The economic impact of the cultural and creative sectors in the Brussels-Capital Region

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Foreword

This research has been conducted over the year 2020. The data for this report was collected before the COVID-19 pandemic. In fact, the CCS are one of the sectors most affected. The suspension of live shows, concerts, film & TV production, exhibition and distribution, sporting events, writers' readings and photo assignments, and the dramatic drop in the sales of books (to name a few) – on such a scale and for such an extended period of time – with the loss of many jobs, freelance and otherwise, is unprecedented. This report paints a picture of Brussels' CCS before the disruption caused by COVID-19. This report provides a baseline that can enable us, also in the future, to make a detailed assessment of the impact of the pandemic and of how far policy mechanisms can support the CCS in this difficult time.

Introduction

The cultural and creative sectors (CCS) are among the fastest growing sectors of the global economy, while an increasing amount of the export capacity of cities relies on creative capital and companies within the CCS. Cultural and creative sectors foster economic growth and consequently, occupy a role of growing importance in local economies.

CCS play not only a crucial role economically but also socially and culturally. At the same time, creativity has positive spill over effects on other sectors, through developments such as the uptake of innovative technology and cultural tourism.

'Cultural and creative sectors are important for ensuring the continued development of societies and are at the heart of the creative economy [while] they generate considerable economic wealth; more importantly, they are critical to a shared sense of […] identity, culture and values.' - European Commission (2020)[1]

At the same time, the CCS ecosystem is highly diverse and differs significantly from other industries. It is comprised of a high number of SMEs together with some big market players and public institutions, while being shaped by local cultures and languages. Atypical employment (part-time and fixed-duration contracts, temporary work, self-employment and freelancing), specifically in the media and culture sector, is commonplace. And, each local CCS has considerable local specific challenges and characteristics – as the CCS in Brussels.

Overall, the industry has seen steady growth, but for those cultural formats that can be consumed online (music, audiovisual, video games, immersive content and media), the sectors increasingly face competition and struggle to find new sustainable business models. Consequently, the CCS face new challenges today and have become recognised by policy makers as sectors that create new opportunities economically in need of distinctive support.

'When the creative sector becomes part of an overall development and growth strategy [by policy makers], it can contribute to the revitalization of the national economy where hybrid and dynamic economic and cultural exchanges occur and innovation is nurtured. […] Investing in culture and the creative sectors as a driver of social development can also lead to results that contribute to the overall wellbeing of communities, individual self-esteem and quality of life, dialogue and cohesion.' – UN, Report on Creative Economy (2019) [2]

In its 'déclaration de politique générale commune au Gouvernement de la Région de Bruxelles-Capitale et au Collège réuni de la Commission communautaire commune – Législature 2019-2024', the Brussels Regional Government (BRG) identifies the CCS as one of the four key sectors of the metropolitan economy. However, research and insights about Brussels' CCS is still scarce (see below). This study has the goal to fill this gap and estimates quantifiable outcomes that delineate the impact the CCS have on Brussels' economy. In order to achieve this goal, an economic impact analysis model is applied delivering estimations on key data and comparative as well as geographical analysis of the local CCS. The aim of the findings is to feed into developing a successful strategy to approach CCS' support in the future in Brussels.

At first, in this study, a delineation for the CCS is outlined that can help guide future policy making and is used for the here-applied methodology. In the second part, based on statistical data on micro firm data, the characteristics of Brussels' CCS are outlined in order to present

[1] See https://ec.europa.eu/culture/sectors/cultural-and-creative-sectors
[2] See https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2328

key economic indicators and understand the current situation, and problems in the CCS. At the end of this study, there are conclusions and recommendations outlined for improving the performance of the local CCS in Brussels.

It needs to be noted that the here-presented findings are mere estimations of the overall population and economic impact. The methodological approach followed a logic of prudence presenting numbers rather at the lower end taking into consideration the data limitations. The data has been cleaned manually to best reflect the current situation of the CCS in Brussels. And the sectors included in the analysis have been identified in accordance with hub.brussels. More insights about the limitations of the study and the applied methodological approach can be found in the annex.

1. Methodology

1.1 Defining the CSS

The mere delineation of the CCS is complex and has been intensively discussed in literature and politics. There are different concepts in place, ranging from 'creative and cultural industries' to the 'creative economy' to the 'cultural industries' and more. Depending on the context and domain, these terms can have different meanings.

The CCS is most often depicted by the cultural and creative aspect of the industry activities. In literature 'culture' constitutes products and services, which is either non-reproducible (a concert, an art fair) or aimed at reproduction, mass-dissemination and export (a book, a film, a sound recording). [3] The term 'cultural industries' (in the plural) appeared first in the 1970s. The UNESCO Convention on the Protection and the Promotion of Cultural Expressions defines 'cultural industries' as 'industries producing and distributing cultural goods or services' with cultural goods and services described as 'those activities, goods and services, which at the time they are considered as a specific attribute, use or purpose, embody or convey cultural expressions, irrespective of the commercial value they may have'.

The concept of 'creative industries' defines often industries on the basis of types of inputs and generative processes that characterize their creation. [4] The idea of creative industries emphasises the significance of creativity, such as artistic, scientific and economical creativity. In Europe, the terminology 'creative industries' is attributed to the studies and work in the UK. Also, the European Cluster Observatory adapted the approach of the creative industries defining them as activities 'drawing on advertising, architecture, art, crafts, design, fashion, film, music, performing arts, publishing, R&D, software, toys and games, TV and radio, and video games.'

[3] https://ec.europa.eu/assets/eac/culture/library/studies/cultural-economy_en.pdf
[4] https://ati.ec.europa.eu/sites/default/files/2021-05/Sectoral%20Watch%20Creative%20Industry.pdf

The above-described approaches that are connected to the CCS show how complex the term can be perceived. Studies on the impact of the CCS in Europe also take very different approaches. Public institutions so far have not installed a widely acknowledged delineation of the CCS.[5]

In order to create insights for the Brussels Capital Region, a new approach was developed. The here-developed approach was inspired by existing national and international frameworks including previous studies on Brussels' CCS, Flanders, Wallonia, UK's DCMS, Eurostat and the European Commission (see annex for a comparison of the different approaches based on NACE classifications). Using existing frameworks to inform the here-developed approach allows comparison between CCS studies to some extent. At the same time, the here-depicted delineation takes Brussels' existing market structures into consideration as well as policy strategies of the BCR.

The aim is not only to create a definition but to ensure that the delineation is operationalizable for the research (based on NACE classification codes) and future studies on CCS in Brussels. The definition and NACE classification is supposed to be at the same time flexible to allow adjusting in case new international frameworks need to be taken into consideration in the future. The delineation was developed by going back and forth in the analysis to re-evaluate the delineation along the study. We define the CCS the following way:

The creative and cultural sectors (CCS) are those sectors and economic activities from production to distribution that are built on creative assets, individual creativity, skills and talent and that have the potential to produce and create cultural value and economic growth.

For this definition, we need to take into account the fact that creativity is an intangible factor that is exposed to constant change and not easy to grasp, which creates problems of management in practice. We included in the delineation not only core creative production activities but also publishing, supporting, and distribution activities. This approach led to the identification of 10 key sectors of the CCS in Brussels:[6]

- audio-visual;
- software & gaming;
- music, performing & visual arts;
- books & press;
- advertising & marketing;
- design & designer fashion;
- cultural, arts & heritage;
- organisation of events;
- architecture;
- photography.

[5] It needs to be noted, that the European Commission plans currently to adapt a new approach and delineation also statistically for the creative and cultural sectors. A future study of the CCS in Brussels could be adapted to such a new delineation to make better international comparison possible.
[6] See Annex for a full list of NACE codes applied in this study.

1.2 Data gathering and harmonisation

This study is based on information about business entities extracted from Bel-first (a database on companies published by Bureau van Dijk - www.bvdinfo.com). Bel-first covers more than 1.2 million companies in Belgium, which includes more than 500,000 companies with accounts (active and inactive status), 275,000 companies without accounts and details of 425,000 sole traders that are active but not required to file accounts.

NACE codes along the definition of the CCS have been used to extract data about businesses registered in Brussels and Belgium. It is important to note that this doesn't include all creative work (there are many creatives working in other sectors) or non-market creative activities and output. It is therefore likely that our figures on the number of creative workers is conservative. We manually cleaned or added companies that have been identified as (not) being part of the CCS in Brussels, which was necessary due to the data limitations.

Empty data fields on numbers of employees, turnover and net added value were harmonized by applying the median and average values of the applicable years.[7] For the analysis, other data variables were enriched with supplementary information, including data IBSA / BISA and StatBel (see annex for a detailed outline of the data harmonisation process and its limitations).

Our approach to the harmonisation process was cautious, and estimates were rounded down based on the extracted data. The data represents figures from 2018, unless otherwise indicated (the most recent available data due to the filing requirements of companies). The data was analysed with the software Tableau.[8]

2. The economic contribution of the CCS in Brussels

2.1 Key numbers : net added value & turnover

The analysis shows that the creative and cultural industries (CCS) are an important part of Brussels' economy. Based on our estimations, the CCS generated about 3,213.3 million EUR net added value in 2018. This is a contribution of 3.8% to Brussels' economy. In 2018, the CCS generated over 12,511.6 million EUR turnover.

Using the same estimations, for comparison the CCS contributed in 2018 about 3% to Flanders' economy and 2% to the economy of Wallonia. With a contribution of almost 4% to Brussels' economy, this shows that the biggest concentration of the CCS in Belgium can be found in the capital (see below for more information on the geographical distribution of the CCS in Belgium).

[7] See Britton, J. N., & Legare, G. (2005). Clustering and the digital economy: New media in Toronto. Canadian Journal of Regional Science, 28(2), 329–348.
[8] See https://www.tableau.com/

2.2 Economic growth

The analysis shows that the creative and cultural industries (CCS) are an important part of Brussels' economy. Based on our estimations, the CCS generated about 3,213.3 million EUR net added value in 2018. This is a contribution of 3.8% to Brussels' economy. In 2018, the CCS generated over 12,511.6 million EUR From 2010 to 2018 the CCS grew in value added on average by 3.7% yearly in Brussels. From 2017 to 2018, the value added grew by 2.4%. The annual average growth level of the CCS in Brussels is higher than the expected growth levels of Brussels' economy, which is 1.2%.

We can therefore expect that the CCS will become in the coming years even more important for the local economy. The turnover of the CCS in Brussels grew even faster. From 2017 to 2018 the turnover grew by 4.0% and from 2010 to 2018 on average 3.9% per year (see Fig.1).

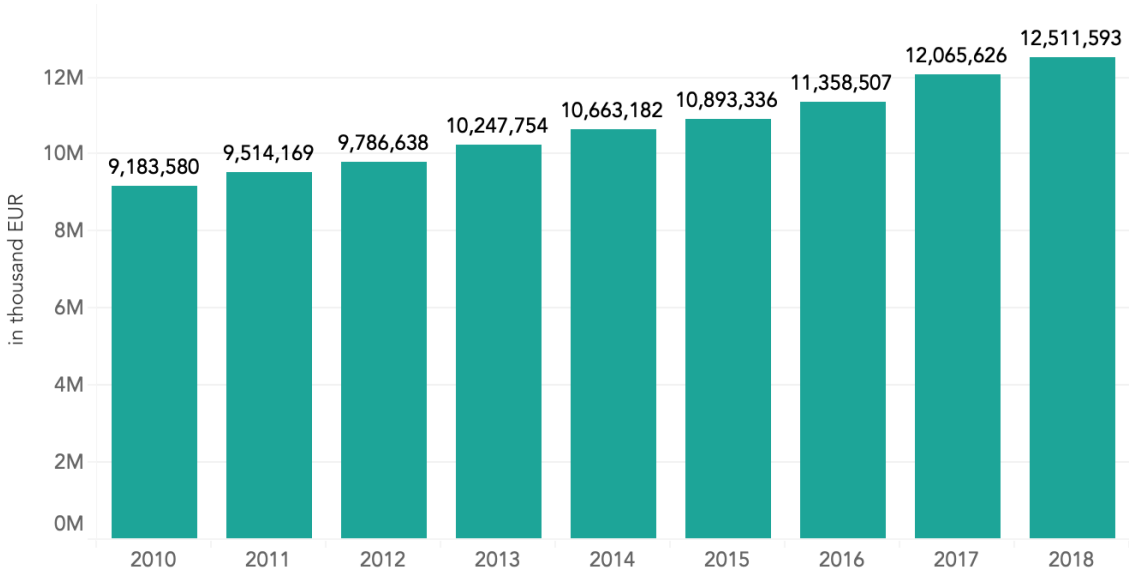


Fig. 1 – Growth of generated turnover of Brussels' CCS

2.3 Sector distribution: net added value

The biggest sector in the CCS in Brussels in terms of economic contribution is the audio-visual sector with 865.3 million EUR net added value produced in 2018, which makes up more than a quarter of the total economic contribution of the CCS to Brussels' economy (26.9%). This is followed by the advertising & marketing sector (669.2 million EUR net added value), the books & press sector (438.7 million EUR net added value) and the software & video gaming sector (318.6 million EUR net added value)[9] - see Figure 2.

[9] See box for more insights about the video game sector. Sources: https://www.wired.co.uk/article/uk-creative-industries-growth and https://www.belgianentertainment.be/en/bea-news-blog/2019/8/26/the-belgian-gaming-companies-present-more-than-ever-at-gamescom-2019 (last accessed October 2020).

The audio-visual sector is the biggest sector due to some very large media companies being located in Brussels. This includes the two public broadcasters VRT and RTBF, KINEPOLIS GROUP and RTL BELGIUM (more information about the biggest employers of the CCS in Brussels can be found below).

The video games sector in Brussels in the spotlight

The size and economic contribution of the video games sector in Brussels is very difficult to estimate based on the available data source. We have found that video game developers and publishers often do not register with the applicable NACE code for '5821 - publishing of computer games'. Many firms involved in video game development and publishing also register with activities like 'web portals, 'other software publishing' and other. We therefore included in our analysis the software and gaming sector into one sector of the CCS in Brussels. Still, the video game sector should be taken as an important asset for the CCS in regions. For example, it has been found that the video game sector now adds more to UK's economy than movies or music. It has been argued that the video games sector shows one of the highest growth rates among CCS and enables innovation, technological advancements. The Belgian Entertainment Association estimates that in 2018, 1,100 people worked in the Belgian gaming sector, up by 400 in just 5 years.

Based on desk research, stakeholder consultation, and the data used for this study, we identified that around 5-10 companies in Brussels are directly involved in video game development. The video game sector is of course an ecosystem also interacting and being highly involved with activities related to for example VR/AR, app development and other areas, which makes the ecosystem bigger. While other regions in Europe started to heavily invest in its local video game industry, Brussels' local video game sector is still rather small but shows great potential for future development.

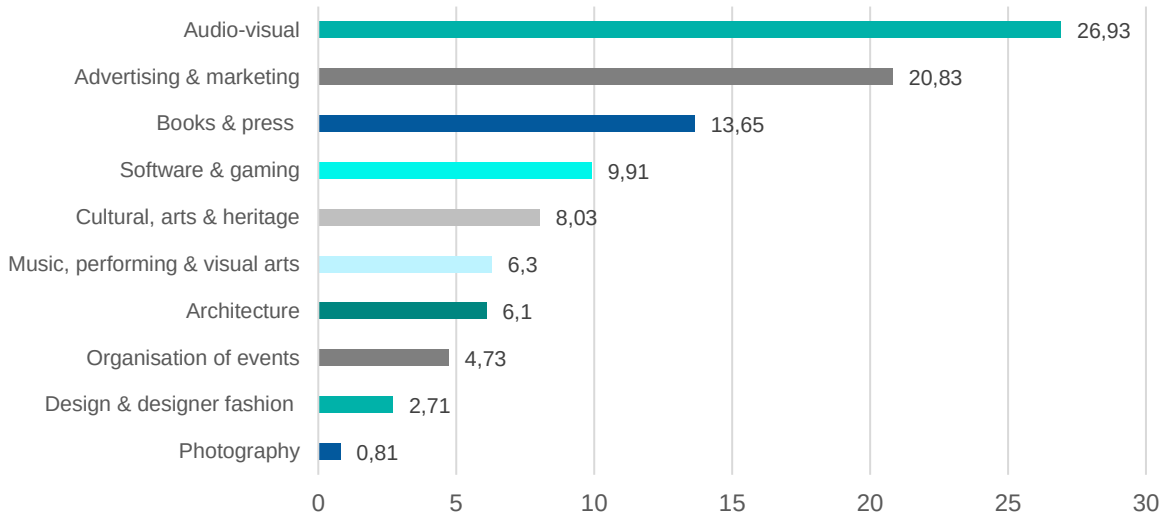


Fig. 2 – Sector distribution of the CCS' economic contribution in net added value in Brussels

3. Employement in the CCS in Brussels

3.1 Key numbers: employers, employees & freelancers

Brussels' CCS makes an even bigger contribution to Brussels' labour market. In 2019, more than 25,000 enterprises have been active as employers in the CCS in Brussels. This includes more than 18,000 VAT liable companies. That is more than 16% of VAT liable companies active in Brussels.

Based on our estimations, the 25,000 enterprises employ about 92,800 employees in the CCS in Brussels. In addition, more than 12,800 independents work as freelancers or sole traders. This means that more than 100,000 people work in Brussels' CCS of which 12.2% work as freelancers. The CCS make up about 15% of Brussels' total workforce.

The importance of the CCS for the local economy can also be shown when we compare the CCS with other sectors in Brussels in terms of number of workers. For comparison, the sector that employs most people is the public administration sector with about 120,000 employees and freelancers. This is already followed by Brussels' CCS, which makes the CCS the second biggest contributor to employment in the capital (see Figure 3).

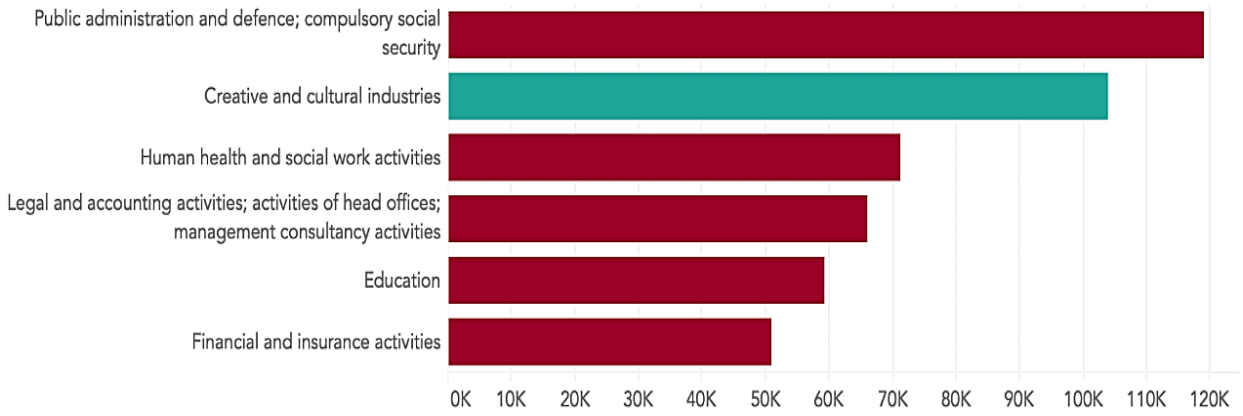


Figure 3 – Comparison of employment (including independents) per sector in Brussels (comparative data taken from StatBel)

3.2 Employment growth

One of the reasons, why the CCS have become such an important sector for employment in Brussels is the higher than average growth rates of employment and freelance work. Using the same data and methodology as above, we have found that between 2015 and 2018 employment (including freelance work) has grown by 19%, which was one of the highest growth rates in employment by sector in Brussels in this time frame. For comparison, based on data from IBSA/BISA the only the scientific research and development sector grew by more with 25% growth in this time frame. Based on IBSA/BISA data, the arts, entertainment and recreation sector alone grew in this timeframe in employment by 16%.

Between 2010 and 2018, the CCS showed a stable growth rate of 4-10% per year in employment (including freelancers). But the growth of work in the CCS can be especially

explained by the growth of the number of freelancers active in the CCS in Brussels. From 2010 to 2018, the number of freelancers grew by 130.2% from about 5,500 to more than 12,000. On average the number of freelancers active in the CCS in Brussels grows by 11.0% per year. For comparison the overall number of freelancers working in Brussels grows on average by 3% per year (based on IBSA-BISA data). But, also the number of people employed in the CCS grew above average by 5.0% per year on average (see Fig. 4).

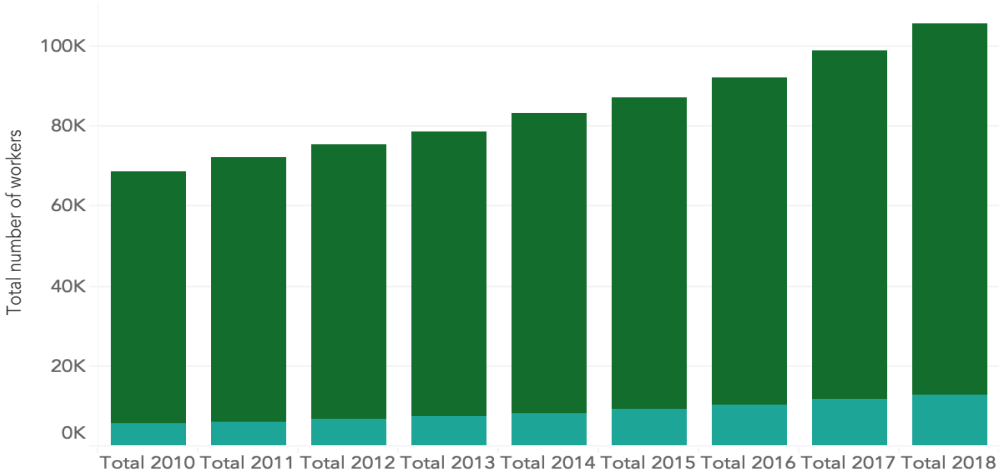


Figure 4 – Growth of employment in the CCS in Brussels

3.3 Labour productivity

The number of people working in Brussels' CCS is growing increasingly while at the same time the output created is not growing at the same rate (see above). This can be explained through labour productivity. Labour productivity is an economic indicator that is closely linked to economic growth and competitiveness. Labour productivity represents the total volume of output (measured in terms of share of GDP produced / net added value) per unit of labour (measured in terms of the number of people working in the sectors). The indicator allows to assess the efficiency and quality of human capital in the production process.[10]

The labour productivity of employed and self-employed in Brussels' CCS decreased from 2010 till 2017 by about 15.9%. This is a yearly average productivity decrease of 2.1%. While every worker on average in the CCS in Brussels produced around 41.000 EUR net added value in 2010 this decreased to around 34.000 EUR in 2018.

This phenomenon is not unique to Brussels' CCS but has different scales in different cities. Low productivity rates in the CCS has been for example found in recent research in the UK[11] and on EU regional level.[12]

A number of possible explanations can be put forward that have been discussed in literature. One explanation could be that businesses hoard labour on relatively low wages

[10] See http://www.ilo.org/ilostat-files/Documents/description_PRODY_EN.pdf
[11] See https://heartofswlep.co.uk/wp-content/uploads/2018/11/Creativity-and-Productivity-in-the-Heart-of-the-South-West.pdf or https://www.sqw.co.uk/files/7814/7324/3296/SQW_2016_Creativity_sector_productivity_report-07.09.16.pdf
[12] See https://rsaiconnect.onlinelibrary.wiley.com/doi/abs/10.1111/pirs.12187

rather than investing in capital, leading to stagnation in output per worker. Another explanation is possible risk aversion by financial institutions, which has reduced access to loans for investment. The result can be inefficiency in the allocation of resources in the industry, and an absence of the 'creative destruction' processes that can help drive up productivity.[13]

The research also suggests that high levels of capital investment has declined in especially higher-productivity creative content sub-sectors such as TV and radio or film and music. One factor in this may be the nature of creative activity in the digital age. Especially creative content businesses struggle to capture revenues associated with digital distribution (minimising additional investment). Another explanation is the number of micro-and small firms in these sectors, which are unable to make investments to increase productivity (see below for more information on firm size). [14] There are also differences in productivity among different sectors and activities. A recent study found for example that creative manufacturing in the EU has below average productivity rates while creative services have above average productivity rates.[15]

3.4 Sector distribution: employment

The biggest number of workers in the CCS in Brussels work in the advertising & marketing sector (19.1%). Other sectors of the CCS in Brussels employ a similar share of the total CCS workforce. The books & press sector employ around 16.4% of the CCS workforce with around 17,300 workers in the sector. This is unsurprising as Brussel has been recognised as the world-wide leading press centre with thousands of journalists working in the capital to cover European affairs news. Also, the audio-visual sector (12.5% of the CCS' workforce), the architecture sector (11.5%), the music performing & visual arts sector (10.9%) and the culture, arts & heritage sector (10.4%) contribute a great share to employment and work in the CCS in Brussels (see Figure 5).

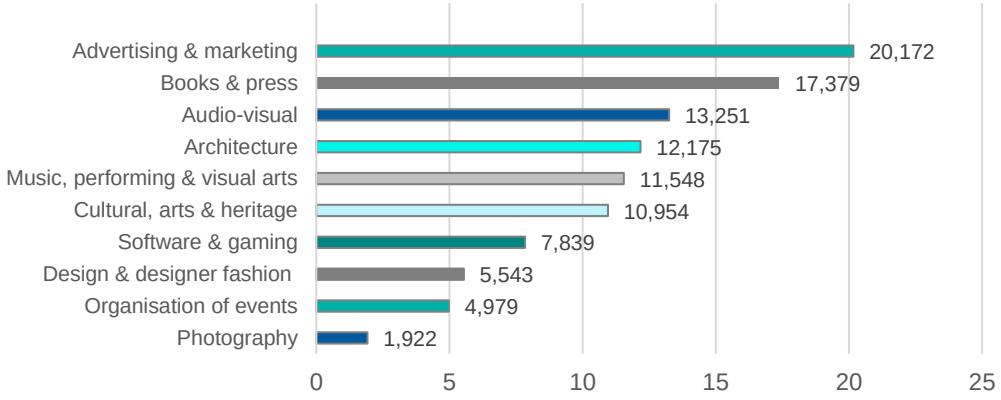


Figure 5 – Share of employment (including freelance) by sector in Brussels' CCS

[13] See https://www.sqw.co.uk/files/7814/7324/3296/SQW_2016_Creativity_sector_productivity_report-07.09.16.pdf
[14] See https://www.sqw.co.uk/files/7814/7324/3296/SQW_2016_Creativity_sector_productivity_report-07.09.16.pdf
[15] See https://link.springer.com/chapter/10.1007/978-3-319-95261-1_2

The biggest employers in the CCS in Brussels are in the audio-visual sector, with the two public service broadcasters, VRT and RTBF, which employ combined more than 4,000 people in Brussels. In the audio-visual sector other big employers are RTL BELGIUM, and VIDEOHOUSE. The biggest employers in the advertising sector include internationally working advertising companies like JC DECAUX and CLEAR CHANNEL. Other big employers of the CCS located in Brussels are the ASSOCIATION DES CONSOMMATEURS TEST ACHAT-TEST AANKOOP, MEDIAFIN and ROSSEL ET CIE operating in the books & press sector, PALAIS DES BEAUX-ARTS and POINT CULTURE operating in the culture, arts & heritage sector and the SOCIETE BELGE DES AUTEUR COMPOSITEURS ET EDITEURS and BRUSSELS PHILHARMONIC in the music, performing & visual arts sector.

It needs to be noted, that Brussels as recognized European capital profits from a number of not only regional but national and internationally operating associations and sector organisations / worker unions working for the CCS being located in the city. This includes not only nationally operating organisations like the SOCIETE BELGE DES AUTEUR COMPOSITEURS ET EDITEURS but also international organisations like the EUROPEAN BROADCASTING UNION or the ASSOCIATION DES JOURNALISTS PROFESSIONELS.[16] Because of this, CCS workers and companies have access to a vast network of supporting organisations (see also below).

Next to the biggest employers, it is also interesting to look at the number of freelancers working in the different CCS sectors. As presented above, of Brussels' CCS, 12.2% are self-employed, compared with 11% across the workforce as a whole (data from IBSA/BISA). And specific sectors and occupations contribute to this above-average number of freelancers in the CCS. The highest percentage of freelancers work in the architecture sector, with 28.3% of workers being independent in 2018. This is a total of more than 3,300 freelancers. Also, the photography (28.1%), books & press sector (14.1%) and the more artistic sectors like the design & designer fashion (19.1%) / culture, arts & heritage sector (10.5%) have high rates of freelance employment (see Figure 6).

And the number of freelancers working in the CCS is growing above average. For example while the number of freelancers working in Brussels' economy grows on average by 3%, the number of freelancers in the architecture sector grows on average by 4%, in parts of the audio-visual sector by 8% and in the arts, creative work and heritage sector by even 20% on average (based on IBSA/BISA data).

[16] Some of these organisations might not have been captured in the analysis as they operate under NACE codes associated to membership organisations, which are out of scope for the analysis at hand. More information about the limitations of the research can be found in the annex.

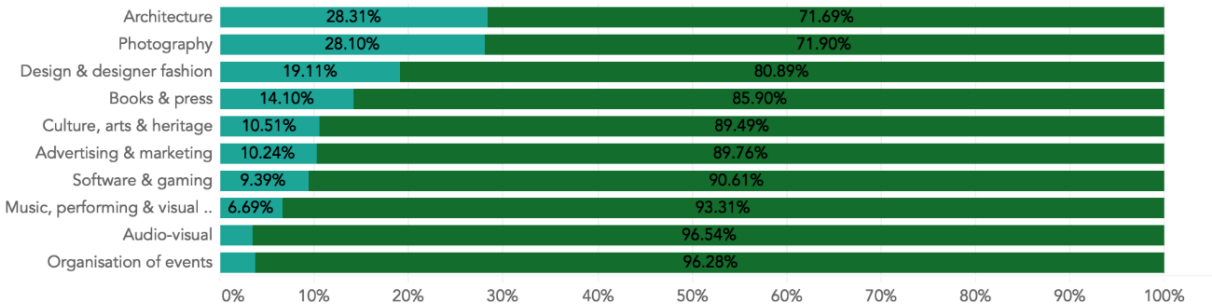


Figure 6 – The share of freelancers working per sector in Brussels' CCS

It has been noted in literature, that freelance workers of the CCS are more often than other industries exposed to precarious working conditions. This is often due to false self-employment in these jobs, which are often the case for architects, journalists and artists for example. A study from 2017 found 'concealed self-employed', the group most similar to employees, made up 8% of all self-employed, while 'vulnerable self-employed' accounted for another 17% in the EU.[17] Of course, freelance work brings also huge benefits to the CCS, which works often on project-basis. Hiring freelancers can bring particular expertise to creative enterprises and create knowledge exchange and flexibility.

4. CCS' firm and market structure in Brussels

4.1 Key numbers : company size, legal forms and languages

Out of the 25,000 enterprises that are active as employers in the CCS in Brussels, more than 97.2% are micro and small businesses. In literature the large number of small businesses that operate in the industry has been identified as one of the specific characteristics of the CCS. In Brussels, around 2.2% have been identified as medium sized (around 500 businesses) and only 0.7% as large or very large businesses (around 170) (see Figure 7).[18]

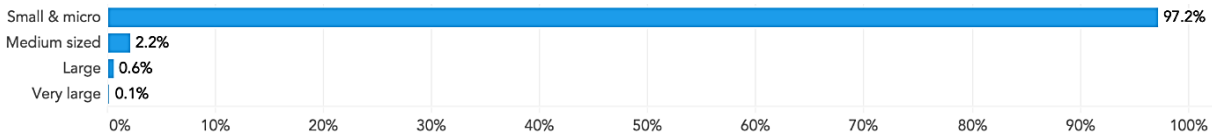


Figure 7 – Company size of CCS businesses in Brussels

[17] See https://www.etuc.org/sites/default/files/publication/file/2018-10/Trade%20unions%20protecting%20self-employed%20workers_EN.pdf

[18] Within Bel-first the size of the entities is defined if at least one of the following conditions is met per category: Very large = operating revenue ≥ 100 million EUR / total assets ≥ 200 million EUR / employees ≥ 1.000; large = operating revenue ≥ 10 million EUR / total assets ≥ 20 million EUR / employees ≥ 150; medium sized = operating revenue ≥ 1 million EUR / total assets ≥ 2 million EUR / employees ≥ 15; small = if no condition is met. Unspecified entities in the dataset have been defined as small or micro as larger entities would meet the reporting conditions and are captured by Bel-first.

Looking more closely at these enterprises, we see that about 31.4% of employers in Brussels' CCS are private companies (around 7,400). Also, many associations (19.6%) are active in the industry. This indicates how diversified the CCS in Brussels is and that not only companies play an important role but also associations and other legal forms (see Figure 8).

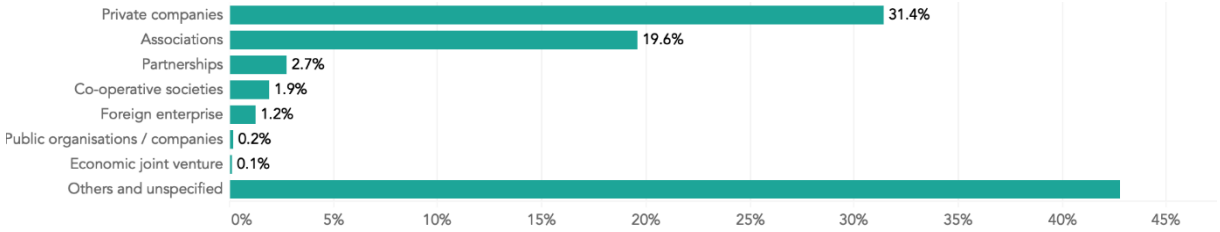


Figure 8 – Legal forms of CCS businesses in Brussels

The available data proofs that Brussels is not only an important location for French-speaking (80.0%) but also for Flemish-speaking CCS businesses and (16.0%). Also, around 20 CCS businesses indicated to be bilingual (no data is available for other languages) (based on filing obligations in language). There are no specific differences among the different CCS sectors that range all from 12-18% share of Dutch-speaking enterprises. The highest shares of Dutch-speaking companies can be found in the audio-visual and photography sectors (with each around 18%). It needs to be noted that Brussels is the only city in Belgium where more than one language is relevant, while otherwise a clear line of French-speaking CCS workers in Wallonia and Dutch-speaking in Flanders can be observed (see Figure 9).

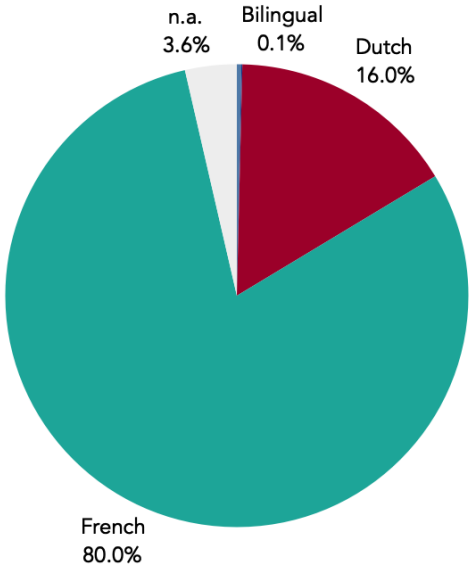
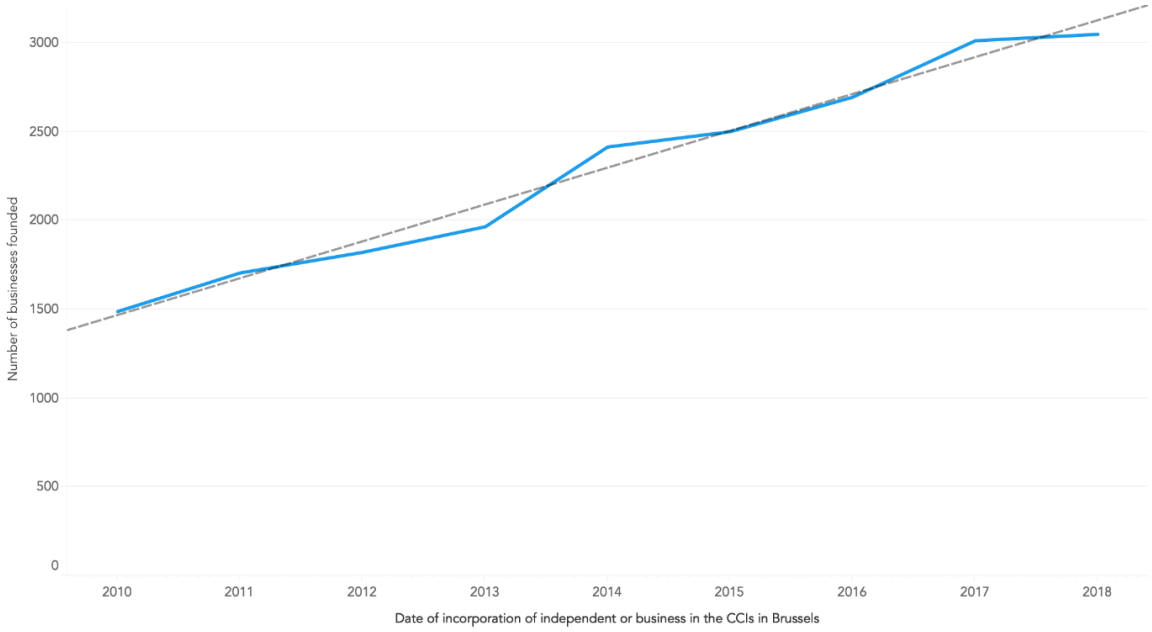


Figure 9 – Share of languages of businesses in the CCS in Brussels

4.2 Business dynamism

The CCS is highly dependent on the entry and exit of new institutions as this is seen as a marker for business dynamism and economic growth. New firms are thought of as especially innovative and play an important role as job creators. Also, the competitiveness of the industry is dependent if new entrants can enter and less productive firms exit the market.

Since around the 1970s, there has been a continuous increase in market entries in Brussels' CCS, which and grows on a stable basis per year. The number of self-employed and enterprises from 2017 to 2018 increased by about 12% alone. An explanation for this positive and stable trend could be adaptation of new technologies in the CCS. The very positive trend started with the mists of the Internet and continues to encourage more and more institutions and self-employed to enter the market. At the same time the exit rate of entities due to for instance bankruptcies but also mergers is much lower. Based on estimations from 2017 to 2018 around 2% of economic entities left the market (for comparison the EU birth and death rates for enterprises averages around 10%, similar to Brussels)[19] (see Figure 10).



[19] https://ec.europa.eu/eurostat/web/structural-business-statistics/business-demography

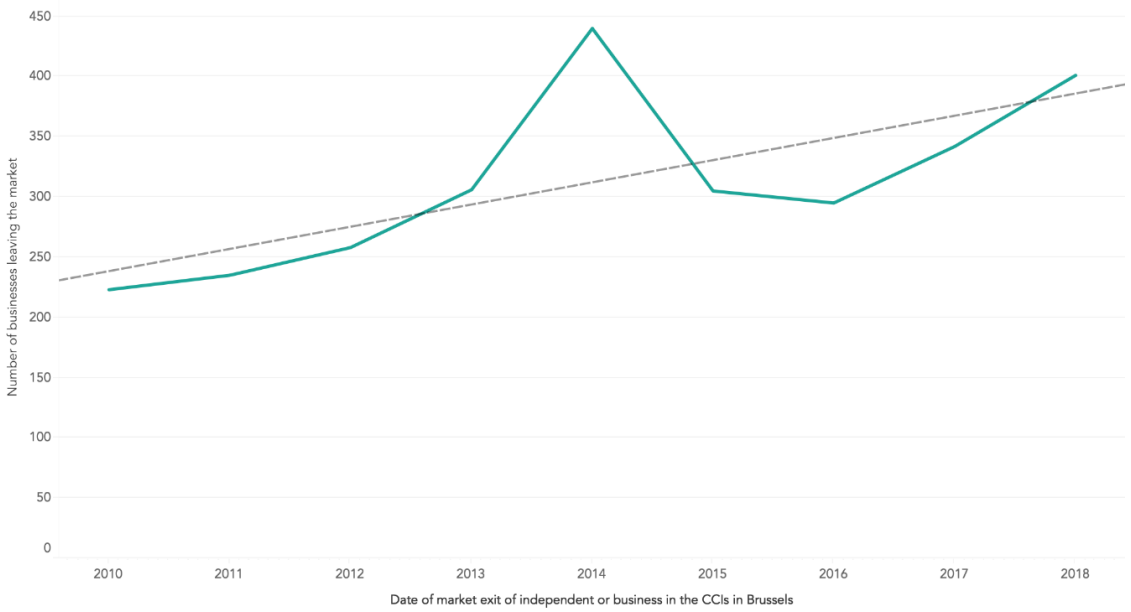


Figure 10 – Market entries and exits in Brussels' CCS from 2010-2018

It is a frequently reported finding that most new firms who enter a market do not survive for long. The firms and self-employed who exit Brussels' CCS market do survive on average about 15 years. Of the businesses that were founded in 2015 more than 75% survived into 2020 (having a survival rate of 5 years) (for comparison on average in the EU, only 50% of businesses with employees will survive their fifth year in business)[20]. This means that actually, while it is believed that the CCS might be a riskier market, the chances for survival for new businesses are better than in other industries in Brussels.

4.3 Geographical distribution

Based on our estimations on number of people working (employees and independents) in the CCS we can see that the sectors are concentrated in certain postal code areas in Brussels. The biggest concentration of CCS activities can be found in the city centre (1000 postal code), with 16.9% of workers of the CCS being located there. Other neighbouring postal code areas show also strong concentrations. This includes Schaerbeek / Schaarbeek (1030 postal code) with 12.2%, where the two public service broadcasters are located, Ixelles / Elsene (1050 postal code), where many audio-visual production companies are located with 14.3% and Uccle / Ukkel (1180 postal code) with 8.3%, where big advertising companies are located (see Figure 11). There are no considerable differences among the CCS sector, company sizes or freelancers and companies.

[20] https://ec.europa.eu/eurostat/web/structural-business-statistics/business-demography

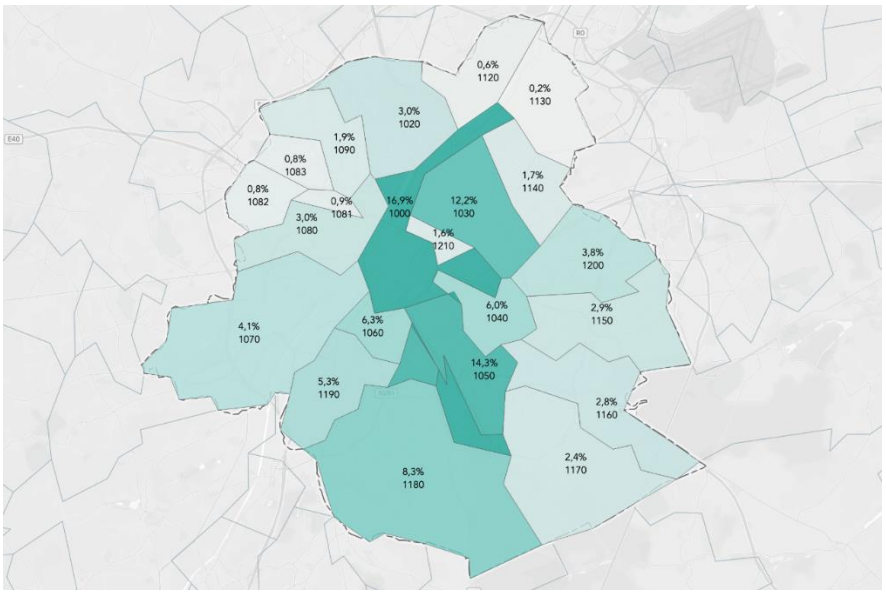


Figure 11 – Map of concentration of CCS employment in Brussels' postal code areas

Looking at the concentration using the same estimations in Belgium (looking at active companies – not independents included - and their number of employees in the chosen NACE codes), we find that Brussels is the province with the most CCS' activities in terms of employment. About 23.5% of employees in the CCS in Belgium are located in Brussels. Other larger concentrations can be found in the neighbouring provinces Flemish Brabant (about 10.3%) and East-Flanders (about 12.0%). Also, Antwerp hosts many CCS activities (about 17.9%) (see Figure 12).

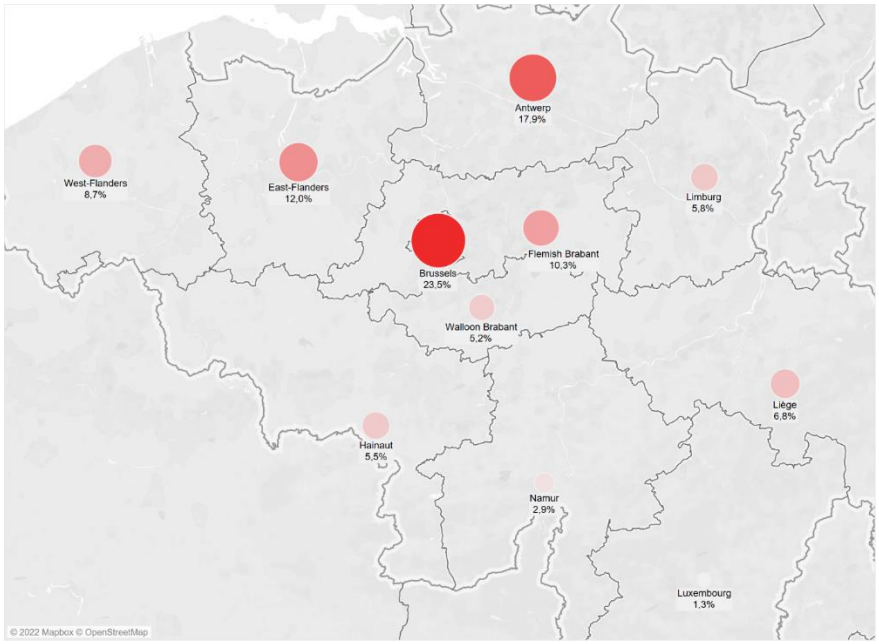


Figure 12 - Map of concentration of CCS employment in Belgium's provinces

Conclusion

Summary of key findings

The findings of this study can be summarised as follows:

- The study shows that the creative and cultural industries (CCS) create not only an essential contribution to Brussels' economy (with 3,213.3 million EUR net added value in 2018 making 3.8% of Brussels' economy) but that Brussels hosts the biggest concentration of creative industry activities in Belgium.
- Up until 2018, the importance of the CCS to Brussels' economy has known a considerable and mostly constant growth. This is due to the above average growth rates in the CCS compared to Brussels' total economy.
- Brussels' economy benefits especially from large audio-visual players being located in the city including the two public service broadcasters.
- Brussels' CCS makes an even bigger contribution to Brussels' labour market with more than 92,800 employees and additionally 12,800 freelancers / independents, which makes up about 15% of Brussels' workforce.
- This makes Brussels' CCS the second biggest employing sectors in the local economy.
- This is due to the higher than average increase in number of employees and especially freelance work in the CCS in Brussels (with an increase of 130.2% of people working as freelancers in Brussels' CCS between 2010-2018 alone).
- However, the labour productivity in Brussels' CCS is decreasing, which can be explained by a possible lack of investment and low wages. Additionally, it became very difficult for CCS firms to capture value due to digital distribution means and changing business models.
- Especially difficult in this context is the steep increase in freelance work, from which the project-driven environment of the CCS benefit but at the same time could create precarious working conditions for the many journalists, architects, artists and other jobs in the CCS in Brussels.
- CCS firms in Brussels are typically very small (around 97%), and just a couple of 'big players' can be found in Brussels. This also leads to lower survival rates. While the CCS market sees many new entrants every year (from 2017-2018 an increase of 12% of new firms in the CCS), market exits are happening often to especially smaller firms. Still the risk of opening a business in Brussels' CCS is lower than in other sectors.
- Brussels' CCS are made up of a unique group of not only French-speaking but also Dutch-speaking companies (about 16.0%). The unique language environment creates opportunities but also a divided market in the capital.
- Brussels' CCS also benefit from having access to not only local and national but also international associations and CCS organisations.

Recommendations

The Brussels Regional Government (BRG) identified in its 'déclaration de politique générale commune au Gouvernement de la Région de Bruxelles-Capitale et au Collège réuni de la Commission communautaire commune – Législature 2019-2024' the CCS as one of the four key sectors of the metropolitan economy. And the recognition and goal of the BRG to support the CCS come at the right time.

We have found in this report that the CCS create not only an essential contribution to Brussels' economy but that Brussels hosts the biggest concentration of creative sector activities in Belgium. But we have also found that the CCS encompass industry activities that are especially under pressure through globalisation (new international entrants to the markets) and technology developments. This is due to the project-based and insecure nature of the CCS.

And the CCS is currently facing an even bigger challenge. While this reports still focused on estimations pre-COVID-19, we can expect that future numbers will paint a different picture. A first change for the CCS consists in the end or drastic reduction of activities requiring people to get close to each other, from the shooting of films and series to the operating of movie theatres. All venue-based sectors (museums, performing arts, live music, festivals, cinema, etc.) are hit by social distancing measures, but also affecting the entire value chain of suppliers. The latter often are SME's, freelancers and self-employed workers: cameramen, artists, writers, directors, choirs, etc. The current crisis has also boosted developments in digitalisation of CCS. For example, film festivals have moved online, cultural events have experimented with virtual and augmented reality and created new forms of cultural experiences, etc. This has also increased the need for digital as well as entrepreneurial skills in the CCS. This increasing precarious situation calls for an increased role of public authorities to support professionals from the CCS.

If a new strategy to support the CCS in Brussels is done right, it can be suggested that for Brussels this can:

- **Sustain growth**, as the importance of the CCS to Brussels' economy is expected to grow within the coming years considerably and faster than the overall economy in Brussels;
- **Boost job creation**, because the higher than average growth rate of the CCS would imply in the coming years an increase of 5-8% employment in the sectors per year.
- **Ensure cultural diversity and inclusiveness**, due to Brussels' concentrating the highest share of CCS activities in Belgium, being relevant not only for the city but also to Flemish- and French-speaking communities in Belgium and internationally;
- **Strengthen an international image of Brussels** as creative capital to attract new investment and creative activities. While Brussels is already a leading location for journalists in the world and hosts many international CCS representations like associations in the city, more needs to be done.

With the right policy and regulatory regime we can accelerate growth and Brussels' reputation as leader in creative production while making Brussels competitive to other metropolitan cities which aim to attract creative talent. And with the increased mobility of the CCS, an attractive city for creative production needs to be built in order to attract new and sustain the creative talent in Brussels.

It is however necessary to ensure that future strategies to support the local CCS are based on a fundamental understanding of what these sectors — as a growth industry of the future — need to thrive. Based on the findings the following recommendations have been developed:

- In order to meet future demands and create necessary support for the local CCS in Brussels, **we recommend creating a strategy to regularly analyse the CCS in Brussels**. As we have found in this study, research on CCS in Brussels is still rare. But easily accessible information and promotion of the sector is needed in order to

cement Brussels' position as an authority on the strategy, policy and measurement of the CCS.

- The discussions in this report have shown that the local CCS is highly dependent on technological advancements. Policy therefore needs to build a reputation of Brussels as a highly skilled economy to produce creative content and services that exploits these technologies. **We recommend therefore to create direct investment into CCS and technology research and building funds for university and industry R&D activities.**
- The findings of this report confirm that the CCS ecosystem is increasingly under pressure through its unique characteristics. There are some clear challenges that need to be addressed urgently if Brussels wants to keep or accelerate the growth of the CCS. As the findings of this report has shown the percentage of self-employed, micro-enterprises and SMEs in the CCS themselves is higher than in most other parts of the economy. These companies are largely project- and client-focused, which acts as a natural barrier to undertaking activities known to improve productivity, such as enhancing management skills, investing in R&D or seeking out business advice that goes beyond the transactional and leads to growth and greater efficiency. Additionally, as we have shown productivity is steeply declining in Brussels' CCS which could indicate the precarious working conditions of many freelancers in the sector. Still, productivity within this diverse sector is not well-understood and generalisation would be unwise. But, such issues need attention. And, addressing such issues faced by the CCS could provide solutions for many other sectors where the number of SME is going to grow as well. **We therefore recommend to create supporting mechanisms that are specifically tailored to the needs of micro businesses and freelancers and to create and lobby for policies to fight precarious working conditions in the CCS.**
- This report has shown that Brussels' CCS have unique characteristics that distinguished the local sectors from other metropolitan CCS. This includes that **Brussels hosts a high number of journalists and a high number of international associations that support the CCS also internationally. And the CCS in Brussels mirrors the multi-cultural environment of the city, which hosts French-, Dutch and English-speaking organisations. Brussels need to leverage such existing assets.** Research shows that it is more effective to build on existing strengths and activity rather than attempt to build brand new creative clusters. Existing assets that could be utilised in Brussels are as diverse as a regional forte in a creative sub-sectors like the AV sector (with the two public service broadcasters being located in Brussels); strong 'institutions' like museums or Higher Education Institutions; or even the perception that a neighbourhood in Brussels is a creative place to be.
- **Finally, effective leadership runs through many successful creative clusters. It is necessary to establish a single point of contact and support organisation that takes responsibility and is the access point for Brussels' CCS from outside and inside Brussels.** Such an organisation needs a combination of clarity of vision and business expertise plus the ability to leverage the support of local communities and government. And the success of CCS relies often on their ability to create networks and programmes. A leading organisation therefore needs to involve local stakeholders, Higher Education Institutions, and leveraging financial resources from governments, local banks and private investors (see Mapping of CCS stakeholders in Brussels exercise for more details).

Annex 1 – Sector delineation and NACE code identification

In order to delineate the creative and cultural sectors in Brussels, we used a number of existing frameworks to identify the NACE codes for sector activity definitions. This included the following studies / approaches:

- A study with the title 'The cultural and creative economy in Brussels-Capital Region' commissioned by the office of the Minister for Finance, Budget and External Relations of the Brussels-Capital Region, which was part of an Innoviris project[21];
- Flanders DC's delineation of the CCS[22];
- A study by the Economic Policy directorate of the Public Service of Wallonia from 2018 (used for definition)[23],
- UK's 'DCMS Sector Economic Estimates Methodology' report, last updated in 2019[24];
- The European Commission's (EC) communication on 'Supporting cultural and creative sectors, CCS and related ecosystems'[25] and its 'Feasibility study on data collection and analysis in the cultural and creative sectors in the EU' by KEA from 2015[26]; and
- Eurostat's 'Guide to Eurostat cultural statistics' (2018)[27].

We identified all NACE codes for the CCS used in these studies / approaches and used a workshop with hub.brussels representatives to delineate the codes based on the identified ones, which should be included in the study. The following table gives and overview of the identified codes and the codes used in this study.

Comparison of NACE codes used in existing studies and approaches with the here-delineated identified NACE does used in the study (it needs to be noted that different approaches work on different NACE code levels):

NACE Code	Description	Sub-sector	Innoviris	Flanders DC	DCMS	EC	Eurostat	This study
13	Manufacture of textiles							
132	Weaving of textiles	Fashion				X		
133	Finishing of textiles	Fashion				X		
14	Clothing and shoes manufacturing							
1411	Manufacture of leather clothes	Fashion	X	X		X		X
1412	Manufacture of workwear	Fashion	X			X		X
1413	Manufacture of other outerwear	Fashion	X	X		X		X
1414	Manufacture of underwear	Fashion	X	X		X		X
1419	Manufacture of other wearing apparel and accessories	Fashion	X	X		X		X
142	Manufacture of articles of fur	Fashion	X	X		X		X
1431	Manufacture of knitted and crocheted hosiery	Fashion	X			X		X
1439	Manufacture of other knitted and crocheted apparel	Fashion	X	X		X		X

[21] https://journals.openedition.org/brussels/1721#ftn3
[22] https://flandersdc.be/uploads/media/5c90c513ebd46/methodologie-impactmeting-creatieve-sector.pdf?production-5454sdf54df007
[23] https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1551776849.pdf
[24] https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology
[25] https://ec.europa.eu/culture/policy/cultural-creative-industries_en
[26] https://ec.europa.eu/assets/eac/culture/library/studies/ccs-feasibility-study_en.pdf
[27] https://ec.europa.eu/eurostat/documents/3859598/9433072/KS-GQ-18-011-EN-N.pdf/72981708-edb7-4007-a298-8b5d9d5a61b5

15	Manufacture of leather and related products							
1511	Tanning and dressing of leather; dressing and dyeing of fur	Fashion				X		X
1512	Manufacture of luggage, handbags and the like, …	Fashion		X		X		X
152	Manufacture of footwear	Fashion	X	X		X		X
16	Manufacture of wood and of products of wood, cork, …							
16292	Manufacture of articles of cork, straw and plaiting	Design		X				
18	Printing and reproduction of recorded media	Manufacturing					X	
1811	Printing of newspapers	Books & press	X			X		X
1812	Other printing	Books & press	X			X		X
1813	Prepress and pre-media	Books & press	X			X		X
18140	Binding and related services	Print media	X	X				X
182	Reproduction of recorded media	Books & press / AV / Music	X	X		X		X
27	Manufacture of electrical equipment							
27402	Manufacture of lighting equipment	Design		X				
31	Manufacture of furniture							
31091	Manufacture of dining rooms, …furniture	Design		X				X
31092	Manufacture of garden and patio furniture	Design		X				X
31099	Manufacture of other furniture n.e.c.			X				X
32	Other manufacturing							
3212	Manufacturing of gems and jewellery	Crafts / Fashion		X	X	X	X	X
3213	Manufacture of imitation jewellery and related articles	Fashion / Design		X		X		X
322	Manufacture of musical instruments	Manufacturing / Music		X		X	X	X
3240	Manufacture of games and toys							X
46	Wholesale trade, except of motor vehicles and motorcycles							
46150	Agents involved in the sale of furniture, household, …	Design		X				
4616	Agents involved in the sale of textiles, clothing, fur,	Fashion	X	X		X		
46412	Wholesale linen and bedding	Design		X				
4642	Wholesale of clothing and footwear	Fashion	X	X		X		
46432	Wholesale of recorded image and sound carriers	AV / Music	X	X				
46441	Wholesale of china and glassware	Design		X				
46471	Wholesale home furnishings	Design		X				
46472	Wholesale Carpets	Design		X				
46473	Wholesale of lighting equipment	Design		X				
4648	Wholesale of watches and jewellery	Fashion / Design		X		X		
46491	Wholesale of newspapers, books and magazines	Print media	X	X				
46497	Wholesale of games and toys	Design		X				
46498	Wholesale of leather goods and travel accessories	Fashion		X				
46650	Wholesale of office furniture	Design		X				
46761	Wholesale diamonds and other gemstones	Design		X				
47	Retail trade, except of motor vehicles and motorcycles							
47591	Retail sale of home furniture in specialized stores	Design		X				
47592	Retail trade in lighting products in specialized stores	Design		X				
47593	Retail sale of glassware, porcelain …	Design		X				
47594	Retail sale of musical instruments in specialized stores	Music		X				
4761	Retail sale of books in specialized stores	Books & press / Print media	X	X		X	X	X
4762	Retail sale of newspapers and stationery …	Books & press	X	X		X	X	X
4763	Retail sale of audio and video recordings …	Music / Distributive trades / AV	X	X		X	X	X
47650	Retail sale of games and toys in specialized stores	Design		X				
4771	Retail sale of clothing in specialized stores	Fashion	X	X		X		
4772	Retail sale of footwear and leather goods …	Fashion	X	X		X		
4777	Retail sale of watches and jewellery in specialized stores	Fashion		X		X		

47787	Retail new artefacts in specialized stores	Design / Visual arts / Arts and antiques retail	X	X				
4779	Retail sale of antiques and second-hand goods in stores	Books & press / Visual arts	X	X		X		
47820	Stalls and markets of textiles, clothing and footwear	Fashion	X					
58	Publishing activities							
5811	Book publishing	Books & press / Publishing	X	X	X	X	X	X
5812	Publishing of directories and mailing lists	Publishing / Print media	X		X			X
5813	Publishing of newspapers	Books & press	X	X	X	X	X	X
5814	Publishing of journals	Books & press / Publishing / Print media	X	X	X	X	X	X
5819	Other publishing	Publishing / Print media	X	X	X			X
5821	Publishing of computer games	IT, software and computer / Software & games		X	X	X	X	X
5829	Other software publishing	IT, software and computer / Software & games			X	X		
59	Motion picture, video and television program production, sound recording and music publishing	Information and communication					X	
5911	Motion picture, video and television programs	Film, TV, video, radio and photography / AV	X	X	X	X	X	X
5912	Activities related to films, video and television program post-production	Film, TV, video, radio and photography / AV	X	X	X	X	X	X
5913	Distribution of films and video and television programs	Film, TV, video, radio and photography / AV	X	X	X	X	X	X
5914	Screening of films	Film, TV, video, radio and photography / AV	X	X	X	X	X	X
592	Sound recording and music publishing	Music / Music, performing and visual arts	X	X	X	X	X	X
60	Programming and broadcasting of radio and television programs	Information and communication					X	
601	Broadcasting of radio programs	Film, TV, video, radio and photography / AV	X	X	X	X	X	X
602	Programming and broadcasting of television programs	Film, TV, video, radio and photography / AV	X	X	X	X	X	X
62	Computer programming, consultancy and related activities							
6201	Design and programming of computer programs	IT, software and computer services / Gaming		X	X	X		X
6202	Computer consultancy activities	IT, software and computer services			X			
63	Information service activities							
6391	News agencies	Books & press / Print media	X	X		X	X	X
70	Activities of head offices; management consultancy …							
7021	Public relations and communication services	Advertising and marketing / Advertising		X	X	X		X
71	Architectural and engineering activities							
7111	Architectural activities	Architecture / Design	X	X	X	X	X	X
73	Advertising and market research							
7311	Advertising	Advertising and marketing	X	X	X	X		X
7312	Media representation	Advertising and marketing	X	X	X	X		X
74	Other professional, scientific and technical activities							
741	Specialised design activities	Design & visual arts / Designer fashion	X	X	X	X	X	X
742	Photographic activities	Design & visual arts / Film, TV, … and photography			X	X	X	X
74201	Activities of photographers, except for press	Visual arts	X	X				
74202	Activities of the press photographers	Print media	X	X				
74209	Other photographic activities	Photography	X					
743	Translation and interpretation activities	Books & press / Publishing		X	X	X	X	
77	Rental and leasing activities							
7722	Rental of video tapes, DVDs and CDs	Video & film / AV	X	X		X	X	X
77294	Rental and leasing services of textiles, clothing, jewellery…	Fashion	1					
82	Office administrative, office support and other business support activities							
8230	Organisation of conventions and trade shows							X
85	Education							

8552	Cultural education	Cultural education / Music, performing and visual arts / AV / Music / Performing arts / Visual arts		X	X	X		X
90	Creative, arts and entertainment	Arts, entertainment and recreation					X	
9001	Performing arts	Music, performing and visual arts / Performing arts & artistic creation / AV	X	X	X	X	X	X
9002	Support activities to performing arts	Music, performing and visual arts / Performing arts & artistic creation / AV	X	X	X	X	X	X
9003	Artistic creation	Music, performing and visual arts / Performing arts & artistic creation / AV	X	X	X	X	X	X
9004	Operation of arts facilities	Music, performing and visual arts / Performing arts & artistic creation / AV	X	X	X	X	X	X
91	Libraries, archives, museums and other cultural activities	Arts, entertainment and recreation					X	
9101	Library and archive activities	Museums, galleries, libraries / Archives, heritage	X	X	X	X	X	X
9102	Museum activities	Museums, galleries, libraries / Archives, heritage	X	X	X	X	X	X
9103	Operation of historical sites and buildings and similar	Archives, libraries, cultural heritage / Heritage / Libraries, archives and museums	X	X		X		
93	Sports activities and amusement and recreation activities							
9321	Activities of amusement parks and theme parks	Archives, libraries, cultural heritage				X		
9329	Other amusement and recreation	Archives, libraries, cultural heritage				X		

The identification of the NACE codes followed the following steps:

- First, **clearly identifiable NACE codes that contribute to the CCS** have been identified. These included codes that are broadly acknowledged by all other studies and approaches analysed including for example codes on a four-digit level under codes such as '59 - Motion picture, video and television program production, sound recording and music publishing', '60 - Programming and broadcasting of radio and television programs', '7111 - Architectural activities', and '90 - Creative, arts and entertainment' among others.
- In a second step, we looked at codes that are only in some of the studies and approaches used to determine, if these should be included in the CCS delineation for Brussels. We looked specifically at **NACE codes that are related to manufacturing** (13-32) such as '14 - Clothing and shoes manufacturing'. We looked at the available data for Brussels and investigated based on a random sample from the data if these codes should be included or not based on desk research. Based on this we decided to include a number of manufacturing activities related to fashion and clothing as the majority of the sample could be identified to be related to fashion design. We didn't include all related manufacturing codes, e.g. '27402 - Manufacture of lighting equipment', because the majority of firms and freelancers active in these codes have not been related to creative activities such as design.
- A similar approach was used for **NACE code activities related to wholesale and retail activities** (46-47) such as '4642 - Wholesale of clothing and footwear' because such activities contribute to the distribution of creative and cultural, products, content and services. Based on analysing random samples of different codes, we identified that the majority of firms active in these codes, are not directly related to creative processes in Brussels. We also took into consideration if the inclusion of the NACE code would impact and distort the results disproportionally. We therefore excluded all wholesale trade activities. These included for example code '4642 - Wholesale of clothing and footwear', which includes stores of H&M, Zara, etc. The deemed that the wholesale of these fashion brands do not contribute significantly to creative and cultural activities in Brussels. However, we decided to include codes related to the retail sale of books in specialized

stores, newspapers, and video, music (4761-4763). These codes include companies that are only partly seen as contributing to creative processes as also many newspaper shops for example are included. The reasoning is that we wanted to create comparability to other studies (because most other studies included these activities) and because firms that are clearly active in creative processes such as record shops are included here.

- We also took a closer look at **activities related to IT and computer programming.** By looking at samples, we decided to exclude several codes if the majority of firms investigated did not considerably support creative processes, such as '6202 - Computer consultancy activities', in which many major companies are included that do not create new software or programmes but do consultancy activities and would disproportionally distort the results. However, we decided to include '5829 - Other software publishing', because much more diverse firms are included here that for example work also on VR and video games.
- We also looked into detail into **codes related to recreation activities**. In code '93 - Sports activities and amusement and recreation activities', we have identified that many firms do contribute to creative processes and culture in Brussels including exhibition room and galleries. However, we manually cleaned sub-codes that did not contribute such as '93291 - Exploitation of billiards and snooker' and other activities related to gambling.
- We also looked at **supporting activities included in codes** that not all other studies have included. We decided to either exclude or include such codes, depending on the contribution to Brussels' CCS and its importance for Brussels' ecosystem. For instance, we '7021 - Public relations and communication services', and '743 - Translation and interpretation activities'. Here again based on analysing a sample and considering the contribution, we decided to include such activities even though also lobbying groups for example might be included here. Still, they create a major contribution to creating new knowledge in Brussels, which is deemed a creative process and at the same time create new design and cultural content (e.g. translation of books). Another reason is the comparability to other studies. And most other studies included these NACE codes.
- Finally, we looked at missing **NACE codes that have not been used by other studies but that could considerable contribute to Brussels' CCS.** We decided to include '8230 Organisation of conventions and trade shows', because the events sector is important in Brussels' international ecosystem and '3240 - Manufacture of games and toys' (which both no other study / approach included), because in Brussels these are mainly small toy manufacturers who design toys or even video game developers acting in this code. Other NACE codes have been identified that contribute to the CCS in Brussels (e.g. 74901 - Activities of agents and representatives of artists, athletes and other public figures), but unfortunately these codes couldn't be included because they only contribute on a 5-digit level, while the database used to extract data only allows to extract data on a 4-digit level.

Generally, it needs to be noted that we made these decisions about which NACE codes to include or exclude based on careful consideration about the impact on the final results, the comparability of this study to other studies on the CCS and the local specific CCS ecosystem characteristics in Brussels. Other studies might choose a different approach because certain NACE codes are differently interpreted in different countries or places for instance. Of course, the decisions made highly influence the final results of the study which needs to be kept in mind when interpreting the results of this study.

Finally, we grouped the NACE codes to 10 identified sectors in Brussels' CCS. The results can be found in the following table, listing all NACE codes included in this study and the sub-sector.

List of NACE codes used in this study on a four-digit level and the grouping into sub-sectors of Brussels' CCS:

NACE Code	Description	Sub-sector
1411	Manufacture of leather clothes	Design & designer fashion
1412	Manufacture of workwear	Design & designer fashion
1413	Manufacture of other outerwear	Design & designer fashion
1414	Manufacture of underwear	Design & designer fashion
1419	Manufacture of other wearing apparel and accessories	Design & designer fashion
1420	Manufacture of articles of fur	Design & designer fashion
1431	Manufacture of knitted and crocheted hosiery	Design & designer fashion
1439	Manufacture of other knitted and crocheted apparel	Design & designer fashion
1511	Tanning and dressing of leather; dressing and dyeing of fur	Design & designer fashion
1512	Manufacture of luggage, handbags and the like, …	Design & designer fashion
1520	Manufacture of footwear	Design & designer fashion
1811	Printing of newspapers	Books & press
1812	Other printing	Books & press
1813	Prepress and pre-media	Books & press
1814	Binding and related services	Books & press
1820	Reproduction of recorded media	Audio-visual
3109	Manufacture of other furniture	Design & designer fashion
3212	Manufacturing of gems and jewellery	Design & designer fashion
3213	Manufacture of imitation jewellery and related articles	Design & designer fashion
3220	Manufacture of musical instruments	Music, performing & visual arts
3240	Manufacture of games and toys	Design & designer fashion
4761	Retail sale of books in specialized stores	Books & press
4762	Retail sale of newspapers and stationery …	Books & press
4763	Retail sale of audio and video recordings …	Audio-visual
5811	Book publishing	Books & press
5812	Publishing of directories and mailing lists	Books & press
5813	Publishing of newspapers	Books & press
5814	Publishing of journals	Books & press
5819	Other publishing	Books & press
5821	Publishing of computer games	Software & gaming
5829	Other software publishing	Software & gaming
5911	Motion picture, video and television programs	Audio-visual
5912	Activities related to films, video and television program post-production	Audio-visual
5913	Distribution of films and video and television programs	Audio-visual
5914	Screening of films	Audio-visual
5920	Sound recording and music publishing	Music, performing & visual arts
6010	Broadcasting of radio programs	Audio-visual
6020	Programming and broadcasting of television programs	Audio-visual
6201	Design and programming of computer programs	Software & gaming
6391	News agencies	Books & press
7021	Public relations and communication services	Advertising & marketing
7111	Architectural activities	Architecture
7311	Advertising	Advertising & marketing
7312	Media representation	Advertising & marketing
7410	Specialised design activities	Design & designer fashion
7420	Photographic activities	Photography
7430	Translation and interpretation activities	Books & press
7722	Rental of video tapes, DVDs and CDs	Audio-visual
8230	Organisation of conventions and trade shows	Organisation of events
8552	Cultural education	Cultural, arts & heritage
9001	Performing arts	Music, performing & visual arts
9002	Support activities to performing arts	Music, performing & visual arts
9003	Artistic creation	Cultural, arts & heritage
9004	Operation of arts facilities	Cultural, arts & heritage
9101	Library and archive activities	Cultural, arts & heritage
9102	Museum activities	Cultural, arts & heritage
9103	Operation of historical sites and buildings and similar	Cultural, arts & heritage
9321	Activities of amusement parks and theme parks (except 93210, 93291, 93211)	Cultural, arts & heritage
9329	Other amusement and recreation	Cultural, arts & heritage

Annex 2 – Methodological limitations and data cleaning approach

The research process applied in this study has some inevitable limitations and it is necessary to report explicit shortcomings of the methodology and to report the data cleaning approach that was applied to overcome these limitations, so that the results of this report can be truthfully interpreted.

There are two major limitations for the data analysis: (1) the complexity of the CCS which leads to (2) low quality of the data.

First, the CCS shows complex structures and is highly impacted by converging tendencies and technology advancements leading to interconnected activities, and novel dynamics making it impossible to clearly distinguish and characterize each entity.

- Especially the NACE classification has its limitations. Consequently, the demarcation of the various entities of the CCS into the 10 sectors here presented is neither exclusive nor exhaustive. To illustrate, a newspaper might nowadays also publish video content online. Should the newspaper be part of the books & press sector or the audio-visual sector? Closest to the truth would be if the activities of the company could be distinguished and separately estimated. However, as due to the NACE classification system, this is not in detail possible.
- We have chosen to extract NACE classifications of the analysed entities based on their principal economic activity (while also secondary and more activities can be declared by companies). The principal economic activity should represent the biggest part of the entity. This approach is theoretical and gives good possibilities for distinctions between activities and entities as the approach gives more restricted delimitation of the CCS.
- Another important factor in this is the globalization industrial sectors are subject to international dynamics. For instance, organisations in Brussels are not necessarily Belgian and operate across national boundaries and organisations abroad may have a significant effect on the local economy. This complexity of the CCS generated by convergence tendencies and globalization through technological advancements is hard to grasp in quantitative methods. The study is therefore limited to the available resources in identifying the institutions and self-employed people in the CCS that need to file activities in Brussels and cannot work exhaustively, neither in terms of defining activities nor spatial boundaries.
- Additionally, the data used includes businesses registered in Brussels including overall key indicators including subsidiaries and branches into the calculations. The available data does not allow us to distinguish directly between trading addresses, addresses for filing purposes and subsidiaries. Only companies registered at one of the analysed locations are included in the analysis. The data does not allow to see where employees are located and therefore where exactly economic activities are taking place. Consolidated accounts have been used, meaning if subsidiaries are working at different locations, the turnover and number of employees are still designated to one location. This means that part of the analysed entities might actually have shares of their employees in a different location or that the actual activities registered in Brussels are not being carried out in Brussels. This needs to be taken into consideration when interpreting the findings.

Second, data sources on the CCS that are available for analysis are hardly reliable.

- Only a portion of the activities of the CCS is encapsulated by classification systems, like the NACE nomenclature (see above). For the majority of the activities, there is no code, or an activity spans different codes, or one code covers different activities. For example, app development has been a rising economic activity, but this is not captured in the classification system.
- Also, irregularities have been encountered between entities' attributed activity codes and actual activities carried out. For instance, the companies that are summarised under a certain code actually perform a different activity, either related or not, and should not be attributed to the activity concerned. On the other hand, entities that actually perform the activity for which searches are made using the nomenclature, are included under a different activity code and are therefore not included in the group to which they belong. This means that there is a discrepancy between the reality and the estimations presented here.
- Additionally, working with official data sources means that there are constraints in data availability. Especially financial data has many constraints. For the entities, all available data are reported according to the reporting requirements of the legal form. This leads to big data gaps in the data set. For example, for self-employed and small companies often, only address details and activities nomenclature are shown, without financial data. At the same time, the CCS encompasses in the majority these kinds of entities. Also, a time lag could be identified as publicly available data becomes only available after about two to three years.
- The complexity of organisational structures in economic and legal areas causes potential discrepancies in the data collection process. When an institution is identified as being part of the CCS but carries out several activities, some of these activities might not belong to the CCS as here defined. But only total figures are available and accounted for. This leads to distortions in the datasets.
- Also, unavailable data cells due to reporting requirements of entities needed to be harmonized (see above). For this average and median measures were applied. This means that the findings of this research are dependent on assumptions made in the harmonization process. Extrapolation however does not take into account the differences between sectors and activities. In the absence of more accurate and comprehensive information, this implemented adjustment is however a good option to approximate the findings than simply ignoring the absence of data.

All these limitations lead to distortions in the findings. Thus, it is important to understand that different approaches, delineations and operationalization in this research field can generate very different figures. In order to overcome the limitations of the methodology, the author has chosen to utilize as many valuable data sources as possible for a European comparison (in order to see reliability of estimations including comparisons to European studies, Eurostat data and OECD data). Additionally, Belgian official data sources have been utilised to check plausibility of the findings and to enrich the analysis including data from IBSA/BISA and StatBel.

Additionally, we applied an inductive approach to manually clean data errors that could lead to overestimations in the extrapolation of the analysis. For this we checked groups of entities in the data set through desk research and through stakeholder consultation:

- First, we analysed the biggest companies in the dataset and checked if their activities are in the CCS and if the values in the dataset of these companies are realistic. This was done by desk research. Through this, we identified several organisations that would distort the results significantly. Therefore, companies have been deleted based on the assumption

that the activities are not taking place in the CCS. Also, values were cleaned if the data was found to be false, e.g. too many employees declared.

- Second, we identified the biggest organisations in Brussels' CCS and checked if they were included with the correct values in the dataset. We for example identified that RTBF, the public service broadcaster, has due to its public organisation type no data recorded in the dataset. Empty data fields were filled with information form the annual reports of the RTBF.
- Third, we asked stakeholders of Brussels' CCS to check the entities in the dataset to identify if sectors and organisations that are included should not be included or if important players in Brussels' CCS are missing. We manually cleaned these companies and added companies to the dataset.
- Finally, we identified a large number of entities with the same name in the dataset. We didn't identify duplicates based on company number though. There were a total of more than 6000 entities in the dataset with the same name. We decided to not exclude duplicate values as it wasn't clearly identifiable if the entities with the same name were indeed duplicates of the same entity or if companies might have by coincidence the same name or if for example one entity has been dissolved at some point and a new one has started. Many of these duplicates were independents who might have registered their freelance work with different NACE codes. We therefore decided to keep them included in the analysis. However this might distort the results slightly to become overestimated (even though other measures in the data cleaning process ensure to rather estimate more conservative indicators).

While the data harmonisation and cleaning process meant to significantly change the underlying dataset of the study, we believe that these manual cleaning steps have been valuable to paint the truest picture of Brussels' CCS. We are confident that this approach will ensure that the most comprehensive picture on the economic impact of the CCS in Brussels is drawn in this report.

Annex 3 – About the study

This study was conducted by the research centre SMIT (Studies on Media, Innovation and Technology) at Vrije Universiteit Brussels (http://smit.vub.ac.be/). The research was produced with the financial support of hub.brussels.

About the author

Dr. Marlen Komorowski is senior researcher at the research centre imec-SMIT-VUB (Studies on Media, Innovation & Technology) in Brussels. She is also working as impact analyst with the Clwstwr programme. Clwstwr is a five-year programme at Cardiff University to create new products, services and experiences for the creative industries and the screen sector in South Wales. She is analysing the impact of the local creative economy on the Welsh economy and is involved in the analysis of the impact of the programme on the industry. Marlen finished her PhD in September 2019 at VUB. The dissertation has the title 'Agglomerating media activities in the city: Media cluster development in Brussels and beyond'. In her PhD, Marlen analysed Brussels' media and creative industries while creating new insights into how to strengthen and support the local media and creative industries in Brussels.

As a researcher, her work focuses on media and creative industries-related projects, impact analysis, industry clustering, ecosystem and value network analysis, new business models and the impact of the digitisation on industries and firms. She has developed an expertise on Brussels' media and creative industries in the last 5 years. Through the four-year project Media Clusters Brussels, which was financed by Innoviris, she was able to analyse the economic impact of Brussels' media industry and developed a methodology for economic impact analysis. She published relevant articles in that context in renowned international, scientific journals.