



**HAL**  
open science

# The share of the culture sector in Abu Dhabi's GDP - Introductory report

Elena Raevskikh, Usman Khalid, Jorge Pinto

► **To cite this version:**

Elena Raevskikh, Usman Khalid, Jorge Pinto. The share of the culture sector in Abu Dhabi's GDP - Introductory report. [Research Report] Department of Culture and Tourism, Abu Dhabi (U.A.E.). 2022. halshs-03784711

**HAL Id: halshs-03784711**

**<https://shs.hal.science/halshs-03784711>**

Submitted on 23 Sep 2022

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

2021 Report

**CultureSTATS-AD**

**The Share of the Culture  
Sector in Abu Dhabi's GDP  
Introductory Report**

دائرة الثقافة والسياحة  
DEPARTMENT OF CULTURE  
AND TOURISM



2021 Report

**CultureSTATS-AD**

**The Share of the Culture  
Sector in Abu Dhabi's GDP  
Introductory Report**

---

# **The Share of the Culture Sector in Abu Dhabi's GDP: Introductory Report**

**2021 Report**

Produced as part of  
CultureSTATS-AD

# NOTES ON THE SCOPE OF DATA COLLECTION

Produced under CultureSTATS-AD, the Department of Culture and Tourism - Abu Dhabi. Nation Towers, B, Corniche Street, Abu Dhabi, PO Box 94000, United Arab Emirates. [abudhabiculture.aetcaabudhabi.ae](mailto:abudhabiculture.aetcaabudhabi.ae)  
[culturestatsad@dctabudhabi.ae](mailto:culturestatsad@dctabudhabi.ae)

© The Department of Culture and Tourism - Abu Dhabi, 2022.

ISBN 978-9948-04-622-6

This work is licensed under the Creative Commons Attribution-Non-commercial 4.0 International Licence.

**CultureSTATS-AD** is a knowledge platform that enables and produces cultural statistics on the emirate of Abu Dhabi. It combines existing data with new research, statistics and analysis to create a bigger picture of how culture drives the emirate forward. CultureSTATS-AD provides tools and information to build on the current understanding of the impact of culture and cultural assets on Abu Dhabi's social and economic growth. It adopts an interdisciplinary approach that requires research expertise and ongoing collaborations with social scientists, economists, urban planners, data scientists and geographers. This research enables an in-depth exploration of the Abu Dhabi culture sector and the emirate's heterogeneous cultural fabric. The study is aided by GIS mapping, and the results are documented in CultureSTATS-AD platforms for data collection, storing and interpretation, benefiting stakeholders and policymakers.

The **Department of Culture and Tourism - Abu Dhabi** (DCT Abu Dhabi) drives the sustainable growth of Abu Dhabi's culture and tourism sectors, fuels economic progress, and helps achieve Abu Dhabi's broader global ambitions. By working in partnership with organisations that define the emirate's position as a leading international destination, DCT Abu Dhabi strives to unite the ecosystem around a shared vision of the emirate's potential, coordinate effort and investment, deliver innovative solutions, and use the best tools, policies and systems to support the culture and tourism industries. DCT Abu Dhabi's vision is defined by the emirate's people, heritage and landscape. We work to enhance Abu Dhabi's status as a place of authenticity, innovation, and unparalleled experiences, represented by its living traditions of hospitality, pioneering initiatives and creative thought.

Some data or information may have been created or structured in files or formats that are not error-free, so DCT Abu Dhabi cannot guarantee that the data provided in this report are not affected by such issues. However, DCT Abu Dhabi accepts no liability for this report's information. The information is general only and not intended to address the specific circumstances of any individual or entity; not necessarily comprehensive, complete, accurate or up to date; not professional or legal advice. Please get in touch with CultureSTATS-AD for any errors or omissions.

Produced in Abu Dhabi, United Arab Emirates.

## ACKNOWLEDGEMENTS

This report was realised by the Department of Culture and Tourism - Abu Dhabi (DCT Abu Dhabi), and was prepared by Elena Raevskikh and Usman Khalid, with contributions by Jorge Pinto. Thanks to the Statistics Centre Abu Dhabi (SCAD), for providing valuable support to deliver this report.



# CONTENTS

<b>Introduction</b>	<b>12</b>
<b>Trends in GDP from cultural activities in Abu Dhabi</b>	<b>14</b>
<b>Impact of culture on employment</b>	<b>18</b>
<b>GDP from culture sub-sectors</b>	<b>20</b>
<b>Impact of culture on the economy</b>	<b>24</b>
<b>Comparison of the culture sector with the manufacturing sector</b>	<b>25</b>
<b>Conclusion</b>	<b>28</b>
<b>Limitations</b>	<b>28</b>
<b>Appendix A: Methodological boundaries and Abu Dhabi data availability</b>	<b>30</b>
<b>References</b>	<b>34</b>

# Introduction

This report is an initiative under CultureSTATS-AD, a knowledge platform that produces and enables an in-depth exploration of Abu Dhabi's culture sector and its heterogeneous cultural fabric. CultureSTATS-AD combines existing data with new research, statistics and analysis to generate a holistic perspective on the impact of culture and how it drives the emirate's progressive development. CultureSTATS-AD is a large-scale, non-routine and complex project with a high degree of inter-task dependency categorised under separate yet interlinking modules. Each module requires a series of activities and provides unique outcomes that maximise the use of the culture sector's potential.

The Cultural Activities Development module (CAD) analyses Abu Dhabi's cultural activities following a baseline study – Cultural Activities Baseline (CAB). In 2020, the Introductory Cultural Activities Baseline (CAB) report was delivered to create knowledge about: (1) the existing cultural activities in Abu Dhabi; (2) the development of each culture sub-sector; and (3) the existing and emerging cultural clusters. The CAD reports map the historical development of Abu Dhabi's culture sector through quantitative and qualitative methods. It provides the necessary information to further delve into the cultural sector and to identify and highlight development opportunities for the emirate. Whereas the analytical and technical studies give the required data and information to recognise the gaps, comprehend the needs and convey knowledgeable recommendations.

In 2021, the CultureSTATS-AD project focused on the economic dimensions of cultural activities, such as private expenditure on culture, the share of culture in Abu Dhabi's GDP, and imports and exports of cultural goods in Abu Dhabi.

This document contributes new findings on the share of the culture sector in Abu Dhabi's GDP. The Culture and Creative Industries (CCI) are key drivers of social and economic growth and diversification in Abu Dhabi, encompassing domains that include heritage, crafts and design, publishing, performing and visual arts, as well as film and television, multimedia, gaming and eSports. The culture sector is one of the fastest-growing economic sectors worldwide and generates annual revenues of USD 2.25 trillion globally, provides 30 million jobs and is predicted to make up some 10 per cent of global GDP. To capitalise on this growth, Abu Dhabi has invested significantly and strategically to create thriving CCI in the emirate.<sup>1</sup>

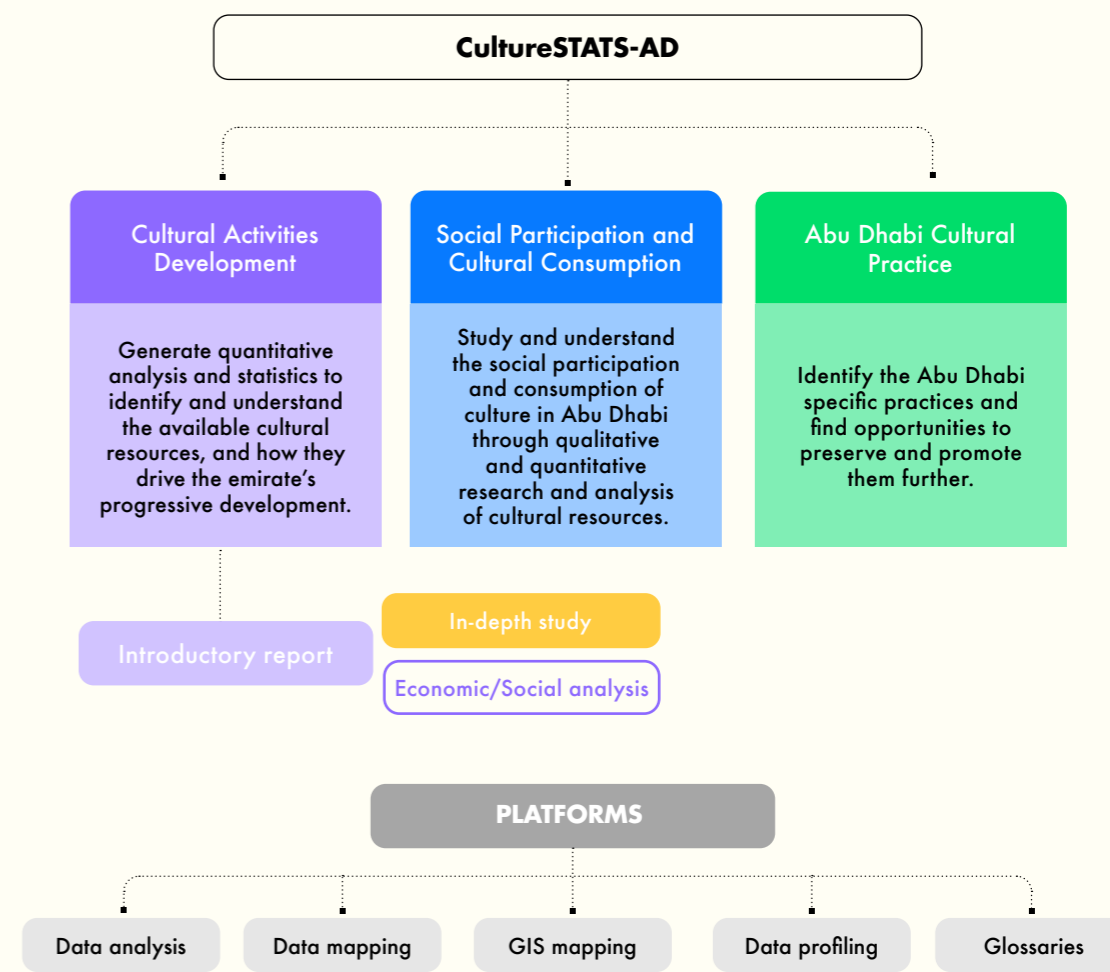
However, there is an absence of internationally comparable statistics that reveal the full economic and social impacts of this sector in the emirate of Abu Dhabi. This also means that the sectors remain largely undervalued in the policy debate. The aim of this document is to provide an overview of one of the measures used internationally to study the economic impact of a sector – i.e. the Gross Domestic Product (GDP) of the culture sector – and how much the sector contributes to the overall GDP of the emirate.

To accurately calculate the culture sector's share of GDP, what constitutes 'culture' needs to be decided. To this end, this report follows the Eurostat framework and divides the production activities related to culture into three broad categories:

- i. Arts, entertainment and recreation
- ii. Information and communication
- iii. Manufacturing

The information regarding the sub-sectors of the above three categories is provided in Table 1.

<sup>1</sup><https://tcaabudhabi.ae/en/who.we.are/culture.and.creative.industries.aspx>



**Figure 1** - CultureSTATS-AD project chart: CAD module




## TRENDS IN GDP FROM CULTURAL ACTIVITIES IN ABU DHABI

As a next step, based on the European Statistical System Network on Culture (ESSnet-Culture) and the data provided by SCAD (Annual Economic Survey data), the share of culture in GDP is then estimated. The detailed calculation method is outlined in the Appendix.

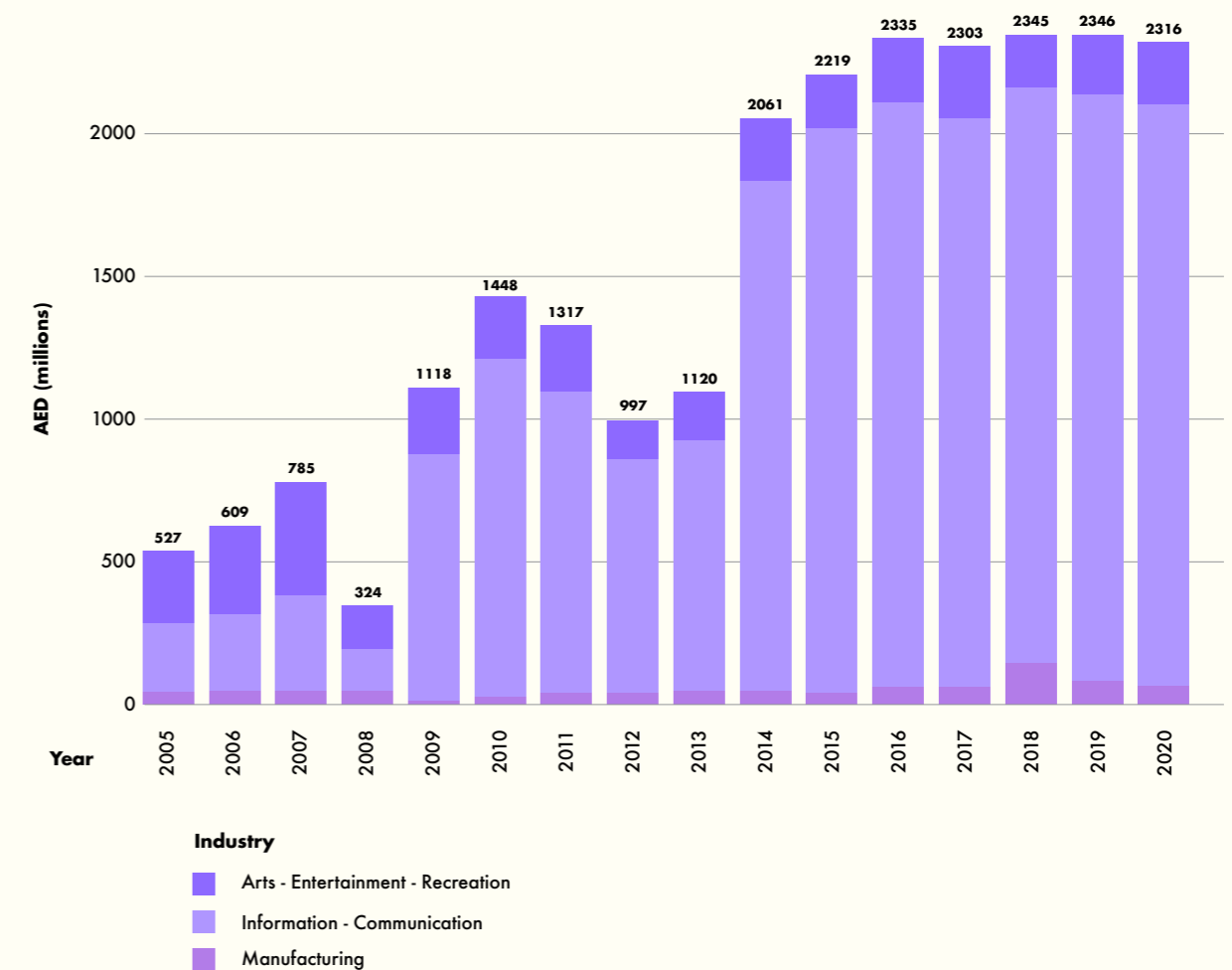
ISIC Rev.4 code	Division of Broad Categories by Sub-Sectors
<b>Arts, Entertainment and Recreation</b>	
90	Creative, arts and entertainment activities
91	Libraries, archives, museums and other cultural activities
<b>Information and Communication</b>	
58	Publishing activities
59	Motion picture, video and television programme production, sound recording and music publishing activities
60	Programming and broadcasting activities
63	Information service activities (news agencies)
<b>Manufacturing</b>	
18	Printing and reproduction of recorded media
32	Other manufacturing (jewellery and musical instruments)

**Table 1** - The scope of culture sub-sectors as per the European Statistical System Network on Culture (ESSnet-Culture)

GDP from cultural activities in Abu Dhabi amounted to more than AED 2,316 million in 2020, an increase of 339 per cent from the 2005 figure of approximately AED 527 million (Figure 1). Closer examination reveals that the Global Financial Crisis of 2007-08 had a severe adverse impact on the culture sector, with its GDP contracting by 58.7 per cent. However, recovery from the crisis was also swift because the culture sector GDP grew 244 per cent between 2008 and 2009.

Inspecting the composition of culture's GDP, it is apparent that the information and communication sector is the most dominant sector, generating the highest share of GDP. This is followed by manufacturing and then the arts, entertainment and recreation sector. In addition, from 2008 onwards, the information and communication sector has experienced significant growth, as seen in Figure 1.

A more detailed discussion of different sub-sectors is presented in section 3.

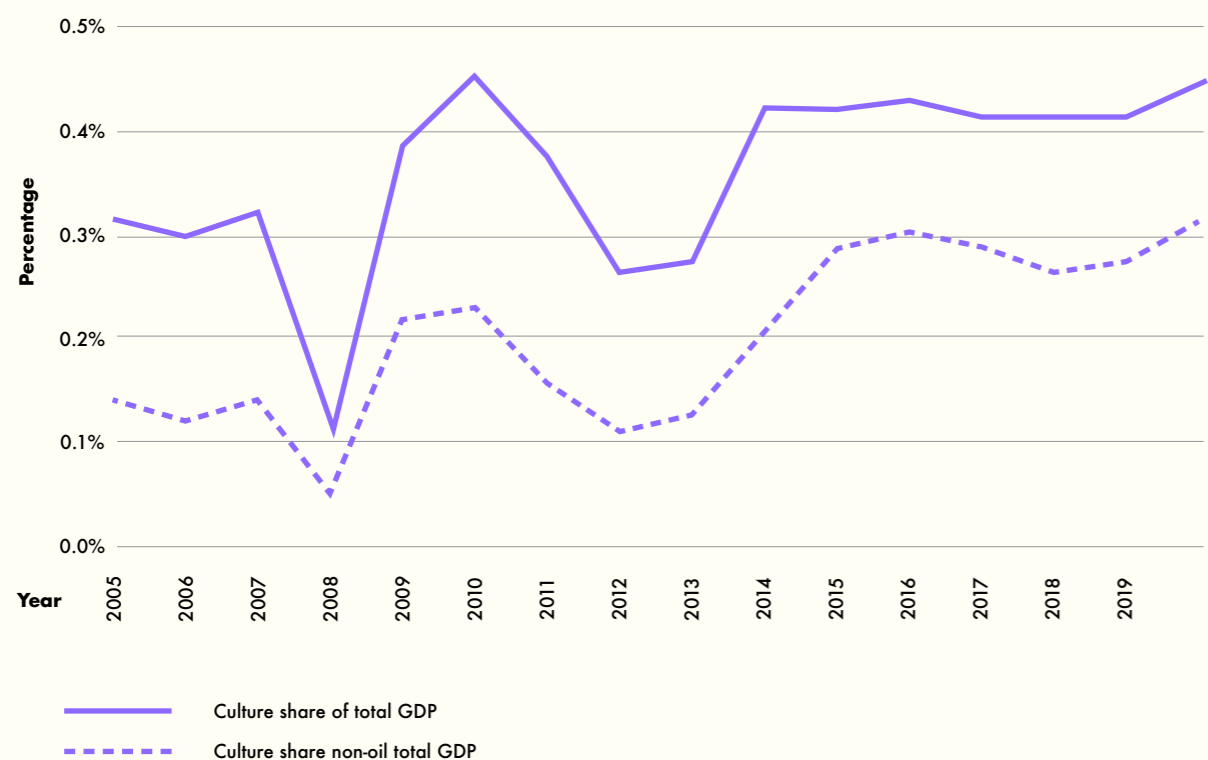


**Figure 1** - GDP from cultural activities in Abu Dhabi grew 339 per cent, from AED 527 million to AED 2,316 million in 2020

The contribution of the culture sector to the United Arab Emirates' economy tripled from 2005 to 2020, amounting to approximately 0.32 per cent of Abu Dhabi's total GDP in 2020 (Figure 2).

The average annual growth rate of GDP from cultural activities has been significant. If the growth rate of these activities is compared with

the total GDP growth rate in Abu Dhabi, it is apparent that the average annual growth rate of the culture sector is 19 per cent. That is more than three times higher than the average annual growth rate of the total GDP of Abu Dhabi, which stands at 6 per cent (Table 1). If this trend continues, culture sector GDP will more than double by 2025, reaching AED 5,526 million.



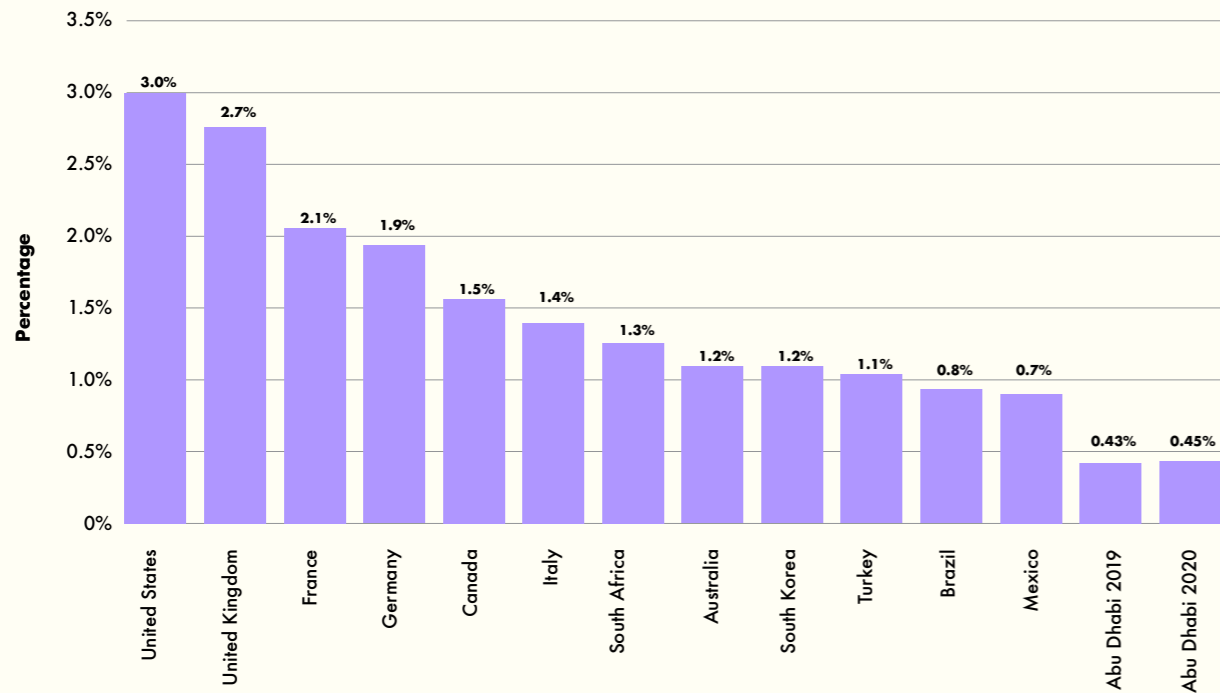
**Figure 2** - The culture sector's share of Abu Dhabi's total GDP tripled from 2005-20

Culture Sector GDP					
	Total Abu Dhabi GDP (Billion AED)	Total Abu Dhabi non-oil GDP (Billion AED)	Total Abu Dhabi GDP from the culture sector (Billion AED)	Culture sector GDP as a percentage of Abu Dhabi GDP	Culture sector GDP as a percentage of Abu Dhabi non-oil GDP
2005	383.4	168.9	0.53	0.14%	0.31%
2006	492.2	202.0	0.61	0.12%	0.30%
2007	545.4	239.3	0.79	0.14%	0.33%
2008	705.2	294.1	0.32	0.05%	0.11%
2009	535.3	297.9	1.12	0.21%	0.38%
2010	640.0	324.4	1.45	0.23%	0.45%
2011	846.4	364.2	1.32	0.16%	0.36%
2012	909.7	393.5	1.00	0.11%	0.25%
2013	931.8	423.9	1.12	0.12%	0.26%
2014	960.1	474.7	2.06	0.21%	0.43%
2015	778.5	505.4	2.22	0.29%	0.44%
2016	760.4	519.2	2.34	0.31%	0.45%
2017	813.6	536.6	2.30	0.28%	0.43%
2018	932.4	543.9	2.35	0.25%	0.43%
2019	880.2	545.0	2.35	0.27%	0.43%
2020	731.4	513.3	2.32	0.32%	0.45%
<b>Average (2005-2020)</b>	<b>740.4</b>	<b>396.6</b>	<b>1.51</b>	<b>0.20%</b>	<b>0.36%</b>
Percentage Change (2005-2020)	<b>91%</b>	<b>204%</b>	<b>339%</b>		
Percentage share of culture GDP <b>Average (2005-2020)</b>	<b>6%</b>	<b>8%</b>	<b>22%</b>		

**Table 2** - Progress of culture sector GDP

## IMPACT OF CULTURE ON EMPLOYMENT

Global estimates reveal that culture and creative sectors generate annual revenues of USD 2.25 trillion and account for 29.5 million jobs (more than the telecommunications or automotive sectors in many economies). How does Abu Dhabi fare compared to other countries in the world regarding culture share of GDP? To answer this question, the culture sector's share of the total non-oil GDP of Abu Dhabi is compared with that of some Organisation for Economic Cooperation and Development (OECD) countries, for which the data was readily available. The exercise revealed that the percentage of Abu Dhabi's GDP from the culture sector is much lower compared with other countries (Figure 3) and is comparable to the culture sector share of GDP in Brazil and Mexico. In countries like the USA and UK, the culture sector's contribution to GDP stands at 3 per cent and 2.7 per cent, respectively, which is approximately nine to 10 times higher than that of Abu Dhabi.



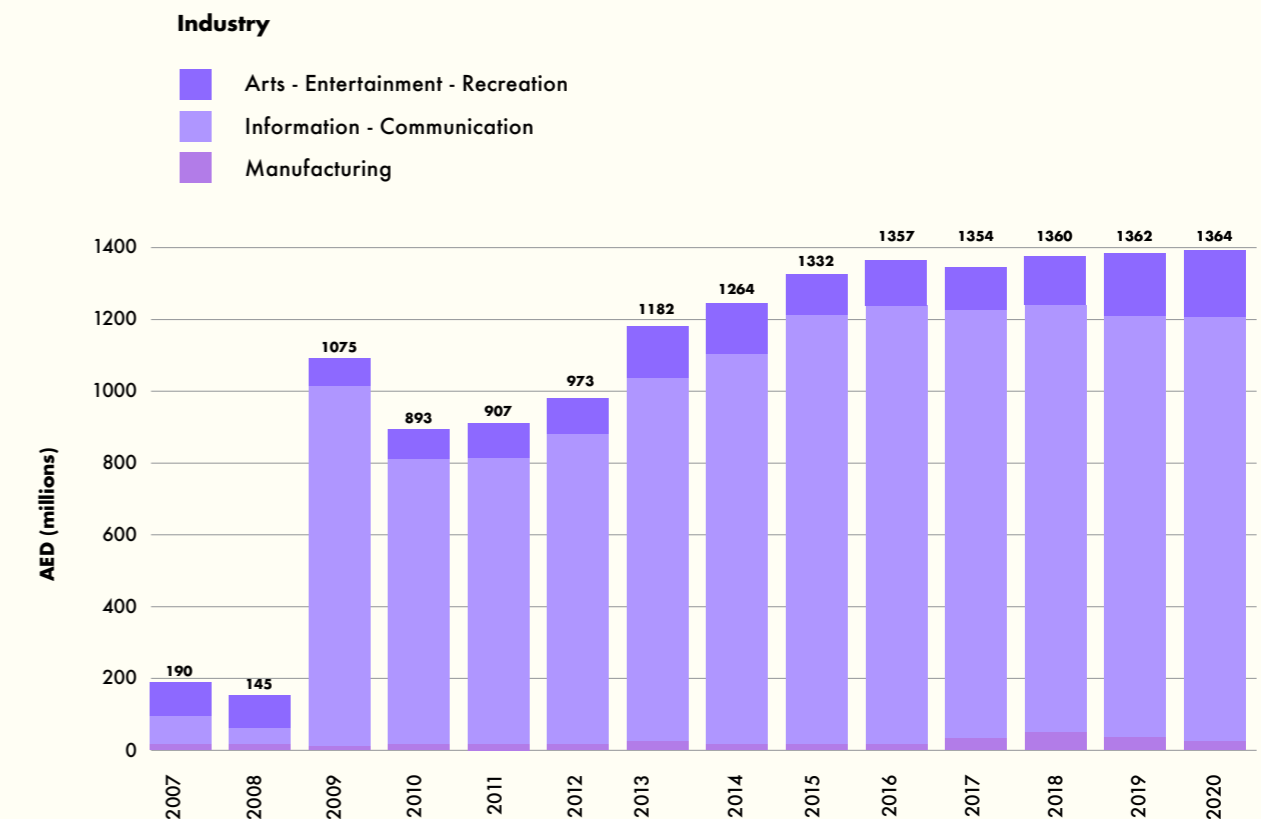
**Figure 3** - The percentage of Abu Dhabi's GDP from the culture sector compared with other countries

Note that these estimates are conservative as they do not account for the value added generated by sectors such as architecture, design, culture, education and volunteerism, which is common in culture and creative sectors due to a lack of data. Also, the establishment of the culture sector in the emirate's GDP is relatively recent compared with the other countries and is shaped by the

contemporary social, economic and political realities of the United Arab Emirates. As such, it would be more relevant to compare Abu Dhabi and other world-leading metropolises. However, international data of this granularity is difficult to access.

The growing importance of the culture sector to Abu Dhabi's economy can also be measured by observing employment trends in the sector. While there is a lack of data on total employment, estimates of compensation to employees in the culture sector can provide an overview of how employment trend has changed over time. Figure 4 shows the progress of compensation to employees in the culture sector from 2007 to 2020. The most striking aspect of the figure is that the change in compensation to employees from 2007 to 2020 was approximately 618 per cent, which translates to an annual growth of about 44 per cent. These figures signal that, over time, the culture sector has become increasingly involved in generating new jobs in Abu Dhabi and contributing to the expansion of the economy.

Note that the above numbers only account for the most visible economic impacts of the culture sector. They do not represent the only economic impact that the culture sector has on employment, since "Jobs are also indirectly generated by the culture sector through the multiplier effect. The multiplier effect refers to indirect jobs generated when the spending and wages of organisations circulate through the economy. These indirect jobs are located throughout the economy in the businesses that provide supplies or business services to the culture sector. They are also generated when culture sector employees spend their income on items such as groceries, retail shops, personal services, health care."<sup>2</sup> These indirect effects from employment are not included in the above estimations.



**Figure 4** - Compensation to employees in the culture sector grew 618 per cent from 2007 to 2020, an annual growth of about 44 per cent

<sup>2</sup><https://www150.statcan.gc.ca/n1/pub/81-595-m/81-595-m2004023-eng.pdf>

## GDP FROM CULTURE SUB-SECTORS

Table 3 breaks down the culture sub-sectors' contribution to GDP from 2005 to 2020. Data for these sub-sectors are obtained from the Annual Economic Surveys conducted by SCAD. As noted in Table 3, on average, the GDP generated from publishing activities, which includes establishments engaged in the publishing industry (newspaper, books and periodicals), was the biggest contributor to culture GDP, amounting to an average of approximately AED 593 million, or 38 per cent of culture GDP from 2005 to 2020.

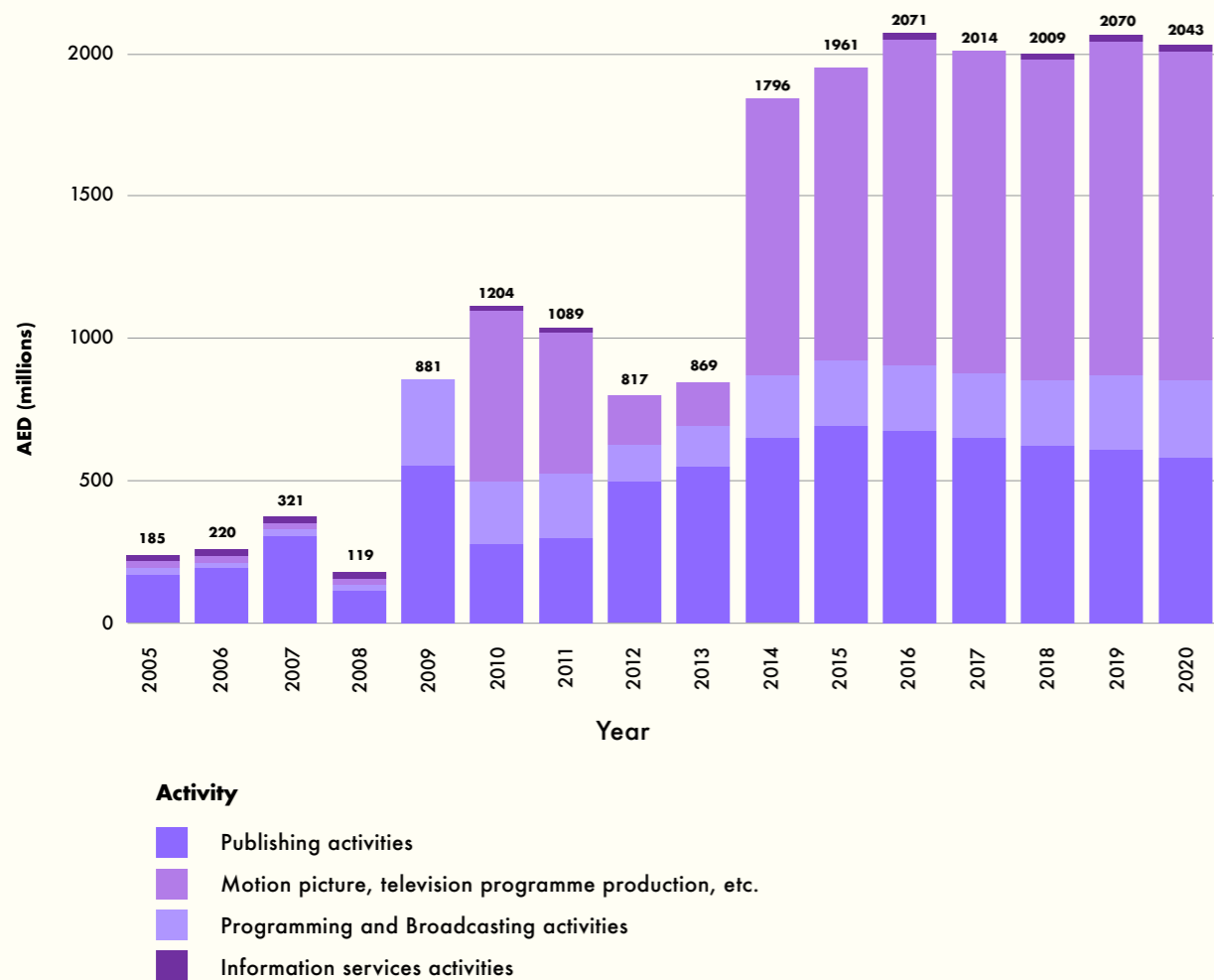
Other significant contributors to culture GDP were programming and broadcasting activities, accounting for 24.5 per cent of culture GDP, followed by activities characterised under printing and reproduction of recorded media, accounting for 21.9 per cent on average of culture GDP. It is not surprising to find that these three sub-sectors, which are composed of mainly profit-oriented establishments, dominate the culture sector, compared with other sub-sectors that are primarily composed of non-profit-oriented establishments (for example, Libraries, Archives and Museums).


Activity	2005	2006	2007	2008	2009	2010	2011	2012
Creative, arts and entertainment activities	38.8	40.9	46.4	37.1	19.2	29.8	31.5	36.4
Libraries, archives, museums and other cultural activities	0.0	0.0	0.0	0.0	0.0	1.1	4.9	7.0
Information services activities	16.4	20.3	27.3	16.7	0.0	9.7	6.9	3.4
Motion picture, video and television programme production, sound recording and music	22.6	23.8	33.9	14.6	323.6	189.0	217.7	102.0
Programming and broadcasting activities	0.0	0.0	0.0	0.0	0.0	695.2	542.1	175.3
Publishing activities	147.0	176.6	260.6	88.2	557.7	310.7	323.2	536.8
Other manufacturing	3.1	3.6	0.6	7.4	8.6	17.8	16.4	10.3
Printing and reproduction of recorded media	299.6	344.5	417.2	160.6	209.9	195.2	174.9	126.6
<b>Total</b>	<b>527.5</b>	<b>609.6</b>	<b>785.9</b>	<b>324.5</b>	<b>1,118.9</b>	<b>1,448.5</b>	<b>1,317.5</b>	<b>997.7</b>

2013	2014	2015	2016	2017	2018	2019	2020	Average (2005-2020)	Percentage share of culture GDP Averaged (2005-2020)
34.1	38.0	36.5	37.3	39.2	38.0	19.9	19.1	33.9	3.4%
14.4	10.8	11.5	17.4	18.2	113.0	46.8	38.3	17.7	0.8%
0.6	1.0	0.8	0.8	0.8	14.9	15.7	15.9	9.4	1.2%
117.5	143.1	149.5	167.7	173.6	182.5	185.9	188.1	139.7	9.3%
95.5	874.4	924.1	949.9	909.8	853.9	898.5	879.6	487.4	24.5%
656.0	778.2	887.4	953.1	930.5	958.3	970.9	960.2	593.5	38.0%
14.7	16.6	15.9	18.5	20.9	23.2	23.7	22.5	14.0	1.0%
187.9	199.5	193.6	191.2	210.6	161.8	185.5	193.2	215.7	21.9%
1,120.6	2,061.6	2,219.3	2,335.9	2,303.6	2,345.7	2,346.9	2,316.8	1,511.3	

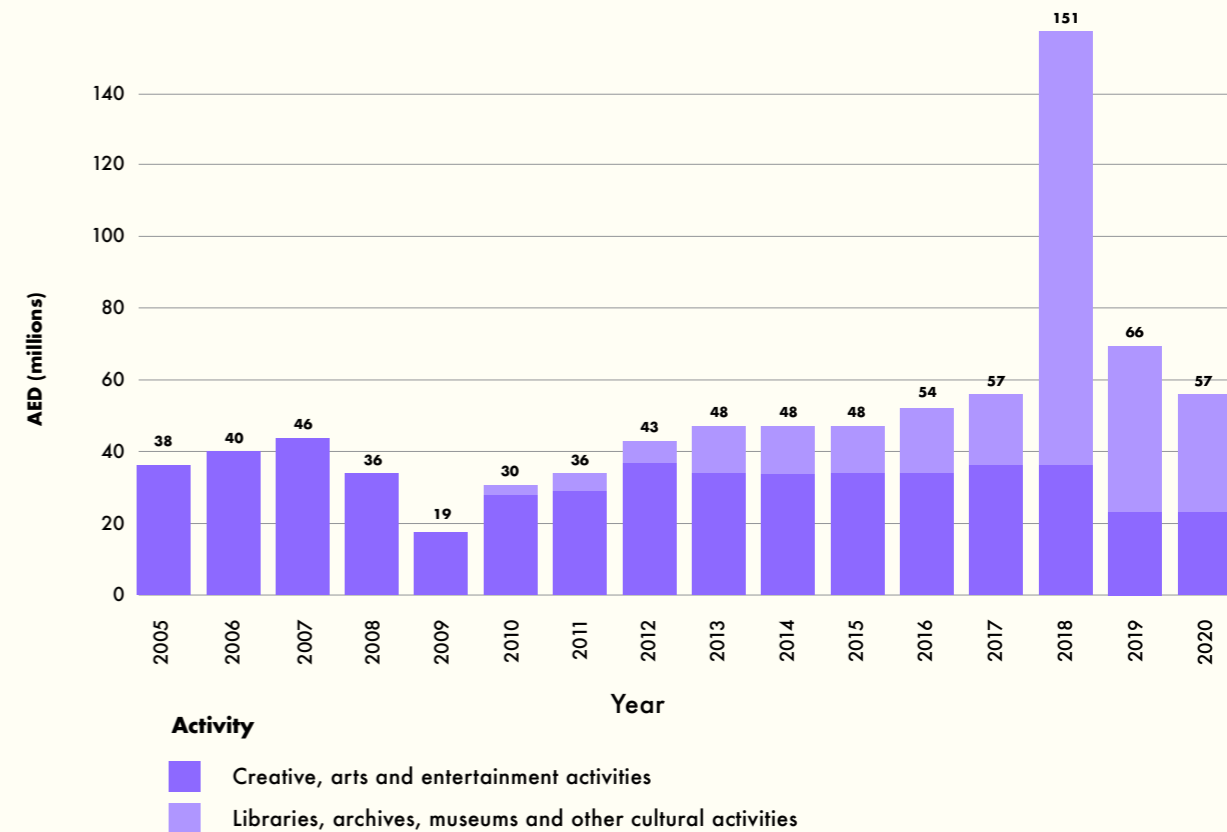
**Table 3 - Culture GDP by sub-sectors (millions AED)**

Comparing the GDP growth rates of the culture sub-sectors, it is evident that some have experienced phenomenal growth over the years, while others have remained stagnant or have contracted. For instance, the value added from publishing activities increased more than sixfold from AED 146.9 million in 2005 to AED 960 million in 2020. Similarly, the value added by programming and broadcasting activities increased from being non-existent in 2005 to AED 879.5 million in 2020 (Figure 5).



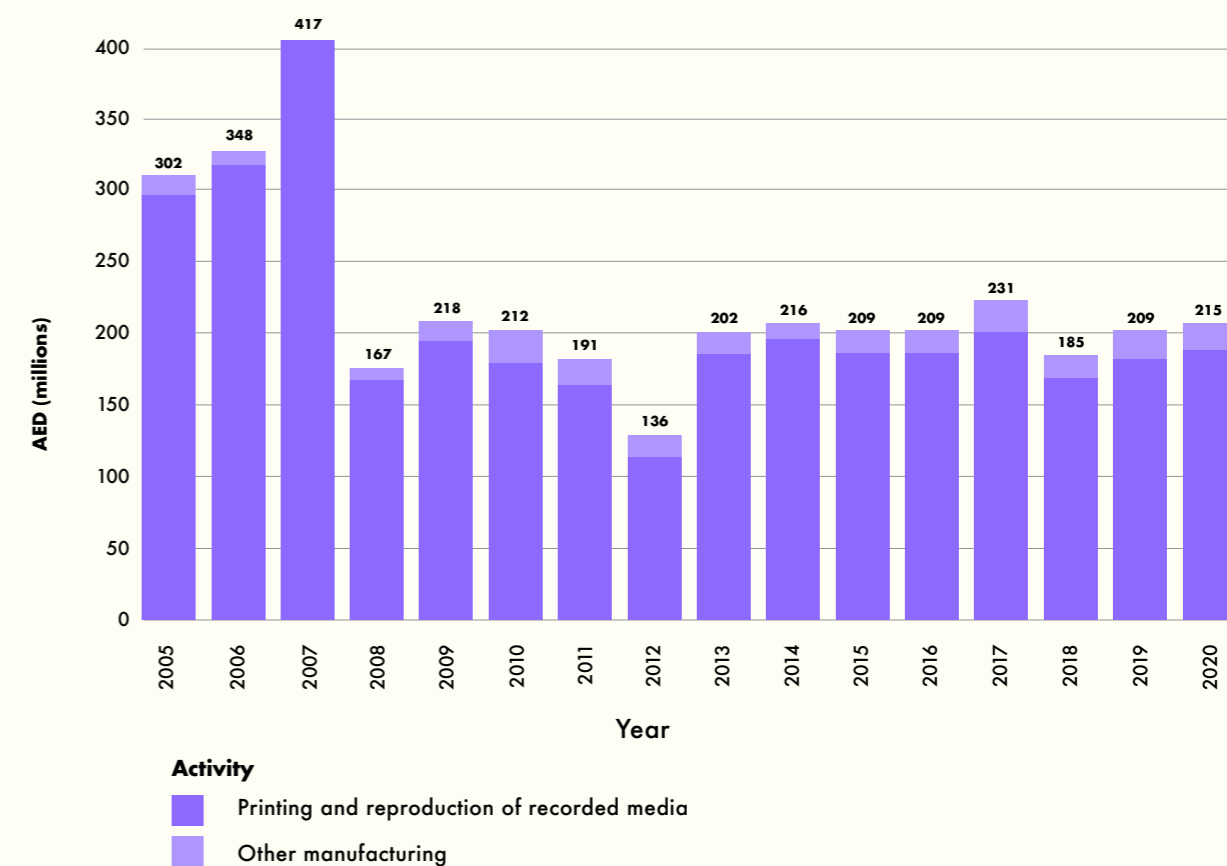
**Figure 5** - The value added of motion picture and television production grew on average 140 per cent per year, while annual growth for programming and broadcasting activities, and for publishing activities was 68 per cent and 42 per cent, respectively

Other sub-sectors that expanded during the 2005–20 period include motion picture, video and television programme production; the sound recording and music publishing sector; the libraries, archives and museums sector; and other manufacturing (Figures 5 and 6).



**Figure 6** - The value added of the libraries, archives and museums sector, which expanded by more than six times from 2017 to 2018

On the other hand, the creative, arts and entertainment sector saw a decline in GDP from AED 38.7 million in 2005 to AED 19 million in 2020. Similarly, the information services sector and activities falling under the purview of printing and reproduction of recorded media contracted during the 2005–20 period (Figure 7).

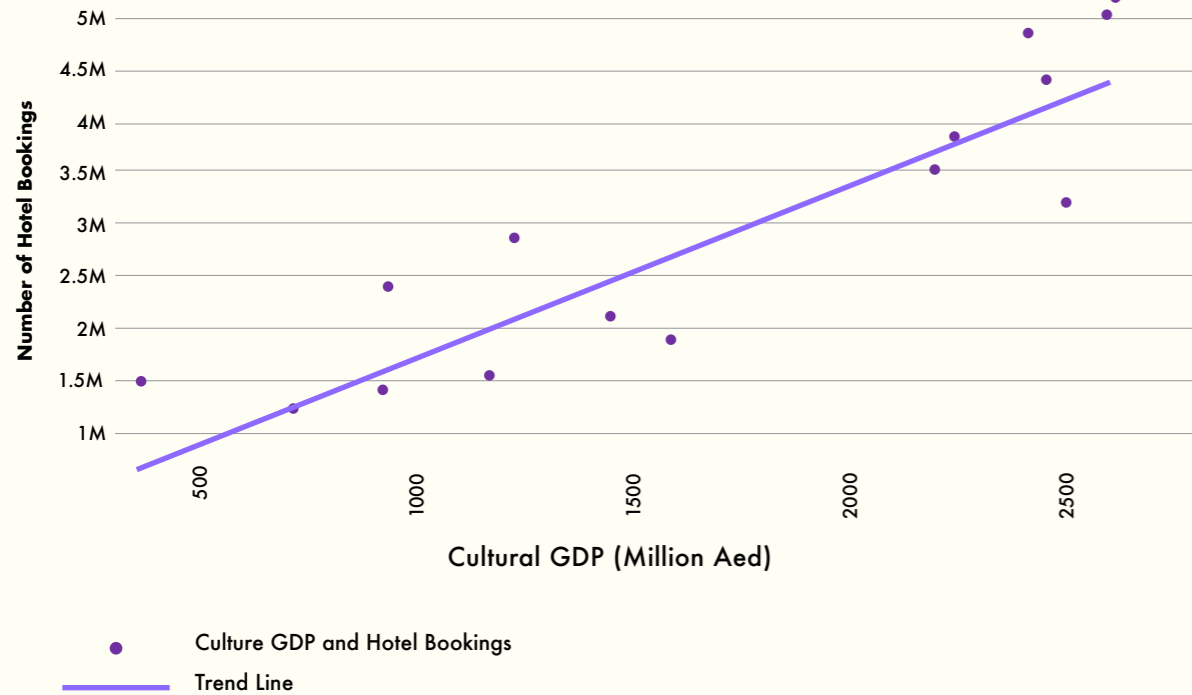


**Figure 7** - The value added of the printing and reproduction of recorded media sector declined from 2005 to 2020

## IMPACT OF CULTURE ON THE ECONOMY

As highlighted earlier, it is important to measure the economic impact of the culture sector. However, purely economic considerations can fail to reflect the social and aesthetic values fundamental to this sector. There are numerous studies that highlight the social benefits of the culture sector. One such indirect effect is its contribution to tourism. For example, the existence of arts and culture organisations can contribute to a region's attractiveness and can

even be influence a firm's decision as to where to locate. To better understand the link between the culture sector and tourism in the context of Abu Dhabi, the number of tourists visiting Abu Dhabi was plotted against the culture GDP. The result of this exercise is presented in Figure 8. The figure clearly shows a strong positive association between tourist arrivals in Abu Dhabi and the size of the culture sector GDP, as captured by the upwards sloping blue line.

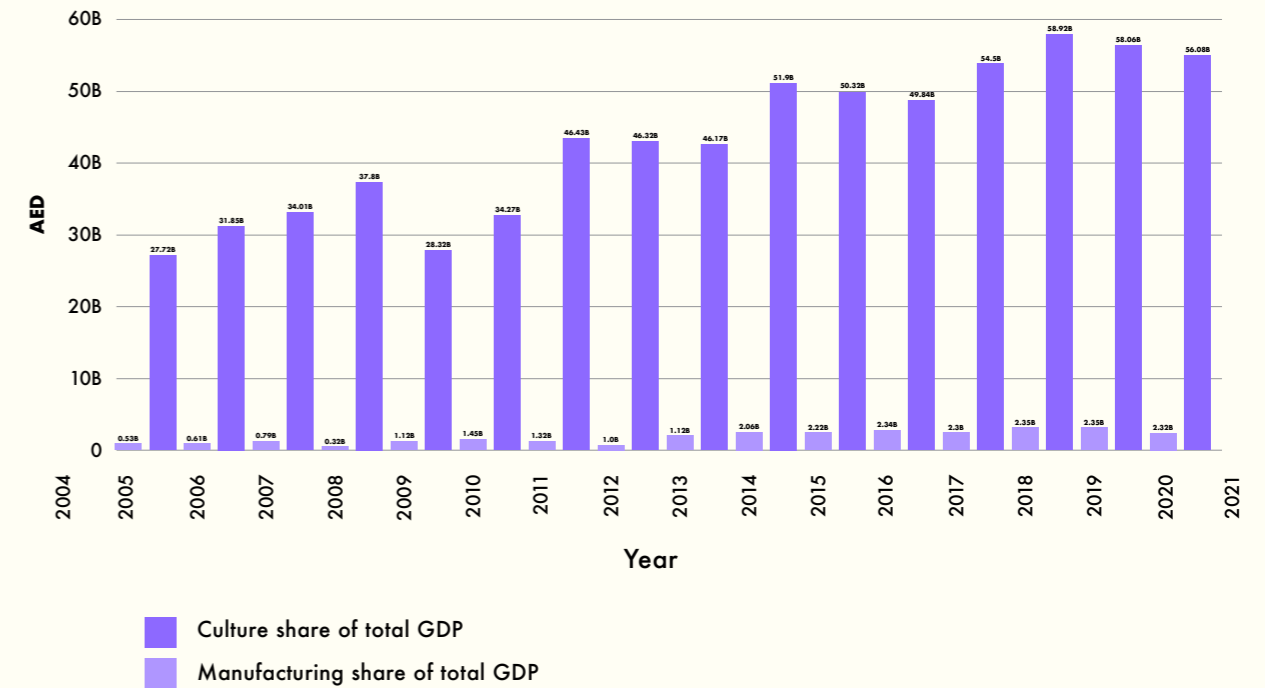


**Figure 8** - There is a strong positive correlation between tourist arrivals and culture sector GDP in Abu Dhabi

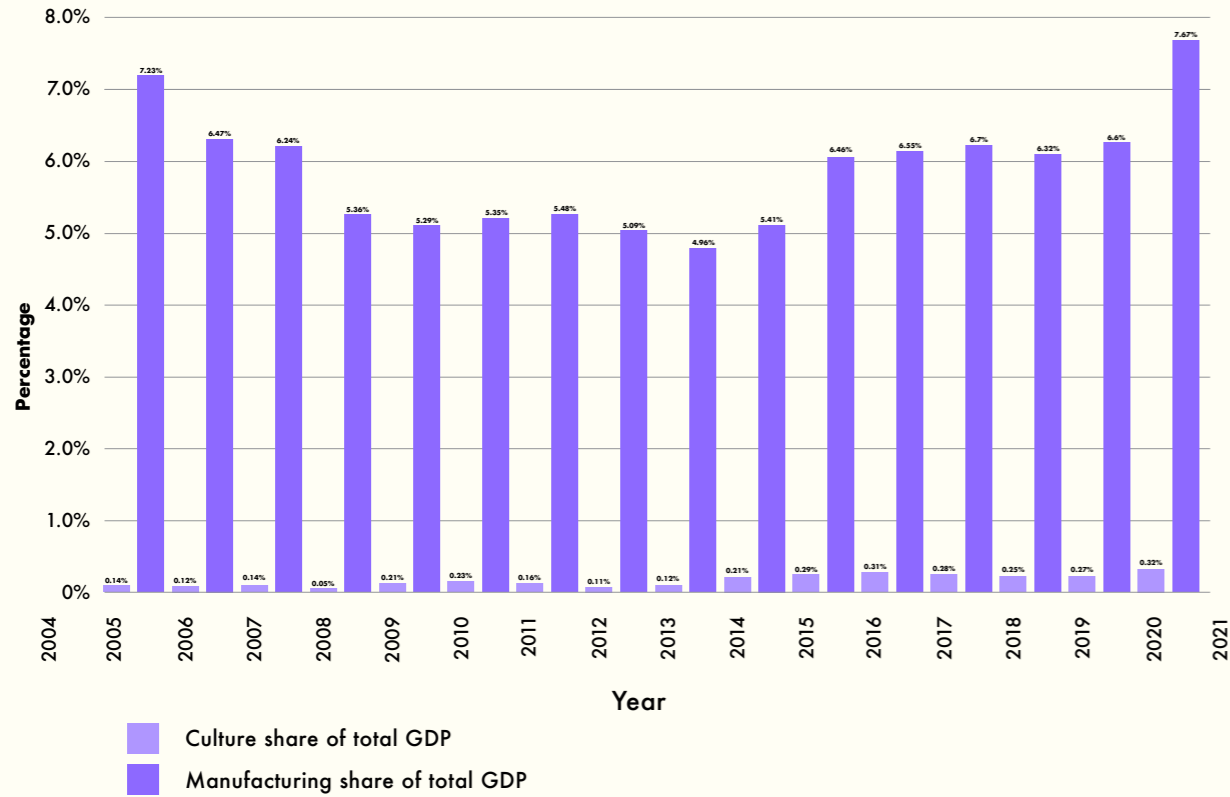
## COMPARISON OF THE CULTURE SECTOR WITH THE MANUFACTURING SECTOR

A brief comparison of culture sector and manufacturing sector activities revealed there was scope for the culture sector to grow and expand in the emirate of Abu Dhabi. As depicted by Figure 9, over the period analysed, expansion of the culture sector has outpaced expansion of the manufacturing sector. For example, the manufacturing sector's GDP was 52 times more than culture sector GDP in 2005,

but by 2020, this ratio had reduced to 24. This highlights that the culture sector expanded faster over the years compared with the manufacturing sector. A similar picture emerges when the share of each sector in the total GDP of Abu Dhabi is compared. The culture sector share of total GDP grew 128 per cent from 2005 to 2020, while the manufacturing sector share of total GDP grew only 6 per cent during the same period.



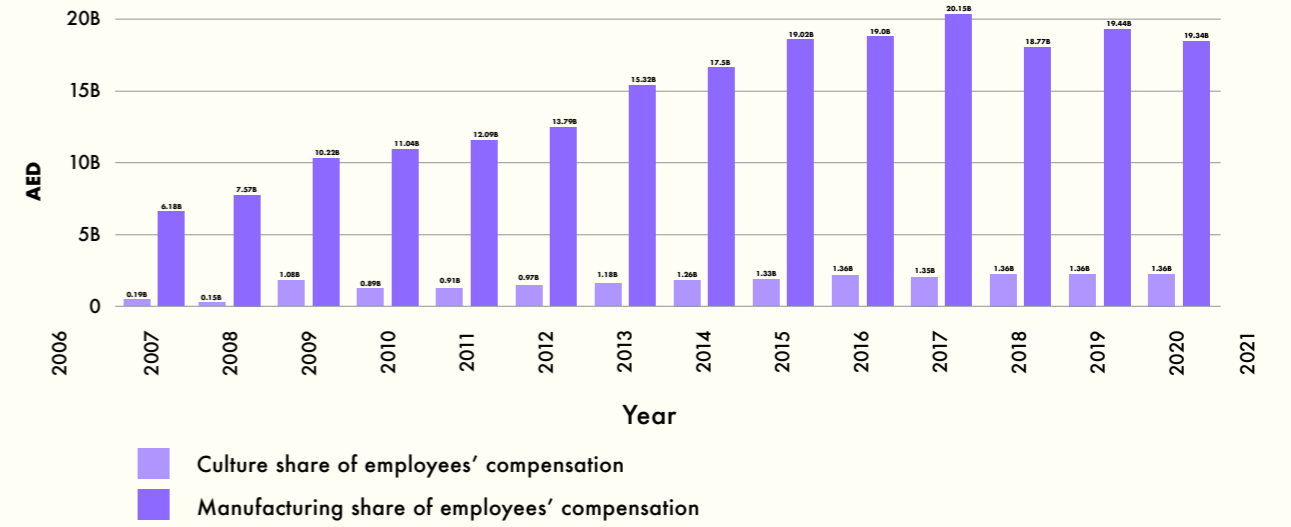
**Figure 9** - The culture sector has grown faster than the manufacturing sector. The manufacturing sector GDP was 52 times more than culture sector GDP in 2005, but in 2020, it was only 24 times higher



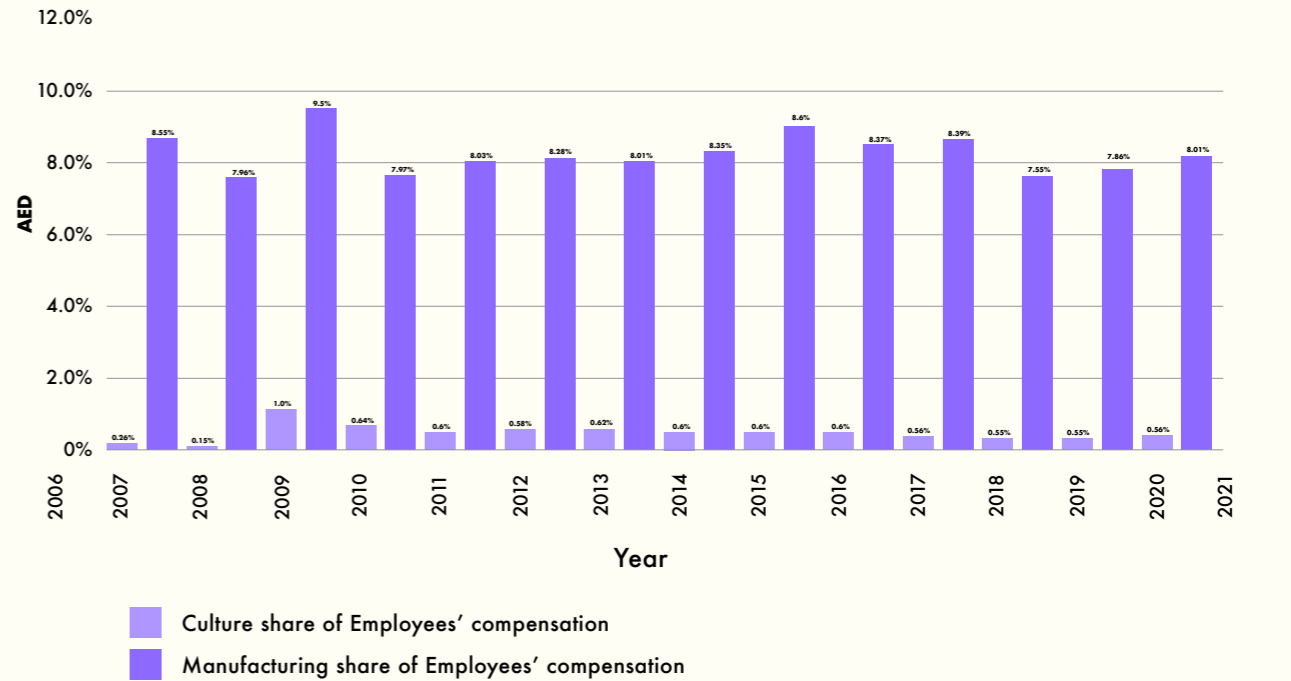
**Figure 10** - The manufacturing sector share of Abu Dhabi's total GDP remains stagnant, growing by 6 per cent from 2005 to 2020. In contrast, the culture sector share of Abu Dhabi's total GDP grew 128 per cent over the same period

The growing importance of the culture sector to Abu Dhabi's economy is also evident when the financial remuneration of employees is compared between the manufacturing and cultural sectors. Figures 11 and 12 indicate that remuneration in the culture sector grew at a much faster rate compared with the manufacturing sector. Surprisingly, from 2007 to 2020, the

remuneration share of manufacturing sector employees contracted by as much as 6 per cent. In contrast, the culture sector's share of employee financial remuneration in Abu Dhabi increased by 115 per cent over the same period. This highlights the increasing importance of the culture sector in supporting the economy and in generating employment.



**Figure 11** - Employee remuneration in the culture sector grew faster than in the manufacturing sector. The manufacturing sector employee wages were 32 times higher than culture sector employee wages in 2005, but by 2020, it was only 14 times more



**Figure 12** - The manufacturing sector share of total employee remuneration in Abu Dhabi decreased by 6 per cent from 2007 to 2020. In contrast, the culture sector share grew by 115 per cent

## CONCLUSIONS

This report is the first statistical overview of the culture sector share of Abu Dhabi’s GDP. The analysis is based on the Statistics Centre Abu Dhabi (SCAD) Annual Economic Survey data available for the 2005–20 period. The approach to the data analysis has been harmonised with a leading international benchmark in culture statistics (the Eurostat ESS-Net Culture framework).

The contribution of the culture sector to Abu Dhabi’s economy tripled from 2005 to 2020, amounting to approximately 0.32 per cent of Abu Dhabi’s GDP and 0.45 per cent of Abu Dhabi’s non-oil GDP in 2020. The change in remuneration to culture sector employees from 2007 to 2020 was approximately 618 per cent, which translates to an annual growth of about 44 per cent.

These figures only account for the most visible economic impacts of the culture sector; the indirect effects from employment are not included in the estimations. Comparison of culture sector dynamics with other sectors (such as manufacturing) clearly underscores the increasing importance of the culture sector in supporting the economy and in generating employment. Also, the analysis shows a strong positive association between tourist arrivals in Abu Dhabi and the size of the culture sector GDP.

The percentage of Abu Dhabi’s GDP from the culture sector is much lower compared with other countries and is comparable to that of the GDP in countries like Brazil and Mexico. In countries such as the USA and UK, the culture sector’s contribution to GDP stands at 3 per cent and 2.7 per cent, respectively, which is approximately five to six times higher than that of Abu Dhabi.

## LIMITATIONS

The present report is not exhaustive and is limited by: (1) the data granularity (the SCAD data is currently available only on the two-digit level of ISIC) and (2) the mainly quantitative characteristic of the data. The precision of the analysis could be enhanced in the future if a more granular culture-related data collection process is implemented. Further, qualitative research is recommended to contextualise the statistical findings.






## APPENDIX A: METHODOLOGICAL BOUNDARIES AND ABU DHABI DATA AVAILABILITY

To accurately calculate culture's share of GDP, the ESSnet-Culture framework was followed and the following production categories to be included in the calculation were selected (Table A1).

**Table 2: Cultural activities and equipment/supporting materials related to cultural activities at a four-digit level<sup>3</sup>**

ISIC Rev.4 code	Scope	Activity class
18.1	fully	Printing and service activities related to printing
18.2	fully	Reproduction of recorded media
32.12	fully	Manufacture of jewellery and related articles
32.2	fully	Manufacture of musical instruments
47.61	fully	Retail sale of books in specialised stores
47.62	fully	Retail sale of newspapers and stationery in specialised stores
47.63	fully	Retail sale of music and video recordings in specialised stores
58.11	fully	Book publishing
58.13	fully	Publishing of newspapers
58.14	fully	Publishing of journals and periodicals
58.21	fully	Publishing of computer games
59	fully	Motion picture, video and television programme production, sound recording and music publishing activities
60	fully	Programming and broadcasting activities
63.91	fully	News agency activities
73.1	partly	Advertising
74.1	fully	Specialised design activities
74.2	fully	Photographic activities
74.3	fully	Translation and interpretation activities
77.22	fully	Renting of video tapes and discs
85.52	fully	Cultural education
90	fully	Creative, arts and entertainment activities
91.01	fully	Library and archives activities
91.02	fully	Museum activities
91.03	fully	Operation of historical sites and buildings, and similar visitor attractions

**Table A1** - The ESSnet-Culture framework approach

A key challenge was that the data available from SCAD provided information on production activities at a very aggregated level – i.e. only at a two-digit level – while the ESSnet-Culture framework defines cultural activities using four-digit ISIC codes. Given this constraint, the available data was used to follow the subsequent approach of estimating the GDP of culture in Abu Dhabi.

If a production category contains partial information on culture, one can apply equal weights to each category and estimate its share of culture. For example, the manufacture of jewellery and related articles and the manufacture of musical instruments fall under 'other manufacturing' at level 2. Other manufacturing also includes four additional production activities, namely: manufacture of sports goods; manufacture of games and toys; manufacture of medical and dental instruments and supplies; other manufacturing not elsewhere classified. Therefore, in total, two out of six categories fall under culture production. Thus, an estimated gross value added of culture production in other manufacturing (at level 2) can be found by multiplying the gross value added of other manufacturing by 0.33 (2/6).<sup>4</sup>

<sup>3</sup>These categories are benchmarked from <https://ec.europa.eu/eurostat/documents/3859598/9433072/KS-GQ-18-011-EN-N.pdf/72981708-edb7-4007-a298-8b5d9d5a61b5>

<sup>4</sup>A similar method is suggested by [http://uis.unesco.org/sites/default/files/documents/uis\\_clt\\_ce\\_manual\\_2015\\_0.pdf](http://uis.unesco.org/sites/default/files/documents/uis_clt_ce_manual_2015_0.pdf)

---

## References

**Benito, B., Bastida, F. and Vicente, C. (2013).** 'Municipal elections and cultural expenditure.' *Journal of Cultural Economics*, 37(1), 3-32.

**Betzler, D., Loots, E., Prokúpek, M., Marques, L. and Grafenauer, P. (2021).** 'COVID-19 and the arts and cultural sectors: investigating countries' contextual factors and early policy measures.' *International Journal of Cultural Policy*, 27(6), 796-814.

**Getzner, M. (2021).** 'Socio-economic and spatial determinants of municipal cultural spending.' *Journal of Cultural Economics*, 1-24.

**Khalid, U., Okafor, L. E. and Burzynska, K. (2021a).** 'Does the size of the tourism sector influence the economic policy response to the COVID-19 pandemic?' *Current Issues in Tourism*, 1-20.

**Khalid, U., Okafor, L. E. and Burzynska, K. (2021b).** 'Do regional trade agreements enhance international tourism flows? Evidence from a cross-country analysis.' *Journal of Travel Research*.  
doi:10.1177/00472875211028321.

**Khalid, U., Okafor, L. E. and Burzynska, K. (2021c).** 'Does the quality of health security of a country moderate the link between bilateral tourism flows and the COVID-19 death rate?' *Journal of Policy Research in Tourism, Leisure and Events*, 1-19.  
doi:10.1080/19407963.2021.1998084.

**Khalid, U., Okafor, L. E. and Sanusi, O. I. (2021).** 'Exploring diverse sources of linguistic influence on international tourism flows.' *Journal of Travel Research*, doi:10.1177/0047287520988909. Khalid, U., Okafor, L. E. and Aziz, N. (2020). 'Armed conflict, military expenditure and international tourism.' *Tourism Economics*, 26(4), 555-577.

**Khalid, U., Okafor, L. E. and Shafiullah, M. (2019).** 'The effects of economic and financial crises on international tourist flows: a cross-country analysis.' *Journal of Travel Research*, 59(2), 315-334.  
doi:10.1177/0047287519834360.

**Okafor, L. E. and Khalid, U. (2021).** 'Regaining international tourism attractiveness after an armed conflict: the role of security spending.' *Current Issues in Tourism*, 24(3), 385-402.

**Okafor, L. E., Khalid, U., & Adeola, O. (2021).** 'The effect of regional trade agreements on international tourist flows in the Middle East and Africa.' In A. N. K. Michael Z. Ngoasong, Ogechi Adeola and Robert E. Hinson (Ed.), *New Frontiers in Hospitality and Tourism Management in Africa*, Springer Nature Switzerland AG, 245-262

**Okafor, L. E., Khalid, U. and Burzynska, K. (2021a).** 'The effect of migration on international tourism flows: the role of linguistic networks and common languages.' *Journal of Travel Research*.  
doi:10.1177/00472875211008250.

**Okafor, L. E., Khalid, U. and Burzynska, K. (2021b).** 'Does the level of a country's resilience moderate the link between the tourism industry and the economic policy response to the COVID-19 pandemic?' *Current Issues in Tourism*, 1-16.  
doi:10.1080/13683500.2021.1956441.

**Okafor, L. E., Tan, C. M. and Khalid, U. (2021).** 'Does panda diplomacy promote Chinese outbound tourism flows?' *Journal of Hospitality and Tourism Management*, 49, 54-64.

**Okafor, L. E., Khalid, U. and Then, T. (2018).** 'Common unofficial language, development and international tourism.' *Tourism Management*, 67, 127-138.  
doi:10.1016/j.tourman.2018.01.008.

**Raevskikh, E., Pinto, J. and Baeker, G. (2021).** 'Abu Dhabi introductory cultural activities report', Department of Culture and Tourism - Abu Dhabi, Abu Dhabi.

**Raevskikh, E., Haidar, R. and Khamis, N. (2021).** 'Cultural indicators in Abu Dhabi: theoretic framework and challenges for their building.' *Quality & Quantity*.  
doi:10.1007/s11135-020-01090-7.

**Shafiullah, M., Okafor, L. E. and Khalid, U. (2018).** 'Determinants of international tourism demand: evidence from Australian states and territories.' *Tourism Economics*, 25(2), 274-296.  
doi:10.1177/1354816618800642.

