some of the regressors. Our findings point out that the Colombian manufacturing industries that became more exposed to trade flows increased

their share of female employment in a more pronounced way with respect to those that remained less exposed, particularly in the case of skilled workers in white-collar positions. As predicted by microeconomic theory, we observe lower female shares of jobs in manufacturing industries with higher levels of industry concentration. Our results are also consistent with the literature that predicts an increasing feminization of employment in response to the massification of emerging computer technologies since the end of the 1980s. The remainder of this paper is organised as follows. The second section presents the literature review and the third provides some background information for the country describing the data used for this empirical application. The fourth reports the econometric results in the light of the existing literature. The fifth and last section offers some concluding remarks.

2. Literature review

Trade theory provides some explanations for the effects of increased foreign competition on employment patterns between men and women. In particular, the Stolper-Samuelson theorem within the Heckscher-Ohlin-Samuelson trade model indicates that trade liberalization increases the demand for, and the returns to, the most abundant factor of production. Thus, if women constitute the abundant factor in exporting industries boosted by trade, it is possible that their returns will grow faster than those of male workers and, in this way, the gender wage gap will be reduced. Wood (1991) provides one of the first studies to survey the relationship between trade and the gender composition of the labor force in developing countries. The author investigated the effects of trade on female employment ratios in manufacturing for a sample of countries and found that increasing exports to industrialized economies are associated with higher relative

demand for female intensive goods from developing countries. But at the same time, Wood (1991) found that trade flows of manufacturing goods from the 'South', which to a great extent are intensive in female labor, were not associated with reductions in relative demand for female labor in manufacturing industries from developed countries.

Several recent papers address the relationship between trade liberalization and the gender composition of employment, particularly in the manufacturing sector. Gupta (2021) explored the association between the trade liberalization that took place in India at the beginning of the 1990s and the female share of employment, using a panel of 1,289 manufacturing establishments surveyed in 1989 and 1998, and census data to construct another panel of employment by gender at the district level for the years 1991 and 2001. She concludes that trade liberalization worsened labor inequalities in India as tariff reductions are found to be associated with decreasing shares of female employment across manufacturing industries, a result explained by India's labor legislation that prohibits women from working night shifts and extended hours. This result was also more pronounced among establishments characterized by high levels of labor intensity and in states where labor legislation makes more difficult the dismissal of workers.

In a similar way, Saraçoglu et al. (2018) studied the changes in employment feminization in manufacturing across a sample of 31 countries between 1995 and 2011 using structural decomposition and factor content analyses. They find that the defeminization of employment documented for low-technology industries from developed countries in the earlier literature is also taking place in developing countries since the 1990s, particularly in the case of middle-income

economies, mainly because of trade diversion towards China. Although the female shares of employment in mid and high-technology sectors improved modestly in both developed and middle-income countries, trade flows appear to reduce the overall participation of women in the manufacturing employment structure in that part of the world. Their results also indicate that as countries transform their manufacturing industries from labor-intensive/low-technology activities to capital-intensive/high-technology industries, labor defeminization intensifies, and trade liberalization appears to reinforce such trend.

Using also structural decomposition methods, Kucera and Tejani (2014) evaluated changes in the feminization of manufacturing employment across a sample of 36 countries between 1981 and 2008. They find persuasive evidence in emerging and recently industrialized economies that employment defeminization has been occurring in tandem with technology intensification in manufacturing, particularly in the case of labor-intensive sectors such as textiles and apparel. Most of the changes in the gender composition across manufacturing industries took place within the most labor-intensive groups, while employment reallocation effects did not play a major role. Kucera and Tejani (2014) also conclude that defeminization of manufacturing in East Asian economies is consistent with an increasing preference for highly skilled male workers as the introduction of sophisticated technologies intensifies.

In a more recent study, Tejani & Kucera (2021) examined the effects of technological change and structural transformation in a sample of 14 countries characterized by the predominance of export-oriented and labor-intensive manufacturing industries. They confirm that technological

upgrading is strongly associated with defeminization of manufacturing employment while within-industry effects appear more important to explain changes in female intensity of labor than employment reallocation effects. The largest shifts in the gender composition of employment were found in the manufacturing sectors of food, beverages, and tobacco; textiles; leather products and footwear, and motor vehicles, in which improvements in labor productivity were found associated with reductions in female employment intensity.

Banerjee & Veeramani (2017) analysed the effects of trade policy on female employment intensity in the case of India using a panel of manufacturing industries between 1998 and 2011. They conclude that lower import tariffs are positively associated with female employment intensity, a finding that they attribute to a cost-cutting strategy whereby competitive firms substitute male workers with cheaper but equally productive female workers. The authors find also that the intensification in the use of technology reduces the proportion of women in the workforce. These two effects acted one against another in a way that female employment gains as a result of trade liberalization have remained modest in the case of India.

From a theoretical point of view, trade liberalization has the potential to affect the gender composition of employment in at least four different ways. First, as long as women and men are imperfect substitutes in production, increased trade may affect the relative demand (as well as relative wages) of one gender group with respect to another. New opportunities arising from increasing exports, as well as more competition from imported goods, have the potential for both changing gender differences in the labor market if women are concentrated in sectors more exposed to trade (Collier, 1994).

Second, trade liberalization reduces the relative prices of capital goods and imported technology in the case of developing countries. This might open new employment opportunities for women as physical strength becomes less relevant. Some studies indicate strong complementarities between female labor and a technology intensification (Galor and Weil, 1996, Weinberg, 2000, Welch, 2000).

Third, the "taste for discrimination hypothesis" formulated by Becker (1957) suggests that policy measures to increase competition are likely to reduce labor market discrimination against women and other minorities. Thus, increasing competition from imports as a result of trade liberalization is likely to reduce the scope for non-competitive behavior in the form of discrimination (Artecona and Cunningham, 2002, Black and Brainerd, 2004).

Fourth and lastly, more competitive markets resulting from trade liberalization might also weaken the bargaining position of women in female-intensive industries as local firms respond to increasing imports with cost-cutting strategies to reduce labor costs. If women are concentrated in manufacturing sectors more exposed to trade in developing countries such as textiles, clothing, electronics, and garment, it is possible that trade liberalization worsens the conditions for female employment (see: Williams and Kenison, 1996, Williams, 1987, Darity and Williams, 1985).

The previous four theoretical considerations inspire the empirical strategy that will be presented in the rest of this paper. They imply that the gender composition of employment can be affected not only by changes in trade flows of manufacturing goods, but also by the intensification in the

use of technology as well as by the competitive forces that impact the labor market.

3. Background and data: trade liberalization and labor markets in Colombia

3.1 Female share of jobs in manufacturing industries

The dependent variable in this empirical analysis is the female share of jobs in manufacturing industries. This variable was estimated with microdata from the Annual Manufacturing Survey -AMS for the period 1981-2000 at the three-digit level of the International Standard Classification of Industries -ISIC, Revision 2[1]. A number of methodological adjustments, including a change to the ISIC Rev.3, rendered impossible the incorporation of more recent years in this analysis.

Estimates at the aggregate of Colombian manufacturing industries indicate that the share of female jobs rose from 31.2 to 36.3 percent between 1981 and 2000 (see Figure 1, panel a). Demographic change a comparatively better improvements in educational achievement among women are referred in the Colombian literature as the main drivers from the supply side of the labor market that explain the incorporation of an increasing proportion of women in the labor market (Isaza-Castro, 2002; Isaza-Castro, 2006; Isaza-Castro et al., 2007; Arango and Posada, 2002; Tenjo and Ribero, 1998; Santa María and Rojas, 2001; Tenjo and Ribero, 1998). It is worth to mention that the total number

1 The AMS could be considered as a census in the sense that it is gathered annually amongst nearly all manufacturing establishments with more than ten workers since 1975. This survey is administered by the National Statistical Administrative Department (DANE, from its initials in Spanish). For more information about AMS microdata, see: https://www.dane.gov.co/index.php/estadisticas-por-tema/industria/encuesta-anual-manufacturera-enam -last access: July 3, 2022.

of jobs in Colombian manufacturing industries reached the lowest level by the end of the analyzed period among blue-collar workers of both sexes and white-collar male workers, while white-collar female workers stand as the only group to increase the number of jobs between 1981 and 2000. The same estimates show that the proportion of female jobs amongst white-collar workers has been higher than in the case of blue-collar workers over all years reviewed in this study (see Figure 1, panel b)[2].

The contraction of manufacturing employment growth in Colombia could be attributed to a number of factors including an increased exit rate of plants after the introduction of trade liberalization reforms in 1990 (Eslava et al., 2009), weaker demand for Colombian manufactured goods internally due to a severe economic downturn at the end of the 1990s, as well as a less competitive position of Colombian manufacturing exports due to the appreciation of the Colombian currency for most of that decade (Ocampo et al., 2004). Goldberg and Pavcnik (2003) claim that labor market rigidities (rather than trade liberalization) were also a major factor contributing to both the informalization of urban employment and the stagnation of formal employment in manufacturing firms over the 1990s.

The increase in the share of female jobs commented above was the highest amongst white collar workers as it rose from 31.7 per cent in 1981 to 45.5 per cent in 2000, while in the case of blue-collar workers there was a more modest rise, from 29.8 to 32.6 per cent over the same years (see Figure 1,

2 The characterization of the labor force between white and blue-collar workers just commented above was dictated by the availability of questions in the survey over the entire period of analysis. Other alternatives of analysis, namely, by skill, hierarchical, and contractual status for the whole period from 1981 to 2000 were not feasible due to changes in the questionnaire.

panel b). Such trends are in line with some of the literature reviewed above, according to which the feminization of the labor force is concomitant with the process of economic development.

Employment in Colombian manufacturing industries also experienced a structural transformation in terms of the skill composition of the workforce over the years analyzed here as the percentage of white-collar jobs rose from 24.6 per cent in 1981 to 32,3 per cent in 2000. It should be noted that this increase has been more pronounced amongst women (see Figure 2). These trends suggest a structural transformation of the manufacturing employment by skill level in Colombia where the increasing proportion of white-collar workers is benefiting the incorporation of more women into the manufacturing workforce. This interpretation is in tandem with Galor and Weil (1996) and Welch (2000) who conclude that the incorporation of technology in production processes requires the demand of both skilled workers and female labor.

3.2 Tariffs and trade

Trade liberalization in Colombia revolved around two elements. First, the signing of trade agreements with México, Chile, and the Andean countries of Venezuela, Ecuador, Peru, and Bolivia. Second, the reduction of tariffs and non-tariff barriers to trade in 1990 with the initial idea of a gradual approach over a time horizon of more than three years. According to Attanasio et al. (2004), Goldberg and Pavcnik (2005b, 2005a) and Jaramillo and Tovar (2006), the fact that Colombia did not participate in the GATT negotiations for the reduction of trade tariffs made this reform comparatively more drastic than in many other developing countries. On top of all of that, Colombian economic authorities decided to

speed up the liberalization process in view of macroeconomic circumstances such as high inflation, a dramatic increase in the inflow of foreign capital, and a reduction in trade flows. Thus, the initial liberalization schedule for 1994 in terms of non-tariff barriers and import tariffs was completed by the end of 1991 (Edwards, 2001).

We measure the degree of trade openness in Colombia with simple and weighted average import tariffs across 29 manufacturing industries (see Figure 3). According to weighted average estimates, import tariffs for all manufacturing industries fell from 16.9 per cent in 1981-1984 to 6.4 per cent in 1997-2000[3]. The largest reductions on weighted tariffs over these years (all of which were more than 20 percentage points) were reported on 356- Plastic products, 313- Beverage industries, 384- Transport equipment, 381- Fabricated metal products and, 332- Furniture and fixtures. Some of the existing literature for this country suggest that the most protected industries before trade liberalization were also the sectors with the highest concentration of skilled workers and thus, experienced the largest reductions in tariffs during the liberalization period (Attanasio et al., 2004, Goldberg and Pavcnik, 2003, Goldberg and Pavcnik, 2005b, Goldberg and Pavcnik, 2005a, Jaramillo and Tovar, 2006).

3.3 Concentration, market power and trade reforms

As explained above, trade liberalization is expected to bring about more competition in the form of increased imports and, thus, reduce the scope for inefficient gender discrimination. Competition from imports, however, may also strengthen the bargaining position of local firms as they

3 Weights are based on imports value in US dollars.

are forced to implement cost-cutting strategies to survive and remain competitive while workers face more limited employment options within industries more exposed to trade.

We computed a four-firm concentration ratio (CR_4) across industries to control for changes of market structure, based on the ratio between the gross product value from the four largest firms within a given industry and the total gross product value for the same industry, according to the following expression:

$$CR_4 = \sum_{i=1}^{4} S_i \qquad (1)$$

where S_i indicates the gross product share of the i firm in the total gross product of a given manufacturing industry. Results for this index show a modest reduction in market concentration along the two decades defined in this study, from an average of 0.452 in 1981 to 0.439 in 2000. Figure 4 shows this concentration ratio for each one of the 29 ISIC sectors along the years defined in this study on an identical scale to display the high degree of stability in the ranking of the most (and less) concentrated sectors. The most concentrated sectors in which the top four firms represents more than 70% of the production value are 353- *Petroleum refineries*, 314- *Tobacco manufactures*, 354- *Products of petroleum and coal*, 372- *Non-ferrous metal basic industries*, 355- *Rubber products* and, 361- *Pottery, china and earthenware*. In contrast, the least concentrated industries over the years reviewed with an index below 20 per cent are 311- *Food products*, 381- *Fabricated metal products* and, 322- *Wearing apparel, except footwear.*

3.4 Capital equipment

Increasing availability of capital equipment in manufacturing industries enables female labor intensity as it makes physical strength less relevant (Galor and Weil, 1996). Since trade liberalization makes cheaper the access to imported capital equipment, there is a possibility of interaction of this variable with the participation of women in the workforce. To account for this, we estimated the natural logarithm of the amount of capital per worker in manufacturing industries (in Colombian pesos at constant prices for 1999) under three different categories: machinery equipment, transport equipment, and office equipment. This capital stock measure was estimated according to the following formula for perpetual inventories:

$$K_{it} = K_{it-1} + I_{it} + (K_{it-1} + I_{it}) \times D_i \qquad (2)$$

where K represents the capital stock of industry l at the beginning of year t, I depicts the gross investment of industry i and, D represents the observed depreciation rate of industry i calculated by Pombo (1999) according to the ISIC Rev. 2, at the 3-digit level. As in the case of our dependent variable, estimates for K and D were obtained also from microdata of the AMS from 1981 to 2000.

Figure 5 presents the estimates of the logarithm of capital stock per worker according to expression (2) for the 29 manufacturing sectors over the 20 years span covered in this analysis. All manufacturing industries reported an increase in the amount of capital per worker for both machinery and office equipment between 1981 and 2000, while the amount of transport equipment rose only in 14 out of the 29 manufacturing sectors over the same years. The largest

increases in the amount of capital per worker were reported by 313- *Beverage industries*, 362- *Glass and glass products*, a supplier sector of the former, 361- *Pottery, china and earthenware*, and 369- *Other non-metallic mineral products*.

4. Econometric analysis

4.1 Methodology

In this empirical application, we implement a variety of panel data models to explain the effects of trade policy on the gender composition of the labor force across manufacturing industries[4]. These include fixed-effects instrumental variables (FE-IV) estimators, and the dynamic instrumental variables -IV approach developed by Arellano and Bover (1995) and Blundell and Bond (1998). As technological changes may also affect the share of female jobs over time, our empirical strategy also incorporates the three explanatory variables for the (natural logarithm of) capital stock per worker in terms of machinery, transport, and office equipment. As anticipated above, we also control for changes in market structure with

4 Other of studies have assessed the impact of trade liberalization on the extent of gender wage discrimination, rather than the gender composition of employment (see, for instance, Artecona & Cunningham 2002 in the case of Mexico; Reilly and Vaseudeva 2005, and Chamarbaguala 2006 in the case of India). Such studies use household survey microdata that allows the estimation of wages by gender based on information from the supply side of the labor market. Our study is based on survey data gathered from the demand side of the labor market, this is, from firms rather than households. In particular, we are using data from the Annual Manufacturing Survey -AMS of Colombia which do not provide disaggregated information for men and women about wages or labor costs. Other variables, such as the number of female and male workers are recorded with a high degree of precision in this survey, and this is precisely the information that we use in the present empirical application to construct the dependent variable in our econometric models. Given that the unit of information in the AMS is the firm and not the worker (as it would be in the case of household surveys), other conventional variables in studies of gender wage discrimination such as schooling levels or professional experience cannot be accounted for in the present empirical application.

the inclusion of a concentration index based on expression (1) in Section 3.3, above.

We implemented a FE-IV approach based on an individual industry effects model

$$y_{it} = \alpha_i + x'_{it}\beta + \varepsilon_{it} \qquad (3)$$

where the dependent variable, y_{it}, is the share of female jobs in industry i at time t, x'_{it} depicts a set of explanatory variables (in this case, a trade variable, a concentration index and, a capital stock per worker measure in logs – either machinery, transport or office equipment) and β represents a vector of coefficients to be estimated. The structure of the error component, in addition to the conventional random component ε_{it}, assumes the existence of unobserved time-invariant industry fixed effects denoted by α_i. With the availability of appropriate instruments, z_{it}, it is possible to obtain consistent estimation of β in cases where x_{it} is correlated with the time-invariant error component α_i. The validity of such instruments requires that they are uncorrelated to the idiosyncratic error ε_{it} so,

$$\mathrm{E}(\varepsilon_{it}|\alpha_i, z_{i1}, \ldots, z_{it}, \ldots, z_{iT}) = 0 \qquad (4)$$

Thus, FE-IV estimates are consistent if assumption (4) is satisfied. As customary in panel data, the condition of the idiosyncratic error term $\varepsilon_{it} \sim (0, \sigma^2_{\varepsilon})$ is frequently not satisfied due to serial correlation within panel units. For this reason, we estimated heteroscedasticity-robust standard errors that allow for intergroup correlation with the implementation of a clustered sandwich estimator to adjust the variance-co

variance matrix[5]. FE-IV estimates presented here with cluster-robust standard errors were calculated with the ***xtivreg2*** Stata command written by Schaffer and Stillman (2010), while in models without instruments were calculated with the conventional ***xtreg*** Stata command.

In addition, we compare the previous estimates with those from a dynamic panel data system obtained through the Generalized Method of Moments -GMM developed by Arellano and Bover (1995) and Blundell and Bond (1998). This approach relies on a simultaneous estimation of a system with two equations, one in differences and one in differences, with a set of instruments used in each equation.

The model can be represented by the following expression:

$$y_{it} = \delta y_{i,t-1} + x'_{i,t}\beta + \rho_i + \varepsilon_{i,t} \qquad (5)$$

in which $\delta y_{i,t-1}$) is the lagged dependent variable and its coefficient, p_i represents the industry fixed effects and, $\varepsilon_{i,t}$ is an *i.i.d.* error term. First differencing of (5) eliminates p_i as follows,

$$y_{i,t} - y_{i,t-1} = \delta(y_{i,t-1} - y_{i,t-2}) + \beta(x_{i,t} - x_{i,t-1}) + (\varepsilon_{i,t} - \varepsilon_{i,t-1}) \qquad (6)$$

Under this specification, the choice of instruments is performed under the less restrictive assumption of *weak*

5 Chapter 8 in Angrist and Pischke (2008) describe this and other procedures for robust covariance matrix estimation in panel data. See also Cameron and Trivedi (2009) for a review of different estimates for the variance-covariance matrix including the cluster-robust procedure.

exogeneity[6]. However, this estimator is characterized by both low asymptotic precision and small sample biases. For this reason, Blundell and Bond (1998) advice that this estimator should be complemented with the regression equation in levels. Moreover, when the lagged dependent and explanatory variables are persistent over time they represent weak instruments for the regression equation in differences (Blundell and Bond, 1998). According to Griliches and Hausman (1986), another problem is that the differences estimator is biased due to decreasing signal-to-noise ratios. For all of this, Arellano and Bover (1995) system estimator reduces potential biases by the simultaneous estimation of equations (5) and (6). Industry-specific effects are instrumented with lagged differences which, in the context of the regression in levels, represent adequate instruments. Although industry-specific effects may be correlated with right-hand side variables, there is no correlation between them when they are expressed in differences.

Consistency of this GMM estimator relies on whether the lagged explanatory variables are adequate instruments. Following Arellano and Bond (1991) and Arellano and Bover (1995), we tests the validity of instruments with both the Sargan test for over-identifying restrictions and the second-order serial correlation test. The Sargan test statistic is:

$$s = \hat{\epsilon}' Z (\frac{1}{N} \sum_{i=1}^{N} Z_i' \hat{\epsilon}_i \hat{\epsilon}_i' Z_i)^{-1} Z_i' \hat{\epsilon} \qquad (12)$$

6 Under the two assumptions of (i) no serial autocorrelation in the residuals and, (ii) weak exogeneity, the two following moment conditions apply:

$$\mathrm{E}[y_{i,t-s}(\varepsilon_{i,t} - \varepsilon_{i,t-1})] = 0 \quad \forall \quad s \geqslant 2; t = 3, \ldots, T \qquad \text{(i)}$$

$$\mathrm{E}[x_{i,t-s}(\varepsilon_{i,t} - \varepsilon_{i,t-1})] = 0 \quad \forall \quad s \geqslant 2; t = 3, \ldots, T \qquad \text{(ii)}$$

These two conditions represent the basis for the GMM estimator of differences.

where S follows a x^2_{m-r} distribution where $m-r$ is the number of instruments minus the number of exogenous variables, ε_{jt} represents the estimated residuals and Z depicts a set of valid instruments in the differenced equation. The Sargan test assesses the sample analogue of the moment conditions used in the estimation process in which failure to reject the null hypothesis gives support to our model.

The second test checks the no serial correlation hypothesis in the error term by examining first and second order serial correlation in the residuals from the regression in differences. According to Arellano and Bond (1991) and Arellano and Bover (1995), failure to reject the null hypothesis of no second-order serial correlation leads to conclude that the original error term is serially uncorrelated.

4.2 Results

Table 1 presents the definition of the variables included in the models just explained above while Table 2 reports their panel summary statistics. This is a balanced panel with no missing values in which all variables fluctuate within the range of 0 and 1, except in the case of the three stock of capital per worker variables as these are expressed in natural logarithms of Colombian pesos at 1999 constant prices. For all variables excluding the stock of office equipment per worker variable *(lnkpw_office)*, most of the variance takes place between manufacturing industries rather than within manufacturing industries.

We implement the FE-IV approach described in expression (3) in order to explain changes in the female intensity of employment as a result of trade liberalization. For this purpose, we incorporate two trade flow measures, the import

penetration coefficient *ipc* and the export orientation coefficient *eoc*, in addition to the concentration index *(CIGP)* described in section 3.3, and the three capital stock measures per worker for machinery, transport, and office equipment (*lnkpw_mach, lnkpw_trans and, lnkpw_office* –see Table 1 for definitions). Under this framework, we found that both trade measures, as well as the concentration index variable *(CIGP)*, are endogenous regressors based on a version of the Hausman test for endogenous regressors developed in Stata™ by Schaffer and Stillman (2010) that is robust to violations of conditional homoskedasticity[7]. Thus, we instrumented *CIGP* with the logarithm of the number of firms, *ipc* with average tariffs (see section 3.2, above) and, *eoc* with a conventional relative trade balance measure *(RTB)* constructed as follows:

$$RTB_{it} = \frac{x_{it} - M_{it}}{x_{it} + M_{it}} \tag{13}$$

where X_{it} and M_{it} denote the exports and imports, respectively, from industry i at time t.

We believe that the use of these instruments is justified not only on their theoretical validity but also in view of their high correlation with the endogenous variables, as we demonstrate below. In the case of the import penetration, we argue that average tariffs represent an appropriate instrument measure of trade policy as they are aimed at moderating import flows. Several empirical applications dealing with the effects of trade on labor market outcomes in Colombia have directly relied on tariffs as a proxy measure of trade policy (Attanasio et al.,

7 The results for this test presented in the Statistical Appendix of this paper (see Tables A1 and A2) indicate that the null hypothesis that a given set of regressors is exogenous can be safely rejected in the case of the variables already indicated: *CIGP, ipc* and *eoc*. See notes at Tables A1 and A2 for details on the structure of this test.

2004, Goldberg and Pavcnik, 2003, Goldberg and Pavcnik, 2005b, Jaramillo and Tovar, 2006)[8]. We believe, however, that using tariffs instead of import penetration as a variable to control for the impact of trade policy on the labor market is problematic as it omits the effects of other trade barriers such as import licenses and import quotas. Contrastingly, import penetration provides an outcome measure of the effects of trade policy on the competitive environment in which local firms have to operate. Tariffs, on the other hand, provide a good instrument for import penetration as they embody a trade policy measure aimed specifically at moderating import flows into the domestic economy. Regarding the export orientation coefficient, we believe that the relative trade balance measure described in expression (5) represents a reasonable estimate of the competitive position of manufacturing industries with rich variation across sectors and over time. We also instrument the concentration index of gross product (CIGP) variable with the natural logarithm of the corresponding number of firms for each combination of industries and years based on the assumption that more competitive industries (i.e., with a lower concentration index) have, on average, a larger number of firms.

In Table 3 we formally test the association between the endogenous regressors, and the selected instruments incorporated in subsequent FE-IV models presented below. According to these results, we can reasonably be confident that our instruments are highly correlated with the endogenous regressors not only in terms of the FE within estimator (see Columns 1, 3 and 5) but also in terms of the first-differences

8 On these papers, Attanasio et al (2004) use tariffs at the beginning of the 1980s interacted world coffee prices as instruments for tariffs while Goldberg and Pavcnik (2005b) perform an identical strategy. Jaramillo and Tovar (2006) also use tariffs at the beginning of the 1980s interacted with annual exchange rates.

specification (see Columns 2, 4 and 6). As in other models presented along this paper, the standard errors reported in Table 3 are robust for cluster correlation. On these results we verify a negative association between import penetration *(ipc)* and average tariffs *(a_tariffs)* as can be seen in the regression coefficients in Columns 1 and 2 which are statistically significant at the one per cent level in the case of the FE estimator and, at the five percent level in the case of the first-differences estimator. We confirm also a negative association between the concentration index of gross product *(CIGP)* and the natural logarithm of the number of plants *(ln_noplants)* as can be inferred from the estimated coefficients in Columns 3 and 4 of Table 5. Lastly, we corroborate a positive relationship with statistically significant coefficients at the one per cent level between export orientation *(eoc)* and the relative trade balance measure *(rtb)* presented in expression (5), above.

Results for our FE-IV estimates for the effects of import penetration on the female share of jobs are presented in Table 4. In order to check the robustness of our FE-IV estimates, we also calculate the same female share equations with instruments derived from their lagged values. Standard errors for FE-IV models presented on Table 4 are robust for cluster serial autocorrelation. To further check these results, we also report estimates using the Generalised Method of Moments approach developed by Arellano and Bover (1995) and Blundell and Bond (1998) (see Section 4.1, above). These estimates display the import penetration coefficient -*ipc* as a control for the degree of trade openness (while those on Table 5 use the export orientation coefficient for this purpose). The results indicate that the import penetration coefficient is positively associated with the female share of jobs in manufacturing industries particularly in the case of white-collar workers, with statistically significant coefficients

under all specifications[9]. Results for all workers confirm this result although they turn statistically insignificant under the dynamic panel data system (column 4) while the coefficients for blue-collar workers are statistically insignificant under the FE-IV and the AB/BB estimators.

The strong association between import penetration and the proportion of female workers among white-collar positions is in accordance with Banerjee & Veeramani (2017) who also found that lower barriers to trade are positively associated with female employment intensity. Saraçoglu et al. (2018) also found modest improvements in female employment intensity in the case of mid and high-technology sectors as a result of trade liberalization, although the effect was the opposite for low-skill employment.

The Concentration Index of Gross Product -CIGP appears negatively associated for all workers under all estimation techniques analyzed here, with coefficients statistically significant beyond conventional levels. However, the disaggregation by skill level reveal that this statistical significance remains only in the case of the dynamic AB/BB estimator which suggest a stronger negative effect that is about four times higher among white-collar workers than among blue-collar workers.

The same results in Table 4 also indicate a positive association between the feminization of manufacturing employment and two of the three capital per worker variables (in logs), machinery and office equipment, while the transport equip-

9 Table A3 in the Statistical Appendix reports the two tests outlined in section 4.1 for the validity of the instruments used in the dynamic panel data model presented in Column 4 of Tables 4 and 5. According to the Sargan test for over-identifying restrictions we find evidence that the instruments are exogenous. Likewise, the results for the second-order serial correlation test suggest that the residuals from the regression in differences are serially uncorrelated.

ment variable appears negatively correlated. The coefficients for these variables, however, are not statically different from zero in a number of cases except in the case of the office equipment variable *(lnkpw_office)* among white-collar workers. This suggests the existence of complementarities between the feminization of manufacturing labor and the intensification in the use of computing equipment in the Colombian manufacturing industries that benefited, mostly, the skilled segment of the female labor force. This result is consistent with the hypothesis supported by some of the studies reviewed above (Galor and Weil, 1996, Weinberg, 2000, Welch, 2000) which suggest that women enjoy a comparative advantage in cognitive skills. This interpretation is, to some extent, in line with the formulation proposed by Weinberg (2000) who argues that, in the case of the United States, a substitution process between highly skilled women and less skilled men might be explained by the increase in computers use which, on the margin, tends to favor the former. Figures presented in Figure 1a, above, suggest that this phenomenon might also be happening in Colombian manufacturing industries as female *white-collar workers* were the only group of the labor force which shows an absolute increase of employment levels between 1981 and 2000. Contrastingly, male *blue-collar workers* were the group with the largest reduction in manufacturing employment over these years in both absolute and relative terms.

The econometric results presented in Table 5 are intended to investigate the effects of an alternative trade variable, the export orientation coefficient –*eoc*. In this case, increased levels of trade in the form of export orientation are positively associated with the proportion of women in manufacturing employment. Nevertheless, the coefficients are statistically insignificant in several cases. Only in the case of blue-co-

llar workers, we find a statistically significant association between *eoc* and the dependent variable in the case of the FE-IV estimator based on lagged values of the endogenous regressor (column 3) and the dynamic panel data estimator (column 4). In the case of white-collar workers, all estimators are statistically significant except in the case of the dynamic panel data (column 4).

The results in Table 5 also corroborate the effects of other variables on the female share of jobs in manufacturing industries. In the case of our market concentration variable *(CIGP)*, there is strong evidence of its negative association with the female share of jobs for all labor force groupings analyzed here. Coefficients for this variable are well determined in most cases although they tend to decrease in significance in the case of the FE-IV estimator based on lagged values of the endogenous regressor (column 3). Regarding the capital investment variables, they confirm our previous findings of a well determined positive association between purchases of office equipment and the female share of white-collar manufacturing jobs under all four specifications. We also verify a negative association between transport equipment and the dependent variable but the coefficients for this variable decreased its statistical significance when they are disaggregated by white and blue-collar jobs.

The positive effects of both trade openness and the intensification in the use of office equipment on the feminization of employment in the manufacturing industries of Colombia are in line with the segregation dimension implicit in Becker's hypothesis of labor market discrimination. In other words, increased levels of market competition erode monopolistic rents to discriminate against women. Although we do not have any evidence of reduced gender discrimination, we do

observe that more competitive industries tend to have on average and *ceteris paribus*, higher female shares of jobs. At least, this is what we would expect according to Becker's hypothesis in terms of the gender composition of the labor force because of increasing competition.

5. Concluding remarks

This paper provides new evidence on the relationship between trade reforms and employment outcomes by gender with an empirical application to Colombian manufacturing industries. Although the evidence presented in this paper does not formally test whether women are more (or less) discriminated in the labor market, our empirical results suggests that trade liberalization, as well as some of the structural transformations in terms of the degree of market competition are associated to the feminization of employment in Colombian manufacturing industries.

We found convincing evidence that increased levels of import penetration are positively associated with higher female shares of jobs in manufacturing industries. Different econometric techniques presented in this paper point towards a similar conclusion, and they indicate that this effect was probably stronger amongst *white-collar workers*. Our estimates using the export orientation coefficient variable point to a similar conclusion, although the statistical significance in this case is less robust. Such complementarities between trade openness and labor feminization are also found in the case of India by Banerjee & Veeramani (2017) and for a sample of 31 countries across the world between 1995 and 2011 by Saraçoglu et al. (2018) in the case of high-technology sectors. Our results are, however, in contrast with those of Saraçoglu et al. (2018) who found that trade was associated

with defeminization of labor in the mid and low/technology sectors in India, a conclusion also verified by Gupta (2021).

On the other hand, we found persuasive evidence that higher levels of market concentration are negatively associated with the female share of jobs in the manufacturing industries of Colombia, indicating that, ceteris paribus, more competitive environments are more likely to incorporate larger shares of female employment. So far, this is what we expected to find from the existing literature in relation to the segregation dimension implicit in Becker's hypothesis of labor market discrimination. As our dependent variable is the female share of jobs, we remain agnostic as to whether the effects of increased competition, either in the form of increased international trade or lower market concentration, have any effect on the extent of gender pay discrimination. We should stress that increasing levels of female employment in manufacturing industries could occur with or without improvements in the bargaining position of women in the labor market.

We could also verify some complementarities between female labor and the use of some types of capital equipment. Our estimates under different panel data techniques are suggestive that the increasing use of office equipment is concomitant with higher shares of female employment in manufacturing industries of urban Colombia. These findings support the hypothesis that the increasing use of technology favors the incursion of women in the labor market as they enjoy a comparative advantage in cognitive skills (Galor and Weil, 1996, Weinberg, 2000, Welch, 2000). Such conclusion is consistent with the fact that the presumably positive effect derived from the increasing use of office equipment is confined to the *white-collar group* where the most qualified women tend to be concentrated.

We attempted to reconcile results from different econometric techniques, including FE-IV and the dynamic IV approach developed by Arellano and Bover (1995) and Blundell and Bond (1998). The appropriateness of instruments and their validity in terms of both economic and statistical theory was assessed by comparing results drawn from different specifications. The use of a variety methods to verify the relationships between the female share of jobs and some variables related to the economic development process provides a sound empirical basis for policy analysis.

Contrary to what has been reported in other studies for India (Tekani & Kucera, 2021; Gupta, 2021), the evidence presented in this paper indicates that trade liberalization in Colombia is associated with an increasing feminization of manufacturing employment. Given that the data used in this empirical application is drawn at the firm level, we could not have access to wage or labor cost data disaggregated by sex to know whether the increased feminization of manufacturing employment could be a cost cutting strategy in which more expensive male workers are replaced by cheaper but equally productive female workers. It could also be the case that because women are less prone to unionizing, employers in the manufacturing sector of Colombia are willing to hire a higher proportion of female workers as a cost-cutting strategy[10]. The nature of our data does not allow us to validate such hypotheses although they could be verified in future research, probably by incorporating information from other statistical sources such as household surveys.

10 Statistics about unionization rates by gender are scarce for Colombia and other developing countries. According to Cobble (2012), women are less likely than men to be unionized, particularly in developing countries where they represent just 40% of workers affiliated to trade unions.

Finally, it should be remarked that this investigation in its present state could be further developed in a number of ways. More recent data for manufacturing industries in urban Colombia, which is available under a new ISIC revision and an entirely new methodology from 2001 onwards, should reveal the effects of increased trade flows from the rest of the world on the gender differentiated patterns of employment, particularly in the case of increased imports of manufactured goods from China. Also, it would also be important to determine the extent to which other macroeconomic variables such as the exchange rate have affected the profitability of the manufacturing sector and whether this has had a differentiated effect in the gender composition of employment. Such effects are of particular importance after the international recession of 2008/2009 in which the prices of commodities such as oil experienced an abrupt surge that adversely affected the competitive position of Colombian manufactures due to the appreciation of the Colombian currency.

References

Acemoglu, D. (2002). Technical Change, Inequality, and the Labor Market. *Journal of Economic Literature*, 40, 7-72.

Aguayo-Tellez, E., Airola, J. & Juhn, C. (2010). Did Trade Liberalization Help Women? The Case of Mexico in the 1990s. Working Paper Series 16195. Cambridge, MA: National Bureau of Economic Research.

Angrist, J.D. & Pischke, J.S. (2008). *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton, New Jersey.

Arango, L.E. & Posada, C.E. (2002). La participación laboral en Colombia. *Borradores de Economía* No.217 [Online]. Available: http://www.banrep.gov.co/docum/ftp/borra217.pdf [Accessed August, 2002].

Arellano, M. & Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *The Review of Economic Studies*, 58, 277-297.

Arellano, M. & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics,* 68, 29-51.

Artecona, R. & Cunningham, W. (2002). Effects of Trade Liberalization on the Gender Wage Gap in Mexico. Policy Research Report on Gender and Development. Washington: The World Bank, Development Research Group.

Attanasio, O., Goldberg, P. K. & Pavcnik, N. (2004). Trade reforms and wage inequality in Colombia. *Journal of Development Economics,* 74, 331-366.

Bahri, A. (2021). Making Trade Agreements Work for Women Empowerment: How Does It Help, What Has Been Done, and What Remains Undone? *Latin American Journal of Trade Policy*, 4(11): 6-24.

Becker, G. (1957). *The Economics of Discrimination* .Chicago, Ill, University of Chicago Press.

Berik, G., Van Der Meulen Rodgers, Y. & Zveglich, J.E. (2004). International Trade and Gender Wage Discrimination: Evidence from East Asia. *Review of Development Economics*, 8, 237-254.

Black, S.E. & Brainerd, E. (2004). Importing Equality? The Impact of Globalization on Gender Discrimination. *Industrial and Labor Relations Review*, 57, 540-559.

BlundelL, R. & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87, 115-143.

Boserup, E. (1970). *Woman's Role in Economic Developmen*t, New York, St Martin's Press.

Cameron, C. & Trivedi, P.K. (2009). *Microeconometrics Using Stata*, College Station, Texas, StataCorp LP.

Chamarbagwala, R. (2006). Economic Liberalization and Wage Inequality in India. *World Development*, 34, 1997-2015.

Collier, P. (1994). A Theoretical Framework and the Africa Experience: Gender Aspects of Labor Allocation During Structural Adjustment. In: Horton, S.K., R., & Mazumdar, D. (ed.) *Labor Markets in an Era of Adjustment*. Washington: The International Bank for Reconstruction and Development/ The World Bank.

Cobble, D.S. (2012). Gender equality and labor movements: Towards a global perspective. Washington DC, Solidarity Center.

Darity, W.A., JR. & Williams, R.M. (1985). Peddlers Forever?: Culture, Competition, and Discrimination. *The American Economic Review*, 75, 256-261.

Duflo, E. (2005). Gender Equality in Development. BREAD Policy Paper No. 011. Bureau for Research in Economic Analysis of Development - Massachusetts Institute of Technology.

Edwards, S. (2001). The Economics and Politics of Transition to an Open Market Economy: Colombia Paris, Organisation for Economic Co-Operation and Development OECD.

Eslava, M., Haltiwanger, J., Kugler, A. & Kugler, M. (2009). Trade Reforms and Market Selection: Evidence from Manufacturing Plants in Colombia. Discussion Paper No. 4256. Bonn, Germany: The Institute for the Study of Labor (IZA).

Fontana, M. (2003). The Gender Effects Of Trade Liberalisation In Developing Countries: A Review Of The Literature. Discussion Paper Series -Center for Economic Policy Research. Brighton: University of Sussex.

Galor, O. & Weil, D.N. (1996). The Gender Gap, Fertility, and Growth. *The American Economic Review,* 86, 374-387.

Gilbert, A. (1997). Employment and Poverty during Economic Restructuring: The Case of Bogotá, Colombia. *Urban Studies,* 34, 1047-1070.

Goldberg, P. & Pavcnik, N. (2003). The response of the informal sector to trade liberalization. *Journal of Development Economics*, 72, 463-496.

Goldberg, P. & Pavcnik, N. (2005a). The effects of the Colombian trade liberalization on urban poverty. NBER Working Paper 11081. Cambridge, MA: National Bureau of Economic Research.

Goldberg, P. & Pavcnik, N. (2005b). Trade, wages, and the political economy of trade protection: evidence from the Colombian trade reforms. *Journal of International Economics*, 66, 75-105.

Gupta, A. (2021). Effect of Trade Liberalization on Gender Inequality: The case of India. *IMF Economic Review*, 69: 682-720.

Isaza-Castro, J.G. (2002). Women Workers in Bogotá's Informal Sector: Gendered Impact of Structural Adjustment Policies in The 1990s. *Planeación y Desarrollo*, XXXIII, 411-468.

Isaza-Castro, J.G. (2006). Trade Liberalization and Gender Effects: A Literature Review for Colombia. *Equidad y Desarrollo*, 4.

Isaza-Castro, J.G., Acosta, C.E. & Meza, C.A. (2007). Género, Pobreza Y Dinámicas Del Mercado De Trabajo: Un Análisis De Microsimulaciones Entre 1990 Y 2004 Para Las Áreas Urbanas De Colombia. In: Ramirez, L.F. & Isaza, J.G. (eds.) *Empleo, pobreza y desigualdad: Una mirada a partir de la investigación Universitaria*. Bogotá: Ediciones Unisalle.

Jaramillo, C. & Tovar, J. (2006). Trade and labor markets: evidence from the Colombian trade liberalization process. *Documento CEDE* No.28. Bogotá: Universidad de Los Andes.

Katz, L F. & Murphy, K.M. (1992). Changes in Relative Wages, 1963-1987: Supply and Demand Factors. *The Quarterly Journal of Economics*, 107, 35-78.

Kucera, D. & Tejani, S. (2014). Feminization, Defeminization, and Structural Change in Manufacturing. *World Development*, 64, 569–582.

Ocampo, J.A., Sánchez, F.J., Hernández, G.A. & Prada, M.F. (2004). Crecimiento de las exportaciones y sus efectos sobre el empleo, la desigualdad y la pobreza en Colombia. *Documento CEDE*, 34.

Oostendorp, R.H. (2009). Globalization and the Gender Wage Gap. *The World Bank Economic Review*, 23, 141-161.

Pavese, C. (2021). Gender Impact of Interregional Trade: The Case of EU-Mercosur Relations. *Latin American Journal of Trade Policy*, 4(11), 25–46.

Pombo, C. (1999). Productividad industrial en Colombia: una aplicación de números índices. *Revista de Economía de la Universidad del Rosario*, 2, 107-139.

Qian, N. (2008). Missing Women and the Price of Tea in China: The Effect of Sex-Specific Earnings on Sex Imbalance. *The Quarterly Journal of Economics*, 123, 1251-1285.

Reilly, B. & Vaseudeva, P. (2005). The Gender Pay Gap and Trade Liberalisation: Evidence for India. PRUS Working Paper No.32. Brighton: Poverty Research Unit, Department of Economics, University of Sussex.

Reilly, B. & Vaseudeva, P. (2005). The Gender Pay Gap and Trade Liberalisation: Evidence for India. *PRUS Working Paper,* 32, 1-52.

Santa María, M. & Rojas, N. (2001). *La participación laboral: qué ha pasado y qué podemos esperar. Archivos de Economía.* Bogotá: Departamento Nacional de Planeación.

Schaffer, M.E. & Stillman, S. (2010). xtoverid: Stata module to calculate tests of overidentifying restrictions after xtreg, xtivreg, xtivreg2 and xthtaylor. http://ideas.repec.org/c/boc/bocode/s456779.html.

Seguino, S. (2000). Gender Inequality and Economic Growth: A Cross-Country Analysis. *World Development*, 28, 1211-1230.

Tejani, S. & Kucera, D. (2021). Defiminization, Structural Transformation and Technological Upgrading in Manufacturing. *Development and Change* 52(3): 533–573.

Tenjo, J. & Ribero, R. (1998). Participación, desempleo y mercados laborales en Colombia. *Archivos de Economía*. Bogotá: Departamento Nacional de Planeación.

Weinberg, B.A. (2000). Computer Use and the Demand for Female Workers. *Industrial and Labor Relations Review*, 53, 290-308.

Welch, F. (2000). Growth in Women's Relative Wages and in Inequality among Men: One Phenomenon or Two? *The American Economic Review*, 90, 444-449.

Williams, R.M. (1987). Capital, Competition, and Discrimination: A Reconsideration of Racial Earnings Inequality. *Review of Radical Political Economics*, 19, 1-15.

Williams, R.M. & Kenison, R.E. (1996). The Way We Were?: Discrimination, Competition, and Inter-industry Wage Differentials in 1970. *Review of Radical Political Economics,* 28, 1-32.

Wood, A. (1991). North-South Trade and Female Labor in Manufacturing: An Asymmetry. *Journal of Development Studie*s, 27, 168.

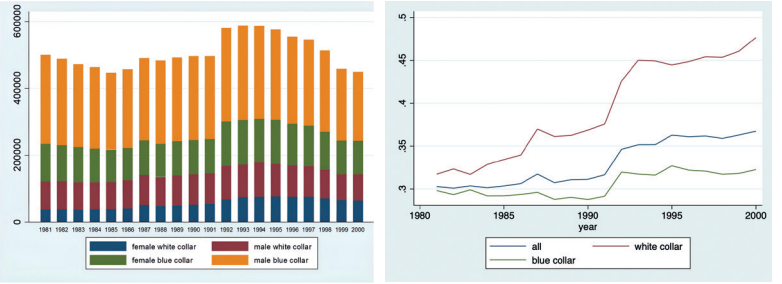
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Figures

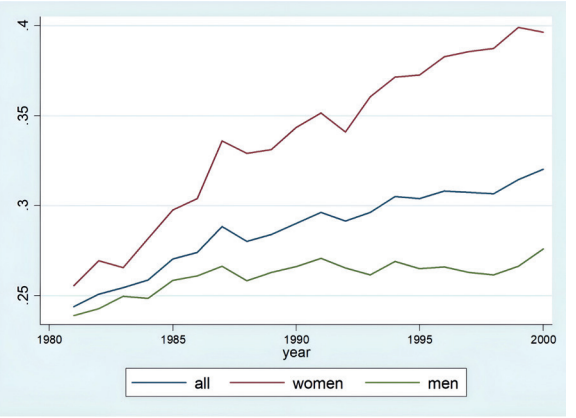
Figure 1: Number of jobs and gender composition of employment across white and blue collar workers and gender in all manufacturing industries, Colombia: 1981-2000

a) Number of jobs *b)% of female jobs*



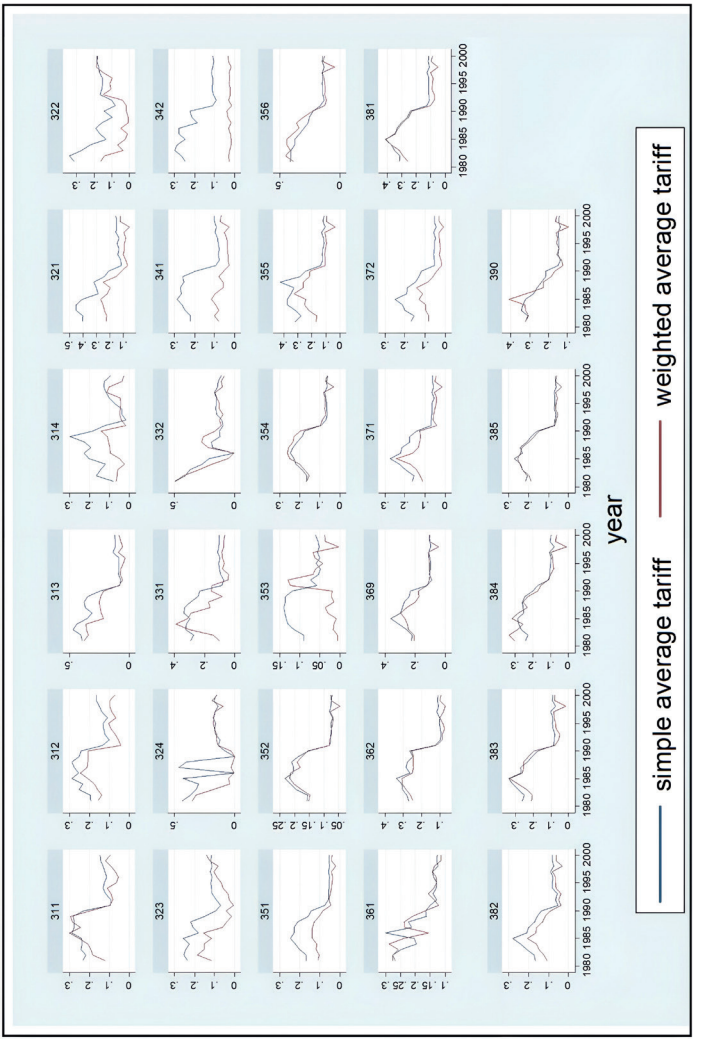
Own estimates based on Annual Manufacturing Survey microdata.

Figure 2: Proportion of white-collar jobs by gender in all manufacturing industries, Colombia: 1981-2000



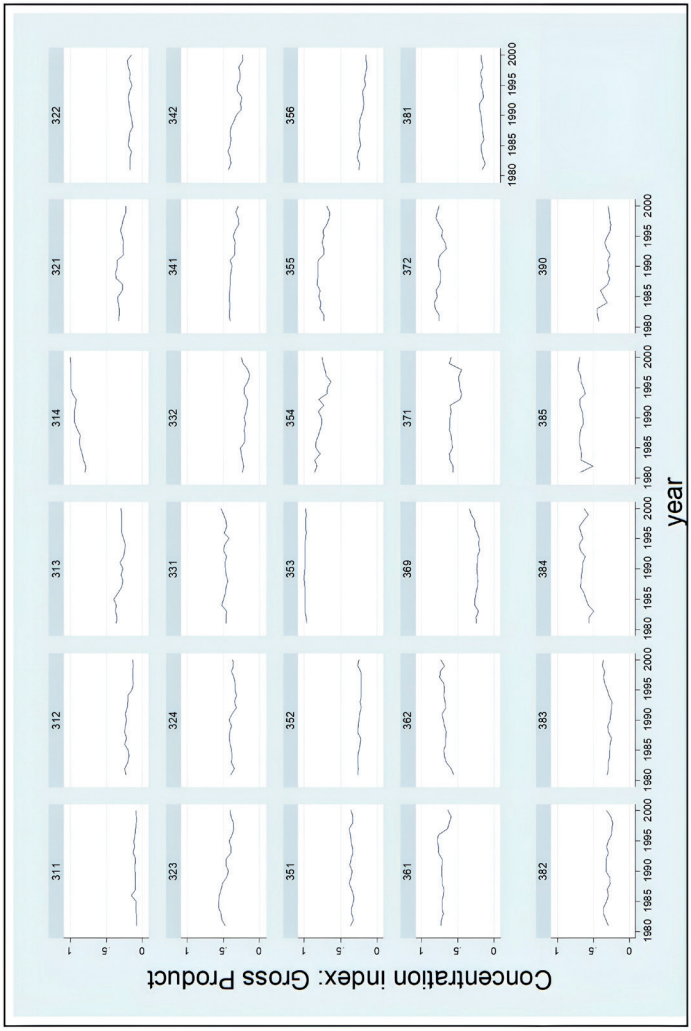
Own estimates based on Annual Manufacturing Survey microdata.

Figure 3: Simple and weighted average tariffs across manufacturing industries, Colombia: 1981-2000



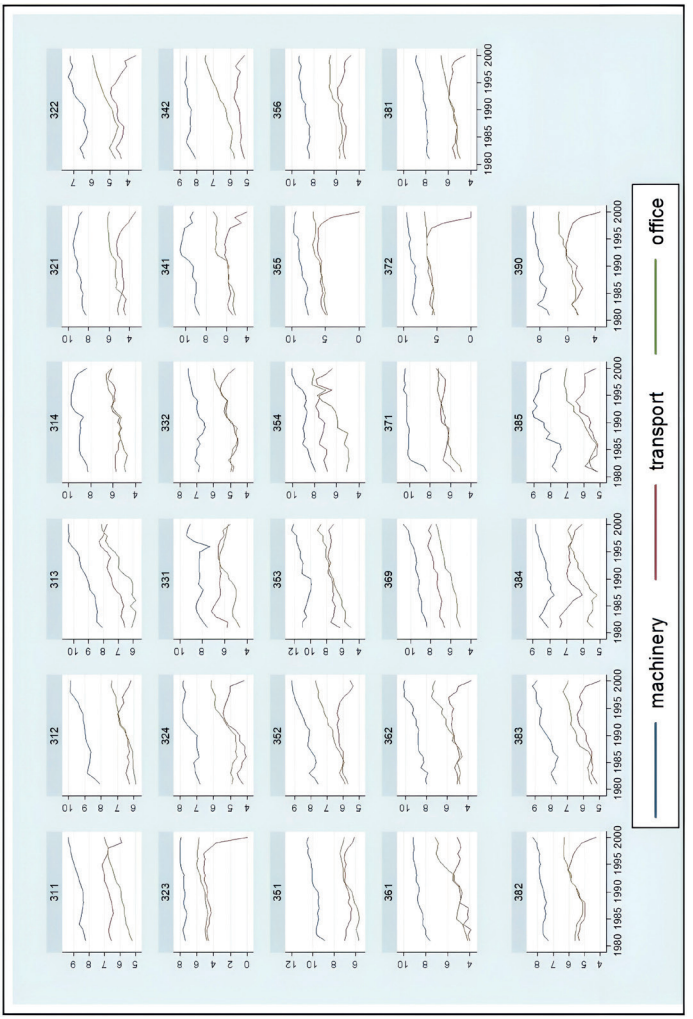
Own estimates based on tariff data from National Planning Department -DNP. Weights are based on import values in Col Pesos.

Figure 4: Concentration Indices (based on Gross Product Values) across manufacturing industries, Colombia: 1981-2000



Own estimates based on Annual Manufacturing Survey microdata.

Figure 5. Capital Equipment (Machinery, Transport and Office) per Worker across manufacturing industries, Colombia: 1981-2000



Own estimates based on Annual Manufacturing Survey microdata.

Table 1 Variable definitions

Label	Variable	Definition
femshare	female share of jobs: all workers	female share of jobs in industry *i* at time *t* amongst all workers
wc_femshare	female share of jobs: white-collar workers	female share of jobs in industry *i* at time *t* amongst white collar workers
bc_femshare	female share of jobs: blue-collar workers	female share of jobs in industry *i* at time *t* amongst blue collar workers
ipc	import penetration coefficient	$ipc_{it} = \frac{M_{it}}{Y_{it} + M_{it} - X_{it}}$ where Y, M and X denote, respectively, the gross product, imports and exports of industry *i* at time *t*.
eoc	export orientation coefficient	$eoc_{it} = \frac{X_{it}}{Y_{it}}$ where X and Y denote, respectively, exports and the gross product of industry *i* at time *t*.
CIGP	Concentration index	See expression (1) in text and details on it.
lnkpw_mach	ln(capital equipment per worker: machinery)	See expression (2) in text and details on it
nkpw_trans	ln(capital equipment per worker: transport)	See expression (2) in text and details on it
lnkpw_office	ln(capital equipment per worker: office equipment)	See expression (2) in text and details on it

Table 2: Panel summary statistics: within and between variation

Variable		Mean	Std. Dev.	Min	Max	Observations
isic	overall	349.897	25.064	311	390	N = 580
	between		25.486	311	390	n = 29
	within		0.000	349.897	349.897	T = 20
year	overall	1990.5	5.771	1981.0	2000.0	N = 580
	between		0.000	1990.5	1990.5	n = 29
	within		5.771	1981.0	2000.0	T = 20
femshare	overall	0.2701	0.1598	0.0096	0.8135	N = 580
	between		0.1596	0.0785	0.8007	n = 29
	within		0.0296	0.1824	0.3727	T = 20
wc_femshare	overall	0.3761	0.1019	0.0364	0.6704	N = 580
	between		0.0861	0.1597	0.5987	n = 29
	within		0.0567	0.2528	0.6486	T = 20
bc_femshare	overall	0.2295	0.1889	0.0032	0.8697	N = 580
	between		0.1899	0.0224	0.8516	n = 29
	within		0.0281	0.1200	0.3487	T = 20
CIGP	overall	0.4429	0.2462	0.0836	0.9990	N = 580
	between		0.2463	0.0985	0.9894	n = 29
	within		0.0442	0.2799	0.5702	T = 20
ipc	overall	0.2189	0.2218	0.0005	0.9456	N = 580
	between		0.2023	0.0176	0.7511	n = 29
	within		0.0980	-0.1337	0.7527	T = 20
eoc	overall	0.1717	0.2237	0.0006	1.8409	N = 580
	between		0.1636	0.0041	0.8421	n = 29
	within		0.1555	-0.4653	1.3417	T = 20
lnkpw_mach	overall	8.6275	0.9976	6.2089	12.3023	N = 580
	between		0.8888	6.7036	10.9253	n = 29
	within		0.4807	6.8639	10.0045	T = 20

lnkpw_ trans	overall	5.8333	1.0772	0.0000	8.2848	N =	580
	between		0.9121	4.4789	7.4737	n =	29
	within		0.5964	0.5224	7.0625	T =	20
lnkpw_ office	overall	6.0298	0.8434	4.2137	9.1494	N =	580
	between		0.5027	5.1884	7.1754	n =	29
	within		0.6833	3.8663	8.0038	T =	20

Table 3: Testing the relevance of instruments: fixed-effects and first-differences estimates

Variable	(1) ipc	(2) D.ipc	(3) CIGP	(4) D.CIGP	(5) eoc	(6) D.eoc
a_tariffs	-0.5688***					
	(0.1193)					
D.a_tariffs		-0.1196**				
		(0.0593)				
ln_noplants			-0.1075**			
			(0.0399)			
D.ln_no-plants				-0.1022***		
				(0.0240)		
rtb					0.2237**	
					(0.0816)	
D.rtb						0.2995***
						(0.0824)
Constant	0.3189***	0.0073***	0.9762***	-0.0007***	0.1933***	0.0096***
	(0.0210)	(0.0024)	(0.1978)	(0.0000)	(0.0079)	(0.0005)

Observations	580	551	580	551	580	551
R-squared	0.2586	0.0078	0.1702	0.0620	0.1223	0.2061
Number of isic	29	29	29	29	29	29

*Cluster-robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Notes: (1) features ipc as a dependent variable against average tariffs (a_tariffs) as a single explanatory variable while (2) features the same variables in differences. (3) features CIGP as a dependent variable against the logarithm of the number of firms (ln_noplants) as a single explanatory variable while (4) features the same variables in differences. (5) features eoc as a dependent variable with the relative trade balance (rtb) as a single explanatory variable while (6) features the same variables in differences.*

Table 4 Fixed-effects IV and dynamic IV estimates of female share equations; trade variable: import penetration coefficient (ipc)

Variable	(1) ipc	(2) D.ipc	(3) CIGP	(4) D.CIGP
Lagged Dep. Var.				0.7729***
				(0.0316)
Ipc	0.0892***	0.1708**	0.1065***	0.0006
	(0.0128)	(0.0701)	(0.0166)	(0.0129)
ln_noplants			-0.1075**	
			(0.0399)	
D.ln_noplants				-0.1022***
				(0.0240)
rtb				
D.rtb				
Constant	0.3189***	0.0073***	0.9762***	-0.0007***
	(0.0210)	(0.0024)	(0.1978)	(0.0000)


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