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1. Introduction

Since the beginning of the 21st century, the cultural and creative industries (CCI) have grown to become one of the main sources of greater production and employment in many countries. In 2013, the industries worldwide generated revenues of $2,250 bn. and employed 29.5 million people (see Table 1). At the same time as consumption of cultural goods and services has increased, production has tended to concentrate. This has resulted in an oligopolistic market with a high degree of asymmetry (see Figure 1). The two largest markets are Asia-Pacific, generated $743 bn. of revenues (33% of global CCI sales) and 12.7 million jobs (43% of CCI jobs globally) and Europe, which accounted for $709 bn. of revenues (32% of global CCI sales) and 7.7 million jobs (26% of all CCI jobs globally) in 2013. Latin America and the Caribbean, which encompasses the region of interest in this study, generated $124 bn. of revenues (5.5% of global CCI sales) and 1.9 million jobs (6.5% of CCI jobs globally).

Table 1: Global Revenues and Employment in Cultural and Creative Sectors

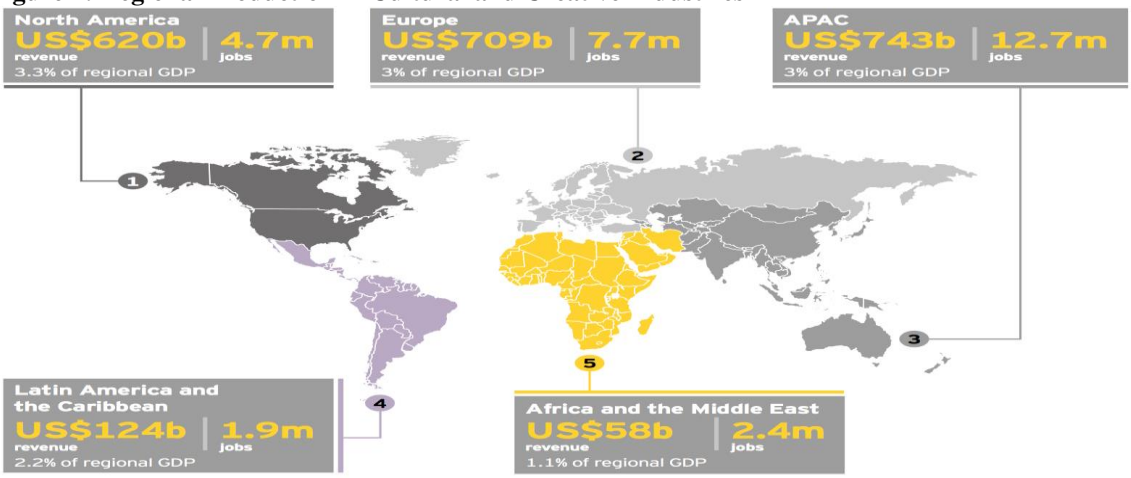
	Revenues in 2013 (USD $ bn.)	**No. of Jobs in 2013 (000s)**
Television	477	3,527
Visual Arts	391	6,732
Newspapers and magazines	354	2,865
Advertising	285	1,953
Architecture	222	1,668
Books	143	3,670
Performing Arts	127	3,538
Gaming	99	605
Movies	77	2,484
Music	65	3,979
Radio	46	502
TOTAL	**$2,253 bn.**	**29,507,000**

Source: adapted from EY (2015)

The nexus between culture and international trade has also acquired prime strategic significance. Between 1980 and 1998, annual global trade of printed matter, literature,

music, visual arts, cinema, photography, radio, television, games and sporting goods increased exponentially from $95,340 to $387.9 bn. (UNESCO 2000).[1] However, a similar picture of concentration emerges when these estimates are examined; more specifically, cultural trade shows significant disparities both within and between the various regional trade blocks. The majority of this trade occurred among a small number of countries. In 1990, Japan, the USA, Germany and the UK were the biggest exporters, with 55.4% of total exports, while the USA, Germany, the UK and France accounted for 47% of total imports. This pattern of concentration remained more or less unchanged during the 1990s. By 1998, China became a more dominant global player, and with the other four countries were the source of 53% of cultural exports and 57% of imports respectively.

Figure 1: Regional Production in Cultural and Creative Industries



Source: adapted from EY (2015)

[1] These estimates do not include the multimedia, audiovisual, software and other copyright-based industries. In 1998, recorded music (LPs, MCs and CDs) earned revenues of USD $38.7 bn. compared with USD $27 bn. in 1990 (International Federation of the Phonographic Industry 1999).

The imbalances in cultural and creative goods production and trade flows has been attributed to several factors. According to the UNDP's 1999 Human Development Report, two-thirds of the global populace do not benefit from the model of economic growth based on expansion of international trade and development of new technologies, and are excluded from the information economy (UNDP 1999). This state of affairs suggests there are gaps in individual countries' capacities and resources to produce cultural and creative goods and services. Indeed, in many developing or small countries, these capabilities are actually shrinking. The imbalances in flows of cultural goods has also been linked to global cultural homogenisation (Fan et al. 2017).

Confronted with imbalances in the flows of cultural goods, policymakers worldwide have registered their concern over the conflict between maintenance of cultural diversity and heritage and the growing trade in cultural goods. In 2001, UNESCO adopted the *Universal Declaration on Cultural Diversity*, which affirms the importance of cultural diversity, recognised as one of the pillars of sustainable development, while simultaneously affirming the importance of cultural communication via international trade in cultural products (UNESCO 2001).

Although the growth of the cultural and creative industries has been mostly limited to the world's richest countries, an increasing number of developing countries have identified the former as a priority in their national development strategies, and have expressed the need to build capacity to better measure the economic impact of these activities to inform their policy responses. In this regard, Caribbean countries increasingly consider the

cultural and creative industries as integral to their economic futures and as targets for investment and trade. The challenge for the region is to move beyond artistic creation to confront the challenges of market development, particularly on an international scale.

Despite some progress in developing the cultural and creative industries, the Caribbean continues to lag in monetising its creativity. At the regional level, this has prompted the Caribbean Community (CARICOM) in 2015 to recommend the establishment of a Caribbean Creative Industries Management Unit (CCIMU) to "address the needs of the region's cultural and creative industries, including business development, trade opportunities, and the protection of artists' and stakeholders' intellectual property rights" (Caribbean Development Bank 2016).

These developments strongly point to the need for more research into the economics of the cultural industries in the Caribbean. What little exists, has been undertaken by consultants for national and multilateral organisations and is largely unknown to academe. This study helps to fill that gap by undertaking an assessment of the cultural industries— a subset of the creative economy (Throsby 2008)—in the Caribbean within the context of the international trade in cultural goods.

Cultural goods are defined as goods conveying ideas, symbols, and ways of life, some of which may be subject to copyrights (UNESCO 2009). They include books, magazines, multimedia products, software, recordings, films, videos, audiovisual programmes, craft, and fashion. They are different from other goods in that their value derives from

irreproducible characteristics that are intrinsic to the way they are viewed by consumers. New cultural products can help countries to develop new markets, as well as to cater to the evolving needs of existing markets.

This chapter has several objectives. First, it describes trends in Caribbean exports of cultural goods over a 25-year period, 1991-2015. This description is not limited to CARICOM countries, but includes the Spanish, French and Dutch Caribbean. Second, it measures the contribution of cultural goods exports to *regional* growth. Third, it estimates regional export potential of cultural goods assuming no change to the region's capacity to export.

Findings from this study are important as the cultural industries lie at the nexus between cultural and economic policy. They contribute to the wellbeing of society. At the same time, cultural industries make a very real contribution to economic outcomes. This makes them an object of interest to policymakers concerned with shaping policy and crafting targeted interventions aimed at improving the conditions and prospects of the cultural industries.

The chapter is laid out as follows. First, there is a brief review of the literature on the economics of culture. In Section 3, an overview of the statistical methods employed is provided while details are left to various appendices for the interested reader. Section 4 presents the results. A discussion and closing remarks are provided in Section 5.

2. Literature Review

Notwithstanding the importance of the cultural industries to an economy, there is relatively little economic research on the industries in general, and on trade in cultural goods more specifically. The dearth of research is even more apparent when considered in a Caribbean context.

Early studies tended to focus on the performing arts. A seminal study conducted by Baumol and Bowen (1966) was a descriptive study of the performing arts in the USA. A key argument by the authors is that government financing is necessary for the performing arts to flourish. Gapinksi (1980) examine the "lively arts", also in the USA. Among his findings is that output in theatre, opera and symphony was most responsive to the number of artists. He also finds that returns to scale are approximately constant for the "lively arts". A later work by Gapinski finds that cultural experiences could be considered a luxury good (Gapinkski 1984). Gapinski also shows that the benefits from public subsidisation of theatre arts exceeds the cost, providing support for Baumol and Bowen's argument.[2]

The next wave of studies examines the market for film. This wave also provides the earliest known studies of trade in cultural and creative goods. Wildman and Siwek's (1990) descriptive analysis of trade in recorded media (film and music) disagree with the earlier view that government intervention is necessary for the survival of cultural

[2] If cultural goods and services can be considered merit goods and yield public-good benefits, apart from the private benefits enjoyed by consumers, as long as the benefits from intervention outweigh the costs, a strong case for government intervention can be made (Throsby 2012).

industries. Marvasti and Canterbury (1992) find that factor endowments (capital and labour) and capital and differences in tastes are significant factors of bilateral cultural trade (recordings, periodicals, books and newspapers) between the USA and Canada. Unlike Gapinski (1980), Marvasti and Canterbury find evidence of increasing returns to scale in the newspaper, periodicals, book publishing, and book printing industries.

Other work emphasised the importance of quality for cultural products and their inputs. Marvasti and Canterbury (1993) show that box office revenues depend on the number of block-buster films, as opposed to the total number of films produced, and the number of stars. Similarly, Throsby (1990) concludes that movie audiences' perception of quality influence demand.

More recent research supports the importance of trade in cultural goods. Using international box office revenues and various measures of a cultural discount factor (the tendency for consumers to value foreign cultural products less because it is difficult to appreciate foreign values and/or foreign language), Shin and McKenzie (2016) find evidence of the ongoing increase in the global film market share by the USA despite its decrease in relative domestic market size. Disdier et al. (2010) show that that cultural trade has a positive influence on overall trade and that cultural goods are traded over shorter distances than non-cultural ones. Marco-Serrano et al. (2014) uncover a bidirectional causal effect between per capita GDP and employment intensity in the cultural and creative industries in Europe. The literature also provides diverse evidence for the international trade in cultural goods. Larger exports of cultural goods have been

attributed to cultural similarity between countries (Takara 2018), birthplace diversity in the exporting country (Orefice and Santoni 2018), and uncertainty management strategies by firms (Kim 2013).

Economic research on the cultural industries in the Caribbean is rare, and appears outside the academic literature. To the authors' knowledge, all studies have been reports commissioned for various national and multilateral organisations. The lack of development in cultural industries across the region is attributed to limited access to credit and finance, the high costs of export marketing and inadequate institutional capacity (Nurse et al. 2007). These constraints have led to a trade deficit in cultural goods in CARICOM that closely tracks that of overall trade in the region. As example, CARICOM imported $88.6 mn. of cultural goods in 2002 while exporting only $2.3 mn. of cultural goods (Nurse et al. 2007). In the same vein, Hendrickson et al. (2012) maintain that the region's poor trade performance is a function of weak product and service development policies, the high cost of and limited access to appropriate financing, and scaling up of operations. Hendrickson et al. find that Caribbean countries underperform in most segments of the cultural industries, even when benchmarked against developing countries of similar size and development, and note that CARICOM accounted for only 0.01% of world trade in cultural and creative goods in 2008 (cultural services accounted for 0.04%).

James (2007, 2012a, 2012b) estimates the economic contribution of copy-right based industries in Jamaica, Trinidad and Tobago and the OECS respectively.[3] For Jamaica, the copyright industries contributed about 4.8% to GDP and accounted for 3.0% of employment in 2005; for Trinidad and Tobago, the contribution was 4.8% of GDP and 5% of employment in 2011; and, for OECS countries in 2010, the copyright sector contributed 3.3% to GDP and 3.7% of jobs in Dominica, 4.6% to GDP and 3.6% of jobs in Grenada, 6.5% to GDP and 3.1% of jobs in St. Kitts and Nevis, 8.0% to GDP and 4.4% of jobs in Saint Lucia, and 5.6% to GDP and 4.9% of jobs in St. Vincent and the Grenadines.

This brief review has provided some insight into the economic contribution of the cultural industries and cultural trade. Notable deficiencies in the literature are estimates of the impact of cultural exports on economic growth, and its export potential. This chapter will attempt to close this gap, using the Caribbean as the case study, a region for which little is also known. The next section describes the methods employed to address the main objectives of this study.

[3] Copyright-based industries include the following products and services: press and literature, music, theatrical productions and opera; motion picture, video and sound; radio and television; photography, visual and graphic arts, related professional and technical services; software, databases and new media; advertising services, and copyright collective management societies (WIPO 2003, 28).

3. Statistical Methods and Data Issues

3.1 *Methods*

This study will first describe trends in exports in cultural goods from 1991-2015, a period of 25 years, to address the first objective. It employs the 2009 UNESCO Framework for cultural goods and services which defines and categorises cultural goods and services for international cultural statistics. This framework outlines 6 core cultural goods—*Cultural and Natural Heritage*, *Performance and Celebration*, *Visual Arts and Crafts*, *Books and Press*, *Audiovisual and Interactive Media*, and *Design and Creative Services* (see Appendix A)—which provide the "conceptual foundations for evaluating the economic and social contributions of culture" (UNESCO 2009, 11). The core cultural goods are mapped onto the Harmonised System (HS) 2007 codes, an internationally standardised system of classification for internationally traded products. Specifically, 6 core cultural goods are mapped onto 85 HS codes at the 6-digit level of disaggregation (UNESCO 2009, 65-69). Cultural goods exports classified according to HS 2007 are obtained from UN Comtrade, an online repository of international trade statistics, for 23 Caribbean countries.[4]

The second objective is to estimate the contribution of cultural goods exports to economic growth. To accomplish this objective, the conceptual approach employed is the neo-classical production function augmented by exports, following Herzer et al.

[4] The countries investigated in the study are: Anguilla, Antigua and Barbuda, Aruba, the Bahamas, Barbados, Belize, Bermuda, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinique, Montserrat, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the Turks and Caicos Islands. The countries excluded are the British Virgin Islands, the Cayman Islands, Puerto Rico, and the United States Virgin Islands due to unavailability of data on exports of cultural goods.

(2006) and Waithe et al. (2011). In this augmented framework, output is modelled as a function of the capital stock, labour and exports of goods. A key argument in support of this approach is that exports may affect total factor productivity through dynamic spillover effects on the rest of the economy (Feder 1983). Empirical studies based on the production function framework include exports because of this spillover effect. Further details on the growth model and how it is estimated are provided in Appendix B.

The third and final objective is to estimate the potential of the Caribbean to export a larger volume of cultural goods given its existing capacity; that is, the region's export potential. This objective is addressed by employing the gravity model of international trade which examines the determinants of exports and permits estimation of export potential. The concept of gravity in international trade is derived from the Newtonian gravity model which argues that the gravitational force between two bodies is directly proportional to their masses and inversely proportional to the square of the distance between them. In this study's context, gravity is represented by the flow of cultural goods exports between the Caribbean and its trade partners, masses are represented by the economic sizes and populations of the exporting and importing countries, and physical distance is modelled as the distance between the capitals of each trade dyad, and intangible dimensions of distance by various cultural variables which are expected to result in greater export flows. Further details are provided in Appendix C.

3.2 *Measuring Cultural Goods Exports*

Cultural goods have features that distinguish them from other goods. Some of these

features distort measures of cultural trade. For example, if one listens to recorded music broadcast from a radio station in another country, then one is importing that music. Activities like these reduce the recorded level of trade as they cannot be observed. The extent of this measurement error is unknown and available statistics cannot be adjusted to account for this.

Another characteristic of cultural goods is that they provide for economies of scale in consumption. For example, the trade statistics will record the number and value recorded media (for example DVDs) that are exported to another country. However, the media can be consumed by any number of persons apart from the original purchaser. So, while the volume of recorded media exported is a clear measure of trade, the number of users arguably represents the demand side of the market as well. This issue is compounded when one accounts for the losses due to digital piracy (Lorde et al. 2010).

4. Results and Analysis

4.1 *Trends in Exports of Cultural Goods 1991-2015*

The Caribbean exported from all 6 core cultural goods categories (see Table 2). With respect to the underlying goods at the HS 6-digit level, the region exported 81 out of the 85 (or 95%) goods. The only underlying goods not exported are: **HS581010** (embroidery in the piece, in strips or in motifs without visible ground); **HS600340** (knitted or crocheted fabrics of a width not exceeding 30 cm of artificial fibres); **HS691310** (statuettes and other ornamental ceramic articles of porcelain or China); **HS691390** (statuettes and other ornamental ceramic articles, not elsewhere specified, excl. of

porcelain or China).

Table 2: Cultural Goods Exports in Caribbean 1991-2015

Core Cultural Good	Exports (USD $)	Share of Total (%)
Cultural and Natural Heritage	7,573,055	0.12
Performance and Celebration	51,216,353	0.81
Visual Arts and Crafts	5,951,881,044	94.53
Books and Press	280,469,152	4.45
Audiovisual and Interactive Media	4,840,091	0.08
Design and Creative Services	613,111	0.01
Total	$6,296,592,806	100.00%

Source: UN Comtrade

In relation to value, the Caribbean exported $6.3 bn. worth of cultural goods from 1991-2015 (Table 2). This represented only 0.02% of global exports for the same period. *Visual Arts and Crafts* comprised the vast majority of cultural goods exported, $5.95 bn. or 94.53% of the total. Four of the 6 cultural goods each comprised less than 1% of total cultural exports: *Cultural and Natural Heritage*; *Performance and Celebration*; *Audiovisual and Interactive Media*; and, *Design and Creative Services*.

Figure 2: Long-run Trends in Regional Cultural Goods Exports and GDP 1991-2015

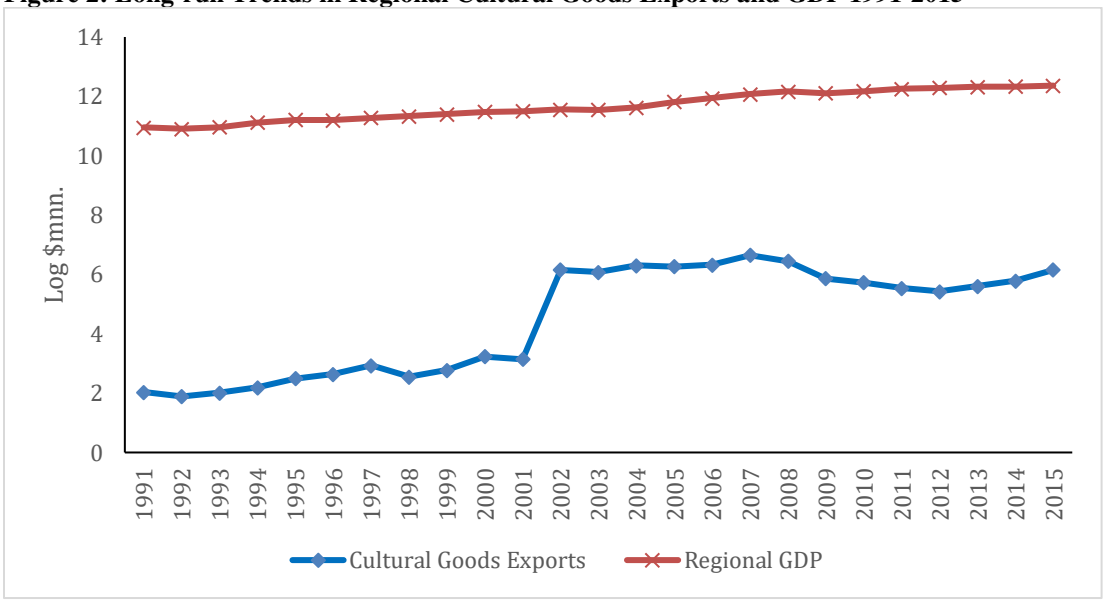


Table 3 presents exports indicators for an *ad hoc* list of countries to get an international context for the Caribbean's export performance. The value of cultural goods exported by the region is very small, exceeding only Brazil and South Africa. On a per capita basis, this performance improves slightly. As a share of GDP, Caribbean exports are only 0.14% of regional GDP; however, this compares favourably with that of other countries, exceeding even the shares of large countries like Australia, Japan, Russia, and the USA.

Table 3: Comparison of Cultural Goods Exports in Select Countries 1991-2015

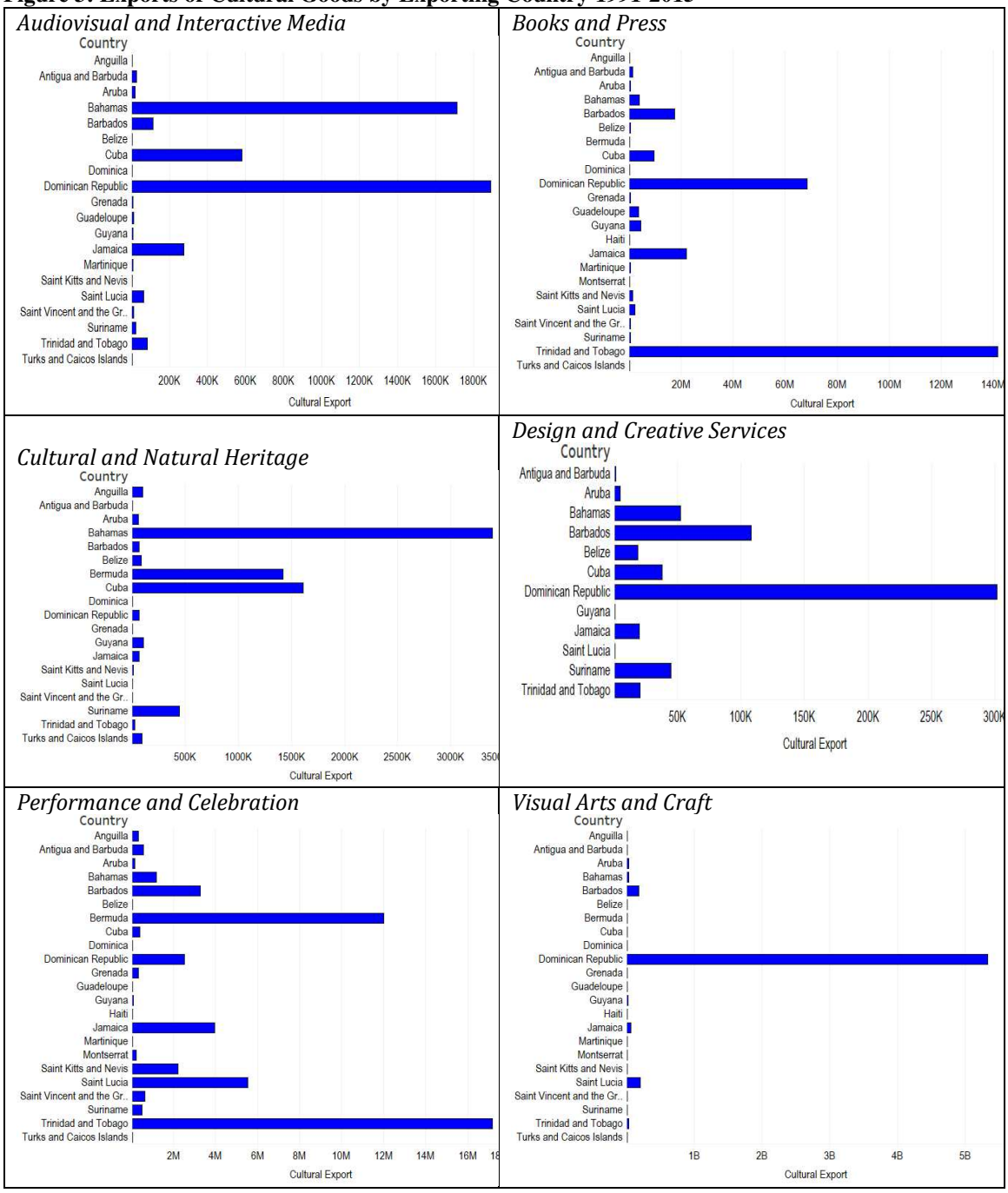
Country	Exports (USD $ bn.)	Exports per Capita (USD $)	Share of GDP (%)
Caribbean	6.30	13.31	0.14
Australia	10.37	19.81	0.06
Brazil	3.86	0.83	0.01
Canada	35.46	44.05	0.14
China	428.26	12.83	0.42
France	104.8	65.69	0.19
Germany	154.91	75.89	0.22
Hong Kong	178.14	1028.48	3.35
India	135.47	4.45	0.44
Japan	85.61	26.94	0.07
Netherlands	44.31	108.29	0.27
Russia	8.85	2.45	0.05
South Africa	3.05	2.43	0.05
South Korea	51.5	42.31	0.24
Spain	37.92	35.00	0.16
United Kingdom	257.56	167.72	0.47
USA	375.57	50.41	0.12

Source: UN Comtrade
Notes: Exports per capita is a 25-year average of per capita exports. Share of GDP is a 25-year average of the share of exports in GDP.

Figure 3 shows the export value of cultural goods by country of export. A small number of countries were the main exporters: Barbados, Cuba, the Bahamas, Dominican Republic, Jamaica, and Trinidad and Tobago. The Dominican Republic was the largest exporter overall. In terms of specific cultural goods, it was the largest exporter of *Audiovisual and Interactive Media*, *Design and Creative Services*, and *Visual Arts and Craft* goods. Trinidad and Tobago was the largest exporter of *Books and Press* and

Performance and Celebration, while the Bahamas was the largest exporter of *Cultural and Natural Heritage* goods.

Figure 3: Exports of Cultural Goods by Exporting Country 1991-2015



Source: UN Comtrade

A relative degree of variation among exporting countries can be observed for all but one core cultural good (see Figure 3). The significant exception is *Visual Arts and Craft*, which makes up almost 95% of all cultural goods exports. The Dominican Republic accounted for over 90% of this export. In addition, a small number of countries did not export at least one core cultural good. For *Audiovisual and Interactive Media*, this included Bermuda, Haiti and Montserrat; for *Cultural and Natural Heritage*, Bermuda, Haiti, Martinique, and Montserrat; and for, *Design and Creative Services*, Anguilla, Bermuda, Dominica, Grenada, Guadeloupe, Haiti, Martinique, Montserrat, St. Kitts and Nevis, St. Vincent and the Grenadines, and the Turks and Caicos Islands.

Figure 4: Import Partners for Cultural Goods 1991-2015

Source: UN Comtrade
Note: Only statistics for countries with imports in excess of $100,000 are shown.

As indicated earlier, the value of all cultural goods exported by the Caribbean between 1991-2015 was $6.3 bn. Figure 4 shows the breakdown by export partner. The country to which exports were highest was the USA, approximately $254.58 mn., or 4% of all cultural exports. The Caribbean exported $67.3 mn. to countries within the region, 1% of

the total. To the former colonial powers of the region (UK, France, Netherlands, Spain), $71.53 mn. worth of cultural goods, just over 1% of the total, were exported.

4.2 *Impact of Cultural Goods Exports on Regional Economic Growth 1991-2015*

Two estimators were used to estimate the growth model (see Appendix B1 for details) for the full sample period. Both provided similar results. Appendix D1 presents only 1 of these variants for the sake of brevity. For the full sample (column 1), findings suggest that larger levels of the capital stock and non-cultural goods exports, and a greater degree of export diversification increase regional growth. There is also some persistence in GDP growth. Focussing on the impact of cultural goods exports on economic growth (see $\log(X_{it}^{C})$), the results imply that cultural goods exports had no significant impact on regional growth between 1991-2015, perhaps lending support to arguments advanced by Nurse et al. (2007) and Hendrickson et al. (2012) regarding the underdeveloped state of the cultural industries in the region.

As a check on the robustness of the finding that cultural goods exports had no growth impact, the sample is split and the model re-estimated. Columns 2 and 3 of Appendix D1 present the growth estimates from the split samples. For the 1991-2004 period (column 2), cultural goods exports are positively associated with changes in regional growth; specifically, every 1 percent increase (decrease) in cultural goods exports resulted in a(n) increase (decrease) in output of 0.005 percent. For the 2005-2015 period (column 3), cultural goods exports are negatively associated with changes in regional growth; specifically, every 1 percent increase (decrease) in cultural goods exports led to a(n)

decrease (increase) in output of 0.004 percent, an impact almost equal in magnitude to the positive impact experienced from 1991-2004. These findings are consistent with the long-run trends observed in cultural exports and GDP (see Figure 2). Overall, these two contrasting periods of cultural goods export growth resulted in a zero net growth impact on GDP.

While evidence was found that the Caribbean can indeed benefit economically from exports of cultural goods, concerns arise regarding its ability to do so sustainably. Is there unmet demand for cultural goods from the Caribbean? Where does this demand arise? To answer these questions, the study estimates the export potential—a measure of the feasibility of profitably exporting products—of cultural goods to different export partners.

4.3 *Export Potential of Cultural Goods Exports*

The gravity model must be first estimated to generate the potentials. Estimates are provided in Appendix E1. For the full sample (column 1), results indicate that the Caribbean's capacity to supply cultural goods [$\log(RGDPpc_{it})$] and import partners' capacity to import [$\log(RGDPpc_{jt})$ and $\log(N_{jt})$] led to more cultural exports. Geographic distance (D_{ij}) had a negative impact on exports; that is, the region exported less to countries farther away than to those that are closer, a typical result in international trade. Cultural factors were also key determinants of cultural exports. Exports were greater between countries that share borders with Caribbean countries ($contig_{ij}$). The region exported more cultural goods to countries that are still colonies ($colstill_{ij}$), that were

former colonies (col_{ij}), or that share a common coloniser ($comcol_{ij}$). In contrast, Caribbean countries exported less to countries that spoke the same language ($comlang_{ij}$). This result is atypical in international trade, as trade flows are usually larger between countries that speak the same language. However, it may hold promise for the region's efforts to diversify its cultural goods export markets. The gravity model is also estimated for the split samples that were examined for the growth model, 1991-2004 (column 2) and 2005-2015 (column 3). Although there are some differences, results are broadly similar qualitatively speaking.

Table 4 presents export potentials for various export partners over the full and split samples in percentage terms. Looking first at the estimates for the full sample, results indicate that the potential existed for the Caribbean to export more cultural goods. The region under-exported 50.5% less to the world than was potentially possible. A breakdown shows that there was greater potential to increase exports to English-speaking countries overall (59.3%) or extra-regionally (58.8%) than there was to non-English-speaking countries overall (37.6%) or extra-regionally (40.2%). This is consistent with the finding from the gravity model (see Appendix E1) that the Caribbean exported less to countries that spoke the same language, which in this case was mainly English,[5] as the majority of Caribbean countries in the sample are English-speaking. The corollary meant there was greater potential for exports to English-speaking countries. Export potential to the colonial powers of the Caribbean (former and current), was highest for all groups of

[5] The sample of Caribbean countries includes one Spanish-speaking country (Cuba), two Dutch-speaking countries (Aruba and Suriname), and three French-speaking countries (Guadeloupe, Haiti, and Martinique).

partners considered at 64%; that is, the region under-exported 64% less than it could have. This is higher than expected since colonial powers would appear to be a natural importer of goods from their former and current colonies. Even to the top 10 importers of cultural goods, the Caribbean underperformed, not meetings its potential to export by approximately 61.3% for the entire period under study. Like for other groups of export partners considered, their potential varied depending on which period of exports growth is being considered; it was lower in the growth period of cultural goods exports (1991-2004) and higher in the period of exports decline (2005-2015).

Table 4: Export Potential for Cultural Goods 1991-2015

Export Partners	1991-2015 (%)	1991-2004 (%)	2005-2015 (%)
World	50.5	16.7	31.2
Extra-regional	51.1	14.3	30.6
English-speaking	59.3	11.4	49.8
Extra-regional English-speaking	58.8	7.0	49.5
Non-English-speaking	37.6	23.7	4.2
Extra-regional non-English-speaking	40.2	23.0	3.7
Colonial Powers	64.0	23.5	44.2
Top 10 Importers	61.3	16.9	36.7

Notes: Colonial powers are the UK, France, the Netherlands and Spain. The top 10 importers differ according to the sample being considered. For the full sample, from largest to smallest importer, they are: USA, Canada, Spain, UK, Nigeria, Netherlands, France, Jamaica, China and Germany. From 1991-2004, the largest importers are: the USA, Canada, UK, Spain, Netherlands, France, Germany, Jamaica, Russia and Japan. From 2005-2015, the largest importers are: USA, Spain, Nigeria, China, Jamaica, UK, France, Netherlands and Haiti.

Estimates for the 1991-2004 and 2005-2013 periods also indicate the potential for greater cultural goods exports from the Caribbean, although there are clear differences. Export potentials from 1991-2004 are smaller than potentials from 2005-2013 for the world, extra-regional, English-speaking, and extra-regional English-speaking partners, reflective of the growth trends observed in Figure 2; there was annual growth of 12% over 1991-2004 (full export potential was becoming increasingly met) and annual decline of 20%

over 2005-2015 (full export potential was becoming increasingly unmet). The finding of greater export potentials in 1991-2004 for non-English speaking and extra-regional non-English-speaking countries compared to potentials for English speaking and extra-regional English-speaking countries reversed in 2005-2015.

5. Discussion and Conclusion

The objectives of this study were to describe trends in cultural goods exports in the Caribbean, estimate their impact on regional economic growth and calculate their export potential, over the period 1991-2015. Over this period, cultural goods exports growth was very inconsistent; there were subperiods of positive growth with differing rates, negative growth, a spike and recovery. At the same time, regional output grew steadily. For the period, cultural goods exports totalled $6.3 bn., 0.02% of global cultural goods exports. *Visual Arts and Crafts* comprised almost 95% of this sum. The Dominican Republic was the largest exporter from the Caribbean. Other key exporters were Barbados, Cuba, the Bahamas, Jamaica, and Trinidad and Tobago. The USA was the single largest importer.

The study found that cultural goods exports had no significant impact on economic growth for the full sample under study. However, a split of the sample uncovered two contrasting periods of cultural goods exports-related economic growth, the first period with a positive impact and the second with a negative impact, roughly equal in magnitude. These results are consistent with the long-run trends observed in both cultural goods exports and GDP.

Finally, the study found that there was significant potential for the Caribbean to expand cultural goods exports. Export potential differed according to the subperiod and group of importers considered. Notably, export potential is greatest for the former colonial powers, the top 10 importers of cultural goods, and English-speaking importers of cultural goods. Overall the Caribbean's exports of cultural goods underperformed by 50.5%. Even if this potential had been met, however, the region's exports would only have risen to approximately $9.4 bn., still negligible on a global scale.

These findings have implications for the Caribbean's goal to cultivate viable cultural industries. Export diversification is critical, as currently, 95% of all goods exported were *Visual Arts and Crafts*. Export diversification expands the production possibility set, generating more opportunities for income generation and employment creation (Francis et al. 2007). It lowers the risk of having all of one's "eggs in one basket" and thus stabilises foreign exchange earnings from cultural goods exports. This will require market research, possibly with the help of export promotion agencies across the region to identify additional opportunities.

Another important area for improvement is the poor export performance from most Caribbean countries. The Dominican Republic is far and away the largest exporter of cultural goods, while a small number of countries comprise a second tier of exporters. A stronger effort to facilitate greater production and export of cultural goods by all countries is required. Countries should take a closer look at how the performance of the Dominican Republic, to identify possible best practices and for benchmarking purposes.

A cultural policy at the national or perhaps regional level may also help to enable the cultural environment that encourages individuals and cooperatives to enhance production of cultural goods for export.

Estimates of export potential revealed two areas for improvement for the Caribbean. First, the need for the region to meet its export potential, ensuring no demand for exports is left unmet. Second, diversification in export markets should be considered. While there was evidence that the Caribbean's largest potential lay in exporting to countries that were culturally proximate, the potential exists for the region to benefit from exports to countries that are culturally distant.

A limitation of the study is that it does not consider exports of cultural services. Available data is extremely sporadic and precludes its use from the types of statistical analyses conducted in this study. Thus, findings will not fully capture the impact of cultural exports from the Caribbean. Investigating this dimension of cultural exports is an important area for future research.

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Appendix A

A1: Core and Related Cultural Goods (UNESCO Classification)

Core Cultural Goods
A. Cultural and Natural Heritage
• Antiques
B. Performance and Celebration
• Musical Instruments
• Recorded Media
C. Visual Arts and Crafts
• Paintings
• Other Visual Arts
• Craft
• Jewellery
D. Books and Press
• Books
• Newspaper
• Other Printed Matter
E. Audiovisual and Interactive Media
• Film and Video
F. Design and Creative Services
• Architecture and Design

Source: UNESCO (2009, 65-69)

A2: Source of Data

Data on cultural goods exports are taken from the United Nations Comtrade online database available at: *https://comtrade.un.org*. The Caribbean countries investigated in the study are: Anguilla, Antigua and Barbuda, Aruba, the Bahamas, Barbados, Belize, Bermuda, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinique, Montserrat, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the Turks and Caicos Islands. The countries excluded are the British Virgin Islands, the Cayman Islands, Puerto Rico, and the United States Virgin Islands due to unavailability of data on exports of cultural goods from UN Comtrade.

Appendix B

B1: Growth Model Framework

The neoclassical model of growth assumes that output is a function of capital and labour. This study augments this framework by including exports as an input. Exports are disaggregated into total exports into non-cultural and cultural exports to isolate the effect of cultural goods on growth:

$$Y_{it} = f(K_{it}, L_{it}, X_{it}^{NC}, X_{it}^{C}, \boldsymbol{Z}) \quad \textbf{(B1.1)}$$

where Y_{it} is real GDP per capita of country *i* at time *t*; K_{it} is the capital stock of country *i* at time *t*; L_{it} is the stock of labour of country *i* at time *t*; X_{it}^{NC} is real non-cultural exports of country *i* at time *t*; X_{it}^{C} is real cultural goods exports of country *i* at time *t*; and $\boldsymbol{Z}$ is a vector of other variables that may have an impact on economic growth.

$\boldsymbol{Z}$ includes: 2 lags of Y_{it} to account for persistence in real GDP per capita; XD_{it}, an index of export product diversity which signals whether the structure of exports by product of each country differs from the structure of product of the world; and OP_{it}, an index of trade openness, which measures a country's exposure to international trade.

The growth model expressed in logarithms is:

$$\begin{aligned}\log(Y_{it}) = \beta_0 + \beta_1 \log(K_{it}) + \beta_2 \log(L_{it}) + \beta_3 \log(X_{it}^{NC}) + \beta_4 \log(X_{it}^{C}) \\ + \beta_5 \log(\mathrm{Y}_{i[t-1]}) + \beta_6 \log(Y_{i[t-2]}) + \beta_7 \log(\mathrm{XD}_{it}) + \beta_8 \log(OP_{it}) + u_{it}\end{aligned} \quad \textbf{(B1.2)}$$

The growth model is estimated using observations from 1991-2015, but excludes Anguilla, Guadeloupe, Martinique and Monserrat from the list given in Appendix A2, as the required data for the growth model for these 4 countries are unavailable.

Two estimators are used to estimate the growth model as a check for robustness, the Arellano-Bond estimator and the fixed effects estimator.

B2: Sources of Data

Data on non-cultural and cultural goods exports are taken from the United Nations Comtrade online database available at: *https://comtrade.un.org*. Observations on real GDP per capita, capital stock (proxied by real gross capital formation), the labour force, and the US consumer price index (used to convert nominal exports to real exports) are taken from the World Bank World Development Indicator online database available at: *https://datacatalog.worldbank.org/dataset/world-development-indicators*. The export diversity and openness indices are sourced from the United Nations Conference on Trade and Development (UNCTAD) online statistical database available at: *https://unctad.org/en/Pages/Home.aspx*.

Appendix C

C1: Export Potential Framework

This framework has two stages. In Stage I, the determinants of cultural goods exports are estimated. The conceptual approach employed is the gravity model of trade:

$$X_{ijkt} = f(RGDPpc_{it}, RGDPpc_{jt}, N_{it}, N_{jt}, Dist_{ij}, \boldsymbol{V}) \quad \textbf{(C1.1)}$$

where X_{ijkt} is real exports from *i* to *j* of cultural good *k* at time *t*; $RGDPpc_{it}$ and $RGDPpc_{jt}$ are real GDPs per capita of exporter *i* and importer *j* respectively at time *t*; N_{it} and N_{jt} are the populations of exporter *i* and importer *j* at time *t*; $Dist_{ij}$ is the distance between exporter *i* and importer *j*; and $\boldsymbol{V}$ is a vector of cultural variables that are expected to have an impact on cultural goods exports.

$\boldsymbol{V}$ includes: $comlang_{ij}$, an indicator variable to indicate whether exporter *i* and importer *j* share a common language; $contig_{ij}$, an indicator variable to indicate whether exporter *i* and importer *j* share a common border; $colstill_{ij}$, an indicator variable to indicate whether exporter *i* and importer *j* continue to have a colonial relationship; col_{ij}, an indicator variable to indicate whether exporter *i* and importer *j* have ever had a colonial relationship; and, $comcol_{ij}$, an indicator variable to indicate whether exporter *i* and importer *j* had a common coloniser.

The gravity model expressed in logarithms is:

$$\begin{aligned}\log(X_{ijkt}) = {} & \beta_0 + \beta_1 \log(RGDPpc_{it}) + \beta_2 \log(RGDPpc_{jt}) + \beta_3 \log(N_{it}) + \beta_4 \log(N_{jt}) \\ & + \beta_5 \log(Dist_{ij}) + \beta_6(comlang_{ij}) + \beta_7(contig_{ij}) + \beta_8(colstill_{ij}) \\ & + \beta_9(col_{ij}) + \beta_{10}(comcol_{ij}) + + u_{ijkt} \quad \textbf{(C1.2)}\end{aligned}$$

The gravity model is estimated using observations from 1991-2015. The model includes the full group of 23 Caribbean countries (exporters of cultural goods) listed in Appendix A.2 to the world (importers of cultural goods), 187 countries inclusive of Caribbean countries (see Appendix C.3).

To address the issues of zero trade between countries particularly within developing nations, the model given in Equation C1.2 is estimated with the Poisson Pseudo-Maximum Likelihood estimator (PPML).

In Stage II, export potential in accordance with existing trade patterns is calculated as:

$$export\ potential = \frac{\sum \widehat{X_{ijkt}} - \sum X_{ijkt}}{\sum X_{ijkt}} X\ 100 \quad \textbf{(C1.3)}$$

where $\hat{X}_{ijkt}$ are estimated exports of cultural goods and X_{ijkt} are actual exports of cultural goods.

A positive value from Equation C1.3 implies the existence of export potential, that is, opportunity exists for the expansion of cultural exports. A negative value is indicative of a trading environment which has surpassed its potential. A value of 0 indicates that export potential is being met.

The Caribbean's export potential of cultural goods is estimated for exports to: (1) the world; (2) extra-regional countries only (3) English-speaking countries only; (4) extra-regional English-speaking countries only; (5) non-English-speaking countries only; (6) extra-regional non-English-speaking countries only; and, the top 10 importers.

C.2 Sources of Data

Data on cultural goods exports are taken from UN Comtrade online database available at: *https://comtrade.un.org*. Observations on real GDP per capita, population, nominal GDP and the US consumer price index (to deflate nominal exports) are taken from the World Bank World Development Indicator online database available at: *https://datacatalog.worldbank.org/dataset/world-development-indicators*. Information on geographic distance and the cultural variables are sourced from the French Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) available at: *http://www.cepii.fr*

C.3 Importers of Cultural Goods from the Caribbean 1991-2015

Afghanistan	Denmark	Laos	St Lucia
Albania	Djibouti	Latvia	St Vincent and the Grenadines
Algeria	Dominica	Lebanon	Samoa
Andorra	Dominican Republic	Liberia	San Marino
Angola	Ecuador	Libya	Sao Tome and Principe
Antigua and Barbuda	Egypt	Lithuania	Saudi Arabia
Argentina	El Salvador	Macao	Senegal
Armenia	Equatorial Guinea	Macedonia	Seychelles
Aruba	Eritrea	Madagascar	Sierra Leone
Australia	Estonia	Malawi	Singapore
Austria	Ethiopia	Malaysia	Slovakia
Azerbaijan	Fiji	Maldives	Slovenia
Bahamas	Finland	Mali	Solomon Islands
Bahrain	France	Malta	Somalia
Bangladesh	French Polynesia	Marshall Islands	South Korea
Barbados	Gabon	Mauritania	Spain
Belarus	Gambia	Mauritius	Sri Lanka
Belize	Georgia	Mexico	Sudan
Benin	Germany	Micronesia	Suriname
Bermuda	Ghana	Moldova	Sweden
Bhutan	Gibraltar	Mongolia	Syrian Arab Republic
Bolivia	Greece	Morocco	Tajikistan
Bosnia and Herzegovina	Greenland	Mozambique	Tanzania
Brazil	Grenada	Myanmar	Thailand
British Virgin Islands	Guatemala	Nauru	Togo
Brunei Darussalam	Guinea	Nepal	Tonga
Bulgaria	Guinea-Bissau	Netherlands	Trinidad and Tobago
Burkina Faso	Guyana	New Caledonia	Tunisia
Burundi	Haiti	New Zealand	Turkey
Cabo Verde	Honduras	Nicaragua	Turkmenistan
Cambodia	Hong Kong	Niger	Turks and Caicos Islands
Cameroon	Hungary	Nigeria	Tuvalu
Canada	Iceland	North Korea	Uganda
Cayman Islands	Indonesia	Northern Mariana Islands	Ukraine
Central African Republic	Iran	Oman	United Arab Emirates
Chad	Iraq	Pakistan	United Kingdom
Chile	Ireland	Palau	United States of America
China	Israel	Panama	Uruguay
Colombia	Italy	Papua New Guinea	Uzbekistan
Comoros	Jamaica	Paraguay	Vanuatu
Congo	Japan	Peru	Venezuela
Costa Rica	Jordan	Philippines	Viet Nam
Côte d'Ivoire	Kazakhstan	Poland	Yemen
Croatia	Kenya	Portugal	Zambia
Cuba	Kiribati	Qatar	Zimbabwe
Cyprus	Kuwait	Rwanda	
Czechia	Kyrgyzstan	St Kitts and Nevis	

Appendix D

D1: Results from Growth Model

	(1) 1991-2015	(2) 1991-2004	(3) 2005-2015
$constant$	0.436*	-1.742**	1.676***
	(0.235)	(0.761)	(0.556)
$\log(K_{it})$	0.017**	0.084***	0.027**
	(0.009)	(0.013)	(0.012)
$\log(L_{it})$	-0.013	0.030	-0.060*
	(0.021)	(0.069)	(0.002)
$\log(X_{it}^{NC})$	0.023***	0.021**	0.042***
	(0.007)	(0.009)	(0.009)
$\log(X_{it}^{C})$	-0.002	0.005***	-0.004*
	(0.002)	(0.002)	(0.002)
$\log(Y_{i[t-1]})$	1.131***	0.814***	0.973***
	(0.091)	(0.094)	(0.090)
$\log(Y_{i[t-2]})$	-0.255***	0.066***	-0.215***
	(0.078)	(0.092)	(0.054)
$\log(XD_{it})$	0.090**	0.075	0.099***
	(0.043)	(0.119)	(0.032)
$\log(OP_{it})$	-0.002	0.052	-0.039**
	(0.022)	(0.038)	(0.019)

Notes: Standard errors are in parentheses. *** < 0.01, ** < 0.05, * < 0.1.

Appendix E

E1: Results from Gravity Model

	(1) 1991-2015	(2) 1991-2004	(3) 2005-2015
$constant$	-72.856***	-159.046***	-29.300*
	(9.159)	(27.022)	(16.614)
$\log(RGDPpc_{it})$	0.909***	1.644***	0.528
	(0.199)	(0.420)	(0.562)
$\log(RGDPpc_{jt})$	1.556***	0.692	1.332***
	(0.267)	(0.606)	(0.502)
$\log(N_{it})$	0.163	2.221	-0.977
	(0.671)	(1.749)	(1.232)
$\log(N_{jt})$	3.706***	7.213***	2.220*
	(0.620)	(1.732)	(1.146)
$\log(Dist_{ij})$	-0.142**	-0.233***	-0.088
	(0.067)	(0.082)	(0.083)
$comlang_{ij}$	-0.376***	-0.457***	-0.271***
	(0.081)	(0.123)	(0.084)
$contig_{ij}$	1.172***	0.412**	1.269***
	(0.170)	(0.209)	(0.201)
$colstill_{ij}$	0.477***	0.066	0.600***
	(0.126)	(0.270)	(0.146)
col_{ij}	0.695***	1.924***	0.091
	(0.204)	(0.194)	(0.229)
$comcol_{ij}$	1.753***	2.509***	1.459***
	(0.175)	(0.194)	(0.197)

Notes: Standard errors are in parentheses. *** < 0.01, ** < 0.05, * < 0.1.