

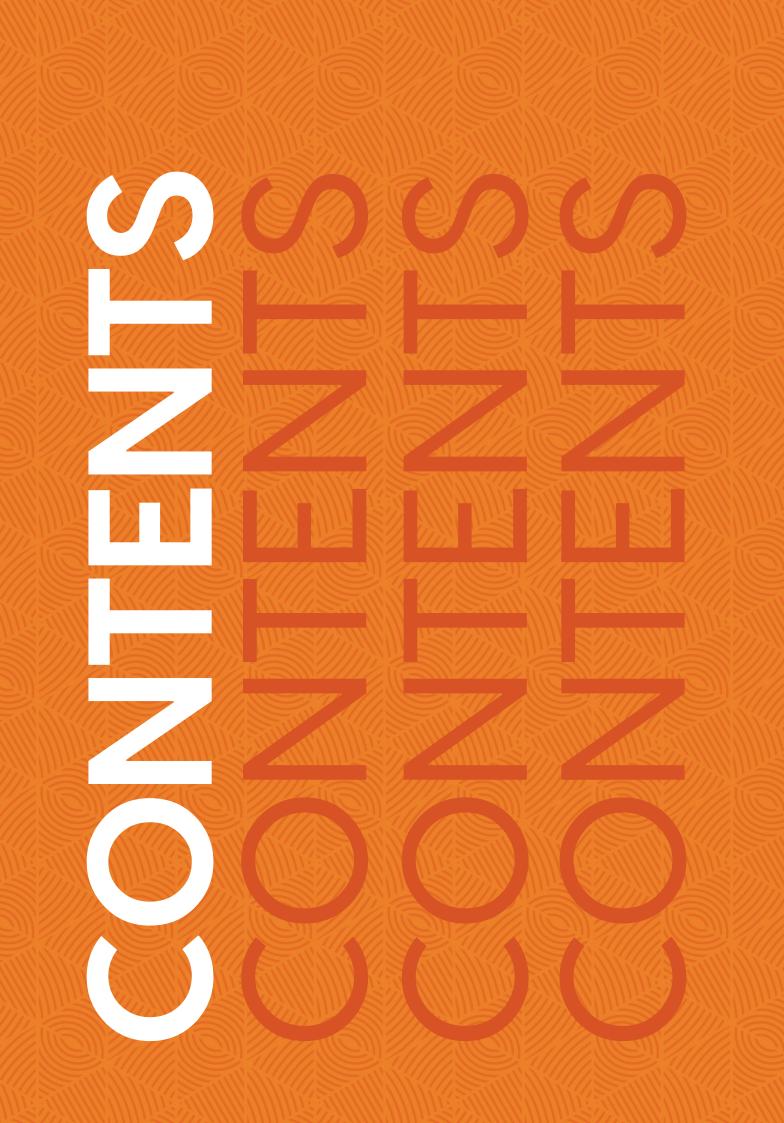




# The Contribution of Copyright-Based Industries to the Economy of

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This report aims to update estimates of the contribution of copyright industries to the Jamaican economy, as published by WIPO in James (2007). The 2005 study did not document the contributions to trade, productivity or Gross Domestic Product (GDP) per capita. Therefore, in addition to updated data on the contribution to GDP and employment, this report will provide estimates of copyright contributions to trade, productivity and development as measured by GDP per capita. Some key policy implications of the updated estimates will also be provided.

In addition to this introduction, the report comprises seven other sections. Section 2 provides a brief

update on the copyright law in Jamaica. For background, Section 3 describes Jamaica's broad economic structure in terms relevant to gaining an adequate understanding of the contribution of the copyright industries. Section 4 provides an update on the profile of the copyright industries. Section 5 presents the methodologies used, including data sources. Section 6 provides updated estimates of the contribution of copyright to GDP, employment and trade, focusing on the potential for increasing intraindustry trade. Section 7 estimates copyright's contribution to productivity and GDP growth per capita. Section 8 summarises the findings and presents some of their policy implications.

## 

Jamaica's copyright legislation and the legal framework supporting the creative industries have undergone progressive changes to better recognise and protect copyright-based content. Jamaica's Copyright Act<sup>1</sup> specifies the duration and scope of protection for creators and rights holders of original literary and artistic content. The Copyright Act has been amended over the years to increase the duration of copyright protection from 50 to 95 years and life plus 95 years (as applicable).

Treaty membership facilitates the introduction of amendments to domestic copyright provisions to align local copyright laws with specific global paradigmatic changes in the substance and scope of copyright law. Jamaica is a member of several international copyright treaties. One of them is the Beijing Treaty on Audiovisual Performances, which recognises economic and ownership rights for performers in audio-visual works. Jamaica has signed the treaty, but it has not been ratified as of the date of this publication. When the substantive provisions of this treaty are incorporated into Jamaica's copyright legislation, performers of audio-visual works will be

-The Copyright Act, Jamaica. Available at <a href="https://www.jipo.gov">https://www.jipo.gov.jm/sites/default/files/PDF\_Files/CopyrightAct.pdf</a>.

able to receive fair compensation for their work. The Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled has also been ratified by Jamaica. Once fully incorporated into Jamaica's Copyright Act, it will be easier for these individuals to access published works.

A notable legislative development in Jamaica that has synergies with the country's copyright legislation is the enactment of the Security Interests in Personal Property Act (SIPP).<sup>2</sup> Copyright law works best for rights holders when other legal frameworks in place can support the monetisation of their creative content. Due to the SIPP, copyright interests are now recognised as loan collateral. Copyright valuation and collateralisation can enhance the economic capacity of rights holders and optimise how they position their rights in global markets.

Regarding copyright registrations, JIPO's introduction of a voluntary copyright registration service now enables copyright owners to register their creative content and receive a certificate of registration

<sup>&</sup>lt;sup>2</sup>Security Interests in Personal Property, 2013, Available at https:// laws.moj.gov.jm/library/subsidiarylegislation/the-security-interests-in-personal-property-act.

as proof of ownership. In addition to serving as prima facie evidence of the validity of an owner's copyright, registration also helps track the number of copyrighted works created in Jamaica. As of December 2022, 567 copyright works were registered and deposited with JIPO (PIOJ, 2021).

Global technological innovations are significantly reshaping how Jamaican creators produce and distribute their works to the public. For example, with only a laptop, a microphone, suitable software applications and time, a musician can create new music and distribute it globally on online music streaming platforms (such as Spotify) or video-sharing services (such as YouTube and TikTok). However, with this flexibility and versatility comes the challenge of ensuring adequate administration of rights in a way that leads to effective monetisation of protected property. Further, several new forms of content creation that have emerged based on blockchain and artificial intelligence are not adequately addressed by current laws.

These complex developments make it difficult to track new content, increasing the challenges statisticians face in capturing the content in existing databases and constructing a reliable estimate of the contribution of copyright to the economy. Another challenge is adequately protecting local copyright content on global blockchain platforms and in the metaverse. Moreover, there will be limitations on enforcing Jamaican copyrights if the blockchain provides limited safeguards for owners' rights or requires copyright owners to resolve disputes in courts outside Jamaica or in arbitral seats where their rights are not adequately represented.

# 

The copyright industries are elements of the set of industries capable of producing capital, which is defined as output that can be stored and reused by various sectors to generate further output. The appropriate economic background for studying the contribution of the copyright industries to the economy is data on the evolving structure of the economy, best measured by the industries' share of GDP that can produce capital. Since the works of classical economists such as Leontief (1953. 1970) and Lewis (1954), economists have known about the importance of capital-producing sectors for the dynamic behaviour of an economy. The proxy indicator for the output of industries capable of producing capital is the combined output of manufacturing, construction and other sectors such as education and the creative industries. James and Hamilton (2022) empirically demonstrated that economic structure, measured as the share of GDP of capital-producing industries, is the leading strategic factor in economic development, alongside the quality of institutions and the level of technology. A significant reason for this is that the capital industries, including the copyright industries, are the main basis for the growth of a country's capacity to participate

successfully in intraindustry trade by introducing innovative solutions to problems arising from local and global markets.

Table 1 presents the structural changes in Jamaica's economy between 2010 and 2019. The reference benchmark structure is 65%, which is typical of the major developed economies in the global system. The data indicate that the economic structure of Jamaica, while well below the benchmark structure, remained broadly constant. Industries capable of producing capital contributed 50% of GDP in 2010, which fell marginally to 49% in 2019. Generally, these data indicate that the economy's structure is not improving in the necessary way to enhance the standard of living that the economy can support. The stagnation stems from the average growth of the real output of the capital-producing industries by 0.6% per year over the period, while the real GDP grew at approximately the same rate of 0.9%. It is clearly in the country's interest to upgrade its development efforts by promoting the growth of the share of capital production in GDP, including by fostering the expansion of the copyright industries.

#### Table 1

The Structure of the Jamaican Economy, 2010 to 2019.

Year	Manufacturing	Construction	Other	Sum	Growth of the Industries That Can Produce Capital	GDP	GDP Share of Industries That Can Produce Capital	GDP Growth
2010	1.10E+09	9.30E+08	4.84E+O9	6.87E+O9		1.37E+10	0.50	
2011	1.12E+O9	9.37E+O8	4.84E+O9	6.90E+09	.005	1.40E+10	O.49	.017
2012	1.12E+O9	8.96E+O8	4.85E+O9	6.86E+O9	006	1.39E+10	O.49	006
2013	1.12E+O9	9.13E+O8	4.85E+O9	6.88E+O9	.003	1.40E+10	O.49	.005
2014	1.11E+O9	9.28E+O8	4.88E+O9	6.91E+O9	.005	1.41E+10	O.49	.007
2015	1.13E+O9	9.41E+O8	4.90E+09	6.97E+O9	.009	1.42E+10	O.49	.009
2016	1.15E+O9	9.45E+O8	4.93E+O9	7.03E+09	.008	1.44E+10	O.49	.014
2017	1.17E+O9	9.55E+O8	4.97E+O9	7.10E+09	.01	1.45E+10	O.49	.01
2018	1.18E+O9	9.86E+O8	5.01E+09	7.18E+O9	.011	1.48E+10	O.49	.019
2019	1.21E+O9	9.80E+08	5.09E+09	7.27E+O9	.014	1.49E+10	O.49	.009
Average					0.006		O.49	.009

Source: UNSD Country Profiles Dataset

## **UPDATES TO THE PROFILE OF THE** JAMAICAN COPYRIGHT SECTOR

There have been some significant changes in the profile of the Jamaican copyright industry since the publication of James (2007).

#### **4.1. SOME INSTITUTIONAL DEVELOPMENTS**

Jamaica established an Entertainment Advisory Board (EAB) to enhance the capacity for evidencebased policy in support of the entertainment sector. The EAB now has a Board of Directors for a two-year term beginning on April 26, 2021, and ending on April 25, 2023. The EAB was reorganised as part of the planning process, and important subcommittees were established to direct the Board's actions. These subcommittees are responsible for various matters, including but not limited to law and regulations, communications, capital markets/finance, research and statistics, education, infrastructure and technology.

Further, Kingston, the capital of Jamaica, was designated as a United Nations Educational, Scientific and Cultural Organisation (UNESCO) Creative City of Music on December 4, 2021. This designation requires attending monthly international conferences with the UNESCO Music City Network, which offers a forum for exchanging best practices among member cities.

#### **4.2. PRESS AND LITERATURE**

This industry has witnessed a shift in consumption patterns, with an ever-growing segment of consumers opting to access media digitally. In adjusting to this shift, major newspaper companies such as *The Gleaner* and *The Observer* have launched online platforms for readers to access their articles, with *The Gleaner* offering paid monthly memberships. With news and literature being offered online, consumers can purchase and access articles from various authors once they have been made available digitally. Further, with the rapid expansion of digital publishing, authors no longer require the input of a major publishing house to distribute their materials to the public.

#### **4.3. MUSIC**

Jamaica's music industry has experienced a boom in the last five years, with the emergence of an increasing number of self-taught artists, composers, producers, directors, publishers and other related professionals. This has led to the success of critically acclaimed artists such as Koffee, Shenseea, Skillibeng and Jada Kingdom. Additionally, this boom correlates with the rising popularity of making music available via online streaming platforms, which allows easier and wider access. These streaming platforms now enable artists to share their music catalogue while still protecting their artistic rights. Streaming platforms, such as Spotify, YouTube, Tidal and Apple Music, facilitate payments on a per-stream basis. This model allows artists to earn exponentially more money than they could before. Prior to the digital age, artists had to rely on sales of content from physical media such as CDs, vinyl and cassettes, which posed their own challenges.

Furthermore, the rapid advancement of digital technology now allows composers and producers such as Mario "Dunw3ll" Dunwell to no longer depend

on established recording studios such as Tuff Gong. At a modest cost, many of them have been able to create their own studios for producing, mixing and composing and have established successful operations, collaborating on musical projects with artists such as Taurus Riley, Protoje, Kabaka Pyramid and Lila Ike.

#### **4.4. PHOTOGRAPHY**

Photography has adapted to the digital age, with clients now able to receive end products via cloud/ email services. This eliminates the hassle of retrieving a physical product and enables easy sharing and editing of images. However, it must also be noted that a major hindrance to the sector is the cost of importing items due to the US\$50 limit imposed by the Jamaica Customs Agency. This limit has not been adjusted to keep up with the ever-increasing equipment prices needed for the industry.



An updated assessment of the contribution of the copyright industries to output, employment, trade, productivity and growth requires two sets of parameters: (i) shares of STATIN aggregated sectors and copyright factors to be used to extract data on copyright from the national accounts and employment and trade statistics and (ii) valid elasticities that measure the contribution of the copyright industries to growth. The copyright factors used were those reported in the Jamaica study of 2005, combined as necessary with relevant factors obtained from the OECS study of 2012 and the Trinidad and Tobago (T&T) study of 2012, as well as from surveys undertaken by the CSO in St. Lucia. The elasticities used were based on estimates produced by James and Hamilton (2022) using global data.

Data from the St. Lucia 2016 Supply and Use Tables, the Jamaica Supply and Use Tables 2007 and the T&T 2000 SUT were used to identify the share of industry output that includes copyright in the broad industry classifications of the national accounts. The St. Lucia Supply and Use Tables and the T&T SUT were also used to derive coefficients that lead to updated estimates of the trade contribution, including imports and exports. National accounting aggregates for Jamaica for 2016 were obtained from STATIN and the United Nations Statistics Division (UNSD) for the period 2010–2019. Data from the 2005 study and the updated estimates of the contribution to output and employment for 2016 were used to develop the estimates of the contribution to national productivity. Data from the UNSD were used in conjunction with the data from the 2005 study and the 2016 estimates to determine the contribution to GDP per capita growth.

In this update, we have incorporated estimates of the copyright value produced by the local pharmaceutical industry. It was reported in the preface of the market study by the India High Commission (2016) that "[t]he pharmaceutical industry in Jamaica is comprised of companies that engage in research  $\mathcal{E}$  development, manufacturing and distribution of drugs for human and veterinary use" and "manufactures a few generic and over the counter pharmaceutical items which is mostly used in the local market".

Patents are the main foundation of intellectual property protection in the pharmaceutical industry. However, in countries like Jamaica, where the patents related to the production of generic drugs belong to foreign inventors, a substantial amount of copyright (and other types of intellectual property) is implicated in the manufacturing and packaging of

generic pharmaceuticals for local distribution. The relevant copyrights cover content published in journal articles, clinical and research papers, graphs, tables, market research data, competitive analysis and copyrights in supporting publications and materials. Copyright and database protection also play an increasingly important role as research relies more on bioinformatics and other research methods to analyse large databases of genetic, clinical and biophysical data. Without adequate public data on the subject, we assumed that copyright protection covers a value of output approximating the value of computer and information services activities. The result was a copyright factor of 0.35.

In estimating trade contributions, export coefficients, which represent the shares of exports out of total production, were mainly collected from the 2000 SUT of T&T and the 2016 St Lucia SUT data. Additional information was derived from the 2007 Jamaica SUT. Where these were not applicable, such as in the case of paper and "information, sound, video and television broadcasting and production activities", the simple assumption was made that the applicable ratio is the average for the economy, i.e., the ratio of gross exports to GDP. The import coefficients (ratios of imports to total production) were primarily calculated using data from the 2000 T&T SUT, except for pharmaceuticals, for which data were obtained from the report of the India High Commission (2016).



## THE CONTRIBUTION OF COPYRIGHT-BASED INDUSTRIES TO GDP, EMPLOYMENT AND TRADE

The estimates generated for copyright GDP and trade did not correspond exactly to the industry classifications of WIPO (2015). Instead, they were for somewhat more aggregate industries that align with copyright-related activities, for which data are available from the reference SUTs. Specific estimates were generated for the following industry classifications: (i) manufacture of pharmaceuticals, which would classify as a partial copyright industry under WIPO (2015); (ii) furniture; (iii) textiles and clothing (including leather products); (iv) paper; (v) printing activities; (vi) wholesale and retail trades; (vii) transport, storage and communication; (viii) information, sound, video and television broadcasting and production activities; (ix) photographic and other professional and technical activities; (x) advertising and market research services and (xi) arts, entertainment and cultural activities. Overall estimates are reported in Table 2.

The estimates indicate that the copyright industries contributed about US\$687 million of output, accounting for approximately 5.9% of GDP in 2016, compared to 4.8% in 2005. Thus, the copyright sector grew faster than the economy over the 11-year period. The country also imported about JA\$36.4 billion worth of copyrighted output, accounting for approximately 6.1% of total imports, and exported around JA\$14.8 billion, representing about 9.9% of total exports. There was an overall deficit in the balance of trade for the identified copyright goods and services; however,

on the modest assumption that the country exports about 25% of its arts, entertainment and cultural products, there was a surplus in this cluster. This sector embodies the iconic music industry, which has strong linkages to the rest of the economy, including tourism. Since these industries mainly engage in intraindustry trade through capital production, learning by doing and innovation, they represent a substantial potential for the economy to expand its intraindustry exports as the basis for growing productivity and living standards. The evidence supports the case for implementing policies to enhance the productive, institutional and innovative capacity in capital industries, particularly in the arts, entertainment and cultural sectors that create and export copyrighted content.

Table 3 reports estimates of the impact of copyrightrelated activities on employment in Jamaica in 2016. These estimates were generated using reference data from the St. Lucia 2016 SUT, the Jamaica 2007 SUT and the T&T 2000 SUT. The estimated 13,078 employees involved in creating copyrighted content in the pharmaceutical manufacturing industry assume that the ratio of copyright employees to copyright value-added is similar to that of the "advertising and market research services" sector (0.286). Additionally, the estimates suggest that the copyright industries contributed 4.28% of total economic employment in 2016. Among the important contributing subsectors in 2016 were the "manufacture of pharmaceuticals"

(26%), "wholesale and retail trade" (26.5%), "sound, video and television broadcasting and production activities" (5.9%); "telecommunications activities" (5.6%); and the creative hub of "arts, entertainment and cultural activities" (5.5%). The 4.28% share in 2016 reflects an increase in the share of the copyright industries from the 3.03% estimated in 2005. This growth appears to be linked to the rise of the copyright industry's share in GDP from 4.8% in 2005 to 5.9% in 2016.

#### Table 2

#### Estimates of the Contribution of Copyright to GDP and Trade in Jamaica, 2016.

			/ 5				-			
Copyright Industries	Estimated Output	Copyright Factor	Copyright Value- Added	Import Coef	Imports	Copyright Value- Added in Imports	Export Coef	Exports	Copyright Value in Exports	Copyright Trade Balance
Manufacture of pharma- ceuticals	130649	0.3500	45727.2	O.15	19351.O	6772.9	.098	0.0	0.0	-6772.9
Manufacture of textiles, wearing apparel and leather	2934.7	.005	5.4	O.2	574.9	2.9	.098	288.2	1.4	-1.4
Manufacture of paper products, printing and recorded media	10907.1	0.250	1528.5	1.4	15139.O	3784.8	.098	1071.1	267.8	-3517.O
Manufacture of furniture	11110.8	.050	177.3	O.2	2176.6	108.8	.098	1091.1	54.6	-54.3
Other wholesale and retail trade	399868.5	.058	16242.4							
Passenger land transport	94206.1	.073	5616.3							
Other transportation support activities	13945.3	.073	99.7							
Publishing activities	5305.5	1.000	3559.1	O.6	2940.3	2940.3	O.393	2085.1	2085.1	-855.3
Sound, video and tele- vision broadcasting and production activities	4693.9	1.000	2983.O	O.4	1713.7	1713.7	.098	460.9	460.9	-1252.8
Telecommunications activities	6375O.O	.073	3008.3	O.4	23275.1	1696.3	.098	6260.3	456.2	-1240.0
Computer and informa- tion service activities	1301.0	0.350	299.4	O.4	475.O	166.3	0.000	0.0	0.0	-166.2
Activities of head offices and management consul- tancies	754.1	0.500	244.4	1.3	965.3	482.7	0.000	0.0	0.0	-482.7
Architectural, engineering and technical activities; R&D	3786.4	0.500	1296.2	1.3	4847.O	2423.5	0.000	O.1	0.0	-2423.5
Advertising and market research	3588.5	1.000	2201.7	1.3	4596.8	4596.8	0.000	0.0	0.0	-4596.8
Photographic and other professional and technical activities	4678.O	1.000	2870.2	O.3	1426.8	1426.8	0.000	0.0	0.0	-1426.8
Arts, entertainment and cultural activities	44673.1	1.000	17332.8	O.2	10301.6	10301.6	O.258	11518.9	11518.9	1217.3
Gross copyright val- ue-added			103191.8			36417.3		22775.7	14845.1	
Gross value-added	1760976									
Copyright share of GDP			.05860							
Exports	150250.0									
Imports	595875.O									
	150250									
Copyright share of exports									.09880244	
Copyright share of imports						.061115673				

Sources: 2001 SUT, T&T; 2016 SUT, St Lucia; India High Commission (2016); World Bank, WITS

#### Table 3

#### Copyright Employment in Jamaica, 2016.

Copyright Industries	Copyright Employment	% Share
Manufacture of pharmaceuticals	13078	0.260
Manufacture of textiles, wearing apparel and leather	4404	.087
Manufacture of paper products, printing and recorded media	3160	.063
Manufacture of furniture	100	.002
Other wholesale and retail trade	13341	O.265
Passenger land transport	452	.009
Other transportation support activities	224	.004
Publishing activities	1207	.024
Sound, video and television broadcasting and production activities	2955	.059
Telecommunications activities	2843	.056
Computer and information service activities	1402	.028
Activities of head offices and management consultancies	2495	.050
Architectural, engineering and technical activities; R&D	1203	.024
Advertising and market research	629	.O13
Photographic and other professional and technical activities	78	.002
Arts, entertainment and cultural activities	2762	.055
Copyright Employment	50332	1.000
Total Employment	1175214	
Copyright Share of Employment	0.0428	
Source: Computed from the CDB Copyright Industries Database		



#### THE CONTRIBUTION OF COPYRIGHT-BASED INDUSTRIES TO PRODUCTIVITY AND DEVELOPMENT

It has long been established that productivity growth is a key factor helping an economy increase its GDP per capita and, hence, contribute to its development (ul Haque, 1995). Productivity growth is also one of the principal ways through which a society can meet its obligations towards environmental preservation while improving the living standards of its people. An estimate of the copyright industries' contribution to economy-wide productivity can be obtained by using the ratio of the copyright sector's estimated contribution to GDP and its estimated contribution to employment. In Jamaica's case, the contribution of copyright to GDP in 2005 was 4.8%, and the contribution to employment was 3.03%. Thus, the contribution of the copyright sector to productivity was 1.58, indicating that productivity in the copyright industries was 58% above the economy's average. By comparison, the data for 2016 indicate that the contribution of the copyright industries to economywide productivity was 1.38, which is 38% above the national average. The decline in contributions may be

explained by the relatively faster growth of copyright employment compared to copyright value.

Nonetheless, the finding that the copyright industries are consistently more productive than the overall national economy supports the view that it is in the country's interest to invest in growing the share of the copyright industries in GDP relative to its share in employment. This investment is aimed at raising the sector's contribution to overall productivity growth and boosting its impact on the growth of living standards in the country. In broad terms, this is achieved through investment strategies that effectively promote the sector's innovation, enhance its supporting institutions and increase its contribution to the output of capital-producing sectors. The latter increase is achieved partly by boosting the linkages (backwards and forwards) of developing copyright industry supply to the rest of the domestic production system, augmented by domestic and export demand stimulus.

The strategies that lead to productivity growth in the copyright sector are specific applications of the general strategies required to achieve economic productivity growth, as established with global data by James and Hamilton (2022). Based on data from 128 countries up to 2019, James and Hamilton (2022) used Rubin causal modelling to empirically show that an increase in the standard of living is driven by the growth of the capital share of GDP, enhancement of the quality of the institutional framework of the economy and advancement of production technology. The level of development achieved by a country such as Jamaica depends on the set of characteristic long-run elasticities linking the strategic factors to GDP per capita and the level of investment effort the country puts into upgrading them. Model estimation revealed that the characteristic elasticities of countries such as Jamaica are 2.33 for the capital share of GDP, 1.75 for the quality of institutions and 1.42 for the level of technology. These parameters are individually and collectively greater than 1, signalling that a country such as Jamaica would rapidly increase its living standards by investing in upgrading its competitive strategy. In contrast, since the characteristic constant term is -1.92, a country such as Jamaica would likely lose ground if it failed to improve these strategic variables.

It is generally understood that the contribution of any specific capital-producing industry to the development process reflects a combination of the industry's share in GDP and the growth and transformation achieved within the industry, assuming that other potential contributing factors are held constant. Further, within the capital sector, each capital-producing industry contributes to productivity growth and development through (i) its internal growth achievements and (ii) its share of total production in the capital-producing sectors. The copyright industries are components of the capitalproducing industries in the economy.

Estimates from the WIPO report for 2005 (James, 2007) revealed that the copyright sector contributed 4.8% to Jamaica's GDP in 2005. It is also known from data provided by the UNSD that in 2005, the capital-producing sectors contributed 52.7% to Jamaica's GDP. Thus, in 2005, the copyright sector contributed approximately 9.1% to the output of Jamaica's capital-producing sectors. In 2016, the share of copyright industries in the capital sector grew to 12%, as the copyright sector's share of GDP fell to 49%. Using the long-run capital elasticity of 2.33, which applies to countries such as Jamaica,

the data suggest that a 1% growth in the copyright share of GDP contributed 0.21% to GDP per capita growth in 2005. This elasticity increased to 0.28 in 2016. Between 2005 and 2016, the copyright share of GDP grew from 4.8% to 5.9%, an increase of about 2% per year. Using the fact that each 1% growth of the copyright share of GDP causes GDP per capita to grow by 0.21%, the copyright industries have contributed approximately 0.42% to GDP growth per capita in each year between 2005 and 2016. The potential impact on GDP per capita of equivalent growth after 2016 would be about 0.56%.

These findings suggest a general principle: the larger the contribution of the copyright sector to the GDP each year, the greater its impact on the economy's development. Therefore, the overall contribution of the copyright industries to Jamaica's productivity growth and development depends on the level of investment put into expanding the copyright share of GDP. This entails growing the copyright sector at a faster rate than GDP and employment. The GDP of Jamaica has been growing at an average (trend) rate of just over 1.2% in the five years from 2015 to 2019. Using this trend growth rate as the minimum projected growth rate over the next five years implies that the output of the copyright industries must grow at an annual rate greater than 1.2%. Further, this minimum growth rate may need to be increased as a policy target to maintain the country's public debt sustainability. This will facilitate investment in developing the sector, as the sustainability of the debt also hinges on whether the growth rate exceeds the interest rate on the debt.

Productivity is best interpreted as the efficiency of labour inputs augmented with workers' knowledge, skills and self-confidence. Thus, this targeted growth rate of 1% can be achieved by the growth of the sum of (i) labour productivity growth in the copyright sector, (ii) growth of the knowledge, skills and selfconfidence of workers in the copyright sector and (iii) growth of the number of workers employed in the copyright sector. The distribution among the contributing components can be determined by national priorities. Such simultaneous growth is achieved through sector-targeted investment strategies that enhance the capacity of the copyright industries to innovate, upgrade their supporting institutions and increase their contribution to the output of capital-producing sectors. The overall actual GDP per capita growth depends on the effort put into developing other capital-producing sectors and enhancing institutions and technological capacity in the copyright sector and the wider economy.

### **OB** SUMMARY AND POLICY PERSPECTIVES FOR THE COPYRIGHT INDUSTRIES

The main evidence presented in this update indicates that the structure of the Jamaican economy stagnated between 2010 and 2019, as the share of capitalproducing industries in GDP remained at approximately 49% over the period. Furthermore, this share remains well below the benchmark of 65% that is typical of developed economies.

Even in this context, the copyright industries were growing as a share of GDP and, therefore, as a share of the capital-producing sectors. They also increased their contribution to employment until 2016. Still, it is well known that the contribution of the copyright industries to economic restructuring depends on their size and growth rate. Although these industries are growing faster than the economy and other capitalproducing industries, they are still too small to cause a substantial shift in the overall economic structure. However, they are making a positive contribution to improving productivity and living standards. This finding suggests that it is in the national interest to expand the size of the copyright industries in Jamaica to boost their contribution to overall economic restructuring and development. This policy suggestion is also supported by the evidence that productivity in the copyright sector is substantially higher than productivity in the rest of the economy. Overall, the copyright industries, as integral components of the capital-producing sector, are well positioned to enhance the national capacity for diversification and growth in the share of capitalproducing industries in GDP. This, in turn, can increase the national capacity to finance the improvement in living standards over time.

The results suggest that some additional policy initiatives are needed to enhance the presence of the copyright industries in the capital sector. This is consistent with the recommendations outlined in the WIPO report of 2007 (James, 2007). One suggestion is to introduce a set of policies aimed at improving the institutional framework supporting industries. This includes improving the capacity of collective management societies that facilitate the enforcement of copyright law and enable creators to benefit from their works. Another suggestion is to increase national investment in the education system to improve operators' knowledge, skills and self-confidence in the copyright sector. These assets are crucial for the industry to create innovative work and deploy them as capital. Additionally, it is also essential for rights holders and policymakers to understand that digital platform policies may lead to limitations in the monetisation and enforcement of rights. These caveats should be explained to rights holders to prevent them from engaging in risky ventures that could compromise their proprietary interests. The copyright industries are export-oriented capital industries that the country can competitively produce for the global marketplace. This is supported by the evidence that the arts, entertainment and recreation industries generated a trade surplus in 2016. It has been established that capital-producing industries contribute a GDP share significantly lower than the benchmark set by the most competitive economies. Thus, a third policy recommendation is to further strengthen investment financing arrangements and incentives to boost both the relative size and the growth rate of the copyright industries within the economy. Such growth would generate increased linkages to the rest of the economy and facilitate the diversification and growth of intraindustry exports. Ultimately, an increase in the size and rate of growth of the copyright industries would substantially improve Jamaica's standard of living, as measured by its GDP per capita.

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