A Cross-Strait Comparison of Innovation Policies for Cultural and Creative Industries

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ABSTRACT

Cultural and creative industries (CCIs) are an emerging industry supported by governments in many countries. Until now, the academic research in CCIs has discussed issues such as the economic role of CCIs, the development of CCIs in different regions, and cultural policy and innovation. In recent years, CCIs were regarded a positive force for industrial upgrading and economic growth in both China and Taiwan. Moreover, China and Taiwan share a similar industrial growth path given that both are attempting to transform their manufacturing-dominating industry structure via integration of CCIs. A cross-strait comparison of innovation policies for CCIs can enhance understanding, create opportunity for cross-strait collaboration, and identify gaps in the current innovation policy portfolio. Thus, this paper compares the innovation policy tools of China and Taiwan using the framework developed by Rothwell and Zegveld (1981) and offers suggestions for innovation policy design for CCIs in both countries.

Keywords: Cross-strait analysis, Cultural and creative industries, Policy tools, Innovation

1. INTRODUCTION

Cultural and creative industries (CCIs) are becoming increasingly important for modern post-industrial knowledge-based economies and are promoted by governments around the globe, especially in Europe and Asia. These governments have taken seriously the idea that CCIs are crucial components of their economies, and are in need of support and development through industry innovation policies as well as cultural policies (UNESCO, 2013; 2015).

The term "cultural industries" can be traced back to early work in the Frankfurt School in the 1930s and 1940s and it refers to forms of cultural production and consumption that have at their core a symbolic or expressive element, whereas "creative industries" can be applied to a wide productive set, including goods and services produced by the cultural industries and those that depend on innovation (UNESCO, 2013). However, there is no internationally agreed-upon definition for the industries. The three most common approaches to defining the scope of the creative cluster are: the "cultural industries" approach, the "creative industries" approach, and the "copyright industries" approach (Wang, Liu, & Chou, 2010).

UNESCO (2015) defines cultural and creative industries as activities "whose principal purpose is production or reproduction, promotion, distribution or commercialization of goods, services and activities of a cultural, artistic or heritage-related nature". There are 11 sectors in this definition of cultural and creative activities, including advertising, architecture, books, gaming, music, movie, newspapers and magazines, performing arts, radio, TV, and visual. This research adopts this definition in analyzing CCIs.

UNESCO (2015) reports that CCIs generated US$2,250 billion of revenues and created 29.5 million jobs worldwide. The Asian market is the largest CCI market, driven by a large population, followed by Europe and North America. CCIs not only drive growth through creation of value, but have become key elements of the innovation system of the entire economy (UNESCO, 2013). CCIs help stimulate the emergence of new ideas, innovation, and technologies.

Taiwan began promoting CCIs since 2002 through the government's "Challenge 2008: Six-Year National Development Plan". The scope of CCIs is defined by the Ministry of Culture as fifteen plus one categories. According to the Cultural Creative Industries Annual Report of 2016 (Ministry of Culture, 2016), the total number of Taiwanese enterprises in CCIs was 62,958, up 1.24% from 2014. The visual arts and design industries continued the growth in 2014, accounting for 27.65% of the overall growth in CCIs. In 2015, the turnover of CCIs in Taiwan was NT$833.9 billion (US$27.8 billion), a slight increase of 0.57% from 2014.

Similarly, CCIs are being used by the Chinese government to stimulate China's economic transformation. The Chinese government has ratified the Cultural Industry Revitalization Plan, signifying the elevation of the cultural industry to a national strategic industry. The recently unveiled that 13th Five-Year Plan promotes CCIs as a pillar industry. According to the National Bureau of Statistics, the added value of China's CCIs industries increased from RMB 1.105 trillion (US$1,842 billion) in 2010 to RMB 2.724 trillion (US$4,539 billion) in 2015, representing an expanded share in GDP from 2.75 % to 3.82 % (Li, 2016). CCIs have become an important impetus of economic growth and structural change.

Recent academic studies on CCIs in Taiwan and China largely use the perspectives of industrial development (Tsai, 2013; Feng et al., 2013; Xu, 2013; O'Connor & Gu, 2014), cultural and creative park planning (Lin & Chen, 2011; Huang, 2013; Zheng & Chan, 2014; Yeh, 2016), or case studies of enterprises (Chang et al., 2014; Li & Lin, 2014; Chou & Tsai, 2016). Some have discussed the role of the government in the design of policies for CCIs (Lam, 2012; White & Xu, 2012; Huang, 2015;

Lu & Chang, 2016; Hu et al., 2017). Few studies have taken a national perspective on policy tools.

China and Taiwan are transforming their manufacturing-dominant industry structure through value creation from creativity and design, and both governments have released innovation policies to encourage the development of CCIs. Therefore, this study compares innovation policy tools in Taiwan and China to identify issues for future progress.

2. BACKGROUND

2.1 Innovation and Innovation Policy Background

Though there are many ways to define innovation, this paper defines innovation as the commercialization of a new idea or product, and thus focuses on the policy perspective of innovation and CCIs. Innovation policies are instruments that a government can manipulate for the stimulation of national innovations. In the mid-20th century, innovation policies were focused upon universities, research institutions, technological institutes, and R&D laboratories, but in the 1990s innovation policies opened up to non-technological aspects of innovation, such as design, marketing, and organization (Nooteboom & Stam, 2008). Atkinson and Ezell (2012) highlighted the importance of the implementation of innovation policies to support the innovative capacity of economies and to gain the global innovation advantage. However, Marcus (1981) argued that different government policies affect innovation differently. Governments need different sets of strategies for innovation policy for growing particular industries.

2.2 Innovation Policy Tools

Innovation policy refers to government instruments that attempt to stimulate innovation concerning new product ideas, production processes, and marketing concepts. Shyu and Chiu (2002) indicated that innovation policy includes science and technology policy and industry policy, and the former aims to enhance the basic and applied research capabilities of nations while the latter is to enhance the industry competitiveness. Based on the list of possible kinds of innovation policies identified by Rothwell and Zegveld (1981), Shyu and Chiu (2002) grouped these policies into supply, environmental, and demand. Classification and policy tools are illustrated in Table 1.

The three groups of innovation policy tools represent different aspects to which a government could allocate resources. For example, supply-side policy tools focus on the stimulation of new technologies and products. Environmental-side tools encourage the flourishing of an industry. Demand-side tools attempt to establish marketing or sales channels with the government support. Rothwell and Zegveld (1984) contend that the policy system should be sufficiently flexible to accommodate different types of innovation produced in greatly varying contexts given that innovation is a dynamic process. Therefore, these policy tools could form a portfolio of instruments a government can adjust based on the changing environment of innovation. The research follows this framework of innovation policy tools for the categorization of cross-strait innovation policy tools in CCIs.

3. METHODOLOGY

This cross-sectional study on cross-strait innovation policies of CCIs adopts a qualitative research approach through secondary data analysis. This approach enables us to explore the various policy tools in a comprehensive way and to investigate the current cross-strait governmental strategies for the development of CCIs. We sourced reports from various sources such as government databases and research institutions, domestic and foreign journals, newspapers, government white papers, and websites related to policies on CCIs. The data on policy tools were collected and retrieved within 2016 from government websites, white papers, or organizations supported by governments, and these policy instruments were active as of 2016. The study surveyed the policy landscape

Table 1. Classification of government policy tools

Dimension	Policy tool	Examples
Supply side	Public enterprise	Innovation by publicly owned industries, setting up of new industries, pioneering use of new techniques by public corporations, and participation in private enterprise
	Scientific and technical development	Research laboratories, support for research associations, learned societies, professional associations, and research grants
	Education	General education, universities, technical education, apprenticeship schemes, continuing and further education, and retraining
	Information	Information networks and centers, libraries, advisory and consultancy services, databases, and liaison services
Environmental side	Financial	Grant loans, subsidies, financial sharing arrangements, and the provision of equipment buildings or services, financial loan guarantees and export credits
	Taxation	Company, personal, indirect and payroll taxation, and tax allowances
	Legal regulatory	Patents, environmental and health regulations, inspectorates, and monopoly regulations
	Political	Planning, regional policies, honor or awards for innovation, the encouragement of mergers of joint consortia, and public consultation
Demand side	Procurement	Central or local government purchases and contracts, public corporations, R&D contracts, and prototype purchases
	Public services	Purchases, maintenance, supervision and innovation in health services, public building, construction, transport, and telecommunications
	Commercial	Trade agreements, tariffs, and currency regulations
	Overseas agents	Defense sales organizations

Source: Rothwell and Zegveld (1981), Shyu and Chiu (2002).

and identified 124 policy instruments from Taiwan and 77 from China. These policy instruments were categorized using the innovation policy framework of Rothwell and Zegveld (1981, 1984) as described in Table 1. The cross-national analysis of the CCIs is performed via qualitative content analysis and descriptive statistics.

4. THE INNOVATION POLICIES FOR CCI IN TAIWAN AND CHINA

4.1 Innovation Policies for CCI in Taiwan

In the pursuit of economic development in the 1970s, the Taiwanese government prioritized manufacturing to bring about considerable economic output and create "Taiwan's economic miracle". However, the focus on manufacturing industries led to the neglect of the development of arts and creativity, which has become a critical element of economic achievements for many countries. Hence, the Taiwanese government realized the necessity to implement a series of plans and policies for the development of CCIs. In 2002 it began the "Challenge 2008: National Development Plan". The plan called for investing NT$11 billion (US$366 million) for the promotion of CCIs, to pursue talent cultivation, research development, information integration, financial support, provision of space, and the reduction and exemption of rents and taxes. In 2010, the Taiwanese government passed the Law for the Development of the Cultural and Creative Industries, offering legal protection for creators and enterprises in CCIs.

The definition of CCIs in Taiwan does not deviate from the perspectives and definitions used by UNESCO and UK (Wu & Kung, 2014). According to Law for the Development of the Cultural and Creative Industries (2010), its principle is "to foster the development of Cultural and Creative Industries, to establish a social environment with abundant culture and creativity, to utilize the technology and create researches and developments, to strengthen talent cultivation of the Cultural and Creative Industries, and to actively

exploit the domestic and overseas market" (Laws & Regulations Database of R.O.C., 2010). The law also defines CCIs as "the industries that originate from creativity or accumulation of culture which through the formation and application of intellectual properties, possess potential capacities to create wealth and job opportunities, enhance the citizens' capacity for arts, and elevate the citizens' living environment". The scope of Taiwan's CCIs is listed in Table 2.

In 2009, CCIs were promoted as one of the six emerging industries in Taiwan by the Executive Yuan, and "Cultural and Creative Industries Development Program" was passed. The latter provided NT$26.2 billion (US$873 million) to transform Taiwan into a cultural and creative convergence center in the Asia-Pacific region. The program consisted of two sections: the infrastructure section and "flagship program" section. The infrastructure section sought to create a friendly environment for the development of CCIs, such as training of creative talents, relaxation of laws and regulations, and provision of financing assistance to entrepreneurs. The flagship program section included the promotion of popular music, digital content, design and artifacts, through funding, research and development, marketing, personnel education and training, and industry clustering effects.

In 2013, the Ministry of Culture proposed the plan "The Construction and Innovation of the Value Chain for Cultural and Creative Industries" in order to create a new industry ecosystem and aesthetic economy. There were two objectives for this plan: (1) to make Taiwan's CCIs leaders in the Chinese-speaking world and (2) to make CCIs a new engine for the economy of Taiwan. In the same year, the Small and Medium Administration Enterprise (SMEA) of the Ministry of Economic Affairs launched the Emerging Industries Accelerator Program focusing on seven major industries, including CCI. The program provided intensified consultation and offered target acceleration services for medium to large enterprises from mentoring and funding to networking.

Through secondary data collection, we located 124 policy tools used by the Taiwanese government. The most common innovation policy tools are in finance, which accounts for 27% (33 policy instruments), followed by scientific and technical development at 21% (26 policy instruments). Table 3 shows the details of policy tools used by Taiwanese government while Figure 2 shows the distribution ratio of the innovation policy for CCIs in Taiwan.

Table 2. The scope of the CCIs and the relevant regulatory authorities in Taiwan

No.	Industry	Regulatory Authority
1	Visual arts industry	Ministry of Culture
2	Music and performing arts industry	Ministry of Culture
3	Cultural assets application and exhibition and performance	Ministry of Culture
4	Handicrafts industry	Ministry of Culture
5	Film industry	Ministry of Culture
6	Radio and television broadcasting industry	Ministry of Culture
7	Publication industry	Ministry of Culture
8	Advertisement industry	Ministry of Economic Affairs
9	Product design industry	Ministry of Economic Affairs
10	Visual communication design industry	Ministry of Economic Affairs
11	Designer fashion industry	Ministry of Economic Affairs
12	Architectural design industry	Ministry of the Interior
13	Digital content industry	Ministry of Economic Affairs
14	Creative living industry	Ministry of Economic Affairs
15	Popular music and cultural content industry	Ministry of Culture
16	Other industries as designated by the central competent authority	

Source: Ministry of Culture, Republic of China (2015)

Table 3. Innovation policy tools for CCIs in Taiwan

Policy tools/policy	
I. SUPPLY SIDE (48.8% of the total)	
1. Public enterprises (6, 5.00%)	
- Foundation of cultural and creative industries Development Institute	- Digital Education Institute
- Taiwan Design Center	- Nankang Software Incubator
- Institute for Information Industry	- Digital Art Kaohsiung United Office
2. Scientific and technical development (26, 21.00%)	
- "Creative Taiwan - Cultural and Creative Industries Development Program" - Digital Flagship Program	- Cultural and creative cross-border innovation and value-added highlights of the project
- Participate in international pop music activities and study abroad grants	- Shadow Sailing peak program
- Rise of the project (creative production)	- Pop music broadcasts tenor program
- Cultural and creative industries subsidy program	- Ministry of Culture counseling digital publishing industry development subsidies homework points
- Leading new product development counseling program	- Promote the application of smart life in Industrial Bureau - Advanced research on digital publishing industry integrated service
- Digital Taipei: Digital content conference	- Digital convergence key forum - emerging video services development opportunity
- 2011 Digital Licensing Application Forum - Cultural and artistic point of stone into gold	- Digital Content Industry Innovation Seminar
- Cross-Strait Digital Content Industry Cooperation and Exchange Conference and Trade Fair	- Taiwan-Japan Digital Content Industry Forum
- IT Services & eBusiness Day & IT Spending Day	- Digital Taipei: Digital content exhibition
- Digital Content Product	- 4C Digital Design Awards
- Vision Get Wild Exhibition	- Chinese Digital Content Development Association
- Unite 2015 Taipei	- Innovative Technology Applications & Services Program
- Support for the development of the service industry research and development counseling program	- Services Research and Development Counseling Program (Service Industry Innovation Award)
3. Education (13, 10.80%)	
- Foundation of cultural and creative industries development institute	- Colleges and universities to establish cultural and creative related departments and courses
- Pop music industry development action plan	- TV content industry development flagship program talent pool development plan
- Movie industry development flagship project	- International Manga Camp (Publishing professionals training program)
- Pop pearl network project (personnel training)	- TV talent training case
- Professionals training subsidies for industry and academia	- Cultural and creative industries of international personnel training
- MOE Scholarship Program for Overseas Study in Art and Design	- Law for the Development of the Cultural and Creative Industries: Article 11
- Cultural and creative industry intermediary and broker talent cultivation	
4. Information (15, 12.00%)	
- Taiwan Culture Creative Industries Website	- Taiwan design industry soaring project
- International and cross-strait cultural and creative industries bridging program	- Taiwan Services Trade Information Platform
- iCulture	- Taiwan film industry trend research database
- Cultural and creative industries breeding center	- Cultural and creative industry intelligence network
- Cloud iMatch platform	- Digital Content Industry Promotion Office
- Digital Content Institute monthly magazine	- Digital Learning Industry Pushing Hands Monthly
- Digital Publishing Research Forum	- Education cloud applications and platform services
- iMatch of CCI Café	
II. ENVIRONMENTAL SIDE (38.4% of the total)	
1. Public enterprises (6, 5.00%)	
- Law for the Development of the Cultural and Creative Industries: Chapter 2 Assistance, Reward and Subsidy scheme	- Subsidies & Incentives for Taipei Industry

Table 3. Innovation policy tools for CCIs in Taiwan *(continued)*

Policy tools/policy	
- Flagship group and strategy group domestic film subsidies	- Corporate Counseling for Subsidy Funding Counseling Fund
- Counseling art industry innovation bred subsidy program	- Cultural and creative industries subsidy program
- Counseling digital publishing industry development subsidies homework points	- Domestic film feature film counseling gold points
- Subsidy of production and research cooperation program of work points	- Digital highlights program
- Counseling film industry digital upgrade points	- Small Business Innovation Research
- Angel Project	- Subsidy issues digital publications
- The International Exhibition Awards	- Pop deep dream soil project
- Digital content industry and cultural and creative industries preferential loans points	- Digital content industry preferential loans
- To promote SME intellectual property financing program	- Cultural and creative industries preferential loans
- Promote industrial research and development loans program	- Youth Counseling Council of the Executive Yuan
- Financial supportive CCIs project	- Cultural and creative industries preferential loans points
- Film business broadcasting program supply business and audio publishing business preferential loans	- Promotion of industrial innovation or research and development loans
- Assist small and medium enterprises to take root in project loan	- Promote the service industry to develop concessional loans
- Domestic Private Enterprise International Patent Litigation Loans	- Counseling SME upgrade loans
- SMEs small convenience loans	- Micro Venture Phoenix Loan
- 10 billion investment in small and medium enterprises plan	
2. Taxation (3, 2.00%)	
- Law for the Development of the Cultural and Creative Industries: Chapter 3 Tax Incentives	- Culture and Arts Reward Act
- Current tax relief measures for cultural industries	
3. Legal regulatory (4, 3.00%)	
- Digital content industry development regulations	- Law for the Development of the Cultural and Creative Industries
- Foundation of Cultural and Creative Industries Development Institute Draft	- Small and Medium Enterprise Administration of the Ministry of Economic Affairs to Deal with the Essentials of Enhancing Schemes for Small and Medium-sized Enterprises to Invest in Investment Projects
4. Political (8, 6.40%)	
- Challenge 2008 National Key Development Plan - "Cultural and Creative Industry Development Plan"	- Creative Taiwan - Cultural and Creative Industry Action Plan
- Six Emerging Industries - Culture and Creativity	- Digital Learning Industry Cross-Border Jumped Up Project
- Digital Content Industry Development Action Plan	- Cultural Taiwan 101
- Two Trillion and Twin Star Development Program	- Digital Confluence Development Program
III. DEMAND SIDE (12.8% of the total)	
1. Procurement (1, 0.80%)	
- Law for the Development of the Cultural and Creative Industries	
2. Public services (9, 7.00%)	
- National Information and Communication Infrastructure	- Network culture development plan
- Executive Yuan "Four-year work plan to reduce digital divide"	- Ministry of Culture subsidies art village operation support project plan
- Software Park set up (Nangang, Kaohsiung)	- Digital Confluence Development Program
- National Arts Exhibition Center set-up facilities	- Cultural and creative industries park establishment
- Local cultural facilities	
3. Commercial (2, 2.00%)	
- Cross - Strait Agreement on Trade in Services - Specific Commitments in Trade in Services	- Arrangement between the association of East Asian relations and the interchange association for the mutual cooperation on electronic commerce
4. Overseas agent (4, 3.00%)	
- International and cross-strait cultural and creative industries bypass program	- Organization of large-scale trade delegation / industrial marketing group
- Xin Zheng He Project - Service Project	- International Market Development Project

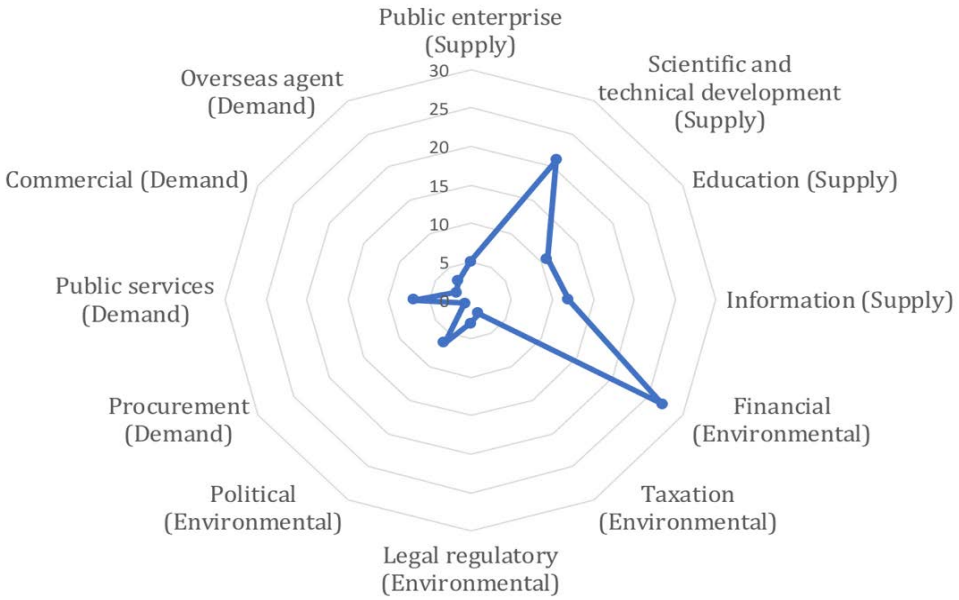

Figure 1. Distribution ratio of CCI policy in Taiwan

4.2 Innovation Policies for CCI in China

In the late 1970s, the Chinese government began to delegate responsibility for the development of CCIs to the provincial level (Kraus, 2004; Tong & Hung, 2012). Before 1999, China used the term "cultural business" rather than "cultural industry". The term "cultural industry" first appeared in China after 2000, although China's cultural industry had its beginnings in 1978 (Lee & Lim, 2013). Though the definition of CCIs was without consensus , the national government began using the term "cultural industries" around 1998 and formally adopted it in the 10th Five-Year Plan (2001). The term includes 10 subsectors: publishing, radio and television, newspaper and magazines, commercial display, entertainment, exhibition, and network, and subsectors such as advertisement, digital content, and animation were added in subsequent plans (Lee & Lim, 2013). This signaled a recognition of the growing economic potential of the commercial cultural sector (O'Connor & Gu, 2014). Since 2000, the Chinese government has implemented policies to support CCIs strategically. In the 10th Five-Year Plan (2001), the Chinese government put an emphasis on electing the cultural industry policy and promoting development of CCIs. In the 11th Five-Year Plan (2006), the Chinese government established ordinances and regulations to develop CCIs, and mentioned it would promote movie, publishing, printing, advertisement, entertainment, exhibition, digital contents and character, and animation industries. In the 12th Five-Year Plan (2011), the government decided to nourish CCIs, and implemented several supportive policies such as inducing big enterprises and investors. In the 13th Five-Year Plan (2016), public entrepreneurship and innovation became the new driving force to the development of design industries. The development of China's cultural policy is summarized in Table 4. According to Hu, Zhou, and Gong (2017), all these shifts are the results of mutual influence and dynamic adjustment between design and industries.

Keane (2014) indicated that the most obvious manifestation of CCIs in China includes art zones, design clusters, movie and animation bases, and incubators. Among these the design cluster is regarded as a sign that the government intended to facilitate the cultural economy. In addition, the central government also established more than 30 national animation bases through its various ministries and departments. Li (2016) claimed that CCIs have

accelerated the economic restructuring in China. In the past thirty years, China had confronted great economic and social achievements with the expansion of industrialization, resulting in average annual growth exceeding 10%. With the integration of CCIs into the current industry portfolios, the Chinese government has attempted to make CCIs a pillar industry and update its industry structure.

Through secondary data collection, we identified 77 innovation policy tools used by the Chinese government. The most numerous focus on public enterprises (17%, 13 policy instruments), followed by financial (10%, 13 policy instruments) and public services (10%, 13 policy instruments) (Table 5). The innovation policies for CCIs in China are shown in Figure 2.

Table 4. Innovation policy tools for CCIs in China

Policy documents	Results
11th Five-Year Plan (2006-2010)	
- Suggestions on the obligation to further develop industrial design in China - Research on the development trend of domestic and foreign industrial design	Establishment of industrial design parks
- Several instructions on promoting the development of industrial design	
12th Five-Year Plan (2011-2015)	
- Several suggestions on pushing the integrate development of culture creativity and design service with related industry - Research on the development strategy of innovation design - Suggestion on further develop innovation design	Integrated development of industries
13th Five-Year Plan (2016-2020)	
- Made in China 2025 - State Council's opinion on the several policy measures to push forward the public entrepreneurship and innovation - State Council's instructive opinion on actively pushing forward the "Internet +" operation	Public entrepreneurship and innovation

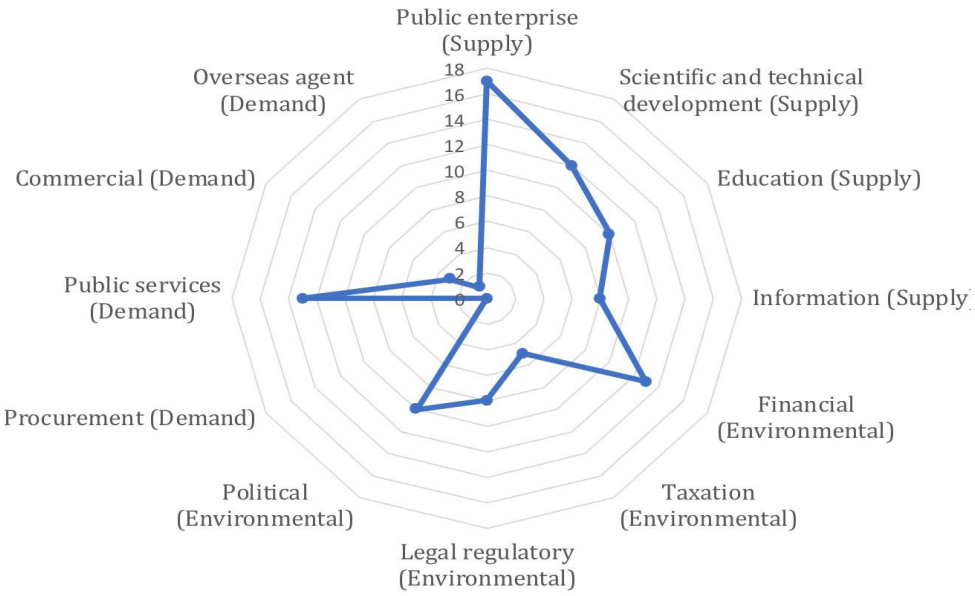

Figure 2. Distribution ratio of CCI policy in China

Table 5. Innovation policy tools for CCIs in China

Policy tools/policy	
I. SUPPLY SIDE (47% of the total)	
1. Public enterprises (13, 17.00%)	
- China Culture Media Group Limited	- China Oriental Performing Arts Group Co. Ltd.
- China Arts and Entertainment Group	- Zhongshu Culture Group
- China Film Group Corporation	- Shanghai Culture Assets and Equity Exchange
- Shenzhen Culture Asserts and Equity Exchange	- Shanghai United Media Group
- China International Television Corporation	- Bamc Digital Television Co., Ltd.
- China Education Publishing & Media Holdings Co. Ltd.	- Beijing Wanda Culture Industry Group Co. Ltd
- Poly Cultural Group Corporation Limited	
2. Scientific and technical development (9, 12.00%)	
- 11th Five Year Plan for Cultural Construction: Promotion Plan of Chinese Children Song Creation	- 11th Five Year Plan for Cultural Construction: Cultural Excellence Strategy to Encourage the Creation and Accumulation of Outstanding Works
- 11th Five Year Plan for Cultural Construction: Improving the Quality of Scientific Research Achievements of Culture and Arts	- National Animation Industry Development Plan in the 12th Five-Year Plan Period: National Animation Quality Project
- National Animation Industry Development Plan in the 12th Five-year Plan Period - Domestic Movie Animation Support Project	- National Animation Industry Development Plan in the 12th Five-Year Plan: China Culture and Art Government Prize Animation Award
- National Cartoon Industry Development Plan in the 12th Five-Year Plan Period	- National Cartoon Industry Development Plan in the 12th Five-year Plan Period - "Motive Force" Original Animation Publishing Support Program
- Beijing Film Academy - China Federation of literary and art resources center digital content industry research center	
3. Education (8, 10.00%)	
- 2014 Cultural Industry Entrepreneurship Creative Talents Support Project	- 11th Five Year Plan for Cultural Construction - National Art Education Promotion Project
- National Animation Industry Development Plan in the 11th Five-year Plan Period - Standardization Project of Animation and Talent Training	- National animation industry development plan in the 12th Five-year Plan period - National animation industry advanced training class
- National Cartoon Industry Development Plan During the 12th Five-Year Plan Period - Investigation and Design of Comic, Animation, Digital Media Art Professional Norms	- National Cartoon Industry Development Plan for the 12th Five-Year Plan - Cartoon Teaching Materials Construction Project of Colleges and Universities
- Cross-Strait Digital Content Industry Conference	- National Cartoon Industry Development Plan in the 12th Five-Year Plan
4. Information (6, 8.00%)	
- Ministry of Culture Information Development Outline (2013-2020)	- 12th Five-year Plan culture and technology development planning
- National Cultural Information Resources Sharing Project Management Measures (June 30, 2002)	- Cultural construction 11th Five-year Plan - to build a platform for the development of cultural industries (Shenzhen)
- National Cartoon Industry Development Plan in the 12th Five-year Plan Period - Original Animation Promotion Plan	- National Cartoon Industry Development Plan in the 12th Five-year Plan Period - National Animation Industry Public Information Service Platform
II. ENVIRONMENTAL SIDE (36% of the total)	
1. Financial (10, 13.00%)	
- National Arts Fund Articles (Trial)	- Cultural industry revitalization plan
- Cultural Construction 11th Five-year Plan - Cultural Products Export Support Program	- The establishment of a special fund for the development of national cultural industries
- Some Economic Policies Further Supporting Cultural Undertaking Development	- Provisions on Supporting the Development of Cultural Industry in the Pilot Reform of Cultural System
- Interim Measures of the Central Government to Subsidize the Management of Special Funds for the Development of Local Culture, Sport and Media	- Opinions of the Ministry of Culture, the People's Bank of China, and the Ministry of Finance on Further Promoting Cultural and Financial Cooperation
- Guiding Opinions on Revitalizing and Developing and Prospering the Culturally Supported Cultural Industry	- Interim Measures for Special Fund for the Development of Cultural Industries

Table 5. Innovation policy tools for CCIs in China *(continued)*

Policy tools/policy	
2. Taxation (4, 5.00%)	
- Personal income tax incentives	- Property tax, land use tax incentives
- Business tax incentives	- Corporate income tax preferential policies
3. Legal regulatory (6, 8.00%)	
- Interim Provisions on the Administration of Internet Culture	- Copyright Law of the People's Republic of China
- Regulations on the Administration of Movies	- Advertising Law of the People's Republic of China
- Administrative Measures for the Broadcasting of Radio and TV Advertisements	- Digital works copyright registration platform
4. Political (8, 10.00%)	
- Cultural Construction "Eleventh Five-Year Plan"	- Cultural and Creative Industries Development Plan during the 12th Five-Year Plan
- Cultural and creative industries revitalization program	- Ministry of Culture Plan for Redoubling Cultural Industries during the 12th Five-year Plan Period
- Information Industry Science and Technology Development "11th Five-Year Plan and long-term 2020 Plan	- Zhejiang Provincial People 's Government on Accelerating the Development of Information Economy Guiding Opinions
- Several Opinions of the State Council on Promoting the Integration and Development of Cultural Creativity, Design Services and Related Industries	- Film Industry Promotion Law of the People's Republic of China
III. DEMAND SIDE (17% of the total)	
1. Procurement (0, 0.00%)	
2. Public services (10, 13.00%)	
- Zhejiang Provincial People 's Government on Accelerating the Development of Information Economy Guiding Opinions	- Regulation on Public Cultural and Sports Facilities
- 11th Five Year Plan for Cultural Construction - The Construction of Township Integrated Cultural Station	- "12th Five-Year " National animation industry development plan - Animation Public Technical Service Platform
- National Cyber-Media Industry Development Base	- National digital publishing industry base
- Shanghai Digital Content Center	- Zhongguancun Science Park Yonghe Park
- Yuhai Park Innovation Practice Base	- Digital Animation Technology Industry Demonstration Base
3. Commercial (2, 3.00%)	
- Cross-Straits Economic Cooperation Framework Agreement	- China Korea Free Trade Agreement
4. Overseas agent (1, 1.00%)	
- China Film Group Corporation	

5. DISCUSSION

Based upon results presented above, we found that the development of CCIs for both Taiwan and China concentrated on supply-side innovation policies, which accounted for 48.8% and 47% of all policies, respectively, followed by environmental-side innovation policies, which accounted for 38.4% and 36%, respectively.

When further examining the supply-side policies in Taiwan and China, Taiwan focused on “scientific and technical development” (21%), “information” (12%), and “education” (12%), whereas China prioritized “public enterprises” (17%). In environmental-side policies, both emphasized “financial”, with Taiwan at 27% and China at 13%. The results are shown in Table 6.

The results show that Taiwan dedicates its resources to technical knowledge, human resources, and financial resources, which corresponds to the characteristics of its industrial development. The emphasis on supply-side policy

Table 6. Cross-strait comparison

No.	Policy tools	Taiwan		China	
I.	SUPPLY SIDE				
	Public enterprises	6	5	13	17
	Scientific and technical development	26	21	9	12
	Education	13	10.8	8	10
	Information	15	12	6	8
	Sub-total	*60*	*48.8%*	*36*	*47%*
II.	ENVIRONMENT SIDE				
	Financial	33	27	10	13
	Taxation	3	2	4	5
	Legal regulatory	4	3	6	8
	Political	8	6.4	8	10
	Sub-total	*48*	*38.4%*	*28*	*36%*
III.	DEMAND SIDE				
	Procurement	1	0.8	0	0
	Public services	9	7	10	13
	Commercial	2	2	2	3
	Overseas agent	4	3	1	1
	Sub-total	16	12.8%	13	17%
	Total	**124**	**100%**	**77**	**100%**

tools in Taiwan might result in overproduction of products but a lack of markets for consumption. In reality, Taiwan's CCIs market is dominated by domestic sales. The annual report of Taiwan CCIs (2016) shows that the export sales of Taiwan's CCIs dropped from 15.34% in 2011 to 10.68% in 2015. This indicates not only that domestic sales of CCIs are the main source of income, but also highlights the pressing need for Taiwan's CCIs to enhance export competitiveness. Thus, innovation policy tools used should be adjusted to foster the demand side rather than focusing on the supply side. Taiwan should place greater emphasis on "public enterprises", "commercial", and "overseas agents" in order to expand its cultural and creative products into the global market. Because of its limited local market size Taiwan should consider expanding its CCIs into the Chinese market first and then into global markets.

The development of CCIs in China is also dominated by supply-side and environmental-side policy instruments. In contrast to Taiwan, however, China focuses more on "public enterprises" as its main policy instrument, and China has regarded the market as an important issue for the development of CCIs. This characteristic follows the typical path of industry development in China in which public enterprises play a critical role in leading the growth of a given industry. China is now the country with the fastest growth rate and the largest market of CCIs in East Asia. In contrast to Taiwan's limited domestic market, China enjoys a large domestic market which is able to cultivate many entrepreneurs in CCIs. Currently, China's policies are aimed at stimulating domestic market demand. In the future, China should strengthen its environmental side policies to further grow domestic demand and to enhance "commercial" and "overseas agent" to accelerate the expansion of overseas markets for cultural products.

China and Taiwan offer similarities in their CCI policies. Nevertheless, they might consider the beneficial effects of collaboration. For example, Taiwan could reinforce its policy instruments for overseas agents to take advantage of the large market demand in China. Likewise, China could enhance its product quality by introducing Taiwan's creative workers into its value chain.

6. CONCLUSION

CCIs have been promoted in recent years by China and Taiwan to stimulate their macroeconomic growth and to reinforce industrial upgrading through the integration of CCIs into other industries. However, the development of CCIs is highly dependent on the innovation policy design at the national level. Thus, this research analyzed policy instruments from a national perspective with the framework of Rothwell and Zegveld, and conducted a comparison of the innovation policy tools used in China and Taiwan. The results of this research can offer policymakers an overview of the current portfolios of policy designs, and the possible adjustment for future development. The emphasis on supply-side policy tools by both China and Taiwan suggests that environment-side and

demand-side may not be sufficient to support overall industry growth.

This research conducted a qualitative approach for data collection and analysis of cross-strait innovation policy tools for CCIs. However, the research only categorizes innovation policies into the policy tool framework, and details of these innovation policies are not emphasized in this research. It is recommended that future researchers examine innovation policies in a specific field of CCIs as different sectors may require specialized policy designs for their development.

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