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## How Does UNESCO's Convention on Cultural Diversity Affect Trade in Cultural Goods?

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### Abstract

The role of the United Nations Educational, Scientific and Cultural Organization (UNESCO)'s Convention on the Protection and Promotion of the Diversity of Cultural Expressions (or the Convention on Cultural Diversity (CCD) for short) has been debated by both experts in international trade law and economists. However, the empirical study presented herein is the first in this body of the literature to investigate the relationship between the CCD and trade in cultural goods. By using trade data for 2004-2010 and employing the first-differenced difference-in-differences method, we seek to clarify its relation with trade in cultural goods by conducting a medium-term assessment. Our estimation results provide no evidence that the CCD works as an instrument of disguised protectionism. Further, we find that CCD contracting countries tend to have increased the extensive margins of cultural imports for some subcategories of cultural goods more than CCD non-contracting countries. This implies that the CCD has contributed to the promotion of cultural diversity.

*Keywords:* Trade and culture, Cultural goods, UNESCO's Convention on Cultural Diversity, Difference-in-differences

JEL classification: F13, F14, Z10

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# 1 Introduction

UNESCO’s Convention on the Protection and Promotion of the Diversity of Cultural Expressions, or the Convention on Cultural Diversity (CCD) for short, was adopted in 2005. In accordance with its Article 29, the CCD entered into force in March 2007 and by September 2015, it had been ratified by 139 member states of UNESCO. The major objective of the CCD is “to protect and promote the diversity of cultural expressions” (Article 1).

In pursuing this objective, the CCD defines both the rights and the obligations of contracting parties. With regard to the former, it states that “each Party may adopt measures aimed at protecting and promoting the diversity of cultural expressions within its territory” (Article 6). These measures may be inconsistent with the national treatment rules in the General Agreement on Tariffs and Trade/World Trade Organization (GATT/WTO) (Voon, 2006). This aspect of the CCD has been criticized by the United States and other opponents for its potential protectionist effects (Graber, 2006).<sup>1</sup> As for obligations, the CCD requires parties to endeavor “to create in their territory an environment which encourages individuals and social groups ... to have access to diverse cultural expressions from within their territory as well as from other countries of the world” (Article 7).

In a number of countries that have ratified the CCD, the Convention has actually changed their policies and legislation (Baltà, 2014).<sup>2</sup> For example, in 2010, Peru set up a Ministry of Culture, which includes a Directorate-General for Cultural Industries and Arts, to revise existing legislation in the cultural sector and develop a new cultural policy framework. Burkina Faso set up a Directorate for the Promotion of Cultural and Creative Industries in 2011 and the Seychelles established a Creative Industries and National Events Agency in 2013. The CCD has also affected newly adopted cultural legislation or policies. For example, Burkina Faso’s National Cultural Policy, which was adopted in 2009, aims to preserve cultural diversity in order to promote cultural awareness and strengthen social cohesion as well as to develop cultural entrepreneurship and cultural industries. Peru’s Cultural Policy Guidelines 2013–2016, which refer to the CCD, identify support for cultural industries as a priority area by stressing the “double nature” of cultural goods and services as both “carriers of identity and creative expression and a source of employment and wealth” (Baltà 2014, p. 10).

Moreover, the CCD has motivated several countries to take steps to strengthen their activities in specific areas of cultural industries. For example, China has adopted a number of regulations and administrative measures since 2008, including “the Administrative Measures for the Production of Audio-visual Products (2008), the Regulations for the Publishing of Electronic Publications (2008), and the Revitalisation Programme for the Cultural Industry (2009)” (Baltà

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<sup>1</sup>Article 20 of the CCD explicitly states that the CCD does not modify the rights and obligations of the parties under any other treaties to which they are parties.

<sup>2</sup>See UNESCO’s website for more examples of national policies and measures taken to implement the CCD at <https://en.unesco.org/creativity/monitoring-reporting/periodic-reports>.

2014, p. 13). European countries such as Spain, Lithuania, and Sweden have also recently designed action plans to support the development of cultural industries. In addition, several countries have introduced measures to facilitate imports of cultural goods and services from developing countries, which may have contributed to the increased access to diverse cultural expressions from other countries. These measures include “invitations for artists or creative entrepreneurs to attend relevant international trade fairs or markets in the cultural and creative industries” (Baltà 2014, p. 24) and the establishment of “special fiscal measures and incentives for cultural enterprises from developing countries, such a tax credits and double taxation avoidance agreements” (Baltà 2014, p. 24). For example, the European Union has implemented the latter measures.

The question is then whether the above-mentioned changes in policies and legislation or actions after the ratification of the CCD have had any real effects on trade in cultural goods. Indeed, the impacts of the CCD on trade have not been empirically examined by previous studies. To bridge this gap in the body of knowledge on this topic, we answer this question by using 2004–2010 trade data and the first-differenced difference-in-differences (DID) method. In particular, we address the following two aspects of the CCD. First, we examine whether it has decreased imports of cultural goods by CCD parties. In other words, we examine whether the CCD has worked as an instrument of disguised protectionism. Second, we examine whether it has increased access to diverse cultural expressions from other countries. We use the extensive margin of cultural imports (i.e., the number of countries from which a country imports cultural goods) as a measure of the degree of accessibility to diverse cultures in the rest of the world.

By using the first-differenced DID method, we obtain the following two main results. First, we find no evidence that the CCD has a negative impact on cultural imports. This finding suggests that the CCD does not work as an instrument of disguised protectionism. Second, we find a positive impact of the CCD on the extensive margin of cultural imports. Our estimations reveal that since the CCD entered into force, contracting parties have increased the number of countries from which they import cultural goods more than non-contracting parties. Finally, we confirm the robustness of our results by combining the first-differenced DID estimation with the matching method based on propensity score matching (PSM).

The remainder of this paper is organized as follows. In Section 2, we review the literature and explain the background. In Section 3, we present the methodology. Section 4 describes the data used in this study and examines the impacts of the CCD on cultural imports. In Section 5, we present the main estimation results. In Section 6, we conduct a robustness check using the matching method. Finally, Section 7 concludes.

## 2 Background and the related literature

The conflict between free trade and culture has a long history. An early example of the legal intervention in the trade/culture conflict is found in Roman law in the second century B.C., which defined a category of goods that could not be subject to commercial transactions (Neuwirth, 2013). Another early example is provided by the papal bull of Pope Pius II in 1462, which mentioned the potential financial value of cultural property and its relation to trade (Neuwirth, 2013).

More recently, there have been a number of trade disputes regarding cultural goods and services filed and settled at GATT and WTO (Footer and Graber, 2000) (e.g., *EEC – Directive on Transfrontier Television* in 1989<sup>3</sup> and *Canada – Periodicals* in 1996<sup>4</sup>).

In the legal discipline of GATT, some cultural goods are allowed to be free from GATT obligations under “cultural exception.” Article IV of GATT defines special provisions relating to films, which allows internal quantitative measures, or screen quotas, while Article XX (f) defines general exceptions to the protection of national treasures of artistic, historic, or archaeological value.<sup>5</sup> The concept of cultural exception was replaced by that of “cultural diversity” in the late 1990s, since it became clear that cultural goods were not excluded from the law of the Marrakesh Agreement establishing the WTO (Graber, 2006).<sup>6</sup> Since then, the concept of cultural diversity has been advocated by UNESCO. In 2001, UNESCO’s Universal Declaration on Cultural Diversity was adopted at its 31st session of the General Conference, while the CCD was adopted by a majority of 148 votes to two at its 33rd session four years later.

Economists have discussed whether the principle of free trade should be applied to cultural goods and whether any policy to protect and promote cultural diversity has an economic rationale. For example, while Caplan and Cowen (2004) insist that the free trade principle should be applied to cultural goods, Mas-Colell (1999) and Francois and Van Ypersele (2002), based on new trade

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<sup>3</sup>See Donaldson (1996) and the official documents of GATT, such as *Austria/Luxembourg/Netherlands/Norway/Spain/Sweden/Switzerland/United Kingdom – Measures to be taken under the European Convention on Transfrontier Television*, Request for Consultations under Article XXII:1 by the United States, DS4/1, 11 September 1989; *EEC – Directive on Transfrontier Television*, Request for Consultations under Article XXII:1 by the United States, DS4/3, 8 November 1989; and *EEC – Directive on Transfrontier Television*, Response to Request for Consultations under Article XXII:1 by the United States, DS4/4, 8 November 1989.

<sup>4</sup>See Hahn (2006) and Panel and Appellate Body Reports, *Canada – Certain Measures Concerning Periodicals*, WT/DS31/R, 14 March 1997 and WT/DS31/AB/R, 30 June 1997.

<sup>5</sup>However, Graber (2006) argues that Article XX (f) has no practical value in terms of contemporary expressions of art and culture because only “outstanding works of visual art and archaeological artefacts having a certain age” (p. 568) can be “national treasures.” “Films, television programmes, computer games, and other products of contemporary creativity cannot qualify for protection under this provision” (pp. 568–569).

<sup>6</sup>Note that cultural services are subject to the General Agreement on Trade in Services (GATS). Under the GATS, market access and national treatment are granted only if members commit to them. However, very few members have entered commitments with regard to cultural services (Hahn, 2006).

theory, suggest that government policy should protect cultural goods under certain conditions. Schulze (1999) and Throsby (1994) point out that cultural goods as experience goods tend to face superstar phenomena<sup>7</sup> in that a small number of goods/firms dominate the market. These phenomena result in a decline in cultural diversity under free trade and might call for policy to protect and promote cultural diversity. However, Ferreira and Waldfogel (2013) empirically deny the growing fears that cultural goods from large economies will displace those in smaller economies, using a unique dataset on popular music charts.

The role of the CCD has also been extensively discussed by experts in international trade law (Graber, 2006; Hahn, 2006; Voon, 2006). For example, Hahn (2006) argues that the CCD aims to create a “safe haven” for cultural policies from GATT/WTO disciplines by establishing the concept of cultural diversity. While the CCD is “an important step towards the recognition of cultural diversity as an internationally recognized public choice of states” (p. 517), he concludes that it has little effect on the rules and obligations of GATT/WTO laws. Graber (2006) also admits that most CCD provisions have little normative effect because they do not impose responsibilities or binding commitments on contracting countries. However, he argues that the CCD may be “a first step towards the achievement of a more coherent international legal order, where not only economic but also societal values, such as cultural diversity, are taken seriously” (p. 574). He points out the possibility that Panels and the Appellate Body of the WTO’s Dispute Settlement Body may take account of the CCD. In a dispute between trade and culture, Panels and the Appellate Body may “find an ‘exception’ or ‘safeguard clause’ for cultural issues within the law of the WTO” (p. 567) by linking the interpretation of the WTO provisions at issue to the CCD. Graber (2006) suggests that “the introduction of a link to the CCD in a *procedural clause* for cultural diversity” (p. 572) might be the best solution in this regard. Such a clause would oblige members to take account of the CCD when interpreting and applying WTO law in disputes on trade and culture. Moreover, Voon (2006) appeals the “mutual supportiveness” of the CCD and WTO. In particular, she argues that the CCD “could assist Members in resolving disputes about cultural policy measures without resorting to formal dispute settlement” (p. 644). In other words, when two WTO members, both of which are CCD contracting parties, consult with each other to resolve a dispute, the terms of the CCD could provide “a useful background for consultations” (p. 645).

Economists have also debated the impacts of the CCD. Acheson and Maule (2004, 2006) discuss the possible effects of the CCD and Acheson and Maule (2004) conclude that it fails to provide an enforceable mechanism. On the contrary, Benhamou (2004) opposes Acheson and Maule (2004)’s view and insists that the CCD is useful to reassert the principle concerning the status and treatment of cultural goods.

The present study is related to a growing empirical literature on trade and

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<sup>7</sup>See Rosen (1981) and Adler (1985) for the theoretical analysis of superstar phenomena.

culture. Early studies in this body of research included Marvasti (1994) and Schulze (1999), which employ the gravity equation to examine the determinants of bilateral trade in arts. More recent empirical studies of trade and culture include Disdier et al. (2010a), Disdier et al. (2010b), Felbermayr and Toubal (2010), and Guiso et al. (2009).<sup>8</sup> Disdier et al. (2010a) examine the effects of media on naming patterns in France. Disdier et al. (2010b) use bilateral trade in cultural goods as a proxy for cultural proximity and investigate the effects of culture on total trade. Felbermayr and Toubal (2010) analyze the effects of cultural proximity on trade among European countries, using data from the Eurovision Song Contest. Finally, Guiso et al. (2009) investigate the effect of bilateral trust on economic exchange (i.e., trade and investment) among European countries based on survey data.

### 3 Empirical strategy

This study empirically examines how the CCD affects imports of cultural goods and cultural diversity by testing the following two hypotheses. Our first hypothesis is that the CCD works as an instrument of disguised protectionism. To test this hypothesis, we investigate whether the imports of core cultural goods by CCD contracting countries have grown to a lesser degree than those of non-contracting countries after the CCD entered into force in 2007 compared with non-cultural goods. Our second hypothesis is that the CCD promotes cultural diversity. To measure cultural diversity in this study, we use the number of countries from which a country imports cultural goods (i.e., the *extensive margin* of cultural imports).<sup>9</sup> Thus, we analyze whether CCD contracting countries have increased the extensive margin of importing core cultural goods than non-contracting countries since 2007 compared with the extensive margin of importing non-cultural goods.

As discussed in the large body of the empirical trade literature, we should address the endogeneity of an international convention or agreement when analyzing their effects on economic outcomes. To address the endogeneity of the CCD, we employ a first-differenced panel data approach.<sup>10</sup> Baier and Bergstrand

<sup>8</sup>There are also a number of theoretical studies of trade and culture. See, for example, Bala and Van Long (2005), Bisin and Verdier (1998, 2001), Janeba (2007), Rauch and Trindade (2009), and Richardson (2006).

<sup>9</sup>One may argue that the diversity of cultural imports could be more properly measured at the country-product level rather than at the country level. However, in the spirit of the CCD, an increase in the exposure to different cultural spheres will be more important to improve access to diverse cultural expressions than an increase in the variety of imported products from one country. Therefore, the number of countries from which a country imports cultural goods is an appropriate measure of cultural diversity in imports.

<sup>10</sup>Alternative econometric methods such as the instrumental variable (IV) approach and PSM approach can be used to address the endogeneity issue. The first-differenced panel data approach is preferable in our context because we face a lack of suitable instruments, which are necessary for the IV approach. Further, although the PSM method can control for selection bias on observables, it does not address selection bias on unobservables (Baier and Bergstrand, 2009). In Section 6, we check the robustness of our results by combining the PSM method with our first-differenced panel data approach.

(2007) analyze the effects of free trade agreements and reveal that IV and control function approaches do not adjust for endogeneity compared with a differenced panel approach. The first-differenced DID estimation method has also been used to examine the effects of other international agreements. For example, Aichele and Felbermayr (2012) use this estimation method to analyze the effects of the Kyoto protocol on CO<sub>2</sub> emissions.

First, we distinguish the post-treatment period (2008–2010) from the pre-treatment period (2004–2006). Second, we distinguish CCD contracting countries as the treatment group from CCD non-contracting countries as the control group. Third, we classify trade goods into core cultural goods and non-cultural goods. As a result, we use the following specification:

$$\begin{aligned} \text{dln}OUTCOME\_2_j &= \alpha_0 + \alpha_1 \text{d}CCD_j + \alpha_2 \text{dln}GDP_j \\ &+ \alpha_3 \text{dln}PCGDP_j + \epsilon_j \end{aligned} \quad (1)$$

where

$$\text{dln}OUTCOME\_2_j \in \{\text{dln}IMPORT\_2_j, \text{dln}EXTEN\_2_j\}.$$

Here, the subscript  $j$  indexes the importing country,  $d$  indicates the first-difference operator for  $t \in \{pre, post\}$  ( $T = 2$ ), and the DID dummy,  $dCCD_j$ , indicates whether a country ratified the CCD before 2008. The nature of the DID estimation, which requires a complete panel, necessitates that countries that ratified the CCD after 2008 are excluded from our sample.

The dependent variable in Equation (1),  $\text{dln}OUTCOME\_2$ , measures the *relative growth* of an outcome variable for core cultural goods compared with non-cultural goods. We use two outcome variables, namely  $IMPORT_{j,t}$  and  $EXTEN_{j,t}$ , where  $t \in \{pre, post\}$ . The former is country  $j$ 's total import value of core cultural goods in period  $t$ ,  $IMPORT\_CUL_{j,t}$ , or non-cultural goods,  $IMPORT\_NON_{j,t}$ , and the latter is the number of countries from which country  $j$  imports core cultural goods,  $EXTEN\_CUL_{j,t}$ , or non-cultural goods,  $EXTEN\_NON_{j,t}$ , i.e., the extensive margins of imports. Following previous studies (Bertrand et al., 2004; Aichele and Felbermayr, 2012), we take the average value in the pre- and post-treatment periods for each outcome variable. We then take the first differencing of an outcome variable, i.e.,

$$\begin{aligned} \text{dln}IMPORT\_CUL_j &= \ln IMPORT\_CUL_{j,post} - \ln IMPORT\_CUL_{j,pre}, \\ \text{dln}IMPORT\_NON_j &= \ln IMPORT\_NON_{j,post} - \ln IMPORT\_NON_{j,pre}, \end{aligned}$$

and

$$\begin{aligned} \text{dln}EXTEN\_CUL_j &= \ln EXTEN\_CUL_{j,post} - \ln EXTEN\_CUL_{j,pre}, \\ \text{dln}EXTEN\_NON_j &= \ln EXTEN\_NON_{j,post} - \ln EXTEN\_NON_{j,pre}. \end{aligned}$$

By using these variables, we construct the relative growth variable for both  $IMPORT$  and  $EXTEN$ , i.e.,

$$\begin{aligned} \text{dln}IMPORT\_2_j &= \text{dln}IMPORT\_CUL_j - \text{dln}IMPORT\_NON_j, \\ \text{dln}EXTEN\_2_j &= \text{dln}EXTEN\_CUL_j - \text{dln}EXTEN\_NON_j. \end{aligned}$$



To control for the growth in domestic market size and in income level, we employ the GDP growth rate,  $d\ln GDP_j$ , and the per capita income growth rate,  $d\ln PCGDP_j$ , as the covariates.<sup>11</sup>

The log of the variables such as imports, GDP, and per capita GDP are averaged over each period to eliminate the effects of country-specific business cycles. Then, they are first-differenced to eliminate time-invariant country-specific factors. This process follows that of Aichele and Felbermayr (2012).

## 4 Data and overview

### 4.1 Data

The data on imports of goods for 2004–2010 are taken from the *BACI: International Trade Database at the Product Level*, which is constructed by the CEPII from the UN COMTRADE database.<sup>12</sup> The BACI covers bilateral trade data at the HS6 level for more than 200 countries. Our sample consists of 110 WTO members, namely 67 CCD contracting countries and 43 CCD non-contracting countries.<sup>13</sup> As we have explained in the previous section, countries that have ratified the CCD after 2008 are excluded from our sample.

By using the data from the BACI, we construct import data on *core cultural goods* and *non-cultural goods* for the sample countries. UNESCO (2005) defines cultural goods as the output of cultural and creative industries, categorizing them into “core” and “related” goods. Core cultural goods are defined as the output of traditionally defined cultural industries, while related cultural goods are the output of creative industries such as software, advertising, architecture, and business intelligence services. We define non-cultural goods as all other goods. We therefore divide goods into core cultural goods, related cultural goods, and non-cultural goods.

In addition, the UNESCO framework for cultural statistics (FCS) divides core cultural goods into five categories: (i) cultural heritage (“HERITAGE”), (ii) printed matter (“PRINT”), (iii) music and the performing arts (“MUSIC&PA”), (iv) visual arts (“ARTS”), and (v) audio and audiovisual media (“AUDIO&AV”) (UNESCO 2005, pp. 91–92). We analyze the effects of the CCD for each of these five categories. In the Appendix, Table A.4 provides the descriptive statistics of cultural imports by FCS category and Table A.1 presents the concordance between the FCS category and HS6 code.

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<sup>11</sup>Note that in our first-differenced panel specification, the time-invariant country-specific variables related to the country’s “cultural attitudes” such as language are dropped from the estimation equation.

<sup>12</sup>We acknowledge that many international transactions of cultural contents are currently made online, which cannot be captured by trade data. Therefore, those e-commerce transactions are not included in our analysis. However, because data on e-commerce transactions are not publicly available, we focus on trade in goods.

<sup>13</sup>We restrict our analysis to WTO members’ imports for two reasons. First, the political dispute is primarily over the relationship between the CCD and the GATT/WTO. Second, WTO non-members account for a small proportion of world trade.

Table 1 shows the descriptive statistics of each category’s proportion of the imports of core cultural goods in our sample. It reveals that printed matter and music and performing arts, on average, account for more than 80% of imports of core cultural goods, while visual arts and audio and audiovisual media, on average, account for about 9% and 8%, respectively. The proportion of cultural heritage in imports of core cultural goods is, on average, around 2%.

Table 1: Proportion of cultural imports by FCS category

<b>Variable</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min</b>	<b>Max</b>
ALL	1.000	0.000	1.000	1.000
HERITAGE	0.019	0.058	0.000	0.678
PRINT	0.508	0.220	0.029	0.951
MUSIC&PA	0.305	0.174	0.021	0.912
ARTS	0.089	0.086	0.002	0.573
AUDIO&AV	0.078	0.119	0.000	0.906

Note: The number of observations is 220 (=110 countries times two periods). The pre-treatment period is 2004–2006 and the post-treatment period is 2008–2010.

## 4.2 Comparison of CCD contracting and non-contracting countries

Before econometrically examining the effects of the CCD, we compare cultural imports by contracting and non-contracting countries,<sup>14</sup> using the descriptive statistics. Table 2 compares cultural imports by CCD status, showing that CCD contracting countries tend to import more core cultural goods than non-contracting countries in the pre- and post-treatment periods. This table also shows that CCD contracting countries’ growth in imports of core cultural goods is, on average, smaller than that of non-contracting countries. The relative growth in imports of core cultural goods is, on average, also smaller in CCD contracting countries than non-contracting countries. However, the difference in the growth rates is less than two percentage points.

Table 3 presents the mean comparison of the extensive margin of cultural imports by CCD contracting status. It shows that more CCD contracting countries import core cultural goods than non-contracting countries in both the pre- and the post-treatment periods. On average, CCD contracting countries’ growth in the extensive margin is almost same as that of non-contracting countries but their relative growth is much higher.

In sum, the mean comparison of the outcome variables suggests that CCD contracting countries tend to increase the extensive margin of cultural imports relatively more than non-contracting countries. Further, the difference in the growth in core cultural imports for CCD contracting and non-contracting countries is rather small. In section 5, we examine the impacts of the CCD econometrically.

<sup>14</sup>Tables A.2–A.3 in the Appendix list the sample countries by CCD contracting status.

Table 2: Comparison of cultural imports by CCD status

<b>CCD</b>	<b>N</b>	<b>Mean</b>	<b>S.D.</b>
Level: pre-treatment period: $\ln IMPORT\_CUL_{j,pre}$			
Non-contracting countries	43	0.460	2.167
Contracting countries	67	0.595	1.406
Level: post-treatment period: $\ln IMPORT\_CUL_{j,post}$			
Non-contracting countries	43	0.551	2.466
Contracting countries	67	0.751	1.747
Growth: $d\ln IMPORT\_CUL_j$			
Non-contracting countries	43	0.273	0.456
Contracting countries	67	0.263	0.462
Relative growth: $d\ln IMPORT\_2_j$			
Non-contracting countries	43	-0.179	0.403
Contracting countries	67	-0.184	0.515

Note: Figures in level are in billions of US dollars.

Table 3: Comparison of the extensive margin of cultural imports by CCD status

<b>CCD</b>	<b>N</b>	<b>Mean</b>	<b>S.D.</b>
Level: pre-treatment period: $\ln EXTEN\_CUL_{j,pre}$			
Non-contracting countries	43	49.667	32.844
Contracting countries	67	68.184	34.278
Level: post-treatment period: $\ln EXTEN\_CUL_{j,post}$			
Non-contracting countries	43	50.016	32.333
Contracting countries	67	68.950	34.336
Growth: $d\ln EXTEN\_CUL_j$			
Non-contracting countries	43	0.009	0.141
Contracting countries	67	0.011	0.126
Relative growth: $d\ln EXTEN\_2_j$			
Non-contracting countries	43	0.001	0.103
Contracting countries	67	0.016	0.085

## 5 Results

### 5.1 The impacts of the CCD on imports of cultural goods

This section presents the estimation results of Equation (1).<sup>15</sup> Table 4 presents the estimation results by using the total imports of core cultural goods as the outcome variable, showing the impacts of the CCD on imports of core cultural goods. Column (1) of Table 4 reports the results for all core cultural goods, while columns (2)–(6) show the results for each category. The coefficients of the CCD dummy are not significant in all columns, which implies that the impact of the CCD on total imports of core cultural goods is negligible.

Table 4: Impact of the CCD on imports of cultural goods (2004–2010)

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)
<i>dlnIMPORT<sub>2</sub></i>	ALL	HERITAGE	PRINT	MUSIC & PA	ARTS	AUDIO & AV
dCCD	−0.039 [0.094]	−0.087 [0.286]	−0.014 [0.070]	0.004 [0.153]	−0.089 [0.156]	0.315 [0.218]
dlnGDP	−0.805 [0.662]	−2.025 [2.056]	−0.049 [0.571]	−1.344 [1.040]	0.590 [0.915]	−2.187* [1.281]
dlnPCGDP	0.464 [0.497]	1.183 [2.069]	0.009 [0.473]	2.041** [0.831]	−0.810 [0.615]	0.457 [1.275]
Constant	−0.075 [0.104]	0.165 [0.318]	−0.196*** [0.073]	−0.422** [0.175]	−0.071 [0.166]	0.346* [0.207]
Observations	110	110	110	110	110	110
R-squared	0.011	0.009	0.000	0.046	0.012	0.064

Notes: Robust standard errors are given in square brackets. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

To summarize, we find no evidence of the negative impact of the CCD on imports of core cultural goods. The findings in this subsection, therefore, do not support the fear that the CCD works as disguised protectionism.

### 5.2 The CCD and extensive margin of cultural imports

Next, we examine the impacts of the CCD on the extensive margin of cultural imports, using the same specification (1) as that in the previous subsection. Table 5 shows that the impact of the CCD on the extensive margin of importing cultural goods is positive and significant in columns (2) and (4). This finding means that the relative growth in the extensive margin of importing cultural heritage and music and the performing arts of CCD contracting countries is significantly higher than that of non-contracting countries.

<sup>15</sup>Table A.5 in the Appendix provides the descriptive statistics of the variables used in the estimation.

The coefficients of GDP growth are significantly positive in all columns except columns (4) and (6). This result can be interpreted that growing economies attract cultural goods such as cultural heritage, printed matter, and visual arts from more countries. The coefficients of per capita GDP growth are insignificant in all columns.

To summarize, this subsection reveals that CCD contracting countries have increased the extensive margin of cultural imports more than non-contracting countries for some subcategories of core cultural goods, thereby suggesting that the CCD has contributed to cultural diversity. Why have CCD contracting countries increased the extensive margin of cultural imports relatively more? One possible reason is that, as stipulated in Article 9(a) of the CCD, such countries are required to report to UNESCO every four years on their actions to promote cultural diversity at the national and international levels.<sup>16</sup> This reporting system may place pressure on contracting countries to increase access to diverse cultural expressions from other countries.

Table 5: The impact of the CCD on the extensive margin of importing cultural goods (2004–2010)

Dependent variable: <i>dlnEXTEN_2</i>	(1) ALL	(2) HERITAGE	(3) PRINT	(4) MUSIC &PA	(5) ARTS	(6) AUDIO &AV
<i>d</i> CCD	0.031 [0.019]	0.138** [0.063]	0.016 [0.023]	0.078** [0.037]	0.053 [0.032]	0.068 [0.051]
<i>dln</i> GDP	0.390*** [0.113]	0.918** [0.387]	0.281* [0.143]	0.257 [0.293]	0.550** [0.217]	0.051 [0.358]
<i>dln</i> PCGDP	-0.091 [0.084]	-0.475 [0.323]	-0.109 [0.109]	0.283 [0.301]	-0.019 [0.193]	-0.107 [0.312]
Constant	-0.062*** [0.022]	-0.158** [0.073]	0.005 [0.025]	-0.219*** [0.051]	-0.113*** [0.037]	-0.001 [0.052]
Observations	110	110	110	110	110	110
R-squared	0.114	0.062	0.034	0.143	0.125	0.019

Notes: Robust standard errors are given in square brackets. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

## 6 Robustness checks

The DID estimator used in our main analysis addresses selection bias on unobservables by allowing us to control for time-invariant unobservable characteristics that may affect a country’s decision to ratify the CCD. An important underlying assumption is that those unobservable characteristics affect the treated

<sup>16</sup>Submitted reports are released on UNESCO’s website. See <https://en.unesco.org/creativity/monitoring-reporting/periodic-reports>. Analytical summaries of these quadrennial periodic reports have been published every year since 2012.

group (i.e., contracting countries) and the control group (i.e., non-contracting countries) in the same way, which is called the “common trends assumption” (Hijzen et al., 2011). However, “there may be unobserved differences that cause both groups to react differently in response to any observed shocks” (Hijzen et al. 2011, p. 465). To address this issue, we combine the first-differenced DID estimation with the matching method. In particular, we employ the PSM method to include observable characteristics that explain the propensity to ratify the CCD.<sup>17</sup> We first construct matched pairs based on the estimated propensity scores from the PSM method and then implement first-differenced DID regressions over the sample constructed from the matched pairs.

We estimate the propensity to ratify the CCD,<sup>18</sup> using the following logistic regression:

$$P(\text{CCD}_{j,\text{post}} = 1) = F(\ln \text{GDP}_{j,\text{pre}}, \ln \text{PCGDP}_{j,\text{pre}}, \quad (2) \\ \text{CUL}/\text{NON}_{j,\text{pre}}, \text{NON\_ENGLISH}_{j,\text{pre}}, \\ \text{MIGRANT}_{j,\text{pre}}, \text{UNESCO}_{j,\text{pre}}),$$

where  $F$  is a logistic cumulative distribution function and the subscript  $pre$  indicates the pre-treatment period.  $\text{NON\_ENGLISH}$  is a binary variable that takes the value of one if a country does not use English as its official language and zero otherwise. We construct  $\text{NON\_ENGLISH}$  from the CEPII’s *GeoDist database* (Mayer and Zignago 2011).  $\text{CUL}/\text{NON}$  is the ratio of the import values of core cultural goods to non-cultural goods, defined as  $\text{IMPORT\_CUL}/\text{IMPORT\_NON}$ .  $\text{MIGRANT}$  is the percentage of migrants in a country’s population, constructed from the World Bank’s *World Development Indicators*.  $\text{UNESCO}$  is defined as 2007 minus the year when the country joined UNESCO. All the explanatory variables are averaged over 2004–2006.

We expect non-English-speaking countries to have a higher tendency to ratify the CCD in order to protect their cultural products. We also expect a country with a higher ratio of imports of core cultural goods to those of non-cultural goods to have a higher tendency to ratify the CCD since such a country would prefer the culture of other countries and respect the value of cultural diversity. Similarly, a country with a higher percentage of migrants in its population should have a higher tendency to ratify the CCD since it would place value on cultural diversity. We include the variable  $\text{UNESCO}$  as an explanatory variable since an earlier member of UNESCO might better understand its policy. Economic variables,  $\ln \text{GDP}$  and  $\ln \text{PCGDP}$ , are included to control for a country’s general economic factors.

Table 6 presents the estimation results of Equation (2). The coefficients of  $\text{NON\_ENGLISH}$  and  $\text{CUL}/\text{NON}$  are significantly positive, as expected.

<sup>17</sup>See Cameron and Trivedi (2005) and Abadie and Imbens (2006) for a more detailed explanation of the PSM method, which is widely used in the trade literature. In the case of international agreements, for instance, Baier and Bergstrand (2009) employ the PSM method to examine the effects of free trade agreements.

<sup>18</sup>Baier and Bergstrand (2004) estimate the determinants of free trade agreements. To the best of our knowledge, our study is the first to econometrically examine the determinants of ratifying the CCD.

Table 6: Propensity scores for ratifying the CCD

	(1) CCD
lnGDP_pre	0.079 [0.134]
lnPCGDP_pre	0.134 [0.216]
CUL/NON_pre	1.878** [0.814]
NON_ENGLISH	2.019*** [0.590]
MIGRANT_pre	-0.017 [0.018]
UNESCO_pre	0.011 [0.015]
Constant	-5.419** [2.425]
Observations	109
pseudo-R-squared	0.173
log-likelihood	-60.442

Notes: Standard errors are given in square brackets. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

However, the coefficients of the other variables are insignificant at the conventional levels, suggesting that they are not major determinants of ratifying the CCD.

Based on these estimated propensity scores, contracting countries are matched with non-contracting countries through the nearest-neighbor (one-to-one) matching method with replacement. The non-contracting country  $c(j)$  that has the closest propensity score to ratify the CCD is selected for each contracting country  $j$  as follows:

$$c(j) = \min_{i \in \{CCD_{i,post}=0\}} \|\hat{P}_j - \hat{P}_i\|. \quad (3)$$

The balancing property is satisfied for this matching. By using the matched pairs constructed in this way, we re-conduct the first-differenced DID regressions. The common support condition is supposed. Therefore, the 14 contracting countries with the highest propensity scores<sup>19</sup> are omitted from the matching as well as the subsequent regression analysis.

Tables 7 and 8 show the impacts of the CCD on cultural imports and on the extensive margins of cultural imports, respectively. The results are qualitatively

<sup>19</sup> Those countries are Austria, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Norway, Paraguay, Portugal, Spain, and Sweden.

similar to our main results in the previous section. In sum, this section confirms and reinforces the previous results, which are not consistent with the fear of disguised protectionism and suggest that the CCD might contribute to cultural diversity by increasing the extensive margin of cultural imports.

Table 7: PSM-DID: Impacts of the CCD on cultural imports

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)
	ALL	HERITAGE	PRINT	MUSIC & PA	ARTS	AUDIO & AV
dlnCCD	-0.067 [0.093]	-0.024 [0.267]	-0.035 [0.078]	-0.093 [0.139]	-0.030 [0.152]	0.289 [0.226]
dlnGDP	-1.576 [1.235]	-5.026** [2.021]	0.313 [1.087]	-3.265* [1.959]	-0.030 [1.576]	-2.994 [1.891]
dlnPCGDP	1.019 [1.155]	5.596*** [2.122]	-0.473 [0.988]	3.660* [1.892]	-0.257 [1.239]	0.664 [2.120]
Constant	-0.037 [0.101]	0.034 [0.227]	-0.218*** [0.077]	-0.236 [0.157]	-0.102 [0.155]	0.387** [0.179]
Observations	104	104	104	104	104	104
R-squared	0.028	0.041	0.007	0.065	0.002	0.049

Notes: Standard errors are given in square brackets. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

## 7 Concluding remarks

In this study, we attempted to identify the impacts of the CCD on cultural imports, using trade data and the first-differenced DID method, and obtained the following two main findings. First, our empirical results suggest that the CCD does not work as disguised protectionism. The estimation results find no evidence that the relative growth in the imports of cultural goods by CCD contracting countries is lower than that by CCD non-contracting countries.

Second, we find evidence that the CCD has contributed to the promotion of cultural diversity. Our estimation results show that CCD contracting countries tend to have increased their extensive margins of importing core cultural goods such as cultural heritage and music and the performing arts relatively more than non-contracting countries in comparison with the increase in the extensive margin of non-cultural imports.

In addition, we confirm the robustness of our results, using the PSM method. We match a CCD contracting country with a CCD non-contracting country with a similar propensity score to ratify the CCD and then use the matched pairs to conduct our first-differenced DID method. The estimation results from the matching method also indicate that CCD contracting countries have not decreased cultural imports but rather increased the extensive margins of cultural imports compared with non-contracting countries.



Table 8: PSM-DID: Impacts of the CCD on the extensive margin of cultural imports

Dependent variable: <i>dlnEXTEN_2</i>	(1) ALL	(2) HERITAGE	(3) PRINT	(4) MUSIC &PA	(5) ARTS	(6) AUDIO &AV
dCCD	0.031 [0.020]	0.192*** [0.057]	0.024 [0.024]	0.086** [0.037]	0.034 [0.032]	0.062 [0.048]
dlnGDP	0.494** [0.192]	0.862 [0.631]	0.322 [0.261]	-0.393 [0.418]	0.558 [0.366]	-0.130 [0.655]
dlnPCGDP	-0.142 [0.175]	-0.249 [0.641]	-0.354 [0.254]	1.322*** [0.498]	-0.100 [0.346]	0.080 [0.637]
Constant	-0.074*** [0.021]	-0.228*** [0.066]	0.024 [0.027]	-0.252*** [0.055]	-0.090** [0.035]	0.022 [0.043]
Observations	104	104	104	104	104	104
R-squared	0.120	0.141	0.028	0.237	0.073	0.018

Notes: Standard errors are given in square brackets. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

Although our analysis provides a medium-term assessment in favor of the CCD, future research should aim to conduct a longer-term assessment by using longer panel data. Moreover, as argued in Section 4.1, we limited our analysis to trade in goods and excluded e-commerce transactions of cultural contents from our analysis because of data availability issues. However, online transactions of cultural contents will become more and more dominant in the future. Thus, to assess the impact of the CCD, future research should aim to include the e-commerce transactions of cultural contents.

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## Appendix

Table A.1: The UNESCO Framework for Cultural Statistics

Code	FCS category	HS6	Description
1	Cultural heritage	970500	Collections and collectors pieces
1	Cultural heritage	970600	Antiques older than one hundred years
2	Printed matter	490110	Brochures, leaflets and similar, in single sheets
2	Printed matter	490191	Dictionaries and encyclopedias
2	Printed matter	490199	Printed reading books, except dictionaries etc
2	Printed matter	490210	Newspapers, journals and periodicals, > 3 issues/week
2	Printed matter	490290	Newspapers, journals and periodicals, < 4 issues/week
2	Printed matter	490300	Children's picture, drawing or colouring books
2	Printed matter	490400	Music, printed or in manuscript
2	Printed matter	490510	Globes, geographical, printed
2	Printed matter	490591	Maps and charts, printed, in book form
2	Printed matter	490599	Maps and charts, printed, other than book form
2	Printed matter	490900	Postcards, printed or illustrated, greeting cards
2	Printed matter	491000	Calendars, printed
2	Printed matter	491191	Pictures, designs and photographs
2	Printed matter	970400	Used postage and revenue stamps, first day covers, et
3	Music and the performing arts	852410	Recorded gramophone records
3	Music and the performing arts	852421	Recorded magnetic tapes, width < 4 mm
3	Music and the performing arts	852422	Recorded magnetic tapes, width 4-6.5 mm
3	Music and the performing arts	852423	Recorded magnetic tapes, width > 6.5 mm
3	Music and the performing arts	852490	Sound recordings other than photographic products nes
4	Visual arts	442010	Statuettes and other ornaments of wood
4	Visual arts	691310	Statuettes & ornamental articles of porcelain or chin
4	Visual arts	691390	Ceramic statuettes, ornamental articles, not porcelai
4	Visual arts	830621	Statuettes, other ornaments plated with precious meta
4	Visual arts	830629	Statuettes and other ornaments, base metal, unplated
4	Visual arts	960110	Worked ivory, articles of ivory
4	Visual arts	960190	Animal carving material, articles, nes
4	Visual arts	970110	Paintings/drawings/pastels executed by hand
4	Visual arts	970190	Collages, similar decorative plaques
4	Visual arts	970200	Original engravings, prints and lithographs
4	Visual arts	970300	Original sculptures and statuary, in any material
5	Audio and Audiovisual media	370590	Photographic plates or film, exposed or developed nes
5	Audio and Audiovisual media	370610	Cinematograph film, exposed and developed, width >35m
5	Audio and Audiovisual media	370690	Cinematograph film, exposed & developed, width <=35mm
5	Audio and Audiovisual media	950410	Video games used with a television receiver

Notes: FCS means UNESCO Framework for Cultural Statistics. The classification is based on UNESCO (2005, pp.91–92).

Table A.2: List of the CCD contracting countries

ISO code	Country name	ISO code	Country name
ALB	Albania	JOR	Jordan
ARM	Armenia	KEN	Kenya
AUT	Austria	KHM	Cambodia
BEN	Benin	KWT	Kuwait
BFA	Burkina faso	LCA	Saint lucia
BGD	Bangladesh	LTU	Lithuania
BGR	Bulgaria	LVA	Latvia
BOL	Bolivia	MDA	Moldova, republic of
BRA	Brazil	MDG	Madagascar
CAN	Canada	MEX	Mexico
CHL	Chile	MKD	Macedonia, the former yugoslav republic of
CHN	China	MLI	Mali
CIV	Cote d'ivoire	MLT	Malta
CMR	Cameroon	MNG	Mongolia
CUB	Cuba	MOZ	Mozambique
CYP	Cyprus	MUS	Mauritius
DEU	Germany	NER	Niger
DJI	Djibouti	NOR	Norway, Svalbard and Jan Mayen
DNK	Denmark	NZL	New zealand
ECU	Ecuador	OMN	Oman
EGY	Egypt	PAN	Panama
ESP	Spain	PER	Peru
EST	Estonia	POL	Poland
FIN	Finland	PRT	Portugal
FRA	France(+DOM TOM)	PRY	Paraguay
GAB	Gabon	ROM	Romania
GBR	United kingdom	SEN	Senegal
GRC	Greece	SVK	Slovakia (slovak republic)
GTM	Guatemala	SVN	Slovenia
HRV	Croatia (local name: hrvatska)	SWE	Sweden
IND	India	TGO	Togo
IRL	Ireland	TUN	Tunisia
ISL	Iceland	URY	Uruguay
ITA	Italy		

Notes: Countries that have deposited their respective instruments of ratification, acceptance, approval, or accession after 2008 are excluded.

Table A.3: List of the CCD non-contracting countries

ISO code	Country name	ISO code	Country name
AGO	Angola	MAR	Morocco
ARE	United arab emirates	MDV	Maldives
ATG	Antigua and barbuda	MRT	Mauritania
BHR	Bahrain	MYS	Malaysia
BLZ	Belize	NPL	Nepal
BRN	Brunei darussalam	PAK	Pakistan
CAF	Central african republic	PHL	Philippines
COL	Colombia	PNG	Papua new guinea
COM	Comoros	RWA	Rwanda
CRI	Costa rica	SGP	Singapore
DMA	Dominica	SLB	Solomon islands
FJI	Fiji	SLE	Sierra leone
GHA	Ghana	SLV	El salvador
GMB	Gambia	SUR	Suriname
GNB	Guinea-bissau	THA	Thailand
IDN	Indonesia	TUR	Turkey
ISR	Israel	TZA	Tanzania, united republic of
JPN	Japan	UGA	Uganda
KGZ	Kyrgyzstan	USA	USA, Puerto Rico and US Virgin Islands
KNA	Saint kitts and nevis	VEN	Venezuela
LKA	Sri lanka	ZMB	Zambia
MAC	Macau		

Table A.4: Descriptive statistics of cultural imports by FCS category

<b>Variable</b>	<b>N</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>S.D.</b>	<b>Sum</b>
All	220	0.000	0.608	16.049	1.896	133.707
HERITAGE	220	0.000	0.022	1.525	0.137	4.875
PRINT	220	0.000	0.183	3.652	0.514	40.181
MUSIC & PA	220	0.000	0.183	2.582	0.443	40.348
VISUAL ARTS	220	0.000	0.105	5.189	0.551	23.165
AUDIO & AM	220	0.000	0.114	4.542	0.434	25.137
NON	220	0.123	80.767	1,713.594	208.306	17768.843

Note: Cultural imports are in billion US dollars.

Table A.5: Descriptive statistics for the estimation

<b>Variable</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min</b>	<b>Max</b>	<b>N</b>
dlnIMPORT_2					
ALL	-0.182	0.472	-2.279	1.462	110
HERITAGE	-0.096	1.335	-3.423	4.102	110
PRINT	-0.212	0.373	-2.223	0.737	110
MUSIC&PA	-0.437	0.703	-2.995	1.044	110
ARTS	-0.109	0.724	-2.610	1.735	110
AUDIO&AV	0.234	1.041	-2.769	3.963	110
dlnEXTENSIVE_2					
ALL	0.010	0.092	-0.222	0.284	110
HERITAGE	0.027	0.303	-0.689	1.215	110
PRINT	0.049	0.104	-0.192	0.296	110
MUSIC&PA	-0.104	0.164	-0.978	0.251	110
ARTS	0.005	0.150	-0.351	0.526	110
AUDIO&AV	0.038	0.242	-0.523	1.274	110
dlnGDP	0.159	0.097	-0.011	0.532	110
dlnPCGDP	0.096	0.109	-0.482	0.410	110
dCCD	0.609	0.490	0.000	1.000	110