How do CICs affect self-perceived innovation of creative entrepreneurs?

– A cross-regional study in China and the Netherlands

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ABSTRACT

Due to the increasing reliance of today's economy on innovation and creativity, creative industries have become a major focus of attention for both academic research and policy development. These industries have been historically associated with innovation, which can deliver innovative outputs and ideas to other sectors within the economy. The innovation capability of creative industries is not only tied to individual traits such as the passion and talents of creative workers, but also to other external factors related with the clustering of the industry. Based on previous literature, scholars from different fields have already identified some factors related to the creative industry cluster (CIC) that could influence the innovation performance of the sector. For instance, knowledge spillover taking place between tenants in the CIC and the historical value of the place itself.

However, most of the existing theories explaining these mechanisms are derived from specific case studies in a certain region, whether they can uphold in different contexts still remains relatively unknown. Moreover, the majority of them are often based on scholars' top-down inductive studies rather than on the daily innovative practice of creative workers themselves. This study addresses these gaps in the literature by investigating how CICs work to affect innovation on the individual level of creative entrepreneurs across two regions, China and the Netherlands. Twelve in-depth interviews were conducted with creative entrepreneurs located in minor CICs across the two nations (business centres in the Netherlands and cultural and creative industry parks in China). Results indicate that besides similarities, creative entrepreneurs in the two countries also reveal notable differences on whether and how they identify with CIC-related factors affecting their innovation proposed by scholars.

The study contributes to the existing literature in two aspects. First, it suggests that the similarities found are possibly applicable in different contexts and thus can be utilized by CICs across regions to boost the innovation of their tenants. Second, based on the two country's cultural, political and structural divergence, the study makes assumptions about possible rationales behind the differences found between them. These assumptions can offer insights to future studies, which aim to further the understanding of how environmental differences play a mediating role in the effect that CICs have on innovation within creative industries.

KEYWORDS: Creative industry, CIC, Innovation, Creative entrepreneur, China, the Netherlands

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1. Introduction

1.1 Creative industries and innovation

In recent decades, our society has transformed into a "post-industrial" era, the leading edge of the economy has gradually shifted from Fordism to more knowledge-intensive and information-based activities (i.e. the knowledge economy). Competition for low-prices and productivity has been increasingly replaced by the competition for creativity and innovation capabilities (Cook, De Laurentis, Todtling & Tripp, 2007). Consequently, creative industries, as a part of the knowledge-intensive sector, are becoming increasingly important to overall economic growth (Colapinto & Porlezza, 2011; De-Miguel-Molina, Hervas-Oliver, Boix & De-Miguel-Molina, 2012; Flew & Cunningham, 2010; Hong, Yu, Guo & Zhao, 2014).

According to Foord (2009), creative industries are the fastest-growing sector in numerous national and regional economies in Europe and Asia (e.g. in Amsterdam, Berlin, Shanghai & Singapore), this is based on metrics including the growth rate of gross domestic product (GDP)/gross value added (GVA) and contributions to the employment rate. Many scholars have explored the mechanisms used by creative industries to foster economic prosperity. For instance, Florida (2002) proposes three ways through which creative industries contribute to economic development by producing: talent (creative professionals), tolerance (atmosphere with high acceptance of minorities within the sector) and technology (high tech firms in the sector). However, it is important to mention that Florida's theory has been criticized for offering little argumentation on what values local creative industries can offer to engage with creative professionals in the first place (Pratt, 2008). Therefore, this theory should be examined and used with a critical approach.

Due to their unprecedented development and contribution to the economy, the academic and political interests in creative industries have proliferated in recent decades. A predominant focus of attention is the clustering of creative industries, through which many scholars have emphasized the significance of spatial agglomeration for creative industries (e.g. Bathelt, Malmberg & Maskell, 2004; Florida, 2002; Heebels & Van Aalst, 2010; Hershberg, Nabeshima & Yusuf, 2007). The term creative industry cluster (CIC) and other similar terms have now become popular in relevant policy documents and grey literature and build upon the existing discourses on agglomerations economies and clusters.

The concept of the industrial cluster was first proposed by Marshall (1890), referring to the geographical proximity of syndetic firms and institutions in a certain industry. In recent years,

clusters have become a striking feature of many economies. As within other industries, the spatial concentration of creative organizations is thought to support regional competitiveness by offering creative firms opportunities to communicate with peers, transfer of knowledge, access talent and suppliers, and cooperate laterally with complementary companies, etc. (Lazzeretti, Boix & Capone, 2009).

Additional to the aforementioned advantages, the clustering of creative industries is also argued to boost innovation within the sector itself, as well as throughout the economy as a whole (Mueller, Rammer & Trüby, 2009; Stoneman, 2009). Unlike traditional industries that rely on standardized mass production and consumption, creative organizations function on different principles to do with the "creative nature of input and intellectual property output" (Potts, Cunningham, Hartley & Ormerod, 2008, p. 167) – these outputs could be, for instance, a new marketing approach proposed by an advertising agency, or the latest application developed by a software firm. It is these innovative outputs offered to clients from other sectors, through which creative industries can also support the wider economic innovation (Müller, Rammer & Trüby, 2008). Furthermore, the spill-over of creative ideas, products and attitudes in to adjacent sectors is a vital source of promotion of wider economic innovation (Müller, Rammer & Trüby, 2008).

Although many researchers have emphasized the positive influence of CIC on innovation within creative industries (e.g. Currid, 2007; Florida, 2002; Sunley, Pinch & Reimer, 2008), the empirical evidence justifying such a connection remains weak. Arguments are often based on specific case studies in a certain area (for example, one cluster in a particular country), where little is known about whether the mechanism they observed is also applicable in a wider context. Therefore, it is necessary to conduct cross-regional studies to test whether the previous findings on how CICs stimulate innovation can be upheld in different environments. Moreover, many previous theories only tap into certain aspects of the multifaceted concept of "innovation" and fail to combine the daily, practical and innovative work of creative entrepreneurs (Wijngaarden & Bhansing, 2016). In other words, not much is known about whether creative entrepreneurs identify with the prescribed meaning of innovation and the claimed influence of CICs – which is largely based on scholars' inductive studies. Thus, to create a better understanding of the underlying mechanism, a bottom-up approach focusing on the micro level of creative entrepreneurs is needed.

The purpose of this study is to conduct cross-regional qualitative research in both China and the Netherlands which examines how the clustering of creative industries influences the self-perceived innovation of creative entrepreneurs. The method consists of in-depth interviews with creative entrepreneurs in both nations. While the cross-regional nature of the study examines whether the

established theories fit with different contexts, the focus on creative entrepreneurs also helps to further the understanding of how CICs impact innovation on a micro and practical level. It is worth mentioning here that the size of the CIC can range significantly, from a city, to a district, to a building. To specify the research aim and facilitate the comparison between the two countries, the CIC in this paper refers to historical or modern building(s) which accommodate around 40 to 1000 creative entrepreneurs. In the Netherlands, they are often referred to as "creative business centres" or "broedplaatsen", while in China, they are often called "Wenhua Chanye Yuanqu (cultural and creative industry parks)". These two types of CICs are often developed "as a direct result of public sector intervention and through business support, infrastructure development for cultural consumption and finance to SME/micro creative enterprises" (Foord, 2009, p. 100). The Theoretical Framework section of this paper discusses this type of CIC in greater depth.

1.2 Academic relevance

As mentioned above, by conducting interviews with creative entrepreneurs located in CICs, this study helps to address the gap in the existing body of literature that evidently overlooks the daily and practical innovation of entrepreneurs by considering a more bottom-up approach to the empirical analysis. Additionally, by collecting and comparing data from China and the Netherlands, the research can reveal how the two countries' cultural, societal and structural differences can possibly play a mediating role for CIC-related factors affecting innovation. This might prove to be particularly useful for developing relevant theories in China since creative industries have only arisen in recent years as the Chinese economy has grown and restructured. Currently, studies regarding CICs in the country predominantly focus on their contribution to the economy with regards to overall development and the formulation of relevant policies. (e.g. Wang, 2018; Wu & Tong, 2018; Yu, 2018; Zhang, 2018). To the best of the author's knowledge, research concerning specific factors affecting innovation in CICs in China are in complete absence.

Moreover, compared with previous research, this study also allows for a more holistic perspective on CIC-related factors influencing innovation. Most studies done so far have made explicit categorization of what increases innovation in CICs, without looking into how these factors interrelate and interact with each other (e.g. Asheim, Coenen & Vang, 2007; Davis, Creutzberg & Arthurs, 2009; Heebels & Van Aalst, 2010). Building upon interviews with creative entrepreneurs, this study focuses on their personal experience and stories regarding CICs' effect on their innovation. This opens the possibility of new CIC-related factors that affect innovation to be

considered within the work, and also allows the researcher to investigate mutual influences and potential overlaps of all these factors.

1.3 Political, managerial and societal relevance

Besides the specific academic contribution, this study also offers several implications for political, managerial and societal relevance. Firstly, the research could provide insight for government institutions formulating policies that impact CICs; these policies have seen a rapid rise across nations in recent years due to recognition of the benefits (i.e. social and economic) that creative organizations can bring to a region. Policies supportive of CICs can help development and thus perpetuate the competitive position of a city by accelerating the urban regeneration process (e.g. shifting the urban landscape), promoting social inclusion (attracting creative workers), and supporting city (re)branding (e.g. labelling an area as a creative hub) (Miles & Paddison, 2005; Sasaki, 2010). Policymakers may obtain useful insights to better stimulate the innovation of creative entrepreneurs in the CIC based on the work contained within this study, and thus further stimulate the development of creative industries and the knowledge economy.

Secondly, this study is also of value to the management of CICs, who monitor and regulate the CIC on the micro level. With a greater understanding of the mechanisms that CICs use to enhance the work of tenants, areas for improvement can be identified to deliver better conditions. Key consideration may be around the selection and mix of tenants, to the building of creative workspaces, and the organization of activities to boost communication between tenants.

Thirdly, the research may help creative entrepreneurs obtain a deeper knowledge of their own innovation process, which renders them an opportunity to have self-reflection and boost their working efficiency. Furthermore, because the study is cross-cultural, it will provide insight to entrepreneurs as to how their international counterparts from a different culture go about accomplishing innovation; this promotes mutual learning and cross-cultural knowledge exchange. Entrepreneurs in China who plan to start a business or work in a CIC located in the Netherlands may find this work particularly enlightening, and vice versa.

1.4 Introduction summary

In a nutshell, this study aims to explore how CIC affects the innovation of creative entrepreneurs in China and the Netherlands, by carrying out in-depth interviews with relevant participants. The following research question is hence introduced:

RQ: *How do creative entrepreneurs in China and the Netherlands experience the influence of their CICs on their self-perceived innovation?*

Further, the relevant sub-questions are introduced:
How does the influence of CICs on the perceived innovation of creative entrepreneurs differ in China and the Netherlands? What are the possible rationales behind these differences?

How does the influence of CICs on the perceived innovation of creative entrepreneurs resemble with each other in China and the Netherlands? What are the possible rationales of these similarities?

2. Theoretical framework

2.1 Definition of creative industries

The term "creative industries" is often used either interchangeably with "cultural industries" or together as "cultural and creative industries" (Flew & Cunningham, 2010). Since this study features a cross-regional comparison between China and the Netherlands, it is important to understand and find the common ground of how these industries are defined in the two countries. The reason is that if creative industries have different connotations in the two countries, the cross-regional comparison between them will become invalid. However, since not many definitions from studies in the Netherlands were found, this section will compare the conceptualizations of creative industries in the West and China.

To begin with, based on the review of literature, only a few differences are found with regards to how creative industries are defined in the West and China. Some western scholars conceptualize them as sectors operating in highly free and flexible marketplaces. For instance, Potts, Cunningham, Hartley & Ormerod (2008) demarcate them as agents operating in a market dominated by social network effects. They argue neither consumers nor producers have a well-established rule or power to determine the product value from creative industries, which is "novelty" (Caves, 2000). Thus, when purchasing a product, consumers rely heavily on social information obtained from others to make the purchase decision. On the contrary, some Chinese scholars emphasize the political value in their definition of creative industries. In these definitions, creative industries are sectors which have the role and responsibility to guide the public opinion

towards national politics and contribute to the consolidation and stability of the current regime (Wang, 2018; Zhang & Qian, 2015; Zhou, 2017). In this case, rather than operating in an unobstructed and open marketplace, creative industries are under strict supervision when it comes to political-related contents.

However, compared with the differences, the overlaps between the Western and Chinese conceptualizations of creative industries are more notable and substantial. Firstly, both the West and China focus on the importance of creative input and intellectual output to define creative industries. An early recognition of creative industries was provided in the Creative Industries Mapping Document (1998, p. 10) in Britain, which defines them as industries "which have their origin in individual creativity, skill and talent, and which have the potential for wealth and job creation through the generation and exploitation of intellectual property". The document categorizes creative industries into the following key sub-sectors: architecture, advertising, arts and crafts, broadcast media, designer fashion, film, games, music, performing arts, publishing and printing, software and computer service. Furthermore, Howkins (2013) proposes that creative industries are industries creating products or services that are protected by intellectual property law, which consists of the patent, copyright, trademark and design industries.

Similarly, many Chinese scholars also highlight the creativity and intellectual properties in their conceptualization of creative industries. For instance, Qi (2011) point out that creative industries are agents involved closely with creativity, cultural heritage and intellectual property, which are composed of knowledge-intensive and highly integrated sectors. In addition, Zhang (2011) conceptualizes creative industries as industries relying on creativity and intelligence to generate products, while effectively using intellectual property protection law to carry out business and achieve sustainable development. Moreover, O'Connor & Gu (2014, p. 3) associate creative industries with "high-tech, IP intensive industries including software development, R&D, business consulting as well as animation, fashion, industrial design, new media and advertising".

Secondly, both Western and Chinese scholars concentrate on the symbolic and cultural value attached to products delivered by creative industries. For example, Hesmondhalgh (2012, p. 16) conceptualizes creative industries as institutions involved in the "production of social meaning" for consumers, as opposed to material goods or consumed services. Their products and services often convey symbolic and aesthetic value, representing people's expression or lifestyle (Heebels & Van Aalst, 2010). The symbolic value carried by the products also remains significant in the definitions from many Chinese scholars. For instance, according to Xiong (2012), creative industries are characterized by products conveying cultural value with originality and irreplaceable attributes.

Wang (2018) also delineates creative industries as those creating products which provide customers with unique cultural experiences. These aforementioned overlapping dimensions used to define creative industries in both China and the West are used in the conceptualization in this study. Therefore, in this paper, creative industries are demarcated as industries that create products 1) with high symbolic and cultural value as a result of creative input, and 2) through the generation and usage of intellectual property.

The classification of creative industries from a literature review on both Western and Chinese academic research and policy papers is adopted in this study (Hong, Yu, Guo & Zhao, 2014). According to them, creative industries consist of the following subsectors: "Science research and technology services (research and development, professional and technical services, technology exchange, technology commercialization), business services (design, advertising, intellectual property services, tourist service and related services), software and computer services (software development, computer service, information transmission and data processing), resident service and related services (designer fashion, performing arts and related services), culture, sports & recreation (broadcast media, film, games, music, cultural arts, sports and entertainment)" (p. 260). Compared with the classification proposed in Creative Industries Mapping Documents (1998) mentioned above, this classification is more structured and allows for the full coverage of relevant domains within creative industries in both China and the Netherlands. Moreover, this also helps the researcher to easily find study participants working across different sub-sectors in creative industries.

In both countries, these industries are key to driving the innovative capacity and prosperity of the economy. On one hand, in the Netherlands, the number of firms in creative industries has almost tripled from 1994–2009. In 2009, organizations in creative industries constitute 5% of the business in the nation (Braams & Urlings, 2010). Furthermore, the Dutch government has listed creative industries as the "top sector" that are directly receiving investments from policymakers, researcher and businesses (Topteam Creatieve Industrie, 2011). On the other hand, unlike developed Western countries where the advancement of creative industries began in the 1980s and 1990s, China started experiencing dramatic economic shifts from Fordism to the knowledge economy more recently (Prasad, 2004). However, creative industries have also seen a rapid growth largely thanks to the supportive policies initiated by both the central government and municipalities; in 2014, the total profits from the industries have increased by 12.13%. In Beijing alone, the number of creative firms rose by around 15.8% (http:// www.chyxx.com /industry/ 201607/431903.html).

2.2 Creative entrepreneurship

As mentioned in the introduction, this study focuses on the perspectives of creative entrepreneurs to investigate the impact of CICs on innovation. The reason to choose creative entrepreneurs to represent practitioners of innovation is determined by the state of creative industries. Since the creative nature of the work makes it hard to achieve economies of scale, creative industries typically contain a large number of entrepreneurs and free-lancers in small and medium-sized companies (Stam & Marlet, 2008).To help target suitable respondents for the interview, this section aims to give a proper definition to creative entrepreneurship.

According to behavioral science, entrepreneurs are commonly considered as risk-taking individuals pursuing self-realization, prosperity and independence in the business setting (Allen, 2006). To achieve these aims, the most common approach they adopt is running their own business. Accordingly, entrepreneurship is historically perceived as the creation of new businesses with the entrepreneur being its founder (Bujor & Avasilcai, 2016). However, others proposed a broader notion of entrepreneurship, pointing out that entrepreneurship is a continuum of activities which not only include running a business, but all activities that help to achieve innovation in a particular sector or process (Bruin & Dupuis, 2003).

Similarly, while some scholars or institutions refer to creative entrepreneurship in the traditional sense as the establishment of a new business in creative industries (Di-Masi; UNCTAD & UNDP, 2010), others also include other activities in the context of creative industries such as organization design and the implementation of innovative strategies (Bujor & Avasilcai, 2016; Heebels & Van Aalst, 2010). This study adopts the latter notion of creative entrepreneurship, since innovation in creative industries is not only achieved by business founders, but also employees and freelancers whose daily work elicits the key innovative outcomes in his or her organization or sector.

To deepen the understanding of creative entrepreneurship, it is advisable to make the distinction between the concept “artist” and “creative entrepreneur”. Anne (2005) suggests while artists are individuals fabricating artwork like paintings, music and films derived from their inspiration and talents, creative entrepreneurs are those who conceive the opportunity to make profits and serve as the catalyst to commercialize these creative inputs. Thus, Anne (2005) also refers to creative entrepreneurship as “the process of adding value to creative inputs/creativity” (p. 145). An artist who not participates in the production of creative inputs but also contribution to the “entrepreneurial value chain” is considered the practitioner of creative entrepreneurship, for

instance, musicians who do not only produce music, but that also market and sell their CDs (Anne, 2005; Bruin, 2018).

In summary, this study follows the broad definition of creative entrepreneurs proposed by Rae, which allows for the full coverage of subjects involved in creative entrepreneurship. According to Rae (2007, p. 55), creative entrepreneurs are any individuals involved in "creating or identifying an opportunity to provide a cultural product, service or experience and bringing together the resources to exploit this".

2.3 Innovation within creative industries

As previously mentioned in the introduction, creative industries are considered a highly innovative sector providing ideas and products to other industries in the economy. However, the connotation of innovation for creative entrepreneurs remains ambiguous. Although this study tries to understand their self-perceived innovation through interviews, it would also be valuable to scrutinize the existing conceptualizations of innovation in the literature for reference purposes. This would help to point out directions and form meaningful questions regarding respondents' perception of innovation in the interview.

The term innovation has been conceptualized by various disciplines such as business and management, economics, organization studies, knowledge management and so forth. However, across all disciplines, the term has always been historically related to change and newness; words such as "radical", "really-new", "evolutionary", "improving" are used frequently (Garcia & Calantone, 2002, p. 13). Based on this perspective, many scholars focus on the types of "new activities" to specify the definition of innovation. For instance, Schumpeter (1934) categorizes innovations into five forms of activities: the launch of a new product or new species of a known product, opening of a new market, developing a new structure of the industry, developing new methods of production or sales of products and gaining new resources or materials. Another similar broad and but much later definition comes from Damanpour (1996), who conceives innovation as means used by the organization in response to the changing external environment or the proactive action to influence the environment. Therefore, innovation can be associated with a wide range of activities including "[a] new product or service, new process technology, new organization structure or administrative systems, or new plans or program pertaining to organization members" (Damanpour, 1996, p. 64). These typologies of innovation would help to identify innovative activities of creative entrepreneurs in the interview.

Furthermore, some studies conceptualize innovation based on the traits it possesses. It would be of value to investigate whether creative entrepreneurs agree with all the traits of innovation claimed by the previous literature. Innovation in creative industries is said to be a phenomenon that is hard to quantify in measurement, since the innovative outputs from creative industries are often highly intangible, perishable and heterogeneous (Nijssen, Hillebrand, Vermeulen & Kemp, 2006). They include not only the new technical products and services but also a range of innovations in other aspects, including client-facing innovation, soft (aesthetic & artistic) innovation and so forth. Additionally, creative outputs can also be characterized by co-production with customers that may be produced and consumed simultaneously (Bakhshi, McVittie, Simmie & National Endowment for Science, Technology and the Arts, 2008). However, the traditional measurement of innovation mainly focuses on more tech-intensive and science-based sectors, using indicators such as R&D investment and the number of patents for its assessment. These quantitative indicators are thus not fully applicable to the innovative activities happening in creative industries (Wijngaarden, Hitters & Bhansing, 2016).

Furthermore, innovation in creative industries is said to possess a dynamic and continuous nature (Bakhshi, et al., 2008). Creative firms are constantly acquiring new knowledge and altering products and processes, for example optimizing the design of a website with new visuals or changing the elements in a painting. This echoes the finding of Wijngaarden, Hitters & Bhansing's research (2016), who propose three main forms of innovation in creative industries, namely, innovation as a "continuous recombination of new and existing elements", complete newness, and contribution to society (p. 01). Thus, such a continuous nature again makes it challenging to measure innovation in creative industries statistically.

In addition to the form and traits of innovation, it would also add value to shed light on whether creative entrepreneurs identify with the determinant of innovation in creative industries as presented by previous literature. Many researchers focus on users' perception when conceptualizing innovation (Kim, 2001; Pae & Hyun, 2002; Ziamou, 2002); the basic assumption of the notion is that users' subjective view is the determinant of innovation. For instance, Roger (1976) defines innovation as "an idea perceived as new by individuals". This theory features a highly pragmatic method of innovation, which highlights the accordance of a firm's interior resources with the users' existing standard and knowledge of innovation. In this case, the development of highly-new products is rather risky since it may not conform with the existing perception of the consumer. Associating the notion with this study, it would be of helpful to investigate whether creative entrepreneurs consider obtaining customers' recognition to be the

determinant or the aim of their innovation. This may be of particular relevance since the innovation in creative industries features co-production with consumers, as mentioned previously in this section.

2.4 CIC-related factors affecting innovation

As illustrated above, the prime objective of the study is to investigate how CICs influence entrepreneurial innovation. This section will summarize the most predominant CIC-related factors affecting innovation from previous studies in different disciplines. As it has been mentioned in the introduction, although theories in this aspect have proliferated in recent years, most of them are based on scholar's inductive researches on case studies. In the Results section of the paper, evidence regarding whether creative entrepreneurs identify with these factors can be found.

2.4.1 Knowledge spillover

A large amount of studies on CICs' contribution to innovation has emphasized the importance of interactions within local networks of firms based on geographical concentration. Lundvall & Johnson (1994) introduce innovation as an "interactive learning process", indicating that communication among innovators and other stakeholders promotes knowledge exchange, which is key to innovation. The geographical proximity, in this case, offers more opportunities for meetings and interactions between individuals. In line with their theory, Belussi & Caldari (2008) indicate that the geographical concentration helps to prompt innovation by offering mutual trust and knowledge, social networks stimulating the qualification of the workforce and generation of new techniques. These advantages CICs bring to entrepreneurial innovation can be summarized as the so-called "knowledge spillover" effect.

The general assumption behind the concept of knowledge spillover is that knowledge serves as a public good that is automatically available to all agents in the economic process (Audretsch & Keilbach, 2008). The constant flow of knowledge supported by the interactions and relationships between individuals stimulates innovation, since it helps generate new combinations of ideas, resources and technologies (Fey & Birkinshaw, 2005). For instance, a game developer might obtain knowledge about the newest practice of character design by talking with peers, and thus improve his own work. An advertising worker might get inspiration for a creative storytelling method by interacting with people from other sectors in the cluster.

A theory supporting the effect of knowledge spillover on innovation in creative industries is the separation of formal and tacit knowledge. Compared with formal knowledge codified via certain

mediums such as books, tacit knowledge is tied to a particular place or cluster and is thus only transferable through the accumulation of experience and communication within local networks (Bassett, Griffiths, & Smith, 2002; Bathelt, Malmberg & Maskell, 2004). Creative industries are dominated by such tacit knowledge since creative workers rely more on "intuitive practice, situated learning-by-doing and non-transferable skills" embedded in local networks (O'Connor,, 2004, p. 134). Therefore, it can be assumed that creative entrepreneurs rely more on the knowledge spillover to stimulate innovation compared with their equivalents in other industries. Furthermore, there are two mainstream theories explaining the process of knowledge spillover: specialization externalities and diversity externalities. While the former refers to the knowledge creation in a particular sector (Marshall, 1890), the latter focus on the generation of new ideas across sectors (Jacobs, 1969). For this study, it would be of value to investigate how creative entrepreneurs perceive the knowledge spillover respectively in the same sector or across different sectors in the CIC.

Additionally, Asheim, Coenen & Vang (2007) make a distinction between two types of communications inducing knowledge spillover in an industrial cluster: face-to-face communication and buzz. While the former refers to the physically co-present, often intentional communication mainly in formal cooperation, the latter is conceptualized as the inadvertent information-exchange in the vibrant milieu of industry clusters (Asheim, Coenen & Vang, 2007). The latter (buzz), can take the form of "rumors, impressions, recommendations, trade folklore and strategic information" in the field, or in other words, all the new knowledge learned by an entrepreneur in an unanticipated process by just "being there" (Bathelt et al, 2004; Grabher, 2002, p. 209).

Asheim et al. (2007) further illustrate the relevance of face-to-face communication and buzz to industries of different "knowledge bases". They indicate that for industries dealing with analytical knowledge (scientific knowledge which aims to explain the natural law) and synthetic knowledge (engineering knowledge which aims to solve practical human problems) bases, where innovation is more about the creation of new knowledge and the application of existing knowledge, face-to-face communication (formal communication aiming at tackling technical and scientific problems) plays a more vital role than buzzing. However, creative industries, drawing on a so-called "symbolic knowledge base" whereby innovation concerns the generation of cultural meanings through aesthetic mediums rely heavily on both face-to-face communication and buzz. While face-to-face communication provides efficient information exchange useful for a specific setting (e.g. collaboration on a project), the buzz often takes place in larger gatherings (e.g. a music festival) and provides more scattered and fluid knowledge which might not be instantly useful but still contains significant value. For this study, it will be interesting to shed light on how creative

entrepreneurs perceive and experience the effect of these two forms of knowledge spillover in the CIC on their innovation.

2.4.2 Locality

The previous literature also suggests that the locality of CICs provides place-based resources which may stimulate the entrepreneurs' innovation (Drake, 2003). A place usually represents identities, associations, meanings and memories for its users or residents (Montgomery, 2003). According to Heebels & Van Aalst (2010), the look and feel of a place influences how creative entrepreneurs experience their daily work and is thus closely related to their innovativeness. To summarize preceding research in this regard, the way that a place prompts innovation is associated with both its environment and the people in this environment.

The environment of the place can contribute to the innovation of entrepreneurs in several ways. Firstly, the historical and symbolic value that the place holds itself may serve as a source of creative stimuli and ideas. Pratt (2002) argues that the local culture has an important influence on cultural production and consumption. Based on the absorption of local symbolic resources, styles, histories and traditions, creative workers can produce cultural products that are filled with locality-based creativity (Yu, 2018). Moreover, Hutton (2006) also argues that CICs located in renewed industrial buildings (which is a common practice worldwide) provides an industrial atmosphere for creative workers, making them feel connected to the historical meaning of the place, and inspire their innovation. This might be especially the case for craft or metal workers, who consider themselves inheritors of the tradition of manufacturing or design art (Heebels & Van Aalst, 2010). Secondly, the place's physical appearance may function as the catalyst for aesthetic innovations for creative workers, especially for artists and designers. According to Drake (2003), different individuals have diverse interpretations of the same place, merged with their own emotional responses to it. Certain specific prompts in the local environment can be incorporated in product design or art creation process of artists and designers, like elements derived from the local architecture (Drake, 2003). However, it should be noted that this effect might appear to be less significant for visual designers, who mainly derive inspirations of innovation from online visual resources beyond the local scale (Drake, 2003).

Besides the environment, peers in the CIC also play a crucial role in stimulating the innovation of creative entrepreneurs, but not necessarily through knowledge spillover mentioned in the previous section. Florida (2002) indicates that places full of diverse kinds of people could help with entrepreneurs' innovative work. Such a diversity brings a tolerant, friendly and open urban

atmosphere, which is appreciated by creative workers and is considered to be a creative inspiration (Florida 2002; 2004). Particularly, as mentioned in the introduction, since this argument of Florida is controversial, the researcher can shed light on whether it can be upheld in this study.
Furthermore, firms in the CIC are also said to have a co-competition relationship with other cluster members. Due to this competitive atmosphere, they are all under constant pressure to exceed others and achieve breakthroughs in innovation ahead of the adjacent organizations (Zheng & Chan, 2014). Similarly, according to Bhansing, Hitters & Wijngaarden (2018), creative entrepreneurs tend to be inspired for his work if he acknowledges the passion of other entrepreneurs in the cluster.

2.4.3 External input

According to the preceding literature, the CIC can also affect creative entrepreneurs by stimulating the input for their innovation from other stakeholders, which might include research institutions, the government and clients. To start with, this can be partly explained by the "triple helix" model that scholars use to analyze innovation. In recent years, the model became more popular to characterize innovation in the knowledge-intensive industry such as creative industries, especially in the context of clustering (Etzkowitz & Leydesdorff, 1997). The model features academic, business, and governmental interests, indicating that the intense negotiation and collaboration between these stakeholders fosters the innovation of creative workers (Etzkowitz & Leydesdorff, 2000). To be more specific, first, some CICs are deliberately built close to research-oriented entrepreneurial universities. In the knowledge-based economy, universities are no longer the ivory tower isolated from the society – instead, they interact closely to industries with the division of labor between them and business diminishing (Colapinto & Porlezza, 2011). Consequently, universities close to a CIC supply the underpinnings of innovation in the area through the provision of high-skilled talent and research findings (Hershberg, Nabeshima & Yusuf, 2007; Leiponen, 2005). Second, as mentioned previously, stimulating the growth of CICs has also been incorporated in the development of policy to boost the knowledge-intensive economy in many countries. The government's sponsorship, subsidies and roll-out of preferential policies targeting CICs can deliver support for the innovation of creative entrepreneurs located within them.

Moreover, Wijngaarden et al. (forthcoming) imply that besides the research institutions and government, clients of the creative workers, including those from both public and private sectors, also generate useful input for innovation. Their contribution is said to be more significant to those tech-oriented sub-sectors in creative industries (Wijngaarden et al., forthcoming). The CIC, in this case, can help creative entrepreneurs attract more customers through two methods. First, the CIC

can offer the product/firm of creative entrepreneurs a brand, a superior reputation and a particular image to the external world (Drake, 2003; Heebels & Van Aalst, 2010). Wijngaarden, Hitters & Bhansing (2019) further explain the two cluster images conceived as most significant in helping tenants impress clients, creatives or professional image. While the cluster's creative image adds perceived creativity to the tenant's products, its professional image boosts the clients' confidence and belief in the tenant's proficiency at work. Second, according to Guo (2019), CICs could also function as the intermediary directly introducing clients to their tenants based on its own network, especially private CICs initiated by organizations owning businesses in other industries.

2.4.4 Personal traits

It is worth mentioning that innovation, as a central component of entrepreneurship (Bird, 1989; Schumpeter, 2000), is not only bound up with extraneous factors such as the communication and atmosphere within the CIC, but also personal traits of the entrepreneur (Brandstätter, 2011). For instance, the personality approach is one of the classic ways to look at the correlation between personal factors and entrepreneurship. It has been demonstrated that six personality characteristics including the desire for achievement, risk-taking, innovativeness, autonomy and locus of control have a direct effect on entrepreneurship, and thus on an individual's ability to innovate (Brandstätter, 2011; Littunen, 2000; Shane & Nicolaou, 2015). However, since these personal traits are not related to CIC but the individuality of each entrepreneur, they will not be discussed and incorporated in the theoretical framework of the study.

Based on all the theories discussed above, the following visual overview (Figure 1) of the theoretical framework is shown below.

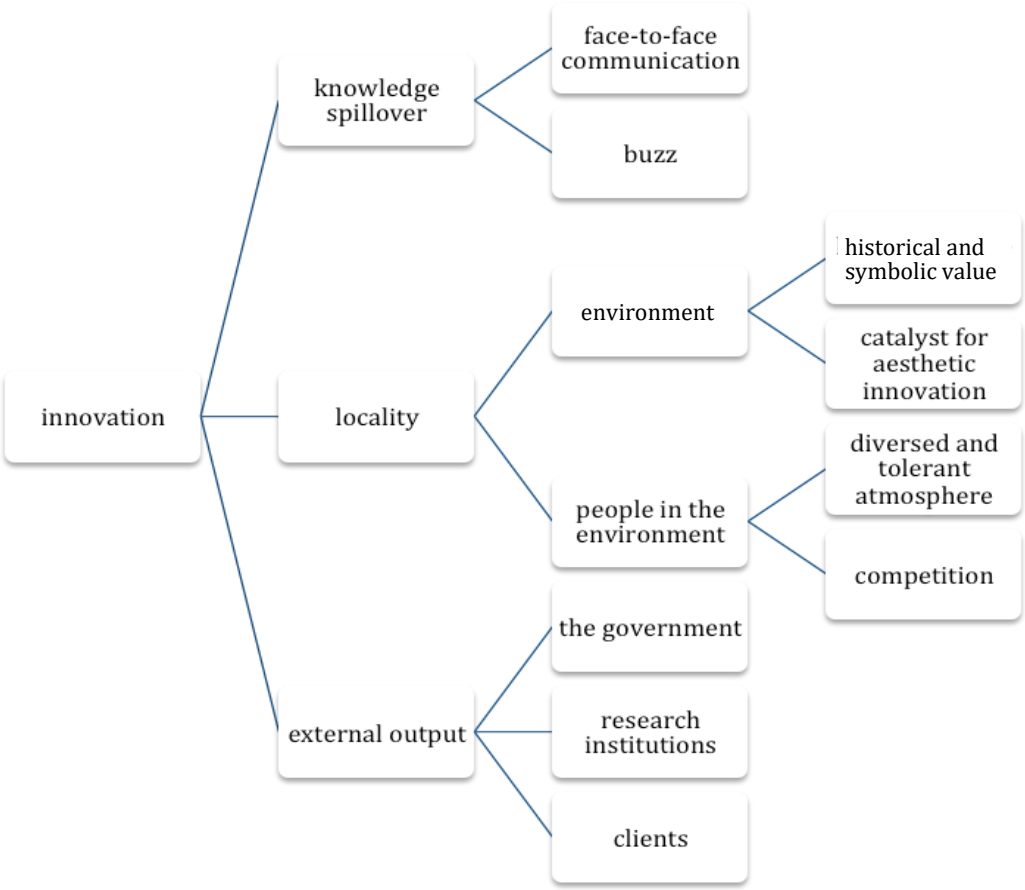

Figure 1 Overview of CIC-related factors affecting innovation

2.5 Contextual differences in China and the Netherlands

As previously stated, the different contexts in China and the Netherlands might play mediating roles in how CICs affect entrepreneurial innovation. This section aims to give an overview of these contextual differences. This can provide inspirations for differences that might occur in how creative entrepreneurs experience the CIC's influence on their innovation in the two nations.

First and foremost, the Netherlands and China have significant cultural differences. The concept of culture has been greatly elaborated upon over the past decades, as has the research on cross-cultural differences and its applications in various fields like phycology, business and so on. According to Hong (2009), culture is the "networks of knowledge consisting of learned routines of thinking, feeling, and interacting with other people, as well as a corpus of substantive assertions and ideas about aspects of the world" (p. 4). Several scholars have proposed frameworks to measure the seemingly amorphous cultural values. One of the most pioneering examples is the six cultural dimensions introduced by Hofstede (1996), which consists of power distance, masculinity, long-term orientation, individualism, uncertainty avoidance and indulgence (Mooij & Hofstede,

2010). According to the Hofstede Insight website, while China scores higher on the former three dimensions, the Netherlands scores higher on the latter three ones.

Alternatively, Schwartz (1999) proposes another framework to measure cultural differences, which is said to be more exhaustive and able to overcome some inaccuracies of Hofstede's dimensions. It entails seven dimensions including conservatism, intellectual autonomy, affective autonomy, hierarchy, egalitarianism, mastery and harmony. Conservation refers to a value that favors propriety and traditional social order and dislikes the promotion of openness and change. Intellectual and affective autonomy represents the extent that a culture allows people to freely pursue their own intellectual directions or pleasure and enjoyment. Hierarchy refers to the extent people accept the fact that different individuals have unequal positions in society, while egalitarianism denotes people's willingness to show concern and offer help to others. Mastery expresses the extent to which individuals seek success through their personal actions, while harmony indicates the emphasis people put on accepting their place in the world and fit into the environment they are in (Schwartz, 1999). Unfortunately, no reliable statistical comparison of the two nations on Schwartz's cultural dimensions are found. However, based on some previous cultural studies, it can be assumed that the Chinese and Dutch society reveal gaps in some of these dimensions. The Conclusion section of the paper will discuss this more thoroughly.

Since the way CICs influence innovation is highly dependent on the way tenants engage with the environment and people around them, it can be speculated that the cultural difference can play a mediating effect in the process. For instance, whether the different degrees of hierarchy would affect how one communicates with others in the CIC, or whether different levels of mastery would affect how one utilizes the CIC image to attract clients.

Second, the organizational structure of CICs in China and the Netherlands also reveal some differences. As stated in the introduction, while the scale of CICs varies, this paper focuses on minor CICs (buildings) instead of big ones like a city or district. In the Netherlands, the buildings that accommodate creative firms are so-called business centres. According to Weijs-Perrée, Appel-Meulenbroek, Vries & Romme (2016), business centres in the Netherlands can be divided into four categories: regular business centers, serviced offices, co-working offices and incubators. Unlike the former types of business centers, besides some ordinary services and office spaces, the latter two also offer more personal services that boost the innovation of tenants of the building. More specifically, co-working offices also aim to promote a collaborative atmosphere by offering activities for tenants to participate in together. Incubators also focus on providing business support service specifically for start-up enterprises, especially regarding helping entrepreneurs build

external and internal networks. These two types of business centres are considered to fit better with the aim of this study. Therefore, all respondents in the Netherlands are from these two types of business centres.

In China, the place that is most similar to the aforementioned two business centres in the Netherlands is “cultural and creative industry parks”. These parks are defined as a multi-functional geographical area that integrates different sections in the creative business including design, production, supply and marketing (Ding, 2013). Specifically, firms in the park can serve as complementary partners in a project and create profits together. Moreover, such parks also possess a distinctive cultural image which can attract talents and businesses outsides. Besides the support services provided to its tenants, the park also offers tenants and visitors residence and leisure activities (Ding, 2013). The urban environment that is most suitable for a cultural and creative industry park should have a radius of 400 meters, buildings with an average of 5-8 floors and some streets (including sidewalks). From what has been discussed above, it can be seen the scales of CICs in China are relatively larger than those in the Netherlands. This might have influences how CICs influence the innovation of creative entrepreneurs in the two nations, respectively, – for instance, the people and resources that are accessible to the entrepreneurs in China may be more abundant. Whereas in the Netherlands, a smaller community in the CIC may help entrepreneurs foster deeper interpersonal relationships.

3. Research design

3.1 Choice of the method

3.1.1 Qualitative method

To explore the impact of CICs on innovation from the perspective of creative entrepreneurs, a qualitative research approach was adopted in this study. Qualitative research aims to delineate how people attach meanings to complex social phenomena in their natural settings (Baum, 2002, p. 849; Berg, Lune & Lune, 2004). Thus, compared with quantitative methods focusing analyzing data presented numerically, qualitative methods typically concern personal accounts and stories including actions, interpretation, feelings and beliefs (Matthews & Ross, 2010). The qualitative approach is considered to fit the aims of this study for the following reasons. First, as previously mentioned in the theoretical framework, innovation in creative industries can be an amorphous phenomenon that is difficult to quantify. This is not only because innovation in the sector can be an

intangible, heterogeneous and continuous process (like the modification of an artwork), but also because the focus on creative entrepreneurs in the study. Respondents could have varied and implicit experiences regarding their innovation at work – furthermore, some of them may not necessarily perceive themselves as an 'innovator'; according to Wijngaarden et al. (2016), many creative entrepreneurs do not identify with the most common conceptualizations of innovation and also do not consider themselves innovative. Besides, many of them do not perceive innovation as the goal or even as a part of the process in their work (Wijngaarden et al., 2016). This means even if their work does involve the innovation as defined in this paper, such actions may not be self-described as this. In this case, a qualitative research method helps tackle these obstacles, in a way that it can capture the subtle and varied innovation on an individual level.

Second, as mentioned in the introduction, instead of generating quantitative results, this research aims to examine the complexity of the process in which creative entrepreneurs experience the CIC's impact on their innovation. In this process, different CIC-related factors could not only have unique mechanisms, but also interact with each other and form a synergy that influences innovation. A qualitative approach therefore suits these conditions better because it allows for the exploration of such dynamic processes. This might be of particular relevance when it comes to the cross-regional comparison in the research, since the qualitative approach helps to achieve closer observation of how the cross-regional context plays out.

3.1.2 Semi-structured interviews

This research is based on qualitative, in-depth interviews. An interview can be defined as a conversation that has "the purpose of obtaining descriptions of the lifeworld of the interviewee in order to interpret the meaning of the described phenomena" (Brinkmann & Kvale, 2008, p. 3). The interviews were semi-structured, which means that while the interviewer has a certain structure that is based upon his research interests and interview guide, he also allows "room for the respondent's more spontaneous descriptions and narratives" (Brinkmann, 2014, p. 1008). Compared with a fully structured interview, a semi-structured one often yields richer details about respondents' notions or experience (Bryman, 2012). Therefore, although some possible CIC-related factors affecting innovation have been listed in the theoretical framework based on previous literature, these items only serve as a preplanned topic list, not a rigid framework. Interviews with creative entrepreneurs carried in such a fluid manner would encourage them to express freely without inhibitions or restrictions prescribed by the interviewer. This helps the

researcher fully grasp the multitude and diversity of innovation, and to explore factors affecting it in relation to the CIC.

Furthermore, the study's exploratory nature also determines the use of semi-structured interviews. Most of the research carried out so far that considers innovation and the clustering of creative industries have been based in the US and UK (e.g. Abreu, Grinevich, Kitson & Savona, 2008; Miles & Green, 2008), how these two factors are interrelated in other countries is still relatively unexplored and unarticulated. Thus, interviews with creative entrepreneurs in China and the Netherlands help to identify underlying mechanisms about how CICs influence their innovation in the two nations, and thus lay the foundation for large-scale quantitative studies to iterate upon in the future.

3.1.3 Thematic analysis

A qualitative thematic analysis was used to analyze the interview data in this study. Thematic analysis is a method to identify and examine repeated patterns/themes within a data set (Braun & Clarke, 2006). It can be used to seek understanding of respondents' experiences, perspectives and underlying ideas (Braun & Clarke, 2006). Codes generated from the analysis can represent the identified themes and are thus used as a summary for later analysis (Guest, MacQueen & Namey, 2012).

The reason to choose thematic analysis for this study is that it allows for more flexibility in data analysis compared with other qualitative methods. It is highly content driven in the sense that the coding process is not bound by predetermined codes/ analytic categories (Braun & Clarke, 2006). In this case, the method would be effective in capturing the complexity of self-perceived innovation of creative entrepreneurs and CIC's effect on it.

3.2 Data Collection

3.2.1 Sampling criteria

The research units of the study were carefully selected based on some key criteria. First and foremost, the respondents were all individuals working in sectors in creative industries. As classified in the theoretical framework, these should include scientific research and technology services, business services, software and computer services, resident service and related services and culture, sports & recreation (Hong, Yu, Guo & Zhao, 2014). To obtain richer and more exhaustive data, the researcher tried to cover respondents across these sectors. Second, the

respondents' work all had strong ties to creative entrepreneurship, which means they could be the freelancer, (co-)founder of a firm, or employees whose daily work can elicit the key of change in his organization or sector. In this circumstance, employees who work in a creative firm but deal more with administration, recruitment or finance were not perceived as suitable respondents. Third, the respondents were all located in a small-scaled creative cluster. Again, note that in the Netherlands, they work in either co-working offices and incubators, while in China, they work in the cultural and creative industry parks.

3.2.2 Sampling methods

To obtain a sufficient number of respondents, purposive sampling and referral sampling methods were adopted in combination in this study. Purposive sampling is a non-random and deliberate technique to select research participants based on some particular features they have, which allows for more focused and detailed exploration of an area of interest (Etikan, 2016). For this study, the researcher purposely selected participants who meet all the sampling criteria mentioned in the previous section. This was done by scrutinizing their personal or company website, professional social media profiles, and checking whether they are located within the types of CICs required. The technique was considered to be applicable for its convenience, because it would be difficult for the author to find and target creative entrepreneurs who fit with all the selection criteria with a randomized approach.

After finding some initial respondents by purposive sampling who were willing to participate in the research, the researcher proceeded with the snowball sampling to connect with more participants. Snowball sampling requires initial respondents to nominate other possible participants who also fit with the selection criteria as prescribed by the researcher (Trotter, 2012). In the case of this study, the initial respondents found by purposive sampling were asked to refer the researcher to other creative entrepreneurs in a CIC from their personal networks.

It is worth mentioning that snowball sampling is criticized for undermining the representativeness of the sample (which is better achieved through a randomized approach), since initial respondents tend to refer someone they know well (Morgan, 2008). However, this drawback was alleviated by the second phase of purposive sampling conducted during the process; while the initial respondents would recommend individuals from their network to the study, the researcher would subsequently scan the information about these people to check whether they fit the profile of an ideal respondent. Only those who also meet the selection criteria would be contacted and invited to participate in the study. By conducting the purposive and snowball sampling alternatively for

several rounds, enough respondents across sectors in creative industries were successfully collected. In total, five respondents were selected using purposive sampling, while a further seven were approached by snowball sampling.

3.2.3 Procedure

The interviews were carried out from April 15th to May 23rd 2019. In total, 12 semi-structured in-depth interviews of around 40-60 minutes were conducted with the respondents. The interviews with four respondents in the Netherlands were carried out on a face-to-face basis in the CIC where they work. For the respondents, this method offered them convenience and a sense of ease during the interview. For the researcher, this allowed for further observation of the respondent in person and the dynamics between the environment and him/her in the CIC. Interviews with two respondents in the Netherlands were carried out via phone call because one of them was only available remotely and the other simply preferred to be interviewed by phone. Interviews with respondents in China were all carried out through the online video call function of Chinese communication apps like Wechat or QQ due to the geographical separation of respondents and the researcher.

The appointments with respondents were made either on a face-to-face basis or through emails and online messaging apps. In the communication with respondents prior to the interview, every one of them was informed about the aim, procedure and main topics of the interview by the researcher. All the respondents agreed with the consent and the audio recording of the interview by a mobile device.

3.2.4 Units of analysis

A total of twelve respondents working in five different CICs were interviewed for this study. Six of the respondents are located in Chengdu, Sichuan province, China while the rest of them are in Rotterdam, the Netherlands. An overview of the research units based on their occupation, sector, CIC, the type of CIC and location can be seen in Table 1.

Respondent	Name	Occupation	Sector (classification	CIC	Type of CIC	Nation of

			based on DCMS report, 1998)			location
1	Tang	Game designers	Games	TianFu Software Site	Cultural and creative industry park	CH
2	Xie	Company founder	Arts and crafts	National advertising creative industry park	Cultural and creative industry park	CH
3	Long	Company founder	Arts and crafts& Architecture	National advertising creative industry park	Cultural and creative industry park	CH
4	Mei	Marketing&Branding manager	Architecture	Xicun	Cultural and creative industry park	CH
5	Hu	Company founder	Games & Software and computer service	Xicun	Cultural and creative industry park	CH
6	Yuan	Company founder	Arts and crafts	Xicun	Cultural and creative industry park	CH

7	Tom	Company founder	Software and computer service	CIC Rotterdam	Co-working space	NL
8	Linda	App designer	Software and computer service	CIC Rotterdam	Co-working space	NL
9	Sam	Company founder	Arts and crafts	CIC Rotterdam	Co-working space	NL
10	Charlotte	Company founder	Publishing and printing	De Kroon Rotterdam	Incubator	NL
11	Vincent	Freelancer	Arts and crafts	De Kroon Rotterdam	Incubator	NL
12	Christina	Freelancer	Arts and crafts	De Kroon Rotterdam	Incubator	NL

Table 1 Overview of Research Unit

3.3 Operationalization

3.3.1 Interview aims

The semi-structured interviews in the research aimed to achieve four mains goals. Firstly, it aimed to understand respondents' perspectives and experience of innovation in their work. Second, the interview was set to investigate the general perception and feeling of creative entrepreneurs toward the CIC they are in. These served as a basis to examine the relationship between the CIC and their innovation latter. Third, the interview intended to address the respondents' perspective on the CIC-related factors affecting innovation identified in the previous literature (knowledge spillover, locality and external input). This not only concerned whether, but also why and to what degree they believe these factors affect their innovation. Besides, the interview also remained open to other CIC-related factors proposed by respondents that have the potential to impact their innovation. These new factors could potentially identify emerging phenomenon in the study field and point out the direction for future research. Fourth,

all the three aims listed above would contain the cross-regional comparison between China and the Netherlands.

3.3.2 Interview structure

To facilitate the semi-structured interview with respondents, an interview guide was developed. As previously stated, the interview guide only served as a potential topic and question list, which was adjusted in the actual interview with a high level of flexibility. The interview guide was structured into the four following parts. A complete version of it can be found in Appendix A in the paper.

The first part of the interview contained some ice-breaker questions, which helped the researcher obtain relevant basic information about the respondent and establish rapport for the following conversation. These questions were on topics such as the respondent's company, their role, recent projects and the time they have spent working in the CIC.

The second part of the interview was used to investigate respondents' perspective and personal experience of innovation in their work. For instance, exploratory questions such as "What does innovation mean to you?" "What does it mean to you to be innovative?" "Do you think your work contains some innovative elements/ renewal/new combinations/creativity?" were asked.

The third part included a set of questions asking respondents about their general perception and feeling toward the CIC they are in. Questions such as "How do you feel about the place/business center/coworking space/park that you are in now?" "Do you think the place/business center/coworking space/park you are in influences your daily work? If so, in which way?" were asked.

The fourth part of the interview focused on respondents' perspectives of CIC-related sources of innovation identified from previous literature. Questions regarding whether and how different elements in the three major groups (knowledge spillover, locality and external input) affect their innovation were asked. Besides, respondents were also asked about whether they thought there were any other CIC-related factors associated with their innovation. If so, the researcher would further ask about how and to what degree these factors make a difference.

3.4 Data Analysis

A thematic analysis was conducted via the following stages: opening coding, axial coding and selective coding. Atlas.ti, an instrument for text analysis was used to facilitate the coding and categorization of the transcripts.

The first phase of the analysis consisted of open coding, a process of "breaking down, examining, comparing, conceptualizing and categorizing data" (Corbin & Strauss, 2007, p. 61). This was done by carefully rereading all transcripts and dividing them into meaningful fragments relevant to the research question (Boeije, 2010). A code which served as a summarizing phrase was then assigned to each fragment for later analysis. For instance, the code "buzz helps innovation" was generalized from the respondents' accounts addressing how they get inspiration from talking with other individuals in an informal setting, like during a lunch break or in a party. Following the step-to-step guide of open coding developed by Boeije (2010), the researcher paid close attention to determine what made the contents in a fragment meaningful as a whole, as well as the constant comparison between different fragments to determine whether they address the same topic and thus should be labelled by the same code. The open coding allowed for an initial exploitation of the interview data and laid the basis for the following analysis.

The second phase involved axial coding. Axial coding aims to "reduce and reorganize" the data by deciding on the degree of significance of different elements in it (Boeije, 2010, p. 155). In this phase, the most significant codes generated by open coding were selected while the least dominant ones were removed. Some similar codes were also merged into one. For instance, codes describing how the respondents' personal factors stimulate their innovation were discarded, like "passion helps innovation" and "persistence makes innovation". Codes including "communication in formal meetings helps innovation", "communication in cooperation helps innovation" and so on were merged into one code, "face-to-face communication helps innovation". Furthermore, themes/categories containing different codes were generated by examining the relevance between them. For instance, "buzz helps with innovation" and "face-to-face communication helps innovation" were categorized under the theme "knowledge spillover affects innovation". During this process, the researcher also reflected on whether the classification of different themes was suitable and evidence-based.

The third phase was concerned with selective coding. Selective coding is the process used to elicit key theoretical concepts or discourses by looking into the connections between themes. This study features the cross-regional comparison of self-perceived innovation and CIC-related innovation sources. Thus, in this phase, the researcher compared the themes emerged respectively

from the interviews with respondents in China and in the Netherlands. For example, the category of "knowledge spillover affects innovation" emerged respectively in the data from the two nations, besides, they both include codes "buzz helps innovation" and "face-to-face communication helps innovation". However, the category in the interview data from China also contains a code "face-to-face communication is more important than buzz". This might indicate respondents from the two nations attach different levels of importance to the two forms of knowledge spillover. The findings of the data analysis will be presented in the Results section of this work. The list of the codes developed through the three stages presented above can be found in the appendix of this paper.

3.5 Research Quality

The two crucial criteria to evaluate the quality of research are reliability and validity. Reliability concerns the consistency of the finding provided that the research is conducted repeatedly (Boeije, 2010). Thus, the reliability of a research is highly dependent on whether the research procedure is made transparent and replicable. The reliability of this study was ensured by the following measures. First, the sampling criteria and methods used to select the respondents were made clear in this paper. Second, an interview guide was developed for the semi-structured interview so that most of the main topics covered were accessible for other researchers if they would like to conduct the interview again. Third, the analysis was carried out rigorously following the three stages mentioned in the last section.

Furthermore, validity measures were used to determine whether the data gathered by researchers is representative of the social phenomena that they intended to study (Ritchie & Lewis, 2003). There are two important dimensions of validity, internal and external validity. Internal validity pertains to whether a researcher can correctly describe and interpret what they have planned to study (Boeije, 2010). In this study, internal validity was increased by assuring that all questions designed for the semi-structured interview were closely associated with the research question, i.e. the operationalization was based on a close link between the theoretical framework and the accompanying questions. The data analysis was also carried out in a reflective manner. External validity refers to whether the study finding can be generalized to other settings, times and contexts (Boeije, 2010). It is thus highly reliant on whether the sample selected is representative of the population. In this study, all respondents were carefully selected based on the sampling criteria, which aimed for an accurate reflection of the whole population of creative entrepreneurs in CICs. However, it is important to note that the external validity of this study is moderately restricted due to the small sample size (six respondents from each country).

Moreover, it is apt to reflect on other factors with the potential to affect the validity of the research. For instance, some questions in the interview could be sensitive. Since innovation is deemed as an essential capability of entrepreneurs, they could be vulnerable to questions that could possibly reveal their inability to innovate. Additionally, it was also possible that some respondents would be unwilling to reveal factors affecting their innovation, which they may have deemed as sensitive information affecting their competitiveness in their respective industries.

4. Results

This section aims to present the results of the thematic analysis of the interview data. In line with the interview aims, this section will start with how creative entrepreneurs perceive innovation in their work. Following this, the results discuss how respondents view and experience the three main dimensions of CIC-related factors affecting innovation identified from previous literature (knowledge spillover; locality; external input). In both aspects mentioned above, the cross-regional differences between respondents in China and those in the Netherlands will be discussed. It is important to note that no respondents have mentioned any other factors tied to CICs affecting their innovation which are not included in the typology illustrated in the theoretical framework. This indicates a general fit of the previous academic theories with the personal perspective of creative entrepreneurs regarding how CICs influence their innovation. Moreover, on each of the three dimensions, a summary of similarities and differences which occurred between respondents in the two nations, along with possible rationales and indications of them will be presented in the Conclusion of this paper.

4.1 The perception of innovation

To compare how the CIC impacts the innovation of creative entrepreneurs in China and the Netherlands, it is first necessary to explore how they understand innovation in their work in general. The interview data suggests some fundamental similarities in how the respondents in the two countries define innovation, but also highlight some distinctive points of divergence.

The compatibility of how respondents across the two nations understand innovation in their work lies into the following two aspects. First, in line with the findings of Wijngaarden, Hitters & Bhansing (2016), the majority of respondents perceived innovation as the recombination of different elements in creating their products. The elements can either be new ones created by respondents, or those that have already existed. For instance, Hu (game design start-up owner,

located in China) mentioned how the novel combination of feminine personality and masculine actions can create popular game characters. He mentioned: *"You can often see a cute girl does girly things like singing and dancing, but you can also let her take a gun or rocket launcher, so that the audience would immediately have a new feeling and fell in love with it."*

Similarly, Vincent (handicraft artist, located in the Netherlands) noted how integrating existing and new materials helps him to create artwork:

"I once took the paint off a wall and made it into a 3D shape sculpture. In this process, I also incorporated other materials next to the paint based on my own inspiration, like the light from within the sculpture."

Second, in accordance with the findings of Bakhshi, McVittie, Simmie (2008), most respondents in the two nations believed innovation in their work is a continuous and dynamic process. Small steps of renewal and improvement remained important for such processes. For instance, Yuan (owner of artistic furniture design firm, located in China) mentioned how continuously adjusting the firm's business plan helps them to better adapt to the changing environment, stating that "*the main framework of the business is not changed, but we are always extending it, making some minor changes in it to make sure we are always at the best state*". Similarly, Tom (technology startup owner, located in the Netherlands) addressed the importance of constantly renewing their app based on market feedback. He argued: *"The market tells you something, and you change this product. Then you go back to the market with the renewed product, you learn from the market, and you change the product again. This is a circle."*

In addition to the aforementioned similarities, respondents in China and the Netherlands also raised different notions in how they define innovation in their work. On one hand, a predominant notion from respondents in China is that innovation is the combination of artistic motivation and commercialization. Profit is perceived as the key in this scenario, which is not only the aim but also the crucial criteria to assess whether an innovation is successful. This is in accordance with how creative entrepreneurs are defined based on the theory of Anne (2005), which indicates that creative entrepreneurs are those who not only produce creative output, but also turn this output into profit. For example, Xie (owner of handicraft design and production firm, located in China) explained how his firm achieves profitable innovation by printing artwork on consumer goods. For him, although pursuing arts represents the "*life goal and idealistic dream*" of many artists, it is also

crucial for them to earn profits, otherwise, as he argued, "*no matter how innovative or creative you stuff is, this is not a meaningful and sustainable innovation*".

On the other hand, in line with the association made between innovation and newness by previous studies (Damanpour, 1996; Garcia & Calantone, 2002; Schumpeter, 1934), a significant number of respondents in the Netherlands expressed their focus on the newness of the method adopted in their conceptualization of innovation. In other words, innovation for them is a new way to deal with an existing situation, solve an existing problem, or simply observe an existing object. This new and novel method often yields higher efficiency or better creativity compared with the old ones. For instance, Christina, a freelance photographer in the Netherlands, mentioned how her innovation is displayed when she finds a new angle to shoot sceneries that people have been accustomed to, by saying that "*I can look at something that is already there for a long time but in my own way, this is the way for my creativity to work*."

4.2 Knowledge spillovers

All creative entrepreneurs interviewed in both nations emphasized the influence of dynamic knowledge sharing in the CIC on their innovation. This is in line with the previous studies revealing the positive effect of knowledge spillover on the innovation in creative industries (e.g. Belussi & Caldari, 2008; Fey & Birkinshaw, 2005; Lundvall & Johnson, 1994). However, besides commonalities, respondents from the two countries also have certain differences regarding how they perceive the mechanism of knowledge spillover affecting their innovation in the CIC.

The following aspects were found to be in common across the two nations in relation to knowledge spillover in the CIC. Firstly, most respondents from both countries think the interconnection between the tenants' sectors are key to fostering knowledge sharing in the CIC. They indicated that individuals from related but not completely identical sectors offer each other the most useful insights and inspirations for innovation. For example, Hu (game design start-up owner, located in China) mentioned how nearby firms in game-related industries can provide him with more useful information for innovation. He argued *"On our left now is a company that does research and development, then we can not get useful information from each other and help each other to innovate. If it is also a firm that does games or apps, I can image we can talk a lot."* Similarly, Tom (technology startup owner, located in the Netherlands) also expressed his expectation that the CIC should accommodate more entrepreneurs in related creative sectors, rather than service providers such as marketing consultancies. In his perspective, having more tenants

from similar sectors means *"There will be more people like you, who share same problems with you, who you can talk to and get inspirations from."*

For these respondents, careful consideration is required to appropriately mix tenants to maximize the effect of knowledge spillover in CICs. The subtlety here is that if tenants are from identical sectors, the knowledge shared might be too monotonous. However, if they are from unrelated sectors, the information exchanged might be irrelevant. This reflects a balance between specialization externalities (Marshall, 1890) and diversity externalities (Jacobs, 1969), the two dominant theories explaining the process of knowledge spillover illustrated in the theoretical framework,

Secondly, most of the respondents from both countries consider the mutual sense of identity among members in the CIC an important impetus of knowledge spillover. Such a reciprocal recognition can be based on analogous life experience, visions, values, passions, challenges, etc. For instance, Xie (owner of handicraft design and production firm, located in China) indicated how the common experience of hardship to run a business helps prompt communication among tenants in his CIC. As he explained, *"We see each other as the same kind of people who go through hardships, thus we are willing to communicate with each other, and also help each other when necessary."*

Similarly, Charlotte (owner of copywriting agency, located in the Netherlands) noticed how the shared environmentally-friendly practice of making compost (fertile soil made from food or scrapes) for plants in her CIC helps her build a close relationship with other cluster members and facilitate their communication:

"It may look irrelevant, but it actually has everything to do with my work and innovation. Because you know together you can actually achieve something. You are connected with people in this process, then you are more willing to help each other in work if there are some problems occur."

Thirdly, in accordance with some previous theories focusing on the positive impact of events on boosting cultural creativity (Hitters & Richards, 2003), nearly all respondents across the two nations mentioned the importance of events organized in the CIC for knowledge spillover. These events are said to create opportunities for both face-to-face communication (formal communication carried out deliberately) and buzzing (informal information exchange), which could be initiated by the CIC management, certain firms in the CIC or external organizations, ranging from professional

seminars, exhibitions, conferences to more informal activities like social gatherings. For example, Hu (tech startup owner, located in China) mentioned how the formal seminars organized in his CIC help him obtain useful information for his innovation by saying "*There are quite a lot of people chatting together in the seminar, not one to one. You get to know what people are up to recently, what new trends are happening in the industry, etc."*

Correspondingly, Tom (tech startup owner, located in the Netherlands) also noticed how the weekly beer party organized in his CIC offers opportunities for mutual innovation inspiration between entrepreneurs:

"In the party, I would just go for somebody and ask, 'hey, how do you think of my product?'. You reflect on my product, you give me some feedback and I learn out of it. In that case, both of us become more innovative."

In addition to the commonalities, some notable differences also emerged between respondents in China and the Netherlands regarding how they experience knowledge spillover in the CIC. To begin with, respondents from the two countries seem to attach different levels of importance to the two forms of knowledge spillover, face-to-face communication and buzz. While the former refers to deliberate communication in formal settings like cooperation, the latter is unintentional and natural knowledge exchange which happens in informal meetings. As presented in the theoretical framework, Asheim et al. (2007) indicate both types of knowledge spillover are of value to the innovation in creative industries, which draw on the "symbolic knowledge base". Interestingly, while no respondents from the Netherlands differentiate between the usefulness of the two types of communication, two respondents from China acknowledged that in comparison with buzzing, formal communication happening during business cooperation has a more significant and direct role in boosting their innovation. From their perspective, while the buzz offers random knowledge which might or might not turn into inspirations, the latter precisely aims for innovation in the project and thus is more efficient. This is also in line with the argument of Asheim et al. (2007) stating that buzz offers more fluid knowledge transfer which may not be immediately useful for catalyzing innovation compared with face-to-face communication. For instance, Long (owner of wall painting and interior design firm, located in China) noticed:

"Conversation in cooperation is more in-depth. There is more innovation happening because the aim of your conversation is to think about creative ideas for this project. Like if we are cooperating with a technology firm, we will directly discuss how we can combine their technology with our wall painting."

Moreover, respondents from the two countries also differed in regards to their emphasis on the types of knowledge shared within the CIC. To begin with, almost all respondents from both countries agreed on the importance of inspirations and suggestions gained from other tenants regarding their product/artwork innovation. For instance, Xie (owner of handicraft design and production firm, located in China) indicated how he got inspirations from a leather art firm to adopt new technology on his product by stating "*I once thought about whether I can apply their technology to ceramics by looking at the process of them making leather."*

Similarly, Sam (owner of a tech startup in the Netherlands) explained how he got inspiration to develop their app from other tech firms in the CIC:

"My friend showed me his app, and then we kind of 'stole' three ideas from him to build our own product. It is only by sharing that we can do that. If he has never said anything about his app to me, I would have never thought that we could do that too."

However, outside of knowledge related to product and artwork development, three respondents in China also attached importance to the information gained regarding industry trends and pertinent recent policies. This point, however, was not addressed by respondents in the Netherlands. To be more specific, the three respondents in China consider knowledge sharing in CIC a crucial step to help them "keep pace with the times" and advance their innovation accordingly. They believe if one does not continuously absorb these types of information, they will eventually be "discarded by the time". For instance, Yuan (owner of artistic furniture design firm, located in China) mentioned the importance of knowledge sharing from which she gets updated information to adapt to *"an era of resource sharing and information interaction*". She argued: *"In this era, you cannot be a 'frog at the bottom of a well'* [Chinese idiom referring to people with a limited horizon zone, XY]. *At least you need to understand the policy regarding your industry, and know whether your target customers have changed in terms of what they like, think and need. These things are being talked about every day in the park, so that everyone can make progress together."*

4.3 Locality

The previous theories suggest that CIC's locality provokes entrepreneurial innovation via environmental stimuli or from people in the shared space. To reiterate, in regards to the geographical environment, the CIC might help innovation through the historical and symbolic value attached to the place, along with its visual appearance which might function as a catalyst for aesthetic innovation (Drake, 2003; Heebels & Van Aalst, 2010; Pratt, 2002;). In regards to people in the environment, the diversified, tolerant and amiable ambiance, as well as the competitive atmosphere formed by them are considered as beneficial for innovation (; Florida 2002; 2004; Zheng, Chan, 2014). As derived from the interview data, respondents from China and the Netherlands revealed both similarities and differences in reference to how they perceive and experience these four factors. A detailed illustration can be found as follows.

4.3.1 Historical and symbolic value of CIC

Most respondents from both countries acknowledged the influence of the place's historical and symbolic value to foster their innovation. This corresponds with the previous studies arguing that the culture, traditions, styles and symbolic resources attached to the place stimulate locality-based creativity of creative workers (Hutton, 2006; Pratt, 2002). For instance, Mei (employee of interior design firm, located in China) not only indicated how the site's primitive and industrial architectural style helped her innovate, but also that its design is embedded in the local traditional culture. From her perspective, the industrial architectural style of the site attracts young creative professionals because it is "*more likely to let your mind wander and come up with something that is interesting".* Meanwhile, she also stated that local cultural elements embedded in the design of her CIC, like tea and bamboo [drinking tea has a long history in Chengdu, while bamboo is associated with integrity and elegance in traditional Chinese culture, XY], also offer inspirations for her to create new products. As she explained: *"There are bamboo forests and old bamboo chairs in the park, and there is a traditional Chinese style kiosk nearby supplying tea. You just feel this 'Chengdu style' in the air, this makes you feel good and is very useful when we, for instance, also want to design a 'Chengdu style' product."*

Similarly, Christina (freelance photographer, located in The Netherlands), also mentioned how the industrial atmosphere of her CIC stimulates her creativity by connecting her with the old days: *"When I am working on my desk and I look over, I just see the high walls of our building flecked with sunlight…… this really gives a feeling that you are back in the old day… this is good place to breed my creativity."*

However, not all the respondents are convinced of the advantages that a CIC's historical and symbolic value can bring to their innovation. Two respondents, one in China and one in the Netherlands, think their passion for the historical and symbolic values of CIC diminishes as time passes. For instance, Tom (tech start-up owner, located in the Netherlands) stated, *"Once you have stayed in a place long enough, it is just another office, you find nothing surprising."*

4.3.2 Visual environment serving as inspirations

As mentioned in the theoretical framework, Drake (2003) notes that the local visual environment in CIC might be integrated into product design or the creation process of creative workers. In this study too, more than half of the respondents from the two countries emphasized the importance of visual environmental elements for their innovation. For instance, Long (owner of wall painting and interior design firm, located in China) has given an example in which an element learned from architecture in his park helped with his own art creation:

"Once I saw them building a new building in our park, the exterior of the building is really like a… magic cube, very fascinating. Then when I got back to my studio I decided to also use the visuals of a magic cube in the next wall painting we will do. "

Nevertheless, respondents from both sides also brought up some specific notions in reference to how the visual environment of the CIC impacts their innovation. In China, three respondents indicated that the openness and wideness of their CIC serves as the catalyst for their innovation. For instance, Long (owner of wall painting and interior design firm, located in China) expressed that he often strolls in the vast area of the CIC because it helps him "*make the mind wander and find more inspirations*".

Moreover, Yuan (owner of artistic furniture design firm) and Mei (*employee of interior design firm)* gave more explicit explanations of how the openness and wideness of the environment can stimulate their innovation. In their view, such an environment provides them with dynamic and diverse visual experiences, which are key for their innovativeness. As Yuan explained: *"Our park is not like a closed mall, which gives people a sense of depression. It is very open and large, you really see different, interesting things happening around you. This can be said to have an effect on our innovation."* Mei also noticed such dynamic experiences inspire her to become *"a more dynamic and flexible person when it comes to artwork creation".* This finding corresponds with the

theory of Dubos (1971), which presents that humans' potentials can only be fully exploited when they are in a physical environment that offers a wide variety of experiences.

Three respondents in the Netherlands mentioned the significance of their engagement with the CIC's physical environment for their innovation, while none of the respondents in China voiced the same opinion. In this context, engagement refers to activities respondents can do to build, exploit and/or alter the environment they are in. According to these respondents, such interactions with the spatial environment not only offer them chances to freely explore their creative spirit, but also add to the creative milieu of the CIC community. For instance, Vincent (freelance visual artist, located in the Netherlands) mentioned how his freedom to build his own studio and paint on the walls in the CIC help with his innovation:

"A bunch of people have built their own studios here, including me, which gives the community a really nice eclectic feeling. Besides building my own studio, I can walk around and paint everywhere I want. The building in a way is inspiring me to take my space and satisfy my need for my artistic practice. "

Similarly, Charlotte (owner of copywriting agency, located in the Netherlands) noticed how she explored her innovative spirit in her spontaneous practice to build new interiors (a children's corner) in her CIC. She said *"I made a small table with chairs and some drawing stuff in our hall. I love how you are allowed to do things to your own environment and use your own innovative spirit in this process."*

As can be seen in the accounts of Vincent and Charlotte, it is crucial that the management of the CIC give freedom for its tenants to "do things" to the environment and allow creativity to prevail. Additionally, it is important to mention that the three respondents in the Netherlands who indicated the importance of engaging with the environment all work in more arts-related sectors in creative industries. Those working in software and computer services were not found to highlight this factor.

4.3.3 Friendly, tolerant and open atmosphere

As previously stated in the theoretical framework, a tolerant, friendly and open atmosphere brought by a diverse mix of people is perceived as an inspiration for innovation (Florida 2002; 2004). Based on the analysis of the interview data, respondents in the two countries differ in this aspect not in how, but to what degree they think this atmosphere affects their innovation. To be more specific,

most respondents think such an atmosphere provides them with a cheerful mood and comfort at work, which are two of the basic conditions needed for their innovation to occur. However, while respondents in the Netherlands gave direct confirmation of the effect of this factor, most of those in China were hesitant in identifying with such an influence, which they deemed as "quite indirect". For instance, Tom (tech firm owner, located in the Netherlands) in the Netherlands mentioned, *"Such a friendly environment makes you feel comfortable. And when you're comfortable and happy are you in the right state to innovate."* However, Hu (game design start-up owner, located in China) noted:

"A friendly environment is not necessarily good for our innovation. However, a bad environment will certainly have devastating effects on innovation. Because we are already very busy at work, if we do not have a good relationship with people around us, there is no way that we can work efficiently, let alone to innovate. "

4.3.4 Competitive atmosphere

The majority of the respondents from both countries denied the effect of the competitive atmosphere in the CIC on their innovation. The main reason for this is the absence of direct competitors in the same sector located in the CIC. However, two of the six respondents in China did assume that if there were a nearby firm engaged in the same business, a competitive atmosphere could be formed which would spur their innovation. Such an assumption corresponds with the previous theory that competitive relationships with other cluster members would put tenants under constant pressure to exceed others and achieve breakthroughs in innovation (Zheng, & Chan, 2014). For instance, Xie (owner of handicraft design and production firm, located in China) envisaged how the existence of a direct competitor in the CIC could possibly prompt him to improve the quality and creativeness of his work because "*all partners and clients in the site would then have two firms to choose from when they want to someone to design a product for them."*

However, the majority of the respondents in the two nations also highlighted their preference for collaborative rather than competitive relationships in the CIC. Moreover, they conceive the former to better prompt their innovation than the latter. Nevertheless, interestingly, respondents in the two countries have different perspectives regarding their rationales of such a preference. On one hand, as a basis for innovation, most respondents in the Netherlands conceive that the people's mutual support and stress-free environment resulted from a collaborative, rather than competitive culture. This is in line with Byron, Khazanchi & Nazarian's finding (2010) that a stress-inducing

environment reduces innovative performance. For example, Linda (app designer, located in the Netherlands) mentioned:

"In this place, people support and encourage not compete with each other. To be innovative or creative, you need to be very relaxed. You never get inspired because you are under pressure, like the pressure from competition. Best work is done when there is no stress."

On the other hand, instead of creating a good environment for themselves, respondents in China believe the collaborative atmosphere in the CIC helps them to better adapt to the external environment and thus innovate. This is also relevant to knowledge spillover, which is considered as a way to obtain information about the external environment. For instance, Hu (tech startup owner, located in China) indicated how information sharing is inevitable for creative workers to optimize the product and/or business after the development of the Internet:

"Nowadays even if you do not want to share information with people, people will get it online. So it is better to open your mind to talk to people in the park, and do business well together. If everyone tries to keep their 'business secrets', no progress can be made, all products and services will always remain the same."

4.4 External factors

As the theoretical discussion of the triple helix model indicates, the intense interaction between academia, governments and industry plays an indispensable role in fostering innovation in CICs (Etzkowitz & Leydesdorff, 1997; Etzkowitz & Leydesdorff, 2000). Moreover, clients are also seen as a crucial input source for firms in creative industries (Wijngaarden et al., forthcoming), and the CIC can function as a tool for attracting clients to firms located there (Drake, 2003; Heebels & Van Aalst, 2010). This section will shed light on how the three types of stakeholders relevant to the CIC: the government, academia and clients, affect entrepreneurial innovation in China and the Netherlands from the examined interview.

4.4.1 Governments

As previously addressed, CICs have been a major focus of attention in policy development to boost the knowledge economy in both the West and China. According to the interview data, both respondents in China and the Netherlands acknowledged that their innovation benefits from the

government's sponsorship and preferential policies targeting their CICs. However, similar to how they differ on their perceptions on the friendly atmosphere in CIC, there was a discrepancy between perspectives on policy. While respondents in the Netherlands have no problem to define policy benefits as an innovation stimuli, those in China tend to doubt whether the policy benefits should be considered as a factor influencing innovation since its influence is "indirect". For instance, Sam (tech start-up owner, located in the Netherlands) mentioned how locating his firm in the CIC helps him to obtain a working visa from the government, because companies located in the CIC can be deemed as "important agencies to boost the development of local creative industries". According to Sam, "*This laid a solid foundation for your business to start, and of course to innovate and get better in the future."*

On the contrary, although having received funds from the municipal government to start his firm in the CIC, Long (owner of wall painting and interior design firm) did not see such benefits as a direct stimulator of his innovation by stating that *"It was nice to receive all those things, but I think it mainly helped me on practical matters like covering the rental of my office space. Of course, you can say without the office space, innovation cannot happen, but I would still say the policy benefits is a condition, not a stimulus for innovation."*

Moreover, in addition to the difference in how they perceive policy benefits, respondents from both China and the Netherlands brought up unique notions regarding how the government's connection to the CIC influences their innovation.

To begin with, interestingly, two respondents from China mentioned how the CIC's bureaucratic practices could hinder, rather than stimulate their innovation. This is in accordance with the notion of Bolin & Harenstam (2008) that bureaucracy within an organization has the potential to stifle individual creativity and initiative. These two respondents are both located in public (government-owned) CICs rather than private ones. According to them, such a negative effect from bureaucracy can be divided into two aspects. First, it may cause difficulty for them to obtain the policy benefits they are granted. For instance, Xie (owner of handicraft design and production firm) argued how the long-lasting and cumbersome procedures to receive a government subsidy has hindered his innovation because he has "*spent many efforts to go through the procedure but ended up receiving only one-tenth of the funds granted after two years in the park.*" The amount of funding he has received, he argued, is "*not even enough to pay the rental*".

Furthermore, Xie also mentioned how the CIC's practice to prioritize tenants requiring subsidy based on Guanxi (hierarchical personal connections or relationships in China) impedes his innovation and work in general. According to him, tenants in his park cannot directly apply for

subsidies from the government, rather, the CIC serves as the intermediary in this process and allocates all subsidies from the government to tenants. In that case, he argued, for tenants who do have a good Guanxi with the CIC management, the process to get the subsidy can be "*long and painful*", because t*hey are never the park's priority to receive subsidies. The approval of their documents will never come*".

Second, the CIC's bureaucratic practice is also reflected in its self-interested behavior seeking to meet certain criteria of the government, rather than helping tenants better innovate or develop their business. For instance, Long (owner of wall painting and interior design firm, located in China) noted how the CIC demanded their physical presence during a politician's visit – and would constantly change tenants to meet with a "political goal." These actions were seen as diluting his innovation:

"The park can also hinder your innovation or work in general. If there are leaders (way to refer to politicians in the Chinese context) *visiting our park, our physical presence is required. Because the park wants leaders to see they have met the requirement to attract a diversity of tenants. So even when you are in the business trip, the park would ask you to go back.*

They do not want you to stay in the park for a long time, either, because they want to attract new tenants. The more teams located in the park, the better the results they could deliver to the government."

On the other hand, two respondents in the Netherlands mentioned how the government's gentrification practice hampered the long-term development of CIC and consequently, their innovation. To be more specific, the short lifecycle of the CIC planned by the government failed to provide a sustainable platform, which could foster the innovation of creative workers permanently. These respondents noticed that some CICs, including their own, would only exist for a certain period of time (usually around five years). After this, the CIC will be torn down as a new neighborhood is built at the location. In that case, creative workers need to relocate from time to time, which has a negative effect on their long-term innovation. For instance, Vincent (handicraft artist, located in the Netherlands) expressed his expectation to locate in a permanent CIC:

"It will be very good for the city to learn from London, Berlin, and even Paris to create a sustainable creative platform within the city. In that case, they not only give a lot of room for innovation, but also create a creative and artistic neighborhood in the city where tourists will go."

4.4.2 Academia

The previous literature indicated that in the knowledge economy, research universities close to CICs might supply the underpinnings of innovation in the area through the provision of high-skilled talents and research findings (Hershberg, Nabeshima & Yusuf, 2007; Leiponen, 2005). However, according to the examined interview data, neither of the respondents in China or the Netherlands identify with such an effect from universities on their innovation. The majority of the respondents simply pointed out their CICs are not built close to a research university, thus such an effect on their innovation does not exist. Only Tang (game designer, located in China) mentioned that the CIC he is in is indeed built near a research university. However, because of the discrepancy between the academic research and industrial development regarding the game industry, the university failed to supply high-quality talent or research findings to the game firms in the CIC:

"There are almost no majors related to games in college education nowadays. Besides, many practical things in the industry can be hard to teach in an academic university. So if we recruit students, we do not care whether they have relevant academic experience of the game industry. Because even if they have, it is not very useful."

It has to be acknowledged that the lack of findings in academia's influence on the entrepreneurial innovation in CICs in this study might have resulted from the small sample size. If a greater number of CICs close to research universities would have been researched in this study, richer data would have been collected regarding academia's influence on innovation. Moreover, according to Farinha, Ferreira & Gouveia (2016), the triple helix collaboration works best to stimulate local technical development. Thus, if more respondents from tech-related sectors are interviewed, the study might uncover additional insights into how academia affects innovation.

4.4.3 Clients

According to the previous literature, while input from clients may function as an important source of entrepreneurial innovation, CICs can help entrepreneurs obtain more clients by either attracting them by its cluster image, or directly function as the intermediary connecting them with more clients (Drake, 2003; Heebels & Van Aalst, 2010; Wijngaarden et al., forthcoming; Wijngaarden, Hitters & Bhansing, 2019; Guo, 2019). The examined interview data showed respondents from both China and the Netherlands reveal similar patterns regarding how they experience this cycle of

"CIC-clients-innovation". It was found out that instead of comparing respondents across the two countries, comparing them across different sectors in creative industries would be more reasonable in this case. The comparison between respondents' perception in different types of sectors can be seen as follows.

First, in accordance with the finding of Wijngaarden et al. (forthcoming), regardless as to whether they are in China or the Netherlands, respondents in more tech-related sub-sectors in creative industries all put considerable emphasis on the importance of clients' input for their innovation. Their innovation features a high client-centered approach in a sense that innovation is used to solely satisfy clients' needs based on their preference and feedback. However, the effect of CIC in this context is deemed as relatively insignificant by respondents in these industries. Since most of their products are digital ones, such as apps and games, users are attracted by the traits of the product, not the image of CIC that the firm locates within. Moreover, the CIC does not have the ability to connect the firms with more potential clients, either. For instance, Linda *(app designer, located in The Netherlands)* mentioned:

"Any tech companies these days are user-centered. We always have to test our new product on the market. If it does not work, we adjust the product and try it again. That is the only way to survive. But you ask if the community has helped us to get more clients, no. The users do not even know where our company is, they download our app just because they like the app itself."

Furthermore, Tang, a mobile game designer in China, also addressed the importance to fit with the market demand when developing new games by saying "*You have to know what players need, not what you think they want. Namely, you need to focus on the real demand of the market, not the so-called fake demand.* " Moreover, he also denied the CIC's involvement in helping his firm get more clients because they *"develop new games based on the market demand, the park is not the market".*

In comparison to respondents working in tech-related sub-sectors, those in arts-related sub-sectors in creative industries across two countries also highlight the relevance of clients input to their innovation. However, the reliance of their innovation on clients is much less than that in tech-related sectors. Precisely speaking, clients' input is taken into consideration while creating a product, but does not serve as the mainstay of their innovation. For instance, Xie (owner of handicraft design and production firm, located in China) talked about how the high cost of making

changes to the product and customers' unfamiliarity with the art profession resulted in the low involvement of them in the product innovation process:

"The customer will give feedback on the initial product we design, and we will make some minor changes based on that. Except this, they do not get involved in the creation of products. There are two reasons for this. First, we are more professional, they do not have better suggestions compared with us. Second, customers will also pay a huge amount of money to keep making changes."

Nevertheless, although clients play a relatively insignificant role in the innovation of tenants in arts related sectors, for respondents interviewed in these sectors, the CIC plays a crucial role in helping them attract more clients. In line with the finding of Wijngaarden, Hitters & Bhansing (2019) and Guo (2019), this is done either through offering them a good image and reputation to the external world, or through directly introducing more clients to them. For instance, Long (owner of wall painting and interior design firm, located in China) mentioned how his firm was designated by a county government for a project, because the government officials "*naturally feel any team from the park is capable and professional*". Similarly, Christina (freelance photographer, located in the Netherlands) also mentioned how the CIC's creative image has helped her to win customers by stating *"When people know that you are from this community, they would instantly assume you are creative. This has actually helped me win customers."*

Furthermore, Yuan (owner of artistic furniture design firm, located in China) has given an example of how the CIC can directly bring her potential clients based on its own network. She mentioned: *"Our park can give us customer resources. They often invite different customers to visit the park, if you can seize the opportunity to talk to these customers, maybe you can build partnerships with them in the future."*

5. Conclusion and implications

The question addressed in this study is how creative entrepreneurs in China and the Netherlands perceive and experience the effect of CICs on their self-perceived innovativeness. In exploring this question, three categories of factors related to CICs with the potential to affect entrepreneurial innovation in creative industries were elicited from the existing literature: knowledge spillovers, locality and external input. By conducting semi-structured in-depth interviews with creative entrepreneurs respectively across the two nations, the study aimed to achieve the following goals:

First, to understand their perspectives and experiences of innovation in their work, second, to shed light on their perception of the CIC-related factors affecting their work. More specifically, the researcher attempted to investigate to what extent and how they identify with the typology of factors summarized from previous literature, and whether they deem there are other factors associated with the CIC that are important for their innovativeness.

This study presents a significant step in filling a number of critical gaps in the literature. To begin with, the bottom-up approach focusing on the perspective of creative entrepreneurs complements previous studies, which mainly examine the relation between CICs and innovation with the inductive approach. Furthermore, the focus on creative entrepreneurs' personal accounts helps to investigate potential interactions and overlaps between different CIC-related factors affecting innovation.

Additionally, since the interviews were conducted with respondents in China and the Netherlands, this study helps to understand whether established theories regarding how CICs affect innovation based on case studies mainly in the UK and US can also be upheld in other regions. Last but not the least, the cross national nature of the study can explore which CIC-related factors should be examined with the sensitivity of different societal, cultural and political environments, and which ones are applicable across regions despite these contextual differences. Based on the Results section of this work, the conclusions regarding how respondents perceive their innovation at work and factors related with the CIC affecting their innovation will be discussed in the following section.

5.1 Perception of innovation and CIC-related factors affecting innovation

5.1.1 Perception of innovation

Respondents in China and the Netherlands revealed both similarities and differences in how they perceive their innovation at work. On one hand, in regards to the nature of their innovation, respondents in the two countries share common notions (innovation as recombination of elements and a continuous process featuring small steps of adjustment,). This finding justifies the later analysis comparing the CIC's effect on such innovation. In other words, if the innovations they refer to are more analogous, the CICs' effect on innovation across the two nations becomes more comparable. This also implies that previous findings on the distinctive nature of innovation in

creative industries (e.g. Bakhshi, McVittie, Simmie 2008; Wijngaarden, Hitters & Bhansing, 2016) are not only in line with the personal experience of creative entrepreneurs, but can also be applied across nations. In line with the results of Wijngaarden, Hitters & Bhansing (2016), this paper argues that considering its unstructured and flexible nature, innovation in creative industries cannot be evaluated only based on traditional indicators like R&D investment.

On the other hand, in reference to the aim of their innovation at work, respondents from the two countries revealed some notable cross-regional differences. While those in China focus on profitability of innovation, those in the Netherlands focus on the degree of novelty contained in innovation. The two countries' cultural differences might be the possible rationale behind this finding. The Chinese and Dutch society revealed notable gaps regarding their scores on one of the cultural dimensions proposed by Hofstede (1996), masculinity. Masculinity measures the extent to which individuals in the society seeks achievement and competition, with success being linked with the best in the field (Mooij & Hofstede, 2010). With a score of sixty-six, China is amongst the highest of the masculinity scores, while the Netherlands scores only fourteen in this dimension (Hofstede Insight). Thus, within a more success-driven culture, it is likely that creative entrepreneurs in China would focus more on the commercial success of their innovation, rather than the novelty of the method taken to achieve innovation.

5.1.2 Knowledge spillovers

Respondents across the two nations all believed that the knowledge sharing in the CIC can promote their innovation. Moreover, most respondents in China and the Netherlands showed common ground regarding the perceived "conditions" for knowledge spillover to happen, which are mixed tenants, mutual identification among tenants and events organized within the CIC. Since the management of CICs might have high involvement in all of these three factors, this finding can provide them with useful insights regarding how to better prompt the innovation of tenants through knowledge spillover.

First, careful selection of tenants is required to stimulate knowledge spillover. According to the respondents, the most ideal mix should contain tenants from related yet not identical sectors who can provide each other useful insights across domains of knowledge. This is not only in line with the previous theory that both diversification and specialization in CIC improves firms' ability to innovate (Jacobs, 1969; Marshall, 1890), but also the common practice of CIC managers to select a mix of different tenants (Hitters & Richards, 2003). Second, shared experience, values, passions and challenges can also form the basis for the mutual communication between tenants. This is in

accordance with the theory of Camagni (1995), which implies that synergies derived from shared experience help to establish shared belief and representation. Therefore, these factors can also be taken into consideration when selecting tenants. Third, the management of CICs should help to organize different internal events to provide suitable circumstance for tenants to interact. These recommendations might be applicable across nations, since both respondents in China and the Netherlands identify with them.

However, respondents in the two countries differ in their emphasis on the form and contents of knowledge sharing. To begin with, while respondents in China think face-to-face communication is a more efficient and direct way to stimulate their innovation compared with buzz, those in the Netherlands attach similar importance to both forms of knowledge sharing. Compared with respondents in the Netherlands, those in China seem to hold a more pragmatic and result-oriented view on how the CIC affects their innovation. In their eyes, since buzz cannot lead to innovation in an immediate, direct and precise way, it is not considered as important as face-to-face communication. This might relate to the pragmatism which has characterized Chinese culture for a long time (Zhang, 2018). According to Zhang (2018) and Nisbett (2003), Chinese thought focuses on practical affairs, namely solving practical problems efficiently. In this case, it makes sense that respondents from China would have a preference for face-to-face communication rather than buzz, because the former features a highly efficient and direct way to innovate.

Meanwhile, while respondents in the two nations acknowledged the knowledge obtained regarding their product/artwork development, those in China also highlight the information about the "trends" which keeps them up to date, like those regarding recent policies targeting creative industries or behavioral changes in their customers. The reason why respondents in China put emphasis on this type of knowledge might lie in its special societal and economic state. As mentioned in the theoretical framework, unlike those in the Netherlands, creative industries have only boomed in China in recent decades (Prasad, 2004). The rapid expansion of business, new technologies and policy reforms feature a rapidly changing marketplace for creative entrepreneurs in China. In this case, it makes sense that that they would regard information about changes in the external environment as crucial to their innovation. Furthermore, compared with the Netherlands, China scores much lower on the Hofstede cultural dimension, uncertainty avoidance (Hofstede Insight). This means compared with people in the Netherlands, Chinese people are more likely to feel comfortable with ambiguous and unknown situations. Consequently, they are probably more willing to embrace changes rather than avoid them. In this case, compared with consumers in the Netherlands, those in China might change their preferences and requirements for creative products

more rapidly. Consequently, for creative entrepreneurs in China, this can lead to a higher reliance on information that helps them understand the changes in their consumers' preferences.

These differences regarding how respondents in the two nations perceive knowledge spillover also have practical implications. For the CIC managers in both China and the Netherlands, measures aiming at stimulating knowledge circulation regarding product/artwork development can be further developed. For instance, the managers could initiate events like individual pitches on a rolling and regular basis in the CIC, in which creative entrepreneurs can demonstrate their products/artwork to large audience and receive valuable feedback. Furthermore, for CIC managers in China, events such as seminars about recent policies/trends relevant to creative industries can be initiated.

5.1.3 Locality

The previous body of literature also suggest the CIC can influence entrepreneurial innovation via its geographical environment or people in the environment. This section will elaborate the results of these two dimensions below.

Firstly, in line with existing studies (e.g. Drake, 2003; Heebels & Van Aalst, 2010; Pratt, 2002), most respondents from China and the Netherlands mentioned that their innovation is stimulated by the local geographical environment of the CIC. This includes the historical, cultural and symbolic values of the CIC, as well as specific prompts in the environment serving as aesthetic inspirations. These findings imply that it is important for CIC managers across nations to create the appropriate "look and feel of a place" to prompt entrepreneurial innovation. However, as stated in the results section, a few respondents also mentioned that as they get used to the CIC's environment, the effect of it on their innovation decreases. This adds a new perspective to the proceeding literature. In other words, it might indicate it is necessary for scholars to remain critical in assessing the influence of the place's values on innovation, since such an influence might only be temporary. For the management of CICs, they could try to prolong the effect of the visual environment by constantly making changes to it, like adding new decoration and altering the placement of objects. In this way, tenants might derive innovation constantly from the geographical environment of the site.

Moreover, respondents from the two nations also added new notions regarding how the physical environment works to prompt their innovation. While some respondents in China emphasized openness and broadness of physical environment, some in the Netherlands highlighted the importance of their engagement with the environment. Referring back the structural difference of

CICs in the two nations, such a difference is considered reasonable. Compared with business centres in the Netherlands, cultural and creative industry parks in China indeed cover broader geographical area. Besides, most firms in the park are located on the ground level together, not scattered on different floors in a single building. Furthermore, it is probable that respondents in China are not given the permission to "do things to the environment" by the management of CICs, whereas in the Netherlands the tenants can more actively engage with their surroundings and environment. However, as mentioned in the result section, the respondents in the Netherlands who indicated the importance of environmental engagement to their innovation all work in art-related sectors. Those work in tech-related sectors like software development were not found to highlight this factor. This might indicate that it is necessary to take a sector-oriented approach rather than focusing on creative industries as a whole when examining the influence of this factor on entrepreneurial innovation in CICs.

Secondly, the previous literature suggests that the tolerant, friendly and open or competitive atmosphere formed by tenants in the CIC can stimulate entrepreneurial innovation (Florida 2002; 2004). To begin with, most respondents in the two nations consider a friendly and open atmosphere improves their well-being and thus put them in a good state to innovate. This not only verifies the previous theory but also illustrates the mechanism of how the atmosphere stimulates innovation. However, while respondents in the Netherlands were highly positive regarding the impact of such an atmosphere on their innovativeness, most of those in China consider it as the necessary but not sufficient condition for their innovation, i.e., while such an atmosphere does not necessarily contribute to innovation, the lack of it can certainly impede innovation. Similar to how they conceive of the influence of buzz, pragmatism in the Chinese culture might be the reason why respondents in China experience hesitation in confirming the effects of atmosphere attributes within CICs on their innovativeness.

Moreover, in contrast to the theory of Zheng & Chan (2014), most respondents in both nations denied the effect of a competitive atmosphere in the CIC on their innovation. They believe it is the collaborative rather than competitive atmosphere in the CIC that prompts their innovation. The relevance of this finding to CIC managers is that measurements to prompt collaboration rather than competition between firms should be adopted to better stimulate innovation. For instance, firms that provide complementary rather than identical services/products should be chosen to locate in the CIC. This corresponds with the conclusion made

However, respondents in the two countries revealed different mechanisms regarding how the cooperative atmosphere in CICs helps their innovation. While respondents in the Netherlands tend

to believe collaboration with others in CIC prompt their innovation by creating a supportive and collaborative environment for them, those in China are more inclined to think it stimulates their innovation by aiding their adaptation to external environmental changes. The former scenario features a people-centric approach (the atmosphere creates a good environment for respondent to innovate), the latter, on the other hand, is characterized by an environment-centric approach (the atmosphere help respondents adapt to the new environment and thus innovate). Again, this difference might relate to the cultural differences the two countries have. As previously stated, Schwartz (1999) proposed a more detailed typology of cultural orientation compared with that of Hofstede, which includes harmony and mastery. While harmonic cultures seek to accept, appreciate and fit into the natural or societal environment, mastery cultures encourage individuals to actively master or change the natural or social setting to achieve personal goals (Schwartz, 1999). Although statistics regarding the two nations' deviation on mastery and harmony were not found, there is a reason to believe that the Chinese society would have a higher degree of harmony rather than mastery than the Dutch one. This is because harmony ("和") is the core and most cherished value in Confucianism that has been historically embedded in the Chinese culture. The aim of it is to seek a harmonious relationship between different objects, for example between people, or between people and the environment (Li, 2006). In this case, respondents in China may be more inclined to seek innovation by adapting to the external environment rather than actively changing it.

5.1.4 External factors

The previous theories feature how the CIC can affect entrepreneurial innovation through its connections with external stakeholders including governments, academia and clients (Drake, 2003; Heebels & Van Aalst, 2010; Wijngaarden et al., forthcoming; Wijngaarden, Hitters & Bhansing, 2019; Guo, 2019). Since the interviews did not yield evidence regarding the influence of academia due to the limited sample size, this section will only include a discussion regarding of the impact of governments and clients on entrepreneurial innovation in CICs.

First, with respect to the government, most respondents across the two nations believed the preferential policies they enjoyed by locating in the CIC help with their innovation. However, similar to that of the communication themes of buzz and creating a friendly atmosphere, while respondents in the Netherlands experienced no hesitation in admitting the influence of policies on their innovation, those in China are more likely to consider such impact as indirect, i.e. such impact is not seen as the wellspring of their innovation. Again, the pragmatism in Chinese culture can possibly explain such a difference.

Moreover, respondents in the two countries also revealed distinctive perspectives regarding how CIC influences their innovation with its connection to the government. Some Chinese respondents mentioned that bureaucratic practices of the CIC could hinder rather than stimulate their innovation. This might be related to China's policy model that features "strong authoritarian national leadership" of the government (Nee, Opper & Wong, 2007. p. 20). Given this political context, it makes sense that the CIC would prioritize meeting the requirements from the government rather than tenants' needs. However, as stated in the results, respondents addressing this point are both from government-owned CICs instead of private ones in China. Thus, it can be assumed that innovation of tenants located in private parks are less affected by bureaucracy compared with those in the public ones. Moreover, two respondents in the Netherlands also stated how the government's gentrification practice hampered the long-term development of CIC and consequently, their innovation. These two findings revealed the fact that CIC-related factors might not only stimulate, but also hinder entrepreneurial innovation. Thus, future research can take a more holistic and nuanced approach to examine the impact of CIC on innovation, especially under specific political contexts in different nations.

Second, regarding how CIC affects innovation through its connection with clients, respondents in the two countries revealed similar patterns. For respondents in tech-related sectors in creative industries, although clients' input functions as the main source of their innovation, the CIC remains insignificant in this context because of its inability to help them obtain clients. However, for respondents in arts-related sectors, while the reliance of their innovation on clients' input is weak, CICs nonetheless play an important role in helping them develop partnerships with more clients. Thus, as previously stated in the Results section, rather than comparing respondents across nations, it makes more sense for future research to compare them across industries in this aspect. In other words, the divergence in how respondents experience the effect of CIC on innovation through clients is greater between different sectors rather than nations. For the management of CICs, this finding indicates that they can play a more important role and put more effort in helping tenants in art-related sectors to attract more clients, and thus promote their innovation.

5.2 Limitations

The small sample size represents a limitation in the validity of the results. With only six respondents in total from China and the Netherlands, the sample does not fully represent the population of creative entrepreneurs located in the CIC in both nations. Thus, it is problematic to generalize the findings.

However, it is crucial to mention that although it is difficult to generalize the results of this research, it still highlights some important aspects regarding how cross-regional creative entrepreneurs perceive the CIC's influence on their innovation. These could serve as a basis for future studies in this area of research. Moreover, as mentioned in the theoretical framework, the creative entrepreneurs in this study not only include business founders and employees, but also freelancers whose daily work contains innovative elements. However, while all three types of respondents were found in the Netherlands, only the former two types were interviewed in China. This mainly had to do with the fact that freelancers are rare in all CICs that the researcher was able to connect with in China; according to the managers of these CICs, it is uncommon that a single freelancer can afford the rental fee and meet all the entry criteria of cultural and creative industry parks. Consequently, the lack of freelancers in the sample in China can also affect the validity of the findings, especially that of the cross-regional comparison between China and the Netherlands. In addition, as mentioned earlier, the snowball sampling strategy utilized in the research could harm the result validity. Respondents with similar characteristics and experiences could have been selected, which can limit the diversity of the findings. Moreover, it has been revealed in the results that respondents from tech-related and art-related sectors perceive and experience the effect of CIC on their innovation differently. This might further undermine the validity of the research result because snowball sampling was not able to grasp such a difference.

The online interviews in the research also have the potential to jeopardize the reliability of the results. As stated earlier, since the researcher is located in the Netherlands, all the interviews with respondents in China were carried out through online video calls and two respondents in the Netherlands were also interviewed online due to their personal preference. In these interviews, although the interview guide was followed to make sure all the relevant questions were asked, the researcher was not able to grasp the information communicated through body language and observe the dynamics happening between the respondent and CIC's environment.

At last, the cross-regional comparison might limit the study's ability to explore at greater depth how CICs affect entrepreneurial innovation respectively in the two countries. For instance, it was found out that respondents in government-owned and private CICs in China have different experiences regarding the extent to which their innovation is affected by bureaucracy. However, since this study focuses on cross-regional comparison, rather than how different CICs in a single country affect innovation, no more discussion in this respect was included in the paper.

5.3 Suggestions for future research

Following the findings and limitations of this research, some direction can be suggested for future studies. To begin with, the study shows that creative workers across nations, besides some crucial similarities, also reveal notable differences in how they perceive the impact of CIC on their innovation. Future studies can continue testing the findings in other nations, and thus further investigate which types of CIC-related factors are applicable across borders, and which ones should be examined with the sensitivity of cultural, political and societal environments in different nations.

Moreover, this study has made assumptions about the causes of difference between respondents in China and the Netherlands, including how they conceive the influence that CICs have on their innovation, such as their varied political contexts and scores on cultural dimensions. Instead of qualitative methods, future studies can conduct quantitative research on a larger scale to investigate the relationships between these factors and CIC's influence on entrepreneurial innovation.

Furthermore, as has been demonstrated previously, creative entrepreneurs in tech-related and arts-related sectors in creative industries have divergent perceptions and experiences on CIC's effect on their innovation in some aspects. Therefore, future studies can investigate further on how the mechanism works differently for creative workers from the two kinds of sectors, rather than studying them as a homogeneous group.

Finally, although the study focuses on minor CICs, it was determined that whether the Chinese CICs are government or privately owned plays an important role in determining how tenants experience innovation in them. For future related studies conducted in China, making a distinction between these two types of CICs is suggested, this will allow more objective and diversified results to be obtained.

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Appendix A: Interview Guide

1. Personal basic information and innovation experience

- Can you describe the work you do? What sector do you work in?
- What kind of business that your company/the company that you work does?
- What is your job in the company?
- What does innovation mean to you?
- What are some of the recent projects that you have been working on?
- Do you think your work contains some innovative elements/ renewal/new combinations/creativity? If so, what are them? If not, why not?
- can you give examples of innovations in you work practices or results? How did these innovations develop?

2. Evaluation of personal innovative ability

- Do you consider yourself as an innovative person? If so, why? If not, why not?
- What does it mean to you to be innovative? Do you think being innovative is important for you?

3. The perception and feeling of the CIC

- How do you feel about the place/business center/coworking space/park that you are in now?
- Do you think the place/business center/coworking space/park you are in influences your daily work? If so, in which way?
- Why you chose to work/locate your company in this place/business center/coworking space/park?

4. The effect of knowledge-over effect on the respondent' innovation

- Do you talk to other people in the place/business center/coworking space/park you are in?
- Who are those people you talk to?
- Where and under what kinds of circumstances do you talk to them?
- What topics do you cover in your conversation?
- What kind of information do you get from your conversation? Do you think it is useful for your job?
- Do you think the conversation between you and other people in the place/business

center/coworking space/park you are in is important to you? If so, in which way?

- Do you think the conversation you have with others in the CIC has anything to do with the innovation in your daily work?

5. The effect of locality on the respondent's innovation

- How would you describe the general atmosphere in the place/business center/coworking space/park you are in?
- Do you think firms in the place you work form a competitive atmosphere and why?
- Do you think such a competitive atmosphere contribute to the innovation in your daily work? If so, how？
- Does a diverse mix of companies exist in place/business center/coworking space/park you are in?
- If so, how do you think of this diversity?
- How this diversity affects your daily innovative work?
- Do you think the place you work in carry some historical or symbolic values?
- If so, what are these values?
- Why it has these values?
- Do you think these values can affect your innovation at work and why?

6. The effect of external output on the respondent's innovation

- Do you enjoy some policy benefits from the government as a tenant in your CIC?
- If so, what are these benefits?
- Do you think these benefits contribute to the your innovation in daily work?
- Do you know if there is any research institution in or close to your CIC? How would you think of their relationship with the CIC?
- Do you communicate or collaborate with the research institution(s) in your CIC? If so, does this relate with your innovation in your daily work and why?
- Do your clients contribute to your innovation at work? If so, how?
- Do you think that the fact that your company is located in the CIC can help you to attract more clients? If so, why? If not, why not?

7. Other factors that the respondent think contribute to his/her innovation.

- Do you think there are any other factors related with the CIC that is related with your

innovation?

- If so, what are them, and how they are related with the CIC?

Appendix B: Codes lists

Interviews with respondents in the Netherlands:

open coding	axial coding	selective coding
professional image of CIC help attract clients(arts-related sectors)	CIC helps innovation through clients(arts-related sectors)	CIC affects innovation through external input
creative image of CIC help attract clients(arts-related sectors)		
CIC introduce clients to tenants(arts-related sectors)		
minor change in product based on clients' feedback(arts-related sectors)		
having more power over clients regarding product creation for being the authority (arts-related sectors)		
clients do not involve in innovation because they do not have clear requirements for products (arts-related sectors)		
innovation more depend on exploring the clients'organization culture by oneself		
innovation as being totally consumer centric (tech-related sectors)	CIC does not help much with innovation through clients（tech-related sectors)	
consumers' feedback as the main input of innovation(tech-related sectors)		
CIC doesn't help to attract clients（tech-related sectors）		
government's gentrification practice hinder innovation		

short lifecycle of CICs fails to breed innovation in a long term	CIC affects innovation through government: gentrification hinders innovation	
permanent CICs help tourism and branding of the city		
permanent CICs have long-lasting effect on innovation		
policy support create basis for innovation	policy support creates basis for innovation	
Denial of academia's effect on innovation: not close to universities	denial of academia's effect on innovation	
friendly atmosphere helps with innovation for creating a good mood	friendly atmosphere helps with innovation	CIC positive atmosphere helps with innovation
competitive atmosphere denial: no competitor in the site	collaborative rather than competitive atmosphere to prompt innovation	
collaboration better than competition to prompt innovation because of people's mutual support		
collaboration better than competition to prompt innovation because it offers stress-free environment		
historical value of CIC helps innovation	historical/symbolic value of CIC help with innovation	CIC physical environment helps innovation
industrial atmosphere of CIC helps innovation		
physical environment: engagement with the environment helps innovation	physical environment: environmental engagement/small elements help with innovation	
physical environment: small elements help with innovation		
conversation condition: similar ambition	conditions for knowledge spillover	Knowledge spillover helps innovation
conversation condition: shared practice		
conversation condition: similar lifestyle		
conversation condition: different but related sectors		
communication in informal settings helps innovation: beer party	buzz helps innovation	

Communication in informal settings helps innovation: lunch gathering		
communication in formal meetings help innovation	formal communication helps innovation	
communication in collaboration help innovation		
get useful feedback and suggestions on product development	important knowledge received from knowledge spillover	
getting artistic inspiration from communication		
innovation as new method to solve existing problems	innovation as newness	Innovation traits
innovation as new way to look at existing things		
innovation as new path to reach the same goal		
innovation results in more creativity/productivity		
innovation as continuously improving the product	innovation as minor improvement/continuous process to combine different elements	
innovation as adding new features to the product		
innovation as continual product upgrades based on market feedback		
innovation as adjusting the art work based on new inspirations		

Interviews with respondents in the China:

open coding	axial coding	selective coding
professional image of CIC help attract clients(arts-related sectors)	CIC helps innovation through clients (arts-related sectors)	CIC affects innovation through external input
creative image of CIC help attract clients(arts-related sectors)		
CIC introduces clients to tenants(arts-related sectors)		

minor change in product based on clients' feedback(arts-related sectors)		
reasons clients are not involved with innovation: high cost(arts-related sectors)		
reasons clients are not involved with innovation: not professional(arts-related sectors)		
Clients centric: innovation to meet consumers' needs (tech-related sectors)	CIC does help much with innovation through clients（tech-related sectors）	
Clients centric: consumers' feedback as the main input of innovation(tech-related sectors)		
CIC doesn't help to attract clients（tech-related sectors）		
CIC prioritize meeting political request impedes innovation	CIC affect innovation through government :bureaucracy drag down innovation	
long procedure to get subsidy impedes innovation		
need Guanxi to get subsidy impedes innovation		
demanded physical presence during leaders' visit		
policy supports indirectly affects innovation	CIC affect innovation through government :policy support indirectly affects innovation	
Denial of academia's effect on innovation: not close to universities	Denial of academia's effect on innovation	
Not close to universities or require tacit knowledge not learned at school		
friendly atmosphere does not directly help with innovation	friendly atmosphere does not directly help with innovation	CIC atmosphere affects innovation
competitive atmosphere denial: no competitor in the site	collaborative rather than competitive atmosphere prompts innovation	
collaboration better than competition to prompt innovation because of Internet age effects		

collaboration better than competition to prompt innovation because information sharing is the trend		
historical value of CIC helps innovation	historical/symbolic value of CIC help with innovation	CIC physical environment helps innovation
industrial atmosphere of CIC helps innovation		
physical environment: openness and wideness help with innovation	physical environment: openness/small elements help with innovation	
physical environment: small elements help with innovation		
conversation condition: similar ambition	knowledge spillover condition	Knowledge spillover affects innovation
conversation condition: common life experience		
conversation condition: common goal		
conversation condition: different but related sectors		
communication in informal settings helps innovation	buzz helps innovation	
communication in formal meeting help innovation	formal communication help innovation	
communication in collaboration help innovation		
communication in collaboration is more helpful than buzz		
get useful feedback and suggestions on product development	Important knowledge obtained for innovation	
getting artistic inspiration from communication		
knowledge about recent policy helps innovation		
knowledge about new technologies helps innovation		
knowledge about changes in targeted consumers helps innovation		
innovation as combination and practical usage and art	innovation as combination of commercialization and art	innovation as combination of commercialization and art
innovation as gaining profits from art work		
innovation as combination of commercialization and art		
innovation as continuously improving the product		

innovation as adding new features to the product	innovation as keep updating products	innovation as minor improvement/continuous process to combine different elements
innovation as keep upgrade product based on market feedback		
innovation as adjusting the art work based on new inspirations	innovation as adjusting the art work	