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NELSON MANDELA
UNIVERSITY

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Economic Mapping Study Research Services to SACO

Research Report 4: Provincial Location and Clusters of Cultural and Creative Industries

Submitted to the Department of Arts and Culture

MEASURING & VALUING SOUTH AFRICA'S CULTURAL & CREATIVE ECONOMY



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Economic Mapping Study Research Services to SACO

Research Report 4 (of 5): Provincial Location and Clusters of Cultural and Creative Industries

05 December, 2017

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Submitted to the Department of Arts and Culture:



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ACRONYMS

AFS	:	Annual Financial Statistics
CCI	:	Cultural and Creative Industries
CPC	:	Central Product Classification
CSA	:	Cultural Satellite Accounts
CSAM	:	Cultural SAM
CFCS	:	Canadian Framework for Culture Statistics
DET	:	Department of Education and Training
DAC	:	Department of Arts and Culture
DTI	:	Department of Trade and Industry
EBOPS	:	Extended Balance of payment Services Classification
FCS	:	2009 UNESCO Framework for Cultural Statistics
GDP	:	Gross Domestic Product
GVA	:	Gross Value Added
HS	:	Harmonised Commodity Description and coding system
ICATUS	:	Intelligent Classification of Activities for Time Use Statistics
ICH	:	Intangible Cultural Heritage
ICT	:	Information and Communication Technology
ILO	:	International Labour Organisation
IO	:	Input Output Table
IP	:	Intellectual Property
ISCO	:	International Standard Classification of Occupations
ISIC	:	International Standard Industrial Classification
MEIA	:	Macroeconomic Impact Assessment Model
NMMU	:	Nelson Mandela Metropolitan University
OECD :		Organisation for Economic Co-operation and Development
OFO	:	Organising Framework for Occupation
RSA	:	Republic of South Africa
SAM	:	Social Accounting Matrix
SACO	:	South African Cultural Observatory
SASCO	:	South African Standard Classification of Occupations
SIC	:	Standard Industrial Classification
SNA	:	System of National Accounts
SU	:	Supply and Use Tables
StatsSA	:	Statistics South Africa
TSA	:	Tourism Satellite Accounts
UIS	:	UNESCO Institute for Statistics
UN	:	United Nations
UNCTAG	:	United Nations Conference on Trade and Development
UNESCO	:	United Nations Educational, Scientific & Cultural Organisation
QLFS	:	Quarterly Labour Force Survey



1 Introduction and Background

This Research Report 4 is the fourth in a series of five reports that have been produced in response to a specific request from the Department of Arts and Culture (DAC) and the South African Cultural Observatory (SACO) that the scope of work and deliverables for this research study be presented in five separate reports. The table in Section 1.4 below reflects the scope of work undertaken in this study and the names of the reports within which each research topic is addressed.

1.1 The National Research Agenda

The Department of Arts & Culture (DAC) has developed the National Research Agenda for research across the arts, culture and heritage (ACH) sectors and the cultural and creative industries (CCIs) of South Africa. The National Research Agenda is an attempt by the DAC to focus research efforts and resources towards achieving research outputs that would enhance the development of the CCIs in South Africa. It also serves to support the many policy imperatives of the Department, the South African Government and its stakeholders.

1.2 The South African Cultural Observatory

Initiated by the DAC through the Mzansi Golden Economy Strategy (2011), the South African Cultural Observatory (SACO) is a statistical and socio-economic research project, launched in 2014, which charts the socio-economic impact of the ACH sectors and the CCIs in South Africa. The SACO is headquartered in Nelson Mandela Bay where it is hosted by Nelson Mandela University on behalf of the DAC in partnership with Rhodes University and the University of Fort Hare.

1.3 The Economic Mapping Study

As indicated in the scope of work for this study, which has been commissioned by Nelson Mandela University (NMU), this study report is one of a number of research reports that are being commissioned by the SACO that are related to the National Research Agenda and the mapping of the South African CCIs, as defined in accordance with the 2009 UNESCO Framework for Cultural Statistics (CSF).

1.4 Scope of Work

The terms of reference for this study specifies that it will primarily be of a desk-top nature, though interviews with select stakeholders could add value. The engagement will also require interaction with the project team from Rhodes University which is currently completing the Employment and International Trade and Cultural Goods component of the study, to ensure that their findings are reflected where relevant to this study.

It is important to note that the purpose of this study is not only to state the macroeconomic findings, but also to provide interpretation and analysis of the data as it pertains to policy development and implementation in accordance with the National Development Plan (NDP) and relevant Department of Arts and Culture (DAC) policy initiatives.

The table below presents the scope of work for this study, along with the various technical reports that have been produced within which each element of the scope of work is addressed in detail.



Table 1.1: Scope of Work and Research Reports

Scope of Work	Research Report
1. Macroeconomic Impact Analysis: - The contribution of the CCIs towards GDP (economic output), as well as demonstrating the relative size of the CCIs sector in relation to other economic sectors across the UNESCO defined domains - An estimation of the forward and backward linkages (multipliers) in the CCIs sector itself, as well as linkages with other economic sectors	Research Report 2: Compiling a Cultural and Creative Industries Satellite Account Embedded into a Social Accounting Matrix for South Africa Research Report 3: The Macroeconomic Impact Assessment Modelling System and Macroeconomic Impact Analysis of the Cultural and Creative Industries Sector
2. Provincial, Location and Cluster Analysis: - Provincial distribution of the CCIs (as per the macro-economic analysis stated above – this section should include maps detailing provincial distribution patterns) - Identification of possible clusters within the CCIs (this should include maps pertaining to the relevant findings) - Transformation and ownership levels from a provincial perspective, and - Employment from a provincial perspective	Research Report 4: Provincial Location and Clusters of the Cultural and Creative Industries Sector in South Africa
3. Shifting Transformation and Ownership Analysis: Determine the transformation and ownership patterns within the South African CCIs across the UNESCO domains, noting that transformation and ownership levels must also be presented in the above-mentions section dealing with provincial distribution and clustering	Research Report 5: Transformation, Ownership and Employment in the Cultural and Creative Industries

Within this context, the study must make use of the following data sources:

- UNESCO Statistical Framework for the Cultural and Creative Sector
- National Level audited trade and economic data from StatsSA or other relevant national entities
- Completed Mapping Reports including the Cultural and Creative Industry Employment Report and the International Trade and Cultural Goods Report, which will be produced and supplied to the successful bidder by SACO);
- Plus94 Mapping Report data (where applicable)
- Data from industry bodies; and
- Any other reliable national level data sources

1.5 Report Structure



2 Methodology

There is no direct distribution of the CCI activities on a provincial basis. The research team calculated the CCI activities production on a provincial basis by making use of the following algorithm:

- The first step was to calculate the magnitude of the total production value of the Standard Industrial Classification (SIC) sectors which are related to the CCI activities per province. This was done by making use of a weighted production value of the SIC sectors related to the CCI activities on a provincial basis. The information for this calculation is obtained from the Annual Financial Statistics Survey (AFS) published by StatsSA (2017)¹ which present data on a provincial basis. The weights used in this exercise are similar to those used to calculate the production of the CCI activities in the cultural satellite account from the SIC sectors;
- A distribution structure of CCI activities for a province was calculated by making use of the Mapping Study by the Department of Arts and Culture (September 2014). The total production value of the SIC sectors related to the CCI activities (first step above) for a province was multiplied with the distribution structure to obtain a representative production per CCI activities for each province. A percentual structure of a CCI activity on a provincial basis were calculated by dividing the value of each activity by the total activities on a provincial basis; and
- The final step to obtain production values per CCI activities per province was to multiply the percentual structure of CCI activities per province by the total of each CCI activity as presented by the CCI activity satellite account (Creative and Cultural Industries Satellite Account, Report number 2).

¹ Annual Financial Statistics (AFS). StatsSA Report number P0021 (2017).



3 Provincial Location of the Cultural and Creative Industries

There are differences across RSA and Provincial economies when analysing the Culture and Creative Industries (CCI) by specific economic variables.

The provincial location of the CCI is discussed by their contribution to Gross Domestic Product (GDP), employment and capital where:

- GDP is the main indicator for economic activity;
- Employment is a good indicator for income distribution; and
- Capital is an indicator for the utilisation of scarce resources.

The objective of optimising the economy is therefore to foster economic growth and create employment through effective and efficient utilisation of scarce capital, in this instance through Cultural and Creative Industries.

3.1 Contribution of Cultural and Creative Industries towards GDP

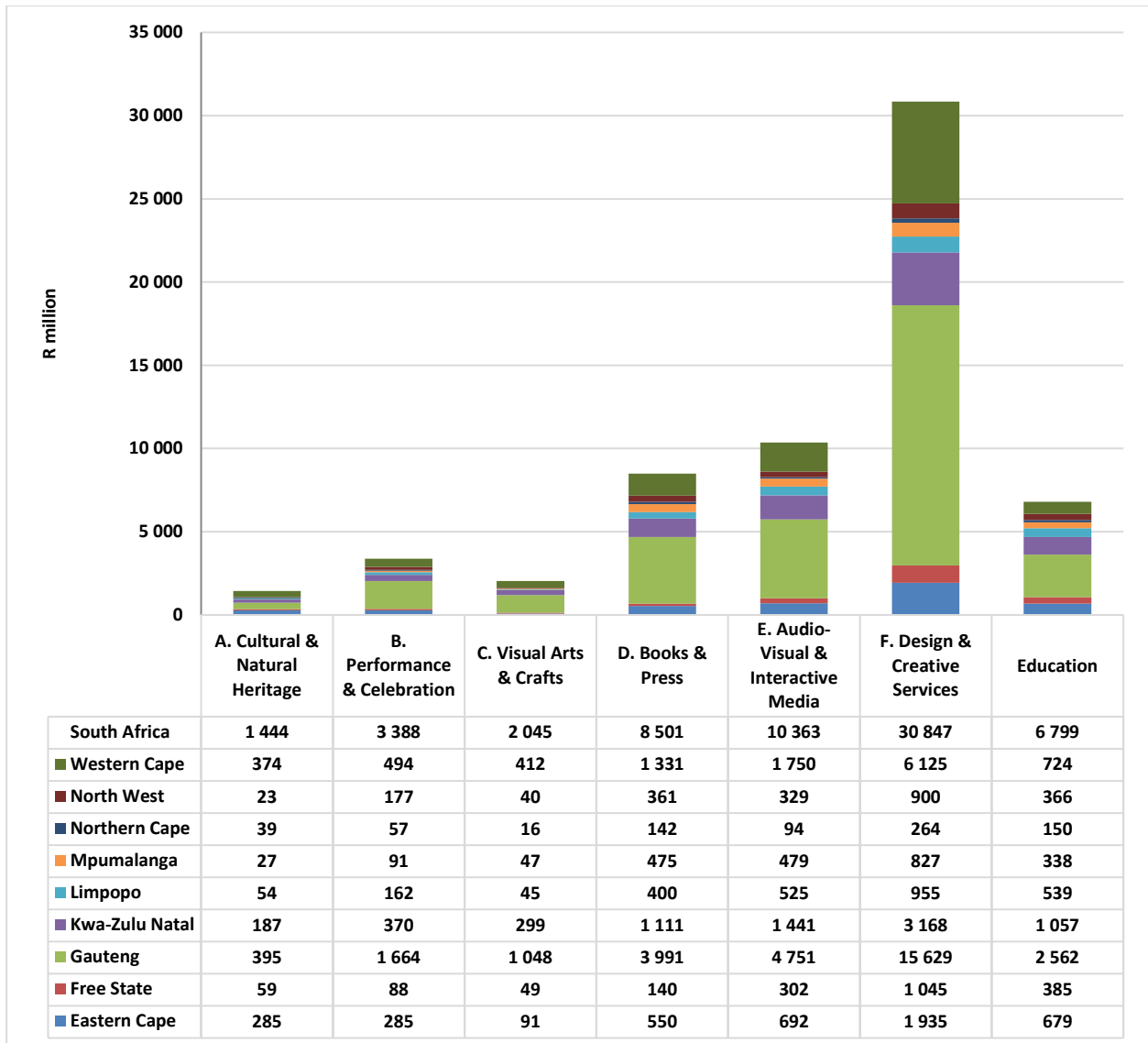
The Contribution of CCI towards GDP was analysed from two angles. Firstly, the presentation of CCI domains according to province and secondly, the presentation of the contribution of GDP per domain by province.

3.1.1 GDP Presentation of CCI domains according to provinces

The contribution of CCI towards GDP in 2016 is clearly defined through a set of figures below. Figure 3.1 depicts the provincial composition of domains in terms of GDP.



Figure 3.1: Presentation of the Provincial Composition of Domains in terms of GDP (R million, 2016 prices)



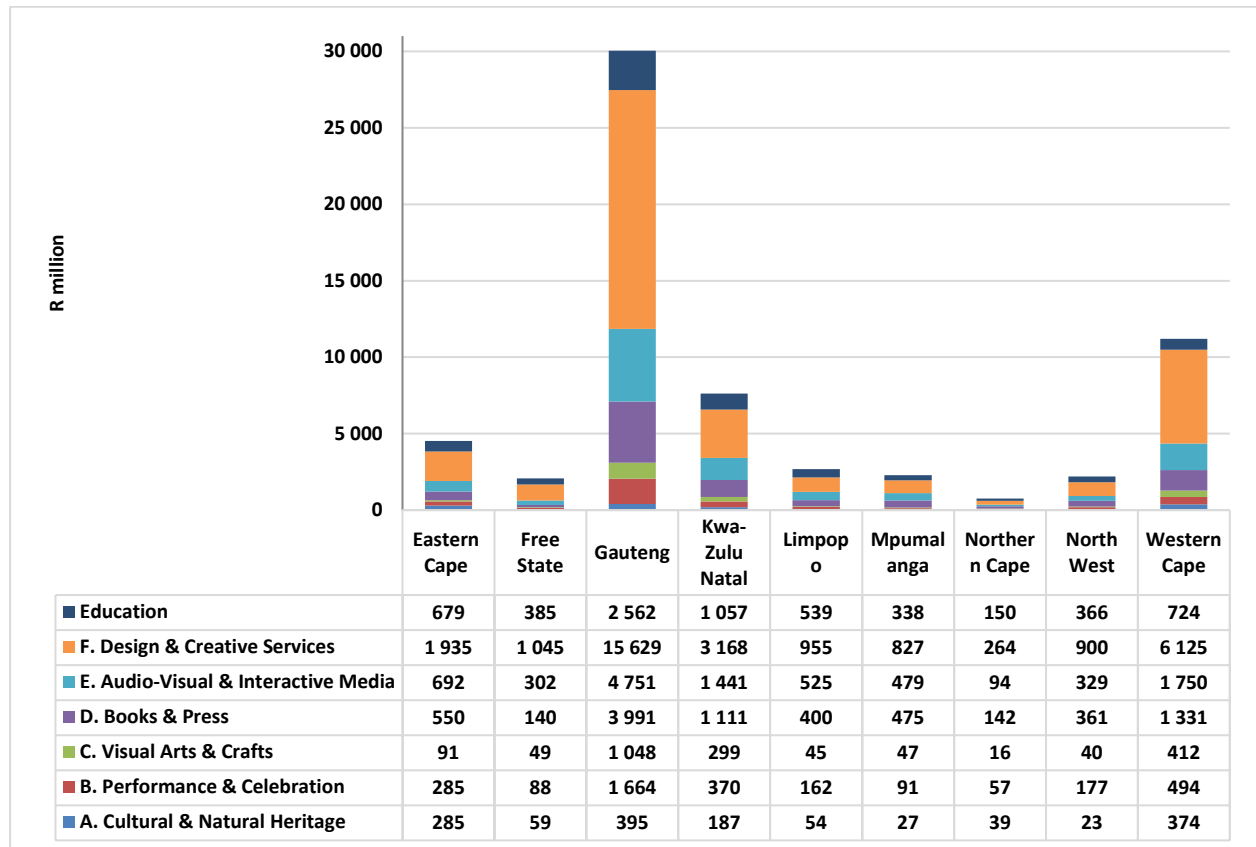
Source: Conningarth own calculation

Important aspects pertaining to Figure 3.1 worth highlighting with regards to the respective domains is that creative and cultural industries is concentrated in the three provinces namely Gauteng, Western Cape and Kwa-Zulu Natal in terms of Gross Domestic Product (GDP).

3.1.2 Contribution of CCI domains to GDP by province

The contribution of domains towards GDP by province is illustrated by Figure 3.2.

Figure 3.2: Domains contribution towards GDP by province (R million, 2016 prices)



Source: Conningarth own calculation

The CCI contribution towards GDP per domain when viewed from the perspective of provinces elucidates the following:

The design and Creative Services is a major contributor to GDP across most provinces. This trend is also consistent with regard to the RSA situation. Audio – Visual is also a significant contributor to GDP in most of the provinces.

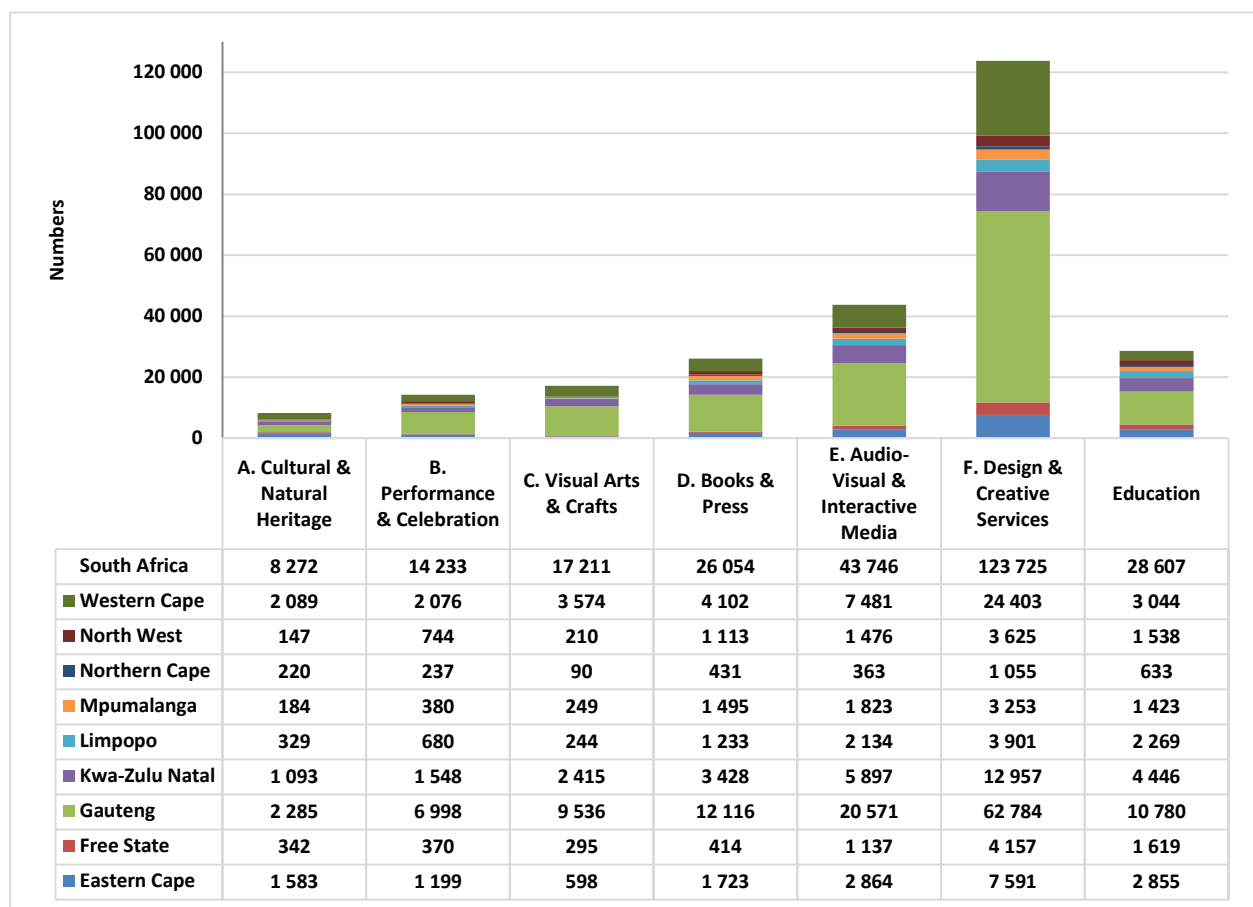
3.2 Contribution of Cultural and Creative Industries towards Employment

The contribution of CCI in terms of Employment are presented from two points of views. Firstly, the presentation of CCI domains according to province and secondly, the presentation of the contribution of Employment per domain by province.

3.2.1 2016 Exposition of employment per province and domains

The contribution of CCI towards Employment in 2016 is depicted by a series of clearly defined pie charts in Figure 3.3.

Figure 3.3: Presentation of the Provincial Composition of Domains in terms of Employment (numbers)



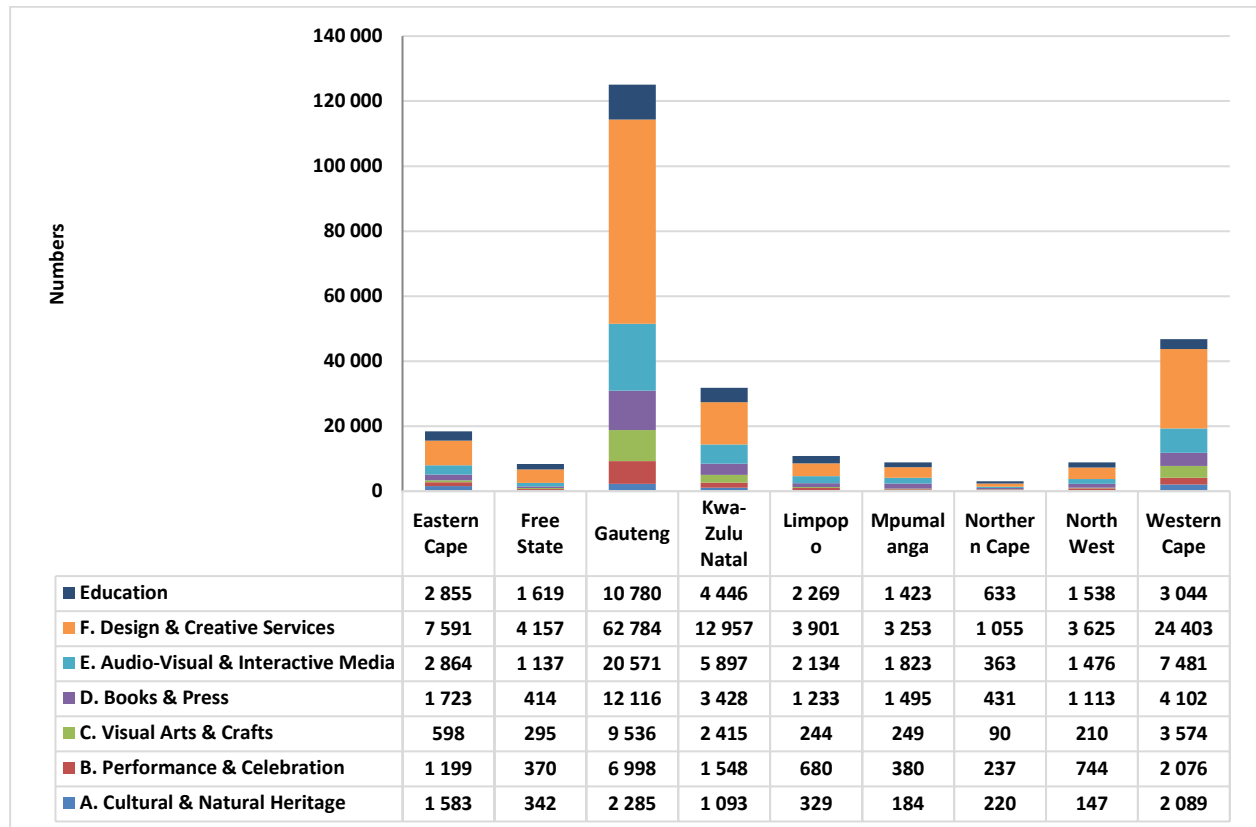
Source: Conningarth own calculation

Important aspects pertaining to Figure 3.3 which are worth highlighting with regards to the main domains is that Creative and Cultural Industries have predominance in Gauteng, Western Cape and Kwa-Zulu Natal in terms of employment.

3.2.2 Employment presentation of CCI domains according to provinces

In this section, Employment per domains by province is illustrated by Figure 3.4.

Figure 3.4: Employment presentation by province (numbers)



Source: Conningarth own calculation

The employment performance of CCI per domain when viewed from the perspective of provinces elucidates the following:

The design and Creative Services is a major source of employment across most provinces. This phenomena is also consistent with regard to the RSA situation. Audio – Visual is also a major source of employment in most of the provinces.

3.2.3 Historic Provincial employment per domains

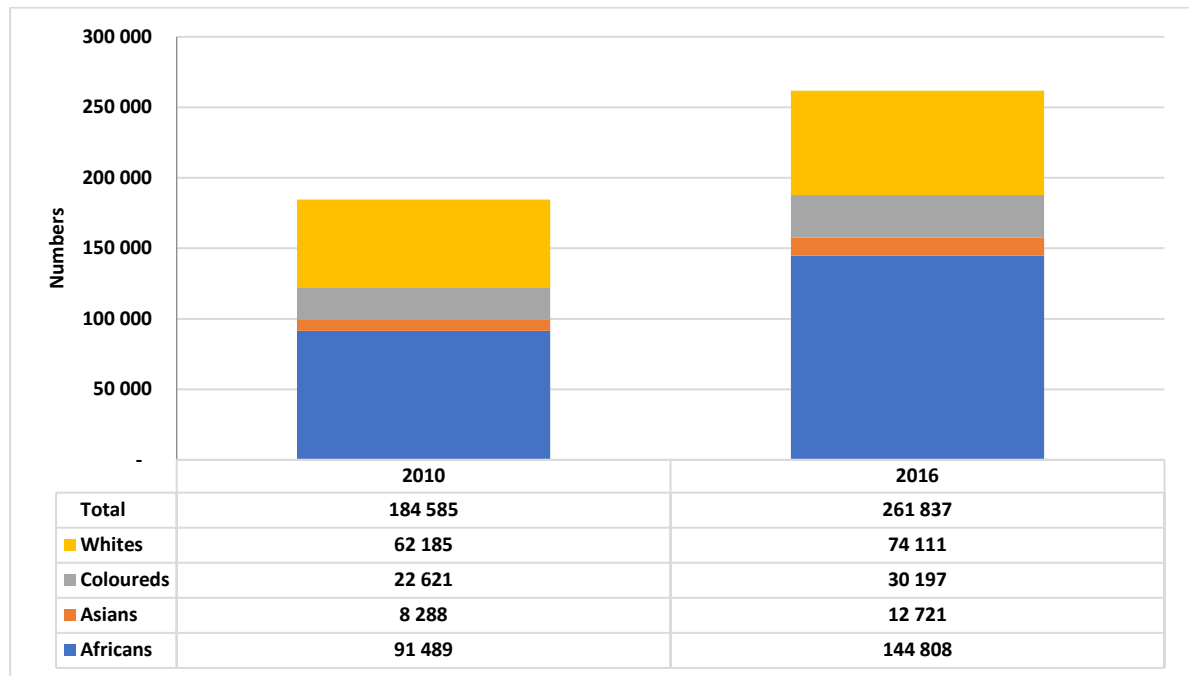
In this section, the economic growth and development of employment per domain is depicted for the provincial economy over the period 2010 to 2016. The growth and development are depicted in self-explanatory graphs and tables (See Figure 3.5 and related table).

Figure 3.5 illustrates the shifts in development and growth of the various domains for 2010 and 2016 respectively.



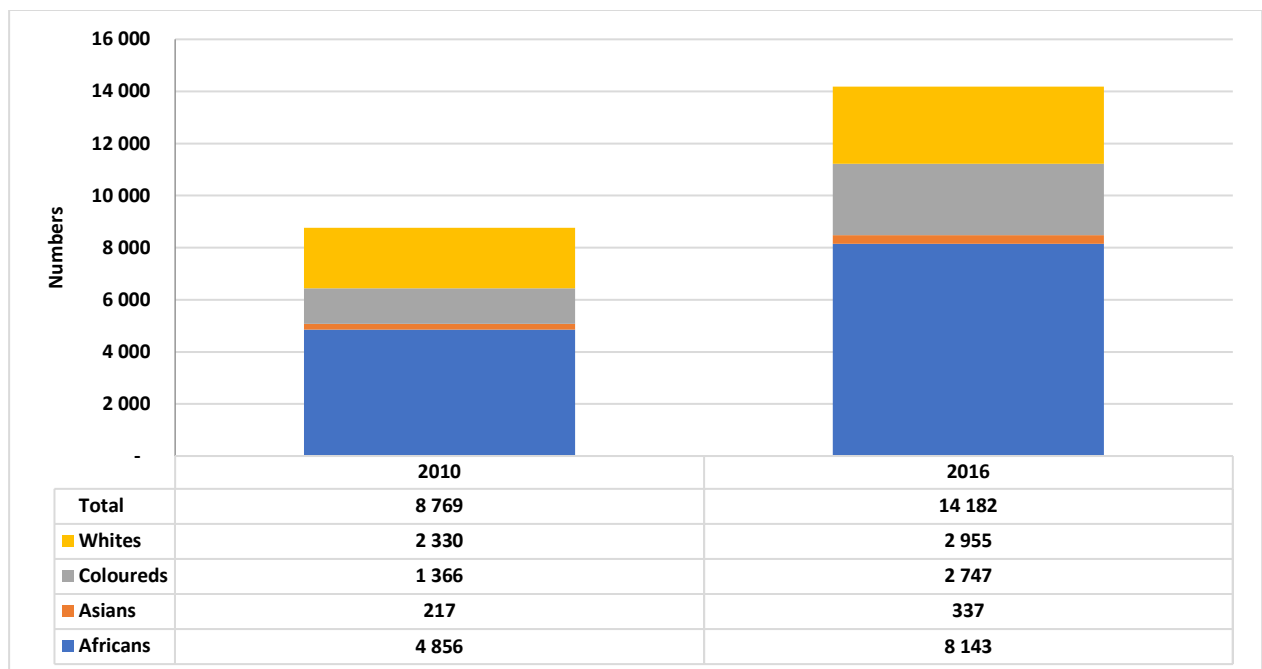
Figure 3.5: Historic Growth and Development of the CCI employment per province and domains (numbers).

National



Source: Conningarth own calculation

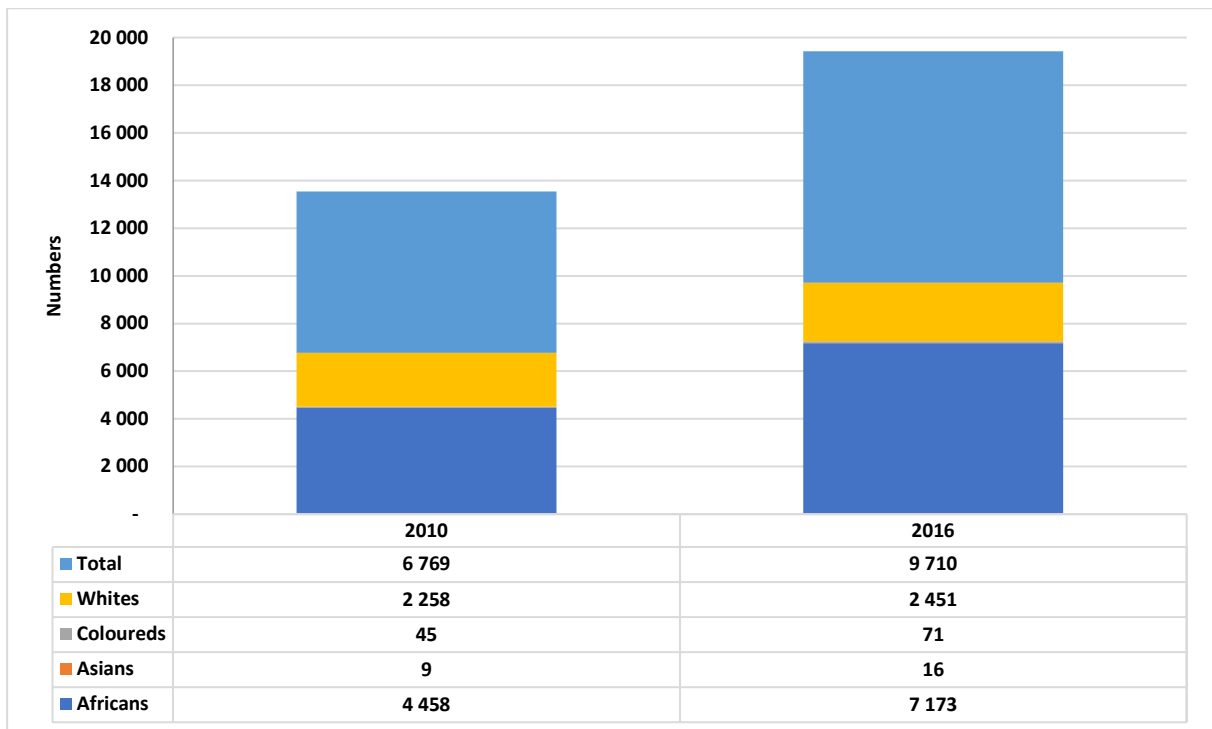
Eastern Cape



Source: Conningarth own calculation

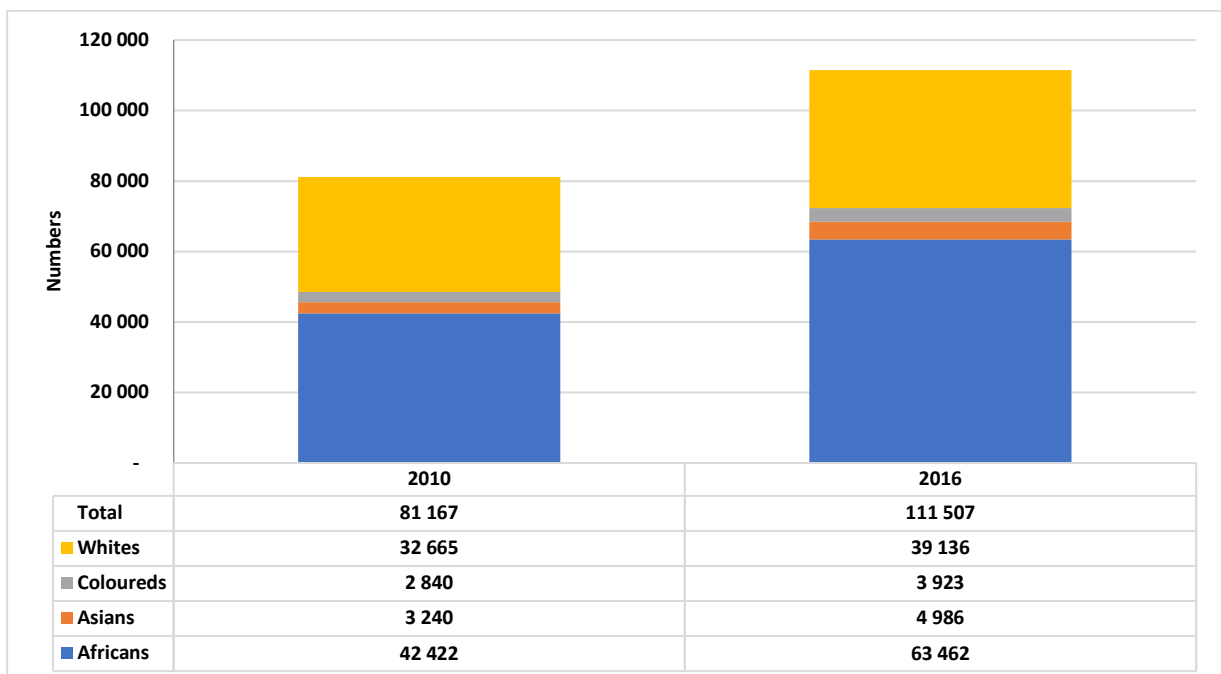


Free State



Source: Conningarth own calculation

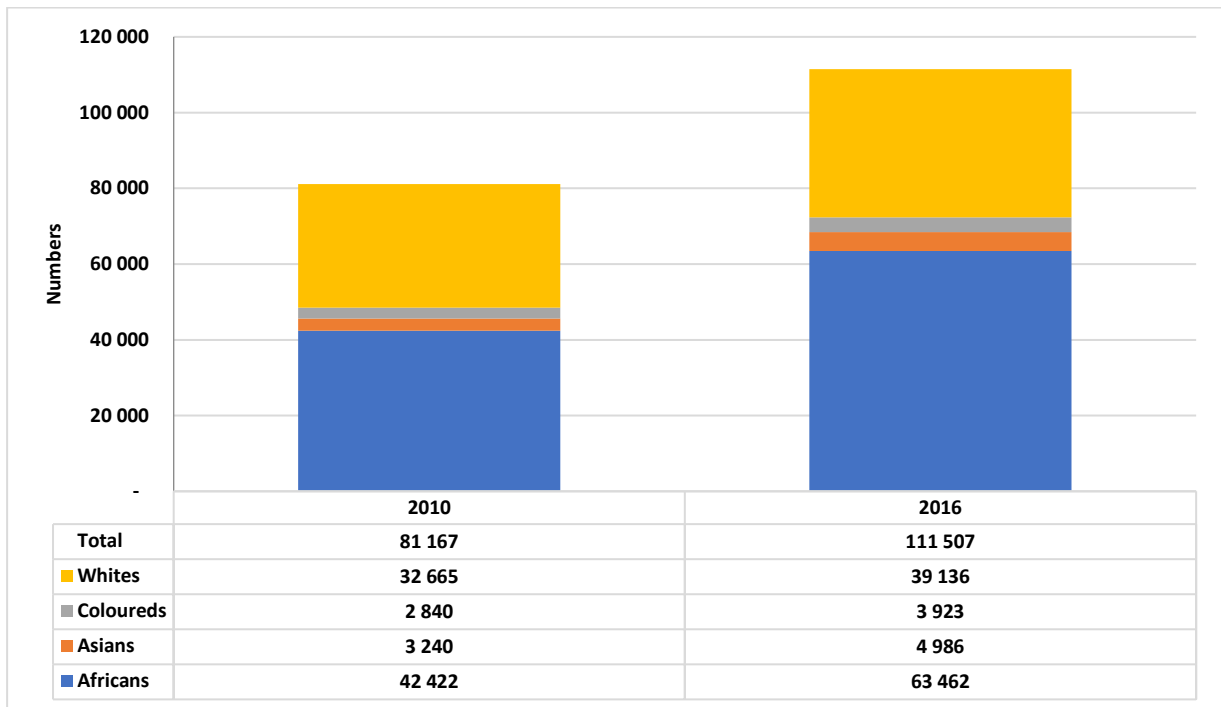
Gauteng



Source: Conningarth own calculation

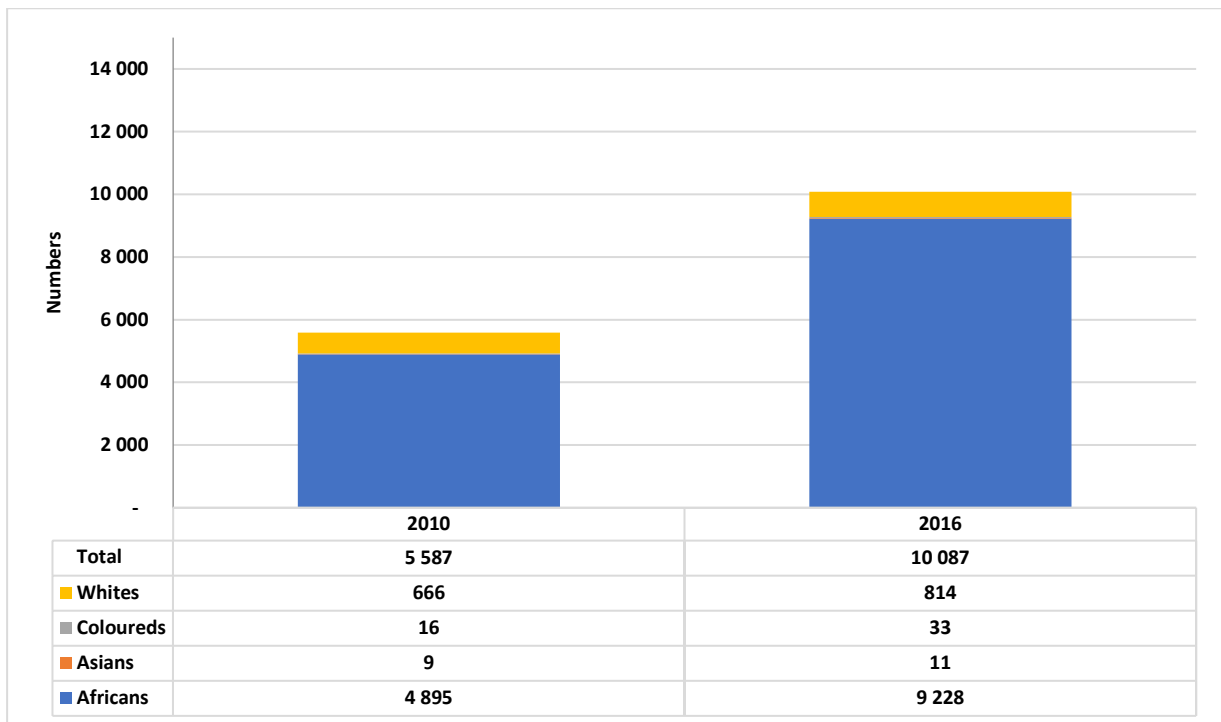


Kwa-Zulu Natal



Source: Conningarth own calculation

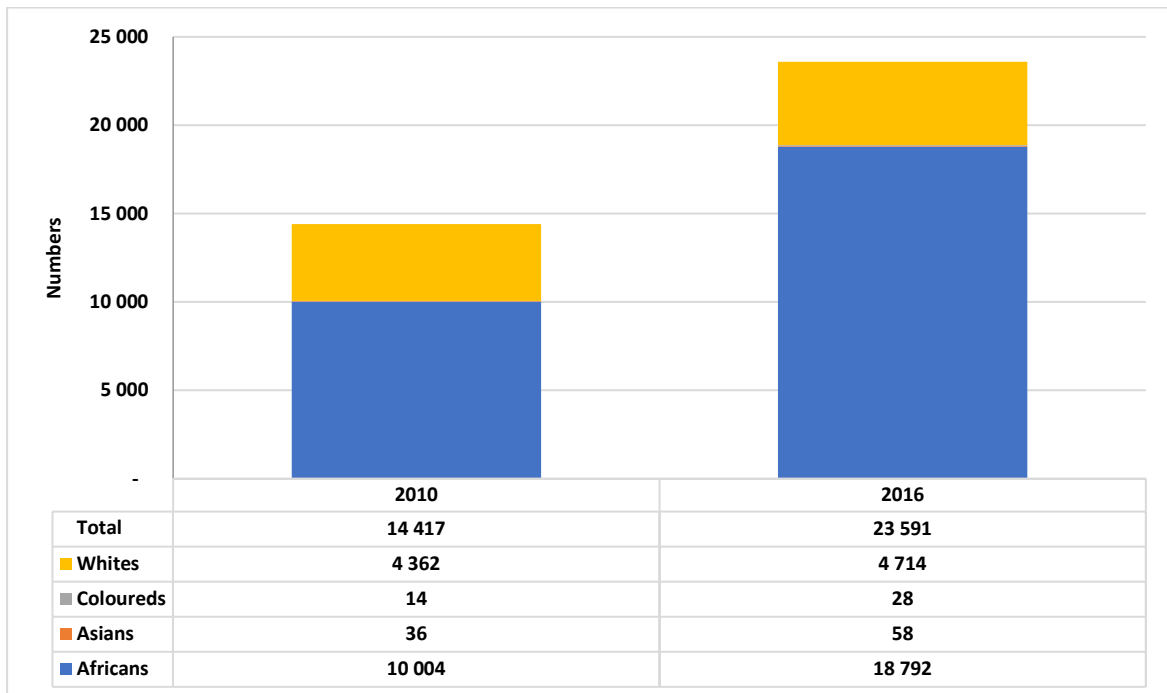
Limpopo



Source: Conningarth own calculation

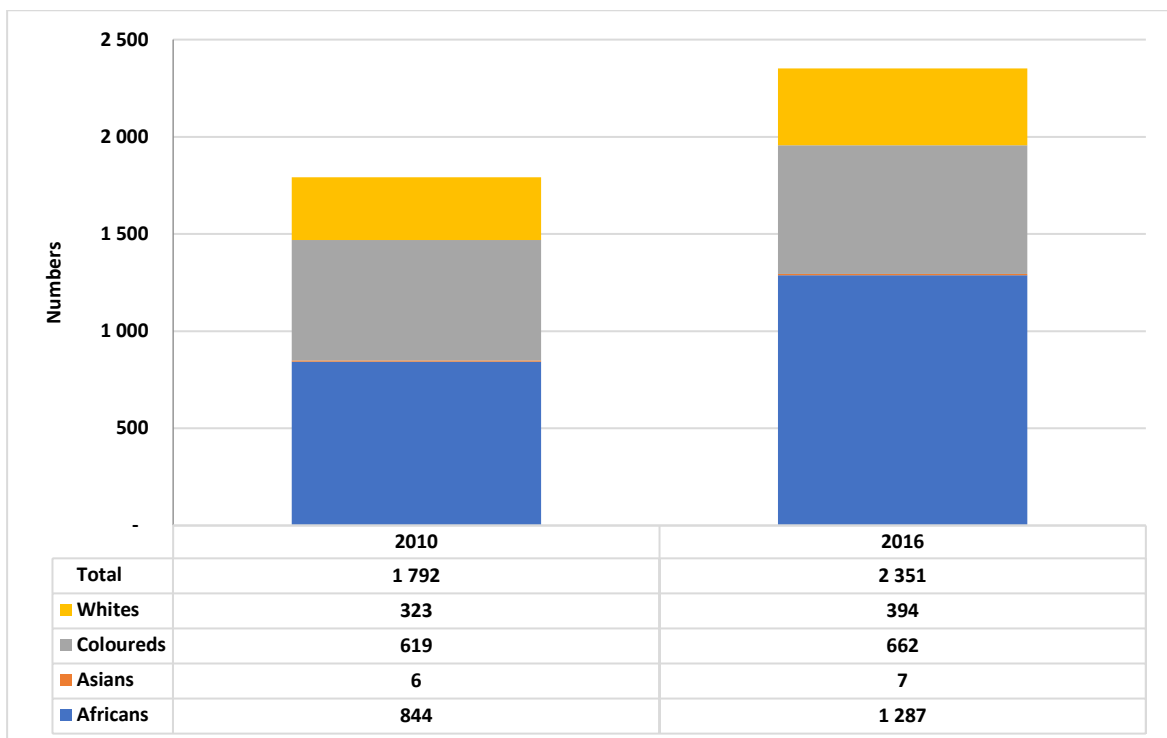


Mpumalanga



Source: Conningarth own calculation

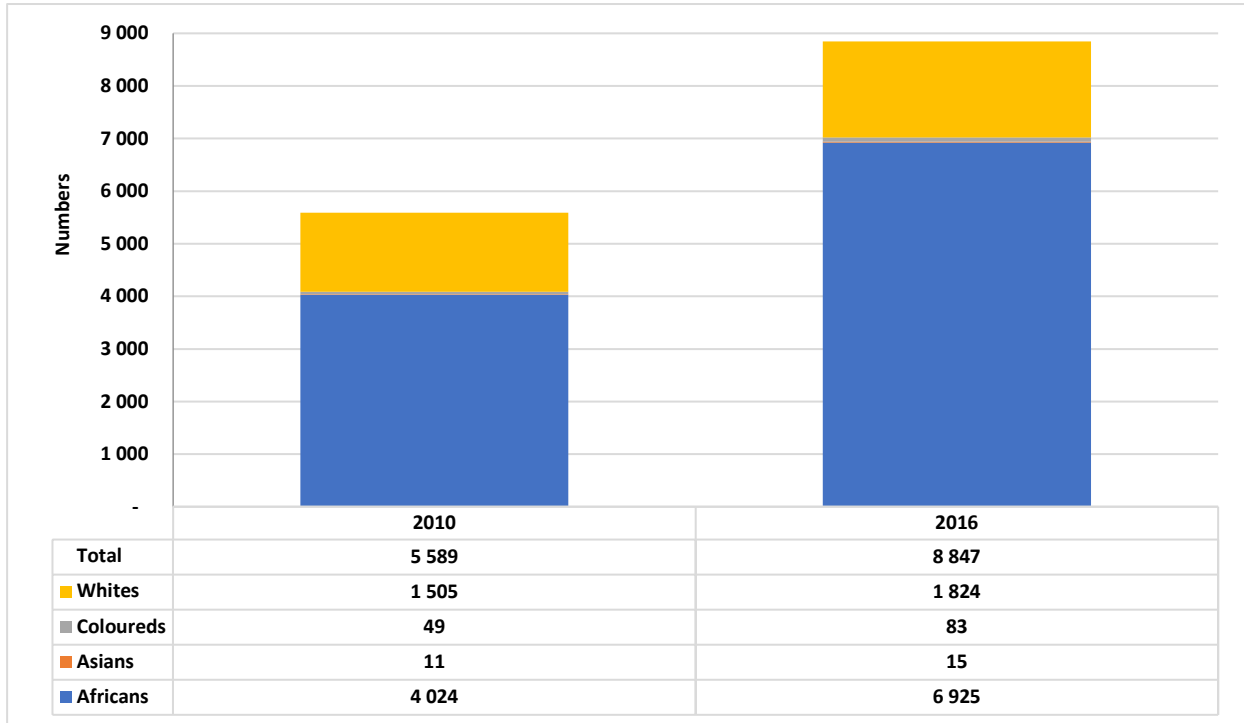
Notthern Cape



Source: Conningarth own calculation

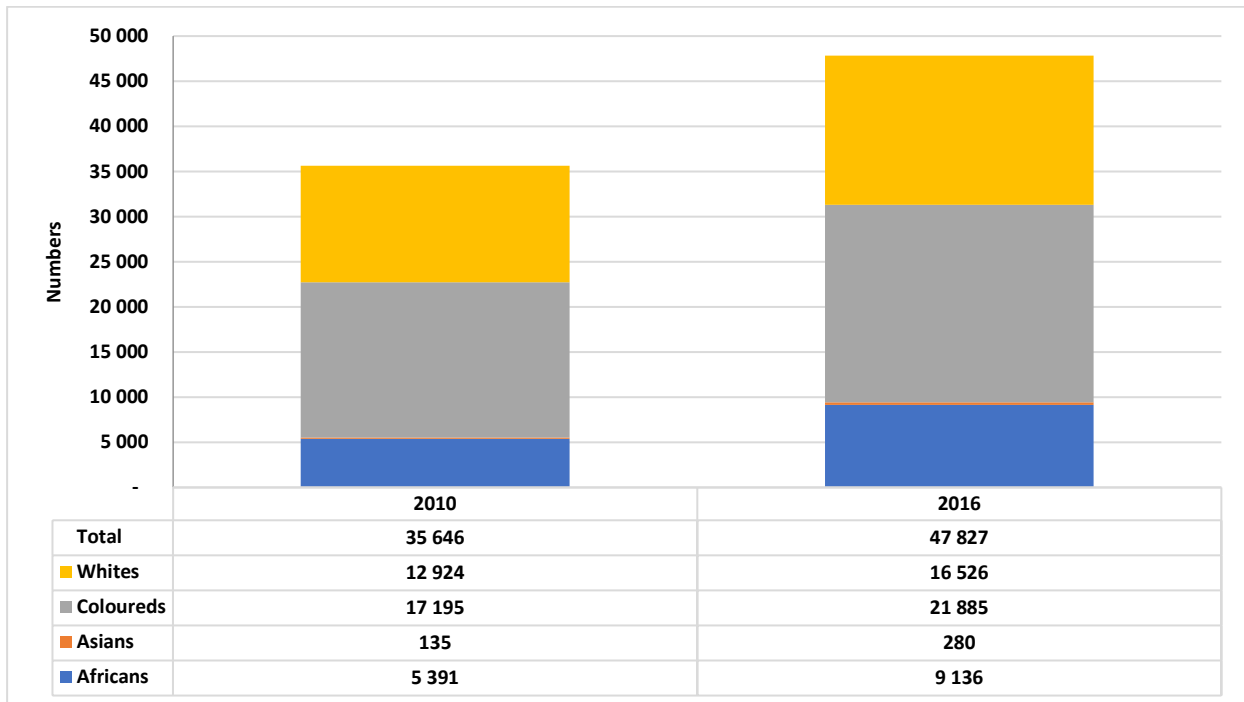


North West



Source: Conningarth own calculation

Western Cape



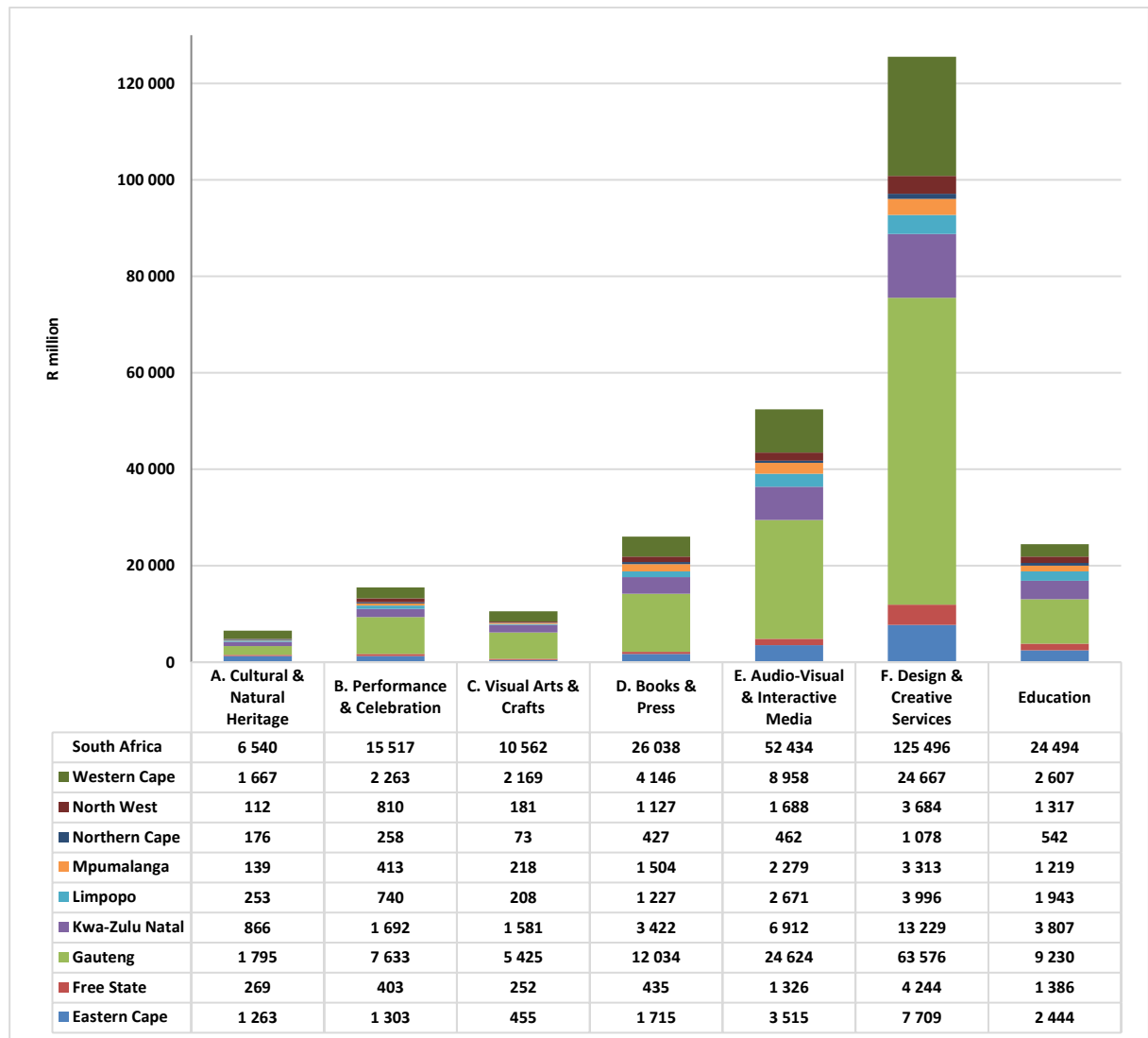
Source: Conningarth own calculation

3.3 Capital Utilisation per Domains

Capital Formation by CCI was done in two ways. Firstly, the presentation in terms of CCI domains was analysed according to province and secondly, the presentation of Capital formation per domain by province.

3.3.1 Capital Utilisation per domains according to provinces

Figure 3.6: Capital Utilisation per domains by provinces (R million, 2016 prices)



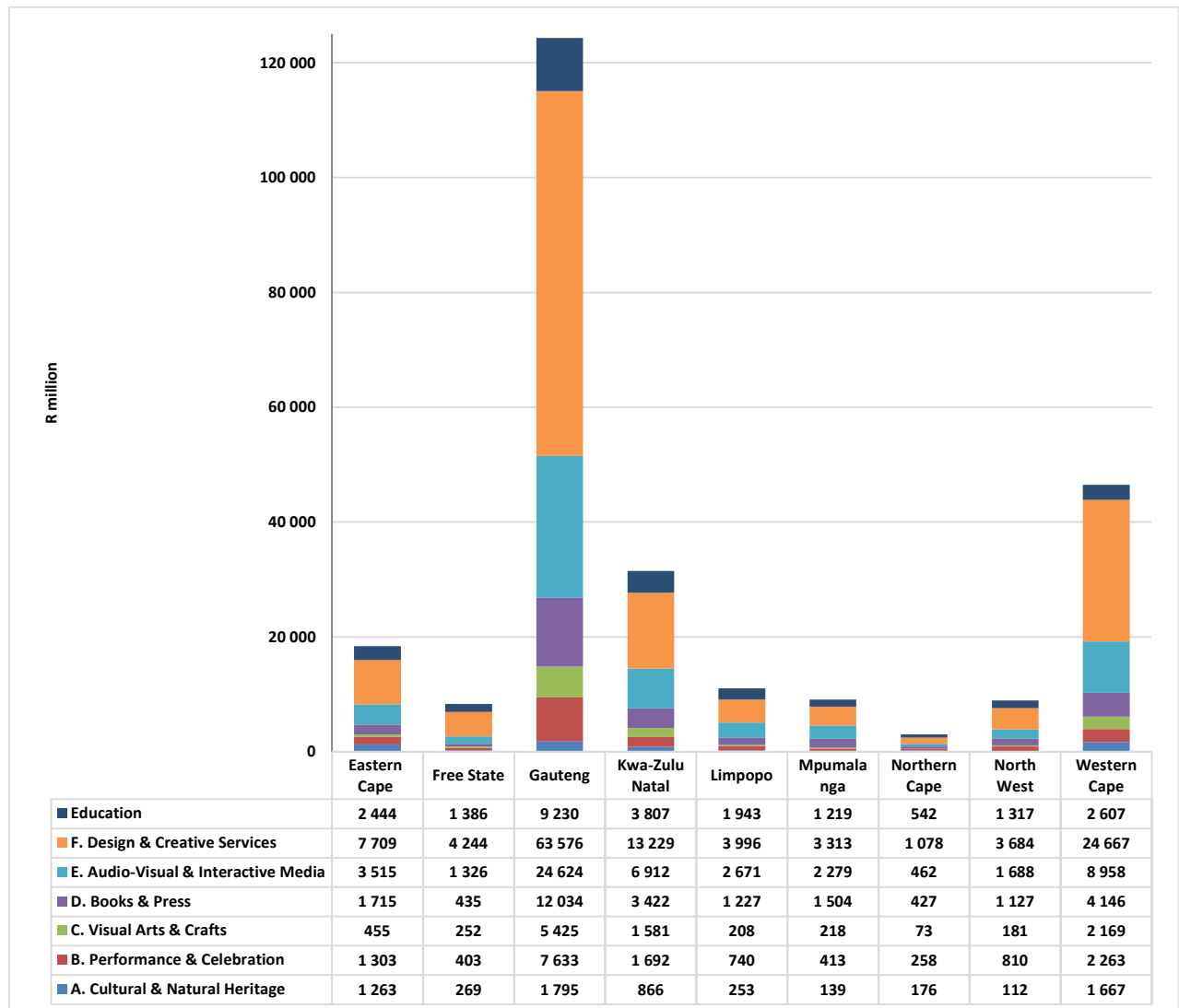
Source: Conningarth own calculation



3.3.2 CCI domains Capital utilisation per province

The capital utilisation of CCI domains per province in 2016 is depicted by a series of self-explanatory Figures.

Figure 3.7: CCI domains Capital utilisation per province (R million, 2016 prices)



Source: Conningarth own calculation



4 Identification of Possible Clusters Within Cultural and Creative Industries

4.1 Introduction

For many decades in the second half of the twentieth century, the Standard Industrial Classification (SIC) was the workhorse of the classification and analysis of sectors in the economy. The SIC system is based on a four-digit industry coding system which grouped industries by sector, such as Wholesale Trade, Manufacturing and Services. Through time it became clear that new emerging sectors such as biotechnology, software, environmental technology, communications, tourism and culture do not fit smoothly in the classic SIC sector classification. Typically, these sectors straddle different sector definition and cannot neatly be allocated to categories outlined by SIC. This state of affairs led to the development of satellite accounts, but still within the broad System of National Accounts.

In a series of papers and reports, UNESCO provides an illustration of the connection between culture and economics through a better understanding of the role of cultural industries in the new cultural policy emphasis and economic reality. These reports emphasise that there is a need for governments to take steps to integrate the concept of cultural industries in development strategies and to ensure that it is necessary for countries to recognise the potential of cultural industries.

UNESCO defines culture as the set of distinctive spiritual, material and emotional features of a society or social group that encompasses not only art and literature, lifestyles, ways of living together, value systems, traditions and beliefs (UNESCO, 2001). As such, the UNESCO Framework for Cultural Statistics defines culture through the identification and measurement of the behaviours and practises resulting from the beliefs and values of a society or cultural group.

In order to arrive at a definition of culture for statistical purposes the concept of a cultural domain (grouping) was formulated. The definition of culture for statistical purposes is based on the presentation of culture as domains for which the purpose is to measure cultural activities and goods and services that are generated by industrial and non-industrial processes. The concept of a domain is consequently a broad sector that includes non-formal activities and activities unrelated to the market in order to indicate that it covers social and non-market related activities, as well as economic, market-related activity. Culture is thus categorised with domains and sub-domains that are measurable, distinct, logical and intended to be recognisable to data users. The domain group together various related entities conceptually within the different statistical dimensions of culture.

The starting point used for constructing these definitions is based on an economic perspective, but the interpretation of the resulting domain is not limited solely to the economic aspects of culture but extends to all aspects of that domain. The definition of cultural domain begins with a number of cultural industries, since these can be formally defined existing international classifications such as the SIC. A domain can also include informal and social cultural activities. Such activities are more difficult to define and thus require other methodologies under the Framework for Cultural Statistics. In this framework, the emphasis is on the relationships, connections and exchanges that cut across industries and sectors.

The cultural domains as defined by UNESCO are grouped under the following headings:

- A: Cultural and Natural Heritage
- B: Performance and Celebration



- C: Visual Arts and Crafts
- D: Books and Press
- E: Audio-visual and Interactive Media; and
- F: Design and Creative Services.

In addition, three transversal domains are included in the UNESCO framework.

4.2 The concept of a cluster

The aim of this approach is to estimate the direct contribution of clusters to the broader economy and to estimate the size of macroeconomic activities within different clusters.

A cluster is different from the classic (SIC) definition because it represents the entire value chain of a broadly defined industry from suppliers to end producers, including supporting services and specialised infrastructure.

There are a number of different definitions of a cluster. In reality, there are different types of clusters, involving, amongst others, different types of partners from industry, research, education, policy makers and politicians. Some of the more influential definitions are Porter (2000):

A cluster is “a geographically proximate group of interconnected companies and associated institutions in a particular field linked by commonalities and complementarities”.

Krugman (1991):

“Clusters are not seen as fixed flows of goods and services, but rather as dynamic arrangements based on knowledge creation, increasing returns to scale and innovation in a broad sense”.

Morosini (2004):

A cluster is a “socioeconomic entity characterised by a social community of people and a population of economic agents localised in close proximity in a specific geographic region”.

Most definitions, though, will have the following characteristics:

- A geographic concentration of firms; interconnected by being part of the same industry; supply chain; a common market or resource; a similar philosophy and by facing similar opportunities and challenges.
- A critical mass of actors, resources and competences – also to sustain interaction among actors in the long run, and
- Existing cooperation and interaction of firms
- Clusters include both vertical links as supplier-manufacture-dealer-customer chain and horizontal production links as in sections of the same industry.

Cluster analysis is a tool that can be used to:

- Better understand a grouping of sectors that belong together from an industry point of view
- Study comparative advantage of regions
- Analyse gains that can be achieved from a shared location, cooperation among firms, common goals and a large pool of qualified and specialised employees.



Some of the advantages of a well-functioning cluster include the following:

- Decreased transport costs and supply chains
- Easier access to resources
- Opportunities for new companies
- Higher degree of specialisation
- Greater cooperation among cluster members
- Creation of a workforce pool that are experienced and specialisation in their field, and
- Greater exchange of ideas and knowledge due to proximity of firms in the same industry.

4.3 Identification of clusters

Methods to identify clusters can be broadly grouped into quantitative and qualitative approaches. Qualitative approaches tend to follow a bottom-up methodology which is more suitable for stakeholder involvement. This method normally builds on expert knowledge and opinion. Quantitative methods tend to use top-down statistical instruments to identify clusters. Before selecting a method, the exact informational needs should be defined and a decision should be taken whether a detailed study is required. Furthermore, policy makers often have to make their choices in the face of heavy budget constraints and extensive stakeholder involvement to strengthen buy-in and dedication to a certain policy. This process is not only time-consuming but expensive as well.

Some of the quantitative methods available to the researcher for cluster analysis include localisation quotients (Koschatzky and Lo, 2007), Ripley's K-method (Anderson et al, 2006), export data (dit, 2001), graph analysis (de Bresson and Hu, 1999), input-output and related methods (Hoen, no date) and network analysis (von Hofe and Cheruiyot, 2017). The qualitative approach typically employs interviews, focus groups or Delphi method to identify clusters. In practice, though, it is highly likely (as was done in this Report) that various combinations of the different methods will be employed in deriving useful data.

4.4 UNESCO cultural domains as clusters

Although not often used in this context, it can be argued that UNESCO domains can be viewed as a type of cluster. This argument is based on the similarities between domains and clusters. Both domains and clusters are constructed based on the philosophy that sub-domains and sectors that logically belong together should be grouped together in the relevant domains/clusters. Secondly, Input-Output methodologies (including SAM's and satellite accounts) are quantitative methods used to produce domains (in this study) and clusters. Thirdly, Delphi techniques are employed to produce data required in both domains and clusters.

4.5 Economic size and structural analysis of cultural and creative clusters

The cultural sector makes a direct contribution in its own right to economic growth and social improvement. The cultural and creative industries, for example, generate incomes, employment and other economic benefits while at the same time providing an avenue for cultural fulfilment, both at the national and the local level. In this and many other ways culture can be interpreted not just as an enabler but also as a driver of development processes.

It must be noted that there is an important distinction to be made between a mapping of a country's present state or situation and its rate of change, where the latter would be measured by

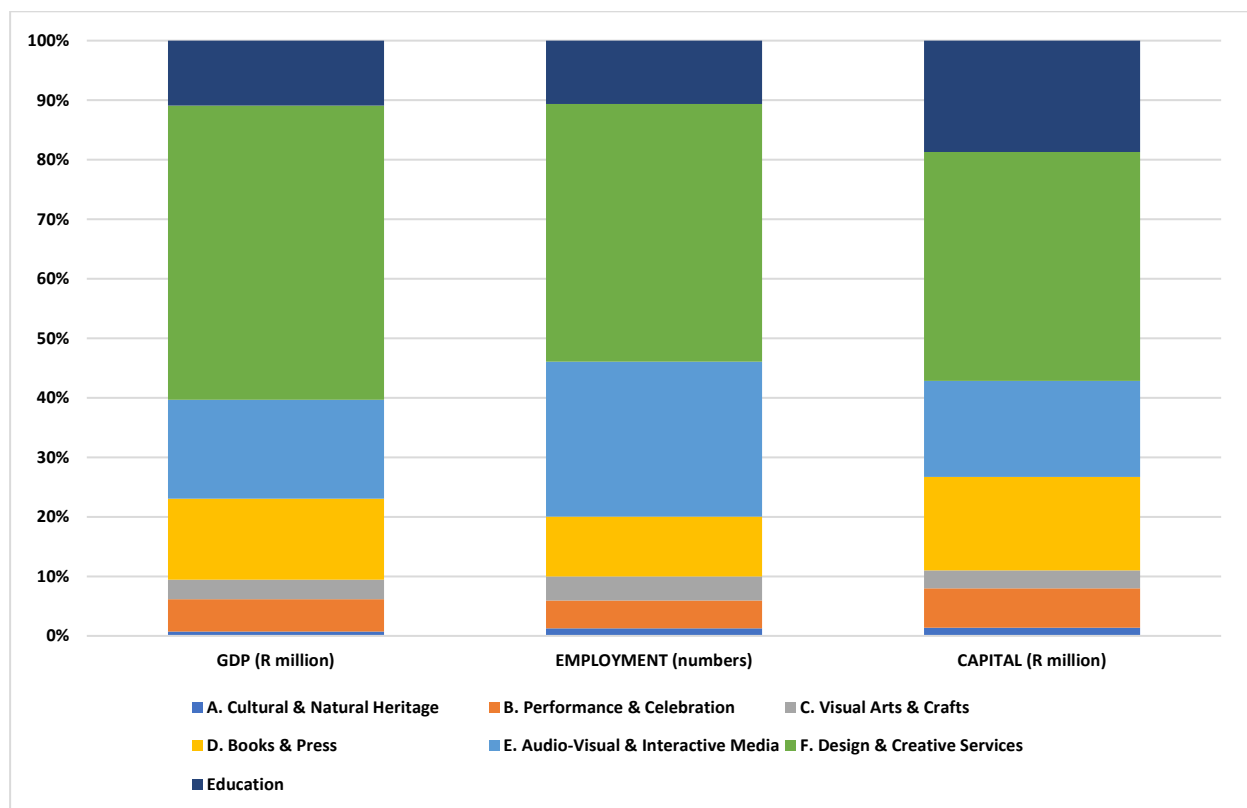


improvement or decline over time in variables which represent the extent of economic, social and cultural growth. As it stands now, the current practice is primarily directed at providing a snapshot of the current situation, whereas any attempt to establish the extent of the beneficial changes derived from the development process would require comparative data for a given set of variables over time.

The purpose of this section is to estimate the direct contribution of cultural domains and sub-domains in generating basic macroeconomic aggregates (production or turnover, employment and fixed capital formation). Economic size data aggregates all components of a domain and provides the more general picture of the role that various domains play in reflecting their contribution to the economy. Structural analysis consists of different analysing techniques for studying the structure of cultural industries, first concerning distribution of macroeconomic aggregates by sub-domain or different stages of the value chain or cluster analysis. This approach is generally used for measuring the economic contribution of cultural sub-domains over the long term, but it can also be used for short-term measurement, in which case it is based on the evaluation of business indicators of performance, such as turnover.

The first table and graph that follow below provide measures of the contribution of the main domains to the overall cultural and creative sector in terms of macro aggregates (turnover, labour and capital). The next group of tables and graphs breaks down each domain into its sub-domains – again in terms of the macro aggregates.

Figure 4.1: CCI Domains contribution to Turnover, Employment and Capital (2016)



Source: Conningarth own calculation



Figure 4.1 indicates that the largest percentage contribution made to total turnover of Cultural and Creative industries comes from the Design and Creative Service cluster (49%) followed by Audio-visual and Interactive Media. Some clusters are very small in terms of turnover: for example the Cultural and Heritage cluster makes up only 1% of the total Cultural and Creative activities' turnover.

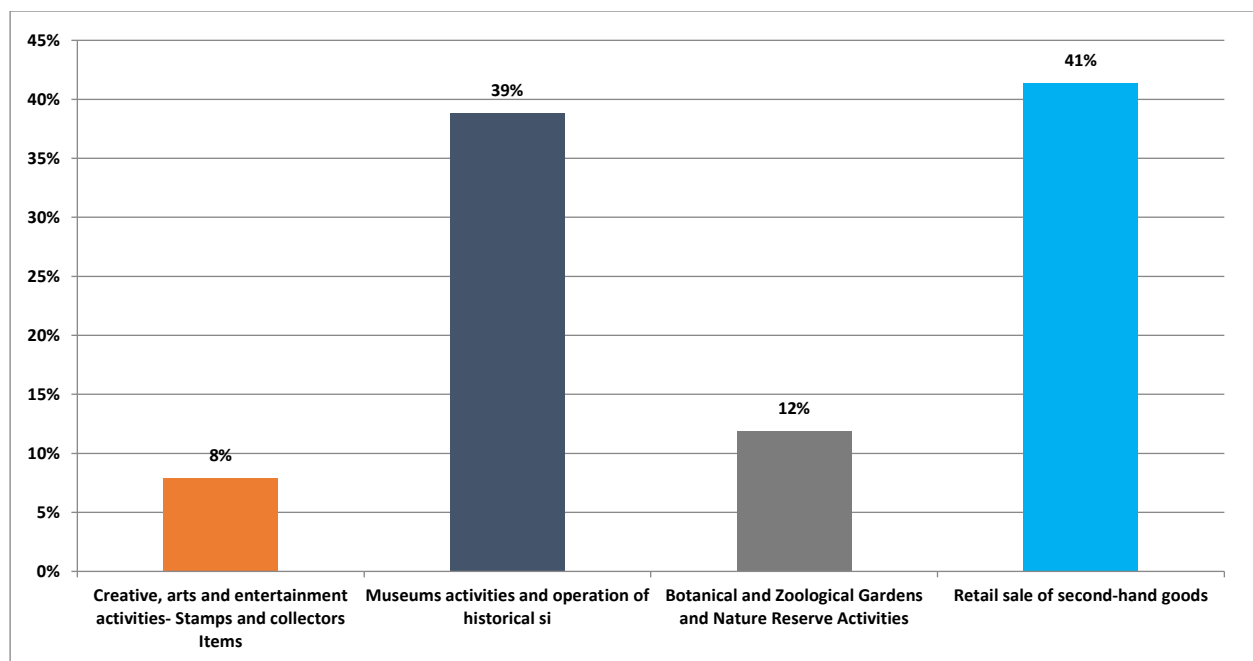
It is obvious from the results below that half of the clusters (the Performance and Celebration cluster, Visual Arts and Crafts cluster and the Books and Press cluster) are dominated by a single sub-domain or activity. The other clusters show a more even distribution of activities in terms of their contribution to the turnover of the cluster.

Table 4.1: Cultural and Natural Heritage Cluster Contribution to Turnover, Labour and Capital

		Turnover Capital (R million, 2016 Prices)	Labour (numbers)	Capital (R million, 2016 Prices)
1	Creative, arts and entertainment activities- Stamps and collectors' Items	132	163	215
2	Museums activities and operation of historical sites	648	1,412	1,367
3	Botanical and Zoological Gardens and Nature Reserve Activities	199	472	411
4	Retail sale of second-hand goods	690	1,342	1,300
	Total	1,669	3,388	3,294

Source: Conningarth own calculation

Figure 4.2: Cultural and Natural Heritage Cluster Contribution to Turnover, Labour and Capital



Source: Conningarth own calculation

The **Cultural and Heritage cluster** showed a turnover of some R1.7bn with equal contributions of approximately 40% made by Museums activities and operations of historical sites and Retail Sales of Second-hand goods. The surprising high contribution by Museums stems from the fact that this domain receives sizable subsidies from the state.

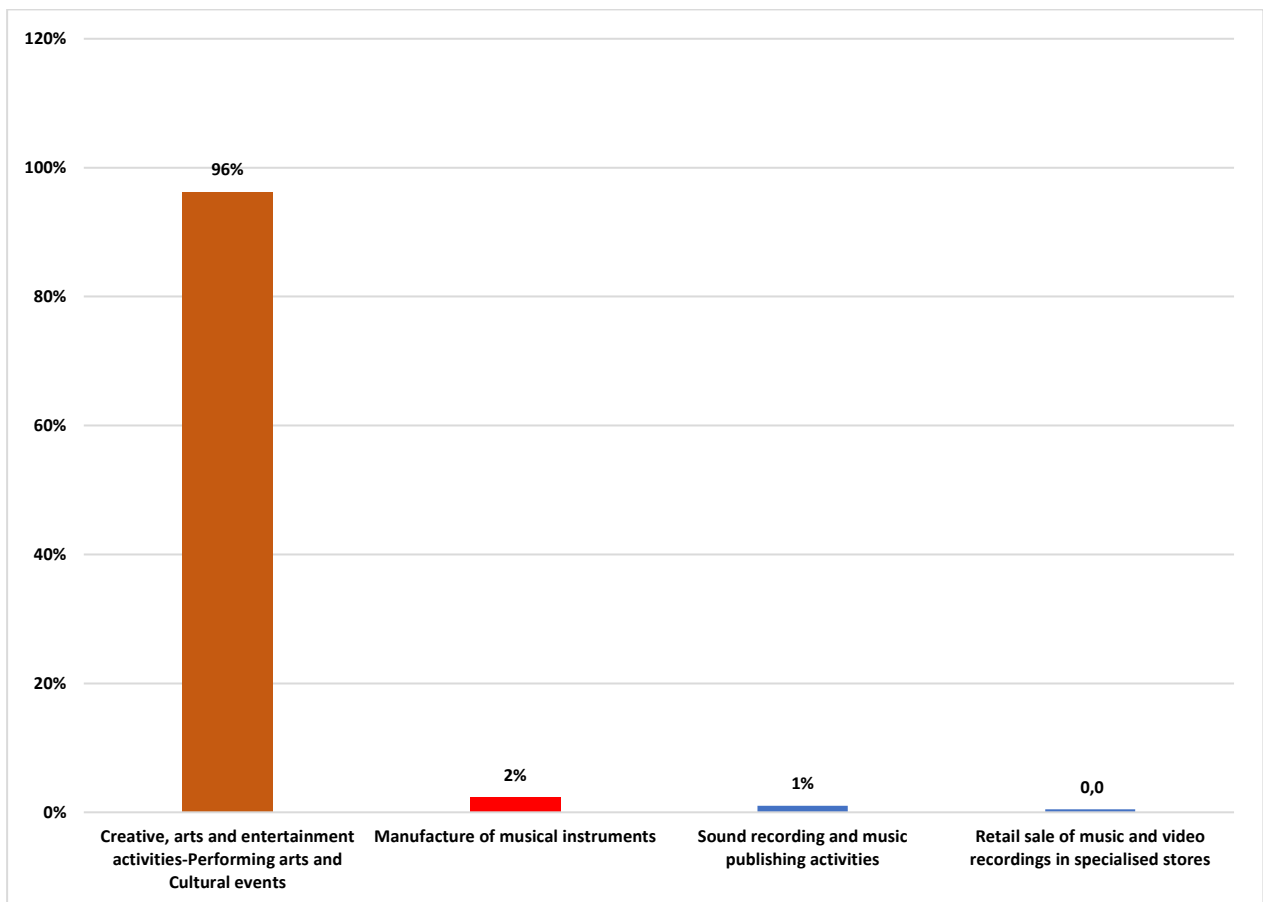
Table 4.2: Performance & Celebration Cluster Contribution to Turnover, Labour and Capital



		Turnover Capital (R million, 2016 Prices)	Labour (numbers)	Capital (R million, 2016 Prices)
1	Creative, arts and entertainment activities-Performing arts and Cultural events	10,589	12257	9896
2	Manufacture of musical instruments	252	225	143
3	Sound recording and music publishing activities	111	66	104
4	Retail sale of music and video recordings in specialised stores	49	38	24
	Total	11,001	12,586	10,167

Source: Conningarth own calculation

Figure 4.3: Performance & Celebration Cluster



Source: Conningarth own calculation

The estimated turnover of the **Performance and Celebration** cluster is recorded as approximately R11bn in 2016. The overwhelmingly contribution to this cluster (96%) came from Creative arts and entertainment activities. The other activities made very minors contributions to the turnover of the domain.

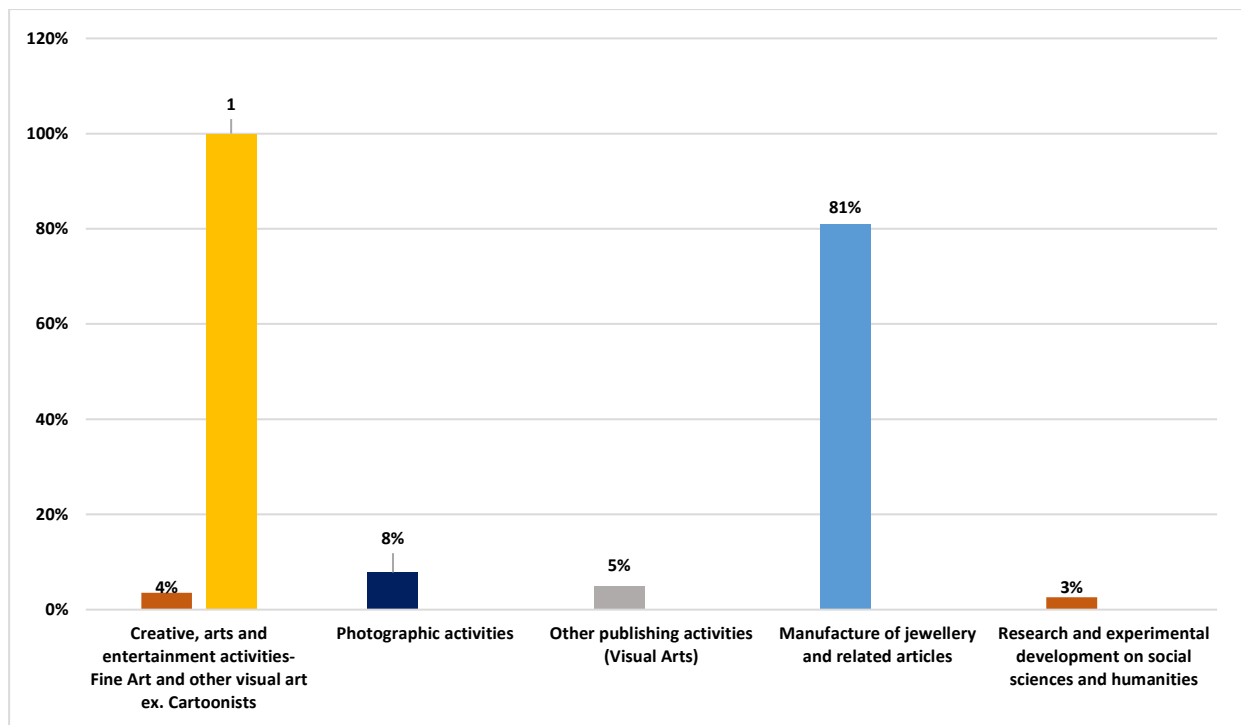


Table 4.3: Visual Arts & Crafts Cluster Contribution to Turnover, Labour and Capital

		Turnover Capital (R million, 2016 Prices)	Labour (numbers)	Capital (R million, 2016 Prices)
1	Creative, arts and entertainment activities- Fine Art and other visual art ex. Cartoonists	504	307	729
2	Photographic activities	1120	1246	1549
3	Other publishing activities (Visual Arts)	717	953	1456
4	Manufacture of jewellery and related articles	11605	7911	16176
5	Research and experimental development on social sciences and humanities	373	415	649
	Total	14319	10831	20559

Source: Conningarth own calculation

Figure 4.4: Visual Arts & Crafts Cluster



Source: Conningarth own calculation

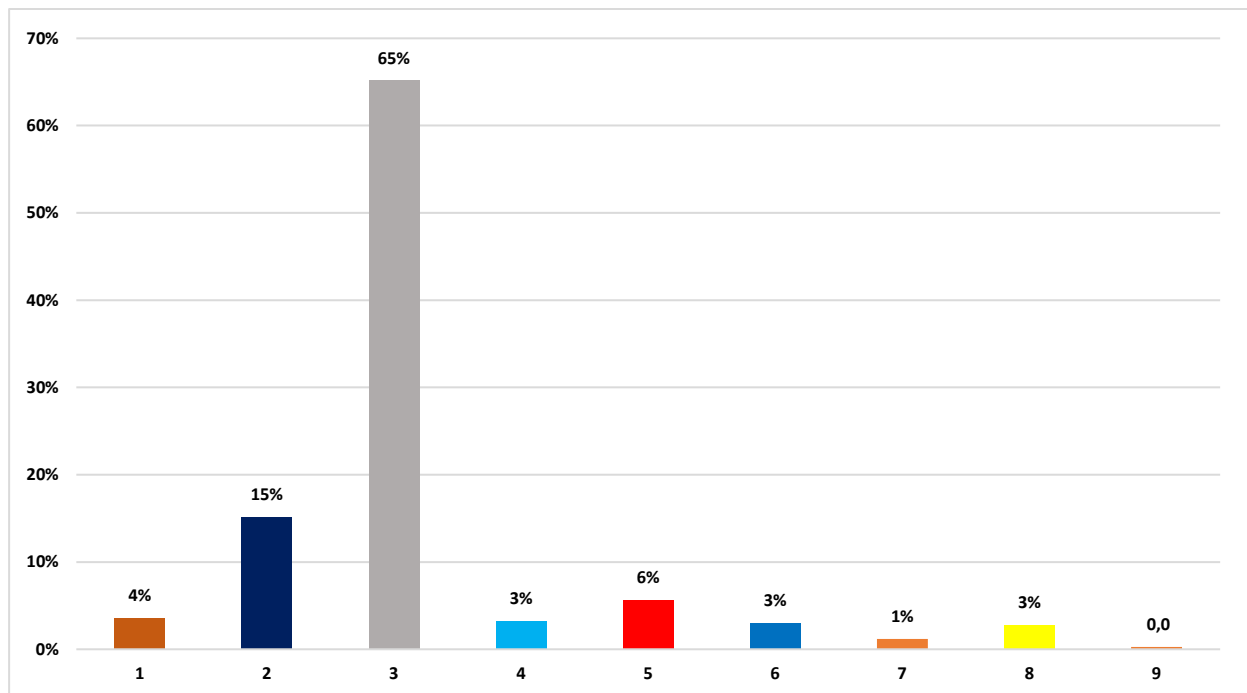
The **Visual Arts and Crafts** cluster contributed a turnover of R14.3bn to the turnover of Cultural and Creative industries' turnover. In terms of the sub-domains the manufacturing of jewellery and related items stand out with an 81% contribution to the Visual Arts and Crafts cluster. This relatively high number is due to the fact that diamonds are included in this sub-domain. The other sub-domains' contributions are less than 5% respectively.

Table 4.4: Book & Press Cluster Contribution to Turnover, Labour and Capital

		Turnover Capital (R million, 2016 Prices)	Labour (number s)	Capital (R million, 2016 Prices)
1	Library and Archives activities	803	978	1659
2	Book publishing	3371	4216	7720
3	Publishing of newspapers, journals and periodicals	14513	15526	14925
4	Other publishing activities (Books and Press)	717	1498	728
5	Retail sale of books, newspapers and stationary in specialised stores	1260	2106	1389
6	News agency activities	666	1531	1000
7	Other information service activities n.e.c.	265	482	399
8	Wholesale of other household goods*	621	657	759
9	Creative arts and entertainment activities-Services of authors, composers, sculptors and other artists, except performing artists	61	64	62
	Total	22277	27058	28641

Source: Conningarth own calculation

Figure 4.5: Book & Press Cluster



Source: Conningarth own calculation

The **Books and Press** cluster's turnover is given as R22.3bn in 2016, with the lion share of 65% emanating from the Publishing of newspapers, journals and periodicals sub-domain. Book publishing contributed approximately 15% of the cluster's turnover. In this cluster elements of the supply chain are present: from publishing activities to retail sales of books and newspapers.

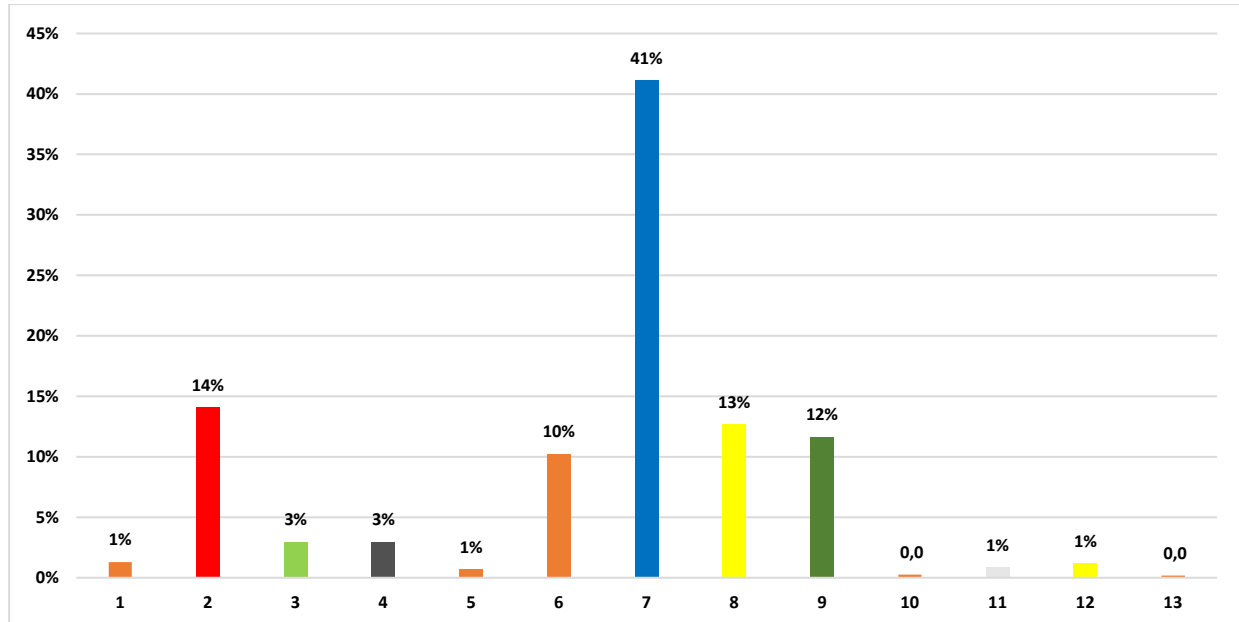


Table 4.5: Audio Visual & Interactive Media Cluster Contribution to Turnover, Labour and Capital

		Turnover Capital (R million, 2016 Prices)	Labour (numbers)	Capital (R million, 2016 Prices)
1	Software Publishing	494	780	586
2	Motion picture, video and television programme production activities	5395	10150	4436
3	Motion picture, video and television programme post-production activities	1130	2169	1486
4	Motion picture, video and television programme distribution activities	1130	2244	1486
5	Sound recording and music publishing activities	259	541	344
6	Motion picture projection activities	3914	8426	3860
7	Radio broadcasting	15759	31885	15892
8	Television programming and broadcasting activities	4858	9981	7110
9	Web portals	4450	2911	5791
10	Renting of video tapes and disks	99	51	100
11	News agency activities	320	402	464
12	Retail sale of music and video recordings in specialised stores	445	249	466
13	Retail sale via mail order houses or via Internet	71	34	78
	Total	38323	69822	42098

Source: Conningarth own calculation

Figure 4.6: Audio Visual & Interactive Media Cluster



Source: Conningarth own calculation

The **Audio-visual and Interactive Media** cluster is the second largest cluster of the Cultural and Creative industries with a turnover of approximately R38.3bn. The cluster has the largest number of sub-domains or activities (13) with Radio broadcasting accounting for 41% of the turnover of



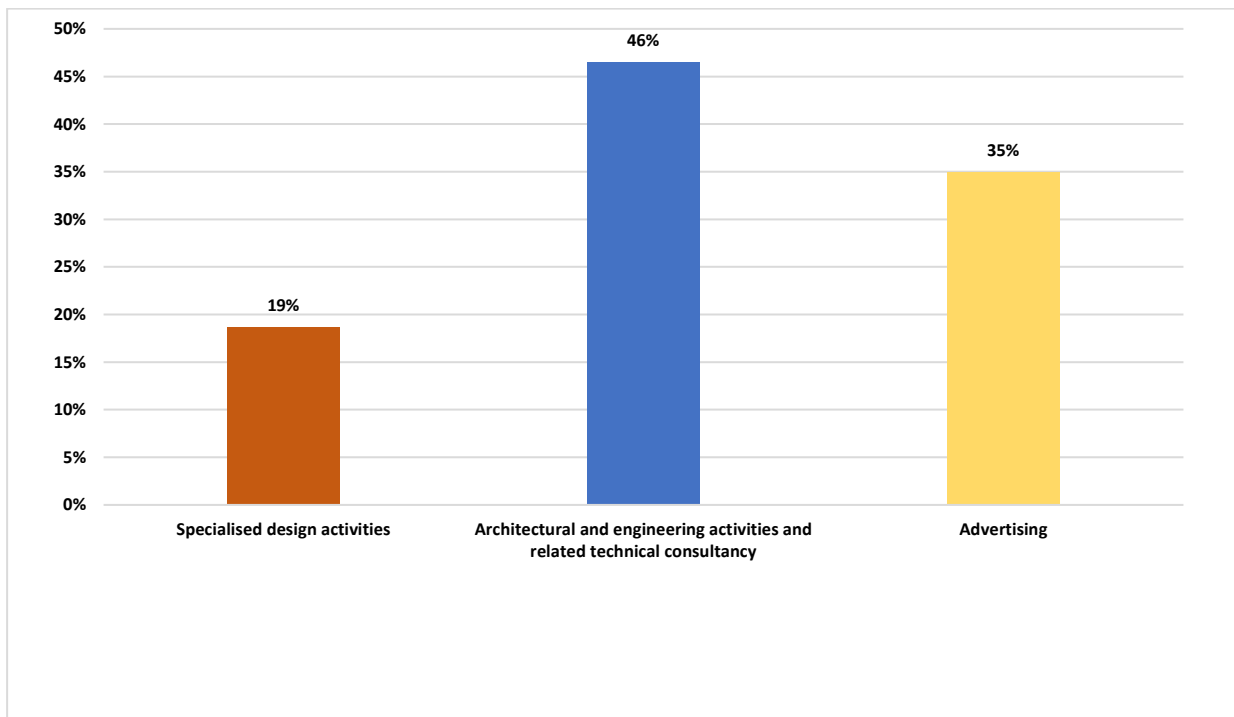
the cluster. In this cluster the supply chain involved is most clearly represented: for example from Motion pictures production activities, to post-production activities, distribution activities and projection activities. This validates the idea that domains as defined by UNESCO can also be viewed as clusters.

Table 4.6: Design & Creative Services Cluster Contribution to Turnover, Labour and Capital

		Turnover Capital (R million, 2016 Prices)	Labour (numbers)	Capital (R million, 2016 Prices)
1	Specialised design activities	15759	27699	10981
2	Architectural and engineering activities and related technical consultancy	39335	54691	57212
3	Advertising	29534	33894	38333
	Total	84627	116284	106525

Source: Conningarth own calculation

Figure 4.7: Design & Creative Services Cluster



Source: Conningarth own calculation

The **Design and Creative** cluster is the largest of the clusters in terms of turnover, labour employed and capital employed. This is primarily the result of the cross-cutting activity of Advertising which is present in virtually all activities in all domains, and Architectural and engineering activities and related technical consultancies.

The transversal domain “Education” is calculated outside the formal modelling process of the other domains. These separate calculations for education shows that it represents 11% of the turnover or production of the Cultural and Creative industries, 11% of the employment and 19% of the capital.

4.6 Recommendations

Although in the study it is hinted that UNESCO's domains represents to a certain extend various clusters in the CCI , it is recommended that consideration be given to the idea of using techniques employed by Cheruiyot and Vom Hofe to undertake conventional methods of cluster analysis with regard to the South African CCI sector in an effort to identify and quantify the linkages that exists between CCI activities within the CCI sector and possibly, more importantly, between CCI activities and activities in other sectors of the South African economy.



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