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The location of creative industries in a developing country: The case of Indonesia

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ABSTRACT

This study examines the occurrence and spatial patterns of creative industries in the context of a developing country, specifically Indonesia. Our findings show that, in the context of Indonesia, it is crucial to distinguish between 'innovative' creative industries and 'traditional cultural' industries. The first category represents those that exploit new knowledge and intellectual property. The latter industries tend to preserve heritage values as selling points and, in Indonesia, they are actually much more significant in economic terms than creative industries and therefore should be taken into account. The spatial patterns of the two industries also differ. Creative industries are likely to concentrate in large urban regions, where innovation and cross-fertilisation of ideas can take place with the support of talent pooling and relatedness among niche producers. The Indonesian case is no exception. Meanwhile, traditional cultural industries are much less dependent on human capital and urbanisation economies. The results of this study suggest that policy strategies aimed at creative industries would be applicable in reasonably advanced regions provided they have sufficient human capital and economic diversification. In comparison, regions specialising in traditional cultural industries can adopt a different strategy to optimise the impact of these industries. Currently, the creative industry policy does not make this distinction.

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1. Introduction

The idea of creative industries is built upon particular contexts and phenomena that are found in 'developed' countries, most notably in North America, Europe and Australia. Today, many countries outside these contexts have also started adopting the idea as a tool for national and local development. However, it is unclear as to what extent this idea is appropriate for these different settings (see Fahmi, McCann, & Koster, 2015). We argue that understanding the regional setting of creative industries beyond the context of developed countries is important. The development of creative industries in these contexts might reflect different patterns and, thus, policy narratives adopted from developed countries might not be applicable in such contexts.

Existing conceptual and empirical contributions have established that regional social and economic settings are critical for creative industries, and that these place-based characteristics create conditions that may boost creativity and entrepreneurial behaviour (Clare, 2013; Florida, 2002; Lee, Florida, & Acs, 2004). Creative industries usually form geographical clusters, often in large cities, where they can benefit from large markets and a variety of activities and people. Urbanisation

economies help creative industries develop through new knowledge creation and cross-fertilisation among different specialties (Feldman & Kogler, 2010; Potts, 2007; Rosenthal & Strange, 2004). However, this premise, based on the situation in developed countries, might not always be valid elsewhere.

In line with this argument, this paper aims to examine the degree to which regional economic settings in Indonesia, a developing country, are suitable for creative industries. Indonesia is regarded as a 'developing' country based on its lower-middle level of GNI per capita (\$3630 in 2014), its mid-range HDI (0.684) and its underdeveloped industrial base.¹ Indonesia has adopted the notion of encouraging creative industries as an instrument for economic development through policy transfer, an idea built especially on the UK concept (see Fahmi et al., 2015).

Given the specific context of the Indonesian situation, this study provides insights into the development of creative industries in a developing country. Although we use the 'developing country' shorthand to classify the Indonesian context, it is clear that 'developing countries' consist of a heterogeneous group of nations with a range of levels of socioeconomic development, and that this might be reflected in the characteristics of their creative industries (De Beukelaer, 2014). Indonesia clearly has a different context to higher income countries in Asia that

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¹ See <http://data.worldbank.org/country/indonesia> and <http://hdr.undp.org/en/countries/profiles/IDN>.

have gone further in the development of creative industries, such as South Korea, Japan and also China, which is still categorised as a developing country, but it is actually the largest exporter of creative products in the world (De Beukelaer, 2014, 2015). Despite the specific aspects of the context, there are at least two aspects shared between Indonesia and other similarly ranked countries that will enable this study to extract lessons for other lower-middle income countries that are currently implementing a creative economy policy.

First, 'creative industries' in developing countries often have distinct characteristics from those in developed countries: they are largely craft-based and frequently not associated with intellectual property and innovation (UNESCO and UNDP, 2013). Here, the Indonesian government promotes long-established traditional businesses embedded in particular regions (e.g., batik, handicrafts) as creative industries, even though these do not emphasise the creation of new knowledge (Fahmi et al., 2015). Although such traditional crafts are classified as creative industries in several countries, including the UK, their share of the craft sector is much lower. In comparison, crafts dominate 'creative industries' in Indonesia (see Table 3).

Second, as in other developing countries, the characteristics of regional economies and technology in Indonesia are not as advanced as elsewhere, and this could be an obstacle to the creation of new knowledge (Yusuf & Nabeshima, 2005). In general, developing countries are still industrializing, although the service sector is often playing an increasing role. Further, the institutional settings and entrepreneurial environment in such contexts are clearly different in that entrepreneurship often appears as a necessity rather than as an opportunity (Singer, Amorós, & Arreola, 2015). Given these issues, the existing conceptual arguments regarding the clustering of creative industries might not fully be evident in the Indonesian case. As described, tradition-based businesses – which we will refer to as 'traditional cultural industries' – reflect a specificity in the creative industries in Indonesia and they may have distinct development patterns. In this regard, we argue that, in the context of Indonesia and perhaps other developing countries, it is necessary to distinguish between 'traditional cultural industries' and 'creative industries'. This will help us to better understand their specific characteristics and design more appropriate policy strategies. If both types of industries have the same development trajectories, one would expect them to be interrelated, and perhaps either substitute or complement each other. In contrast, if they have different development paths, they are likely to be located in different regions, and require different policy strategies. This will challenge the current government's perspective that leads to implementing the same strategies for both creative and traditional cultural industries (Fahmi et al., 2015).

This paper complements the existing publications on the regional locational patterns of creative industries, which are mostly descriptive (e.g., Boix, Lazzeretti, Capone, De Propriis, & Sánchez, 2013; Power, 2002; Pratt, 2004) but much less focussed on explaining factors that determine the pattern (e.g., Lazzeretti, Capone, & Boix, 2012). In order to achieve the aim of this paper, we identify the characteristics of regions where these industries are clustered, and reflect these findings on the current conceptual and empirical contributions on this issue. A regional level analysis is appropriate for several reasons. First, we can compare the concept of creative industries, imported from the developed world, with the actual potential in the regions of Indonesia. Second, our research findings will allow us to identify which regions specialise in creative and/or traditional cultural industries, so that development strategies can be designed to respond better to local potentials. Third, and related to this, as decentralisation is of growing factor in Indonesia, a good understanding of place-specific characteristics is essential to steer regional development processes and policies.

This article is organised as follows. First, in the next section, given the distinct nature of creative industries beyond the developed world, we revisit the definition of such industries in Indonesia. This is followed by a conceptual foundation for examining the factors affecting the location of creative industries. The methodological

framework is then presented, followed by a national-level overview of creative industries. The factors associated with the spatial distribution of these industries are then examined, followed by discussion and conclusions.

2. Defining creative industries in the context of Indonesia

The term creative industries first emerged in Indonesia when young creative people established *indie* music and clothing industries ('distro') in Bandung in the first decade of the new millennium. These youngsters, supported by the British Council, then attempted to develop Bandung as a 'creative city'. Later, the national government had the idea that creative industries could also be established in other localities. In response, President Yudhoyono issued Presidential Instruction 6/2009 on the development of the creative economy, which obliges all local governments to promote creative industries in their own localities, and this was followed by the formation of the Ministry of Tourism and Creative Economy (MTCE).²

In practice, the Indonesian government's classification of creative industries predominantly follows the British (DCMS and John Howkins) model (MTCE, 2014). This British understanding was transferred through the bilateral cooperation between Indonesia and the UK on creative industries (Fahmi et al., 2015). Notwithstanding this standardised definition by the central government, the creative industry notion is interpreted differently across regions. In some localities, such as Bandung, creative industries are considered to encompass 'innovative' activities, whereas, in other cities, local governments promote the long-established tradition-based activities embedded in many regions, such as batik and traditional crafts, as creative industries (Fahmi et al., 2015). This suggests that, in practice, the single, albeit broad, national definition of 'creative industries' does not correspond to the regional economic realities.

The creative economy masterplan (MTCE, 2014) does not explicitly explain why the British classification is embraced. Rather, the DCMS list of creative industry subsectors is used, and existing industries are positioned within one of these subsectors. The subsectors cover architecture, advertising, antiques, design, crafts, fashion, film, video and photography, interactive games, music, performing arts, publishing, research and development, software, and television and radio.³ Nevertheless, the DCMS definition appears to work in Indonesia because these sectors are present in the Indonesian economy. Conceptually, however, the positioning of the existing sectors in the DCMS model is less straightforward. In particular, the craft industry in Indonesia, which is large in terms of firms and employment, does not meet the conceptual definition of a creative industry as advanced in the literature. The notion of creative industries is understood as economic activities that use individual creativity, skill and talent, and potentially yield economic values, through the exploitation of intellectual property (e.g., DCMS, 2013). As such, there are several characteristics that a creative industry should demonstrate. First, these industries should continuously seek to generate new ideas by conducting research and development around their products and services, an aspect in which individual creativity plays a crucial role. Second, as these industries are focussed on generating original and novel values, this intellectual property needs to be protected. Third, these industries usually need to adapt to recent technologies that support their creative processes (see Banks & O'Connor, 2009; Flew, 2013; Galloway & Dunlop, 2007; Garnham, 2005; O'Connor, 2009).

² Since 2015, creative economy affairs in Indonesia have been coordinated by the Creative Economy Board.

³ In a later version, 'culinary' is added to the creative industries classification. However, this subsector is not included in our analysis since it does not fit with most of the conceptual models in the literature. Further, 'creative culinary' is not captured well by the Indonesian industrial classification.

This conceptual description is used to reclassify creative industries. Ideally, the three features of creative industries – innovation, copyright and technology – are measured on the level of occupations or firms, which is unfortunately usually impossible due to a lack of data. This places a limitation on studies of creative industries (see also Lazzeretti, Boix, & Capone, 2008; Lorenzen & Frederiksen, 2008; Power, 2002). We use available data from the Economic Census to develop a classification by assessing existing industrial sectors.⁴ In so doing, the UK classification is used as the basis, and we evaluate whether economic activities performed in industrial sectors are broadly in line with the characteristics of creative industries explained above (see Appendix A).⁵

As such, advertising, architecture, design, publishing, IT and software, radio and television, and research and development can be categorised as creative industries as, generally speaking, these subsectors utilise individual creativity to provide services, often tailor-made, for their consumers whose preferences should be addressed. In this regard, research and development, as well as technologies, are generally required to generate innovative ideas or designs. As such, the products have the potential to be copyrighted. We also include visual, recorded and performing arts in this creative industry category since, in general, these subsectors rely heavily on new ideas to express their art, even though they are 'traditional' and do not always use new hardware technologies.

In comparison, traditional crafts have different characteristics and do not seem to comply with the conceptual definition of creative industries. Crafts might use new technologies to support their production processes, but certain methods or customs are preserved. For instance, batik is based on hot wax ('malam') being applied to fabric in creating the design. Traditional crafts are strongly attached to tradition, which is the main source of ideas in the development of their products. They have existed for a long time and are an integral part of regional identities, wherein a large number of residents usually participate in the crafting activities and knowledge is passed down through the generations. Even though new ideas and designs are applied, a core prerequisite is the preservation of regional heritage and values which provide unique selling points (Kong, Gibson, Khoo, & Semple, 2006; O'Connor & Xin, 2006). This does not mean that craft industries are not creative, or any less innovative than subsectors falling within the creative industries category. However, traditional crafts utilise a different type of creativity. Whilst creative industries exploit individual creativity, traditional crafts tend to benefit from communal creativity, in which individual creative acts cannot be disentangled from collective values and knowledge – in this case, local traditions. This has implications for the nature of the products in that it is more difficult to assess their originality and intellectual property. Since tradition is a collective good, the copyright mechanism generally applied to knowledge-based products – the 'Western' copyright regime – cannot be applied to traditional crafts (see Boateng, 2011). For these reasons, it seems logical to separate traditional crafts from the creative industries category in the Indonesian context. To reflect their distinct characteristics, we refer to these industries as 'traditional' cultural industries. We also place antiques in this category since this subsector also seeks to highlight and preserve retrospective values.

It is difficult to place the Indonesian fashion industry in either the creative or the traditional cultural industries. One might expect the fashion industry to continuously develop new styles and designs and, as such, be distinct from traditional crafting activities as explained above. However, many fashion firms in Indonesia are not involved in this innovative process and, for this reason, we exclude fashion from our analytical model.

We accept that this binary dichotomisation of 'creative' and 'cultural' industries can be criticised. Some scholars argue that the two notions cannot be disentangled since the idea of creative industries is historically and conceptually rooted in the notion of cultural industries (e.g., Flew, 2002). Other scholars criticise the notion of creative industries as reusing existing concepts from the arts and cultural industries, but then extending the boundary by combining cultural industries, such as performing arts, with industries that have different characteristics, such as software and advertising (O'Connor, 2009). However, in the context of Indonesia, separating creative and traditional cultural industries seems justified. First, the Indonesian government does not adopt the term 'cultural industries', but uses 'creative industries' and the 'creative economy', and particularly the DCMS definitions of these terms. Further, given the distinct regional interpretations of the broad term 'creative industries', it seems logical to separate the two types. From a theoretical perspective, it could be expected that the economic growth associated with 'creative' and with 'traditional cultural' industries might take distinct forms. Therefore, in the Indonesian context, it is useful to acknowledge the underlying heterogeneity reflected in the broad 'creative industries' term. Second, by establishing this distinction, we can control for a specific segment of the creative industries in Indonesia which has a different agenda: traditional cultural industries might even discourage the creation of new knowledge in aiming to promote the uniqueness of Indonesian traditions. Nevertheless, they can still be very important for regional economic development. It is worth noting that, in the context of Indonesia, traditional cultural industries are profuse (see Table 3) whereas, in developed countries such as the UK, crafts usually constitute only a small proportion of the creative industry contribution.

To summarise, we argue that, in the context of Indonesia and perhaps in other developing countries, it is necessary to distinguish between traditional cultural industries and creative industries. Both industries may require distinct contexts to blossom and their economic contributions could be different. Establishing this distinction is likely to be helpful in better understanding the different characteristics, and the regional settings that support, each type of industry.

3. Regional settings for creative industries

Previous studies have shown that creative (and cultural) industries are most likely to flourish in larger cities (e.g., Boix et al., 2013; Lazzeretti et al., 2008; Lorenzen & Frederiksen, 2008; Power, 2002). In general, larger cities provide better access to recent technology, economic resources and soft infrastructure. These supply factors, it is argued, attract creative industries that are searching for knowledge and innovative externalities (Comunian, Chapain, & Clifton, 2010; Florida, 2002; Storper & Scott, 2009). An alternative explanation originates from the demand side, viewing cities as centres of consumption and places of cultural expression and enjoyment. As a consequence, creative industries converge on cities to more easily meet market demands and trends (Glaeser, Kolko, & Saiz, 2001; Scott, 1997).

Understanding the location patterns and development dynamics of creative industries outside of the context of developed countries is important because the empirical reality might not reflect the above arguments that are based on research in developed countries. In particular, it is questionable whether the arguments are relevant to traditional cultural industries, which form the bulk of Indonesian 'creative industries', and their location decisions. To construct a conceptual framework for examining the regional characteristics of where creative industries are located, we review both supply-side and demand-side factors and place them in the context of developing countries. These factors are made up of: human capital, the economic and entrepreneurial climate, potential markets, urbanisation economies, and institutional factors.

⁴ KBLI, similar to ISIC.

⁵ Unlike the government's classification, we excluded trade and other supporting activities, as our focus is on the production of creative products.

3.1. Human capital

To start a creative business, creative people are required. Such people are generally young in spirit and are easily able to adapt to new knowledge and technology (Ó Cinnéide & Henry, 2007). They are generally, but not always, highly educated (Florida, 2012). Such people are expected to possess the entrepreneurial skills required for improving the economic value of their products (Ó Cinnéide & Henry, 2007; Potts, 2007). Entrepreneurial skills also enable creative entrepreneurs to search for new opportunities and to reduce risks in order to develop their business (Sawyer, 2012). A concentration of creative industries is therefore likely to be supported by a talent pool of young creative people and university graduates, including in the developing world. Many developing countries have experienced a 'demographic bonus', so might benefit from the increasing participation of young people in the labour market (Lam, 2006). However, this does not ensure that these youngsters will start creative businesses and form a cluster of creative industries. Other factors need to trigger the formation of creative businesses and networks, such as university education and spinoffs.

3.2. Potential markets

Creative industries are associated with post-industrial cities, where service industries increasingly dominate the economy (Flew, 2002; Garnham, 2005). Service firms are potential consumers of creative industries, especially those requiring specific services such as advertising, publishing and multimedia provision. Creative industries need to focus on continuously monitoring trends and consumers' tastes in uncertain and rapidly changing markets (Caves, 2000). However, as they generally have extensive networks and are supported by information technology (IT) and social media, their markets are not necessarily limited by their location (Florida & Jackson, 2010). Therefore, one would expect creative industries to prefer urbanised areas and fairly advanced regions with good IT connectivity, and this will help them access both local and global markets.

In a developing country, such as Indonesia, cities might not yet have reached the 'post-industrial' phase. Nevertheless, there are rapidly growing cities that have a supra-regional function that extends beyond their direct hinterland and where specialised business services are an important contributor to the local economy (Cohen, 2004). Creative industries are likely to congregate in such cities as they provide relatively advanced facilities, including IT, which help them reach out to their potential markets.

3.3. Economic and entrepreneurial climate

The employment structure and economic conditions can determine the location of creative industries. A favourable entrepreneurial climate and culture will encourage people to seek out new opportunities and start new businesses (Malecki, 1993). As such, creative entrepreneurs will probably be located in areas characterised by creativity, diversity and innovation (Lee et al., 2004).

However, the influence of such a climate on creative industries in a developing country, such as Indonesia, might require a complex interpretation. When people become entrepreneurs, this does not automatically mean that they are vigorously responding to opportunities in the economy, it may be that they are unable to perform other jobs (Singer et al., 2015). It is thus uncertain whether creative industries are started in response to a creative recognition of economic opportunities, in which the entrepreneurial climate plays a role (see Ó Cinnéide & Henry, 2007).

3.4. Urbanisation economies

Creative industries have been found to benefit from urbanisation economies that support innovation and flexibility by facilitating

information flow and interaction networks. Large cities in particular are home to a wide diversity that fosters the cross-fertilisation of ideas (Jacobs, 1992; Rosenthal & Strange, 2004). Related variety within sectors and path dependency have been found to induce cross-fertilisation (Boix-Domenech, Hervás-Oliver, & De Miguel-Molina, 2015; Lazzeretti, Boix, & Capone, 2013). A diversity of skills will encourage creative firms to collaborate with each other through frequent interactions and knowledge transfer (Feldman & Kogler, 2010; Potts, Cunningham, Hartley, & Ormerod, 2008; Power, 2002). As such, we might expect creative industries to be concentrated in regions with diversified economies. In a developing country, such as Indonesia, such regions are rare. Manufacturing industries, and even agricultural activities, remain important contributors to the economy, although it is still possible that service industries can dominate several urban economies.

3.5. Institutional factors

Previous studies have shown, as Florida (2012) postulated, that 'soft' factors, such as urban amenities, quality of life, social diversity and tolerance, are associated with the locational patterns of creative industries or occupations (e.g., Lazzeretti et al., 2013; Wenting, Atzema, & Frenken, 2011). In addition to the physical objects within the cultural amenities, it is also possible that symbols and qualities could play a role in facilitating the creative process (Andersson, Andersson, Daghbashyan, & Hårsmán, 2014; Boix-Domenech et al., 2015; Lorenzen & Frederiksen, 2008). However, since developing countries have different societal and cultural contexts from the developed world, here again one cannot be sure such factors apply. As De Beukelaer (2015) argues, culture is not generally understood in developing countries as creative artistic expression, but rather it is regarded as 'a set of beliefs, rules of behaviour and customary behaviours maintained, practiced, and transmitted in a given society' (Hahn, 1995, p. 42). This suggests that culture might not necessarily support creative processes. As such, there may be better proxies to represent the 'coolness' of place in developing countries, and they might vary from place to place.

3.6. 'Traditional' cultural industries: different explanations?

We have argued that creative and traditional cultural industries could have different regional patterns. Using the concept of cultural industries as explained in the literature to examine the regional distribution of traditional cultural industries might be problematic since they seem to have different development trajectories. Whereas cultural industries in the literature are typically linked with the function of cities as centres for cultural consumption (Pratt, 2009; Scott, 1997), traditional cultural industries, and notably in Indonesia, are not always associated with urban living. Many of these industries have existed for generations by sharing traditional knowledge and skills hereditarily. As such, the factors affecting their locations might be different from those of the creative industries discussed above. A pool of university graduates and young creative people might be unimportant. An entrepreneurial climate and economic diversification might not be a prerequisite since they might have little interest in creating innovative designs and values. Since they often create cultural products with strong, and often exotic, traditional values, they might locate close to tourism objects since these are more relevant to their important potential markets.

4. Methodology

To identify the characteristics and spatial patterns of creative and cultural industries in Indonesia, we used the 2006 Economic Census data obtained from BPS-Statistics Indonesia. This dataset is collated every ten years and provides information on the characteristics of

firms, but it is not panel data.⁶ As such, these are the most recent economic census data available. Due to missing values, some regions were excluded from the analysis (Tanjungpinang, Pontianak, Minahasa, Manokwari and Nabire).

The data were aggregated at the municipality/district (*kota/kabupaten*) level to reveal regional differences. We calculated the location quotient (LQ) which is a commonly used value to depict the relative proportion of creative or cultural industries in a region compared to the national level (Boix-Domenech et al., 2015; Lazzeretti et al., 2008, 2013). The formula is as follows:

$$LQ = \frac{l_i/l}{L_i/L}$$

where l_i = the number of firms in creative or cultural industries in the region, l = total number of firms in the region; L_i = the number of firms in creative or cultural industries nationally, and L = the total number of firms nationally (see also Boix-Domenech et al., 2015). LQs can alternatively be calculated using employment data (number of employees rather than number of firms). We opted to use the number of establishments since the dataset used in this study contains firm-level business characteristics and also because data on employment, especially for regions outside of Java and Bali, are unreliable. Nevertheless, we carried out a robustness analysis using employment data for Javanese and Balinese regions only,⁷ as a check on the conclusions drawn from the main model. This also enables us to control for the different characteristics and levels of socioeconomic development between Java and Bali, and the other islands.

The next step in the analysis was to explain the regional distribution of creative and traditional cultural industries. For this, regression models were estimated with the LQ for each type of industry as the dependent variable. We included several explanatory variables, for which we again obtained data from BPS-Statistics Indonesia. At this stage, two further districts in Papua (Teluk Wondama and Boven Digoel) were excluded due to missing values.

The subsections below describe the explanatory variables, which were selected based on the theoretical considerations outlined in the previous section, including human capital, potential markets, economic and entrepreneurial climate, and urbanisation economies (see Table 1).

4.1. Relationships between creative and traditional cultural industries

We included the LQ for traditional cultural industries in the regression model for creative industries, as well as LQ for creative industries in the model for traditional cultural industries. This is intended to investigate the relationship between the two types of industries, particularly whether they are co-located and have a similar development trajectory, and thereby maybe stimulate each other.

4.2. Human capital

Human capital was represented by the percentage of university graduates (GRAD) and the percentage of young people (19–34) in the municipal/district population (YOUNG).

4.3. Potential markets

Several variables were employed to capture different aspects of potential markets. The logged value of total population (lnPOP) was used to represent the market size of a region. As explained in the previous section, we expected service industries (LQ_SERVF or LQ_SERVE) to be

the potential customers of creative industries.⁸ The index of standard living costs (LIVCOST)⁹ was employed to reflect the affordability of creative and cultural products. In view of the Indonesian government's aim of using creative industries to help develop tourism (Fahmi et al., 2015), we included the number of firms in the tourism industry in a region as a variable (TOURISM).

4.4. Economic and entrepreneurial climate

To represent regional economic conditions and the entrepreneurial climate, we used unemployment rates (UNEMP) and self-employment rates (SELF_EMPL). Using unemployment rates can lead to endogeneity problems. Nevertheless, we tried to exclude this variable and the results remained robust.

4.5. Urbanisation economies

Unrelated variety (UNRELE or UNRELF) and related variety (RELVAR or RELVARF) reflect regional economic diversity and cross-fertilisation (Frenken, Van Oort, & Verburg, 2007). Unrelated variety is an entropy index measured at the 2-digit class of KBLI codes, and indicates diversity *between* sectors. Related variety is the weighted sum of the entropy index measured at the 5-digit level within each 2-digit class of KBLI codes. Related variety thus represents the diversity *within* each sector, and it is assumed that 'the economies arising from variety are especially strong between subsectors, as knowledge spill overs primarily between firms selling related products' (Frenken et al., 2007, p. 689).

It is difficult to find good proxies for institutional factors because data on urban and cultural amenities at the regional level are not available. We tried using data on religious and social tolerance, which are a component of the available data on social capital stock,¹⁰ in our analytical model. However, this variable did not provide any added value to our discussion, so we excluded it from our final model.

4.6. Estimation methods

We used spatial econometrics to correct for potential spatial autocorrelations that may exist between neighbouring municipalities and districts. Essentially, whilst municipalities and districts are administrative entities, socioeconomic systems may transcend these boundaries. Our application of this method also provides an insight into the use of spatial econometrics in a country made up of many islands. Both specific-to-general and general-to-specific frameworks were followed (see Elhorst, 2013). In adopting the first-order Queen contiguity matrix, we ran into the problem that 20 localities, including those on remote islands, did not have neighbours (i.e. share a land border). To overcome this, we defined nearby localities as neighbours provided there was a reasonable connection in the form of a bridge or frequent boat services. This still left five localities without neighbours (Natuna, Sangihe Islands, Talaud Islands, Maluku Tenggara Barat, and Aru Islands) which we further excluded from the analysis. However, these are small, remote areas and unlikely to influence the results to any extent.

⁸ LQ_SERVF has quite a high correlation with GRAD (0.696); LQ_SERVE has a high correlation with RELVARE (0.511) (see Appendix B). We tested excluding the LQ for services from the regression models, and the results remained robust, with VIF values classified as tolerable. We therefore opted for models including LQ_SERVF or LQ_SERVE since the fit was better.

⁹ In the original dataset (regional HDI), the variable is labelled 'purchasing power parity'; see <http://www.bps.go.id/Subjek/view/id/26>.

¹⁰ "Stok Modal Sosial 2010 (Berdasarkan Data Susenas 2009)", available from BPS-Statistics Indonesia, Jakarta.

⁶ The Economic Census (*Sensus Ekonomi*) is carried out in two stages. In the first stage (L1), all business units (firms) in each census block are identified and listed. In the second stage (L2), each firm is visited and information obtained about their business.

⁷ In the robustness analysis, the national level (L_i/L) is defined as all regions on Java and Bali.

Table 1
Variables used in the analysis.

Variable name	Label	Source	Mean	SD
Dependent variables				
LQ_CI	Location quotients for creative industries, not including fashion (with firm data)	(a)	0.815	0.538
LQ_CULT	Location quotients for traditional cultural industries (with firm data)	(a)	0.724	0.881
LQ_CIE	Location quotients for creative industries, not including fashion (with employment data)	(a)	0.909	0.599
LQ_CULTE	Location quotients for traditional cultural industries (with employment data)	(a)	1.070	0.857
Explanatory variables				
<i>Human capital</i>				
GRAD	Percentage of university graduates in the local population	(b), (c)	0.054	0.040
YOUNG	Percentage of people aged 19–34 in the local population (2005)	(d)	0.258	0.052
<i>Potential markets</i>				
lnPOP	Total population (natural logged)	(e)	12.661	1.011
LQ_SERVF	Location quotients for service sector industries, including 2-digit KBLI codes 65–99 (firm data)	(a)	0.929	0.329
LQ_SERVE	Location quotients for service sector industries, including 2-digit KBLI codes 65–99 (employment data)	(a)	1.008	0.266
LIVCOST	Index of standard living costs ($\times 100,000$)	(f)	6.136	0.168
TOUR_OBJ	Number of tourism objects	(a)	0.531	1.134
<i>Economic and entrepreneurial climate</i>				
SELF_EMPL	Percentage of self-employed people in the labour force (2007)	(g)	0.194	0.076
UNEMP	Percentage of unemployed people in the labour force (2007)	(g)	0.083	0.042
<i>Urbanization economies</i>				
UNRELF	Unrelated variety (at 2-digit level), firm data	(a)	3.048	0.341
UNRELE	Unrelated variety (at 2-digit level), employment data	(a)	3.725	0.308
RELVARF	Related variety (at 5-digit level within 2-digit class), firm data	(a)	2.151	0.458
RELVARE	Related variety (at 5-digit level within 2-digit class), employment data	(a)	2.531	0.334

Note: Strong correlations were found between LQ_CI and LQ_CIE (0.80) as well as between LQ_CULT and LQ_CULTE (0.87). We can therefore expect that the spatial patterns revealed by both firm and employment data are more or less identical. All data are given for 2006, except YOUNG (2005), SELF_EMPL (2007) and UNEMP (2007). Since these data were collected at adjacent time, it is argued that the actual conditions were not different. The data were calculated from these sources:

- (a) Unpublished raw data “Sensus Ekonomi 2006”, available from BPS-Statistics Indonesia, Jakarta
- (b) “Sensus Penduduk NAD dan Nias”, available from BPS-Statistics Indonesia, Jakarta, 2005
- (c) Penduduk 5 tahun ke atas menurut kabupaten/kota dan pendidikan yang ditamatkan, available from BPS-Statistics Indonesia website http://www.datastatistik-indonesia.com/portal/index.php?option=com_supas&kat=2&idtabel=9&Itemid=953
- (d) Jumlah Penduduk menurut Jenis Kelamin dan Kelompok Umur, available from BPS-Statistics Indonesia website http://www.datastatistik-indonesia.com/portal/index.php?option=com_tabel&task=&Itemid=165
- (e) Population estimation by municipality/district, unpublished material, BPS-Statistics Indonesia, Jakarta, 2010
- (f) Indeks Pembangunan Manusia, BPS-Statistics Indonesia, Jakarta, 2006
- (g) Unpublished material “Labour force by occupation status and sector”, calculated from the 2007 SUPAS 2007 results, available from BPS-Statistics Indonesia, Jakarta, 2007

5. The development of creative industries in Indonesia

To understand the position of creative industries in Indonesian economic development, we first review the changing economic geography and sectoral productivity between 1966 and 2013 to position creative industries within Indonesia's overall economic development. We then describe the characteristics and development patterns of creative industries at the national level followed by the regional distribution of these industries.

5.1. Understanding the meaning of creative industries in the Indonesian economy

The increasing role of creative industries in Indonesia's economy can be placed within the overall macroeconomic development of recent decades. This is particularly related to development since the start of the New Order period, when President Suharto led the country (1966–1998). During this period, the economic policy was highly focused on labour-intensive sectors, and Indonesia experienced rapid industrialisation. As can be seen in Table 2, manufacturing and other industries grew significantly between 1966 and 1995. These industries were mostly related to natural resource exploitation, and were largely backed by foreign direct investment (Aswicahyono, Hill, & Najoko, 2011). The New Order economic policy followed the stages of growth as put forward by Rostow, and one of its goals was that the country's economy would ‘take-off’ in the 2000s (Broad, 1995). Unfortunately, the 1998 East Asian crisis hit almost every sector in Indonesia, and many firms closed down and unemployment rates increased. Manufacture remains a significant contributor to the economy, but its growth has slowed (see Table 2). The service sector has, however, grown more rapidly, indicating a shift towards a more diversified economy.

Creative industries belong to this area of development, and their development is path-dependent. Creative industries did not emerge as an outcome of deindustrialisation; rather they grew because of the crises: people started to make a living in the informal sectors and entrepreneurial activities, including creative industries. This development occurred along with advances in technology and the expansion of global knowledge networks. As such, the initial motivation for starting in creative, and traditional cultural, industries in Indonesia appears different from the general picture in developed countries, in which start-ups in

Table 2

Sectoral change in Indonesia's GDP.

Source: Calculated from “World Development Indicators”, available from <http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=World-Development-Indicators#>.

	Agriculture	Manufacturing industries	Other industries	Services
Annual growth rate (average)				
1961–1965	1.37	1.85	1.32	2.93
1966–1975	4.26	9.99	10.01	6.37
1976–1985	4.13	14.59	3.11	8.20
1986–1995	3.34	11.05	4.02	7.98
1996–2000	1.37	3.06	0.29	–0.08
2001–2006	3.23	4.91	1.16	6.46
2006–2012	3.77	4.52	1.93	8.02
Sectoral share (average)				
1961–1965	53.19	8.78	5.42	32.61
1966–1975	42.34	9.68	12.06	35.92
1976–1985	25.47	12.46	25.27	36.79
1986–1995	20.03	20.69	18.00	41.28
1996–2000	17.21	26.23	18.23	38.33
2001–2006	14.39	28.17	17.29	40.14
2006–2012	14.65	25.72	21.54	38.09

creative industries are based on opportunity recognition and new technologies (Ó Cinnéide & Henry, 2007).

This trend was not followed everywhere in Indonesia, and the stages and conditions of economic development vary significantly. Consequently, we would not expect to find creative industries everywhere. Since Java and Bali have more advanced levels of economic development (Hill, Resosudarmo, & Vidyattama, 2008), their regional economic settings are more likely to support the development of creative industries. This is however not necessarily the case for traditional cultural industries that have been established for a considerable period. The presence of these industries may be more connected with the development of cultural entrepreneurship in the past, which took place within community clusters (kampongs). In many such clusters, people have been producing cultural products for many years, and transferring the skills for making these products from generation to generation.

5.2. Characteristics of creative and traditional cultural industries in Indonesia

According to the dataset we used, creative industries made up 0.63% of all Indonesian firms in 1996, and this figure increased to 0.69% in 2006 (see Table 3). In comparison, traditional cultural industries made up 5.80% of all firms in 1996 and 8.23% in 2006. Together, creative and traditional cultural industries, accounted for 8.92% of the total number of firms in Indonesia in 2006. This is a significant proportion, even when compared to developed countries such as Austria, the UK and Canada (see Evans, 2009). When we looked at the corresponding employment data (Javanese and Balinese regions only because of the previously noted data reliability issues), creative industries accounted for 1.33%, and traditional cultural industries 7.07% of the total employment in Java and Bali in 2006. Both the creative and the traditional cultural industries had higher average annual firm growth rates than other industries and, therefore, we expect both industries to make increasing contributions to economic development. They also share similar characteristics: they are mostly small firms and informal businesses, and both have grown in the last decade (see Fig. 1). Creative industries are generally larger and register higher turnovers, and most of them have been established in the past few decades.

As Table 3 shows, the size and growth rates of each subsector vary. Both performing arts and publishing have high growth rates, possibly because of the newfound freedom of expression in writing and performance following the 1998 political reforms. The production of crafts is also growing rapidly, reflecting the importance of this subsector, although it cannot be described as innovative.

This descriptive overview acts as a general guide for the next stage of analysis. We can conclude that there are creative industries in Indonesia, even though they constitute only a small proportion of all firms. We also see that traditional cultural industries are growing significantly and are far more numerous. It is therefore necessary to continue to distinguish between creative and traditional cultural industries when attempting to identify their impact on the economy.

5.3. Regional distribution of creative and traditional cultural industries

As discussed earlier, creative and traditional cultural industries have different characteristics. This is also apparent in their regional patterns. The correlation between the LQs for both industries (see Appendix B) is fairly low. As expected, the regional distributions of both industries differ. Fig. 1(e) shows that most economic activities, including creative and traditional cultural industries, are concentrated in Java and Bali. Fig. 1(f) shows that creative industries are concentrated in urban areas (71.2%). In contrast, 75.0% of traditional cultural industries are located in rural areas. This is contrast to the situation in the developed world context where studies demonstrate that cultural industries are mostly concentrated in urban areas. This suggests that creative and traditional cultural industries could have distinct favourable place-specific contexts.

To illustrate the concentration of these industries, Fig. 2 shows quantile maps of LQs for each industry using establishment data. Map A highlights the strong concentrations of creative industries on Java. A few concentrations can also be found in several major cities on other islands. It would seem that creative industries grow in highly urbanised areas, where the level of economic development is relatively advanced, and social and economic diversity is relatively high.

Strong concentrations of traditional cultural industries are found not only in Javanese and Balinese regions, but also on other islands (see Map B). This indicates that traditional cultural industries do not only grow in

Table 3

Overview of creative and cultural industries by category at the national level.

Source: Calculated from the results of Sensus Ekonomi 1996 and 2006, available from BPS-Statistics Indonesia.

Industries	1996		2006		Average annual growth
	Frequency	%	Frequency	%	
The number of firms (all regions)					
Advertising and marketing	2431	0.03%	2564	0.02%	0.53%
Architecture and design	4144	0.05%	2837	0.02%	−3.72%
Visual and recorded arts	15,485	0.17%	20,585	0.16%	2.89%
Radio and television	4177	0.05%	2981	0.02%	−3.32%
Performing arts	8666	0.09%	18,259	0.14%	7.74%
Publishing	18,237	0.20%	37,920	0.29%	7.59%
IT, software and computer services	2580	0.03%	3042	0.02%	1.66%
Research and development	1639	0.02%	1031	0.01%	−4.53%
Creative industries (1)	57,359	0.63%	89,219	0.69%	4.52%
Antiques	1396	0.02%	1379	0.01%	−0.12%
Crafts	529,772	5.79%	1,064,649	8.22%	7.23%
Traditional cultural industries (2)	531,168	5.80%	1,066,028	8.23%	7.21%
Creative and traditional cultural industries (1 + 2)	588,527	6.43%	1,155,247	8.92%	6.98%
Fashion (3)	51,322	0.56%	102,339	0.79%	7.15%
Other industries (4)	8,514,445	93.01%	11,696,736	90.29%	3.23%
All industries (1 + 2 + 3 + 4)	9,154,294		12,954,322		3.53%
The number of employment (Java and Bali)					
Creative industries (1)	340,507	1.50%	501,642	1.33%	3.95%
Traditional cultural industries (2)	2,094,348	9.21%	2,668,690	7.07%	2.45%
Creative and traditional cultural industries (1 + 2)	2,434,855	10.71%	3,170,332	8.40%	2.67%
Fashion (3)	628,985	2.77%	822,256	2.18%	2.72%
Other industries (4)	19,672,111	86.52%	33,751,055	89.42%	5.55%
All industries (1 + 2 + 3 + 4)	22,735,951		37,743,643

Source: Illustrated from the results of Sensus Ekonomi 2006, available from BPS-Statistics Indonesia

Fig. 1. General characteristics of creative (CI) and cultural industries (CULT) (2006).

relatively advanced economies, such as Java, but also in less-advanced regional centres outside Java. Although concentrations of both types of industries can be found on the same island, they are distributed in distinct clusters. This suggests that the regional distributions of creative and cultural industries probably have different determinants.

6. Explaining the concentration of creative industries in Indonesia

In this section, we present our estimation results that aim to explain the regional distribution of creative and traditional cultural industries described above. We test whether the regional factors reviewed in an earlier section are associated with the actual concentration of creative industries. We ran ordinary least squares (OLS) regression models for both creative and traditional cultural industries. We corrected for heteroskedasticity by including robust standard errors. We subsequently corrected for spatial autocorrelations by estimating spatial econometric models (see Elhorst, 2013). We ran Lagrange multiplier (LM) tests for spatial lag and error, then estimated spatial lag (SAR), spatial error (SEM) and spatial Durbin (SDM) models. We also ran likelihood ratio (LR) tests to determine whether the SDM model could be simplified to either the SAR or the SEM model. All the spatial regression analyses pointed to the SDM model being the best choice, so only that model is presented here.

The following subsections present the estimation results. We first discuss each factor in the main regression models for both creative industries and traditional cultural industries (see Models 1A and 2A in Table 4). This is followed by a robustness analysis using the employment data for Javanese and Balinese regions only (see Models 1B and 2B in Table 5).

6.1. Relationships between creative and traditional cultural industries

Our estimation results demonstrate a lack of mutual relationships between creative and traditional cultural industries. The coefficient of LQ for traditional cultural industries was not significant in Model 1A, and was negatively associated with the share of creative industries in Model 2A. The coefficient of LQ for creative industries was also not significant in Model 1B, and was negatively associated with the share of traditional cultural industries in Model 2B. This finding indicates that the concentration of traditional cultural industries is pertinent to that of creative industries, but they have completely different patterns. Earlier, our descriptive overview showed that both creative and traditional cultural industries have high growth rates (see Table 3) and, therefore, we can conclude that the two industries neither substitute nor complement each other. In other words, they have developed in different regions and followed different development trajectories.

Fig. 2. Quantile maps of the concentration of creative and traditional cultural industries.

6.2. Human capital

Our estimation results show that creative and traditional cultural industries have different human capital requirements. Human capital is positively associated with the concentration of creative industries in Indonesia. The coefficients of graduates and young people are positive. This supports the thesis that clusters of creative industries are facilitated by young creative people, who are generally highly educated (Ó Cinnéide & Henry, 2007). The concentration of traditional cultural industries is not governed by the same factors. Human capital appears to play no role, given the non-significant coefficient university graduates and the negative coefficient of young people.

In conclusion, and as seen in developed countries, the clustering of creative industries in Indonesia is supported by higher education and young creative talents. However, these attributes do not seem necessary for traditional cultural industries, which do not appear to exploit new knowledge and intellectual property.

6.3. Potential markets

Most of the variables used as proxies for potential markets failed to explain the concentration of creative industries. Both the SDM indirect and total impact estimates of total population were positive in Model 1A, indicating that creative industries can benefit from the presence of a large regional population. The coefficient of LQ for services is positive and significant, showing that creative industries do depend on tertiary

economic activities to provide customers. This also indicates that creative industries tend to be concentrated in relatively advanced economies, again in line with the literature (Flew, 2002, 2013; Garnham, 2005). The concentration of traditional cultural industries is associated with a different set of potential markets. Unlike with creative industries, the LQ for services is negatively associated with the concentration of traditional cultural industries. This indicates that the locations of these traditional industries do not correspond to relatively advanced regional economies. However, the SDM indirect and total impact estimates of tourism industries are positive in Model 2A, indicating that tourism objects can create demand for cultural products from a region.

To summarise, different potential markets are associated with concentrations of creative and of traditional cultural industries. Concentrations of creative industries are associated with more advanced economies, whereas traditional cultural industries are not. This strengthens the argument that traditional cultural industries have become established in several regions and are not associated with the current development of 'tertiarised' regional economies.

6.4. Economic and entrepreneurial climate

We expected that a favourable economic and entrepreneurial climate would foster a concentration of creative industries. The SDM indirect impact coefficient for self-employment rates is negative in Model 1A, indicating that high self-employment rates in a region decrease the concentration of creative industries in surrounding regions. This suggests a complex situation and one possible explanation is that

Table 4
Main results.

	Model 1A: Concentration of creative industries (LQ_CI)				Model 2A: Concentration of traditional cultural industries (LQ_CULT)			
	OLS	SDM			OLS	SDM		
	B (Robust SE)	Direct	Indirect	Total	B (Robust SE)	Direct	Indirect	Total
Relationships CI-CULT								
LQ_CI					−0.054 (0.09)	−0.130	0.266	0.136
LQ_CULT	−0.011 (0.02)	−0.023	0.000	−0.022				
Human capital								
GRAD	5.279 (0.95)***	6.003***	−1.200	4.802***	1.6942 (1.39)	2.082	−1.525	0.557
YOUNG	0.974 (0.42)**	0.821**	2.471***	3.292***	−1.464 (0.83)*	−1.000	−0.595	−1.595
Potential markets								
lnPOP	0.023 (0.02)	−0.016	0.107***	0.091**	0.1895 (0.03)***	0.149***	0.022	0.171**
LQ_SERVF	0.296 (0.09)***	0.282***	−0.226	0.056	−0.94 (0.20)***	−0.934***	−0.051	−0.985***
LIVCOST	0.001 (0.00)	−0.001	0.001	0.001	0.0035 (0.00)	−0.002	0.003	0.002
TOURISM	0.004 (0.00)	0.006	−0.005	0.000	0.0269 (0.02)	0.001	0.058***	0.058***
Economic & entrepreneurial climate								
SELF_EMPL	−0.363 (0.22)*	−0.246	−1.200***	−1.446**	−0.019 (0.43)	0.127	0.102	0.23
UNEMP	0.120 (0.59)	−0.152	−0.272	−0.424	−2.143 (1.04)**	−0.246	−3.958*	−4.204*
Urbanization economies								
UNRELF	0.053 (0.06)	0.076	0.014	0.090	0.6404 (0.12)***	0.454***	0.264	0.718***
RELVARF	0.283 (0.05)***	0.273***	−0.025	0.248*	−0.179 (0.12)	−0.307***	0.335	0.028
Intercept or Rho	−1.788 (0.61)***			0.392***	−4.032 (1.69)**			0.224***
N	428			428	428			428
R ²	0.601			0.682	0.273			0.385
F	59.57***				15.57***			
Mean VIF	1.69				1.82			
Spatial diagnostics								
Moran's I	6.93***				5.36***			
LM lag	28.37***				33.74***			
RLM lag	0.20				9.21***			
LM error	42.84***				24.98***			
RLM error	14.67***				0.44			
SDM model test								
LR test SAR				54.03***				29.93***
LR test SEM				32.93***				34.12***

Note: Standard errors in parentheses.

*** Significant at 1%.

** Significant at 5%.

* Significant at 10%.

regions with high self-employment rates attract creative industries from the surrounding areas. Another explanation could be that, as creative industries make up only a very small proportion of all firms, that self-employment rates are not associated with the concentration of these industries. Further, self-employment might not be a good proxy for entrepreneurship, especially if there is significant necessity-based entrepreneurship. Possibly, creative industries are not started for necessity-based reasons but rather as a response to opportunity, which would be in line with the literature (Ó Cinnéide & Henry, 2007). Turning to traditional cultural industries, we see that the coefficient of self-employment is positive, but not significant, in Model 2A. Meanwhile, the unemployment rate is negatively associated with the concentration of these industries. This shows that concentrations of traditional cultural industries are situated in regions with relatively good economic conditions.

In conclusion, we found a mixed picture with regard to the effect of the economic climate on creative and traditional cultural industries. This is not to say that both industries do not do better in an entrepreneurial and economically thriving climate. However, entrepreneurial environment in a developing country, such as Indonesia, is rather complex, and the same industries might be established in recognition of economic opportunities and because of economic need (Singer et al., 2015).

6.5. Urbanisation economies

Related variety, which represents diversity within sectors, is positively associated with the concentration of creative industries. Unrelated variety, on the other hand, does not have a significant relationship with the concentration of creative industries. This finding resonates

with the current literature on the geography of innovation and creative industries (Feldman & Kogler, 2010; Lazzeretti et al., 2013; Pratt, 2008). Our findings suggest that the concentration of creative industries is strengthened by diversity within sectors, and the literature points to this being because this diversity encourages cross-fertilisation of skills and knowledge transfer between firms in the local creative environment.

A different result is found for traditional cultural industries. The SDM direct and total impact coefficients for unrelated variety are positive in Model 2A, indicating that sectoral diversity facilitates the concentration of traditional cultural industries, whereas related variety is negatively associated with the concentration of these industries. As such, a concentration of traditional cultural industries seems to require diversity *between* sectors but not *within* sectors. This supports our thesis that traditional cultural industries are not concerned with the exploitation of new knowledge, and so do not stand to benefit from cross-fertilisation between firms.

6.6. Robustness analysis

Robustness analyses were conducted to check whether our estimation results would tell a different story if we used employment data rather than firm data to calculate LQs. As reliable employment data are not available for the entire country, these analyses are limited to Java and Bali.

Generally, the results of robustness analyses supported the conclusions drawn from the main model (see Table 5). There are slight differences in some coefficients, but not sufficient to challenge our final conclusions. In terms of human capital, a difference was found in the

Table 5
Robustness analysis.

	Model 1B: Concentration of employment in creative industries (LQ_CIE)				Model 2B: Concentration of employment in traditional cultural industries (LQ_CULTE)			
	OLS	SDM			OLS	SDM		
	B (SE)	Direct	Indirect	Total	B (Robust SE)	Direct	Indirect	Total
Relationships CI-CULT								
LQ_CIE					−0.416 (0.10)***	−0.362***	0.060	−0.302
LQ_CULTE	−0.179 (0.06)***	−0.206**	−0.110	−0.316				
Human capital								
GRAD	6.574 (1.43)***	7.238***	0.091	7.329*	−0.996 (2.01)	−1.589	−1.633	−3.222
YOUNG	2.299 (1.21)*	2.653*	2.573	5.226*	4.592 (1.69)***	3.477*	0.082	3.559
Potential markets								
lnPOP	0.130 (0.06)**	0.117	−0.005	0.112	0.098 (0.09)	0.209*	−0.538**	−0.329
LQ_SERVE	−0.305 (0.20)	−0.369	−0.347	−0.717	−0.801 (0.31)**	−0.462	−0.546	−1.008*
LIVCOST	−0.255 (0.57)	−0.421	0.288	−0.133	0.816 (0.98)	−0.295	3.814*	3.518
TOUR_OBJ	−0.019 (0.01)**	−0.023**	−0.016	−0.038	−0.009 (0.01)	−0.024*	0.013	−0.011
Economic and entrepreneurial climate								
SELF_EMPL	1.018 (0.97)	1.508***	1.058	2.567**	2.751 (1.72)	3.892**	0.382	4.274
UNEMP	−6.577 (1.49)***	−7.500***	−3.725	−11.225**	−11.184 (2.55)***	−3.626	−5.147	−8.773*
Urbanization economies								
UNRELE	0.125 (0.17)	0.058	−0.083	−0.025	0.262 (0.29)	0.033	0.220	0.253
RELVARE	0.486 (0.18)***	0.518***	0.150	0.668	−0.320 (0.35)	−0.555**	0.516	−0.039
Intercept or Rho	−1.079 (3.52)			0.315***	−4.949 (6.12)			0.059
N	124			124	124			124
R ²	0.431			0.518	0.355			0.514
F	9.48***				7.16***			
Mean VIF	1.85				1.67			
Spatial diagnostics								
Moran's I	2.76***				0.78			
LM lag	5.12**				0.27			
RLM lag	0.57				0.29			
LM error	4.82**				0.09			
RLM error	0.27				0.10			
SDM model test								
LR test SAR				3.31				23.05**
LR test SEM				2.98				23.24**

Note: Standard errors in parentheses.

*** Significant at 1%.

** Significant at 5%.

* Significant at 10%.

coefficient for the percentage of young people, which was negative in Model 2A but positive in Model 2B, but only significant at the 10% level. This result indicates that young people on Java and Bali are more likely to be involved in traditional cultural industries than those on other islands.

There are also a few differences in significance levels and signs with regard to potential markets. Most notably, the coefficient of LQ for service industries becomes insignificant and that of tourist industries becomes negative in Model 1B. However, the coefficient of LQ for services is still negative in Model 2B (as it was in Model 2A) showing that a strong service sector does not simulate traditional cultural industries. In addition, the coefficient for standard living costs became significant in Model 2B, suggesting that high-income consumers are likely to make use of cultural products from the surrounding regions. Overall, these results strengthen the case for the potential markets for creative and traditional cultural industries being different.

Unemployment rates exert a negative influence on the concentration of both creative and traditional cultural industries, indicating that both require a favourable economic climate. The self-employment coefficient is positive not only in Model 2B but also in Model 1B (while it was negative in Model 1A and insignificant in Model 2A) indicating that self-employment simulates both creative and traditional cultural industries. This change in the association possibly indicates that the regional entrepreneurial climate on Java and Bali is different to that on the other islands. This is to say that, self-employment on Java and Bali reflects a different condition of entrepreneurial activity than it does on other islands. It is possible that, on Java and Bali, entrepreneurship is more likely taken up in recognition of the opportunity provided since the business competition is likely to be more intense due to the higher

level of economic activity and population density (see Singer et al., 2015).

Finally, with regard to urbanisation economies, the only change is that the coefficient of unrelated variety becomes insignificant in Model 2B (whereas it was negative in Model 2A), but this does not affect our conclusion that creative and traditional cultural industries require different conditions in terms of economic diversification.

7. Discussion and conclusions

This study has examined the regional characteristics that govern the occurrence of creative industries in the context of a developing country, Indonesia. The term creative industries is imported from developed countries and the 'original' concept is often interpreted differently in Indonesia in that it is not always considered to relate only to the promotion of individual creativity and intellectual property. Rather, long-established traditional cultural industries are seen as creative industries, despite their strong attachment to heritage values and little attention to innovation and knowledge creation, which are the main features of creative industries (Fahmi et al., 2015). Therefore, in this paper we distinguish between traditional cultural industries and creative industries. By introducing this distinction, we have been able to account for the underlying heterogeneity in the broad and contested definition of creative industries. Our results point towards distinct regional settings for creative and for traditional cultural industries and, on this basis, a more focussed policy strategy can be defined. The knowledge gained from our findings can deliver insights not only for the Indonesian government, but also for other countries that promote traditional businesses as creative industries.

Our findings highlight the relatively small share of ‘real’ creative industries in the Indonesian economy. This supports the view that creative industries are, in a sense, a ‘luxury good’ and that they are most prominent in advanced economies. Nevertheless, these industries can be important in other contexts as they may spark economic development. In Indonesia, creative industries are found mostly in the Javanese and Balinese regions, where economic development is relatively tertiarised. This finding is in line with theory and with empirical evidence obtained in the context of developed countries which conclude that creative industries tend to be clustered in urban areas and in more advanced regional economies (Lazzeretti et al., 2013; Potts, 2007; Pratt, 2008). The clustering of creative industries is facilitated by the availability of human capital, and principally of young and higher educated people who are able to establish both formal and informal networks. These start creative businesses by building a learning platform, and generating knowledge spillovers and competition. These processes take advantage of urbanisation economies in which the relatedness between niche producers facilitates the generation and cross-fertilisation of innovative ideas (Feldman & Kogler, 2010). As such, supply factors appear to outweigh the demand-side forces for creative industries. However, this does not mean that demand factors are unimportant for creative industries in that these industries clearly require an economic environment where they can easily access recent technology and control their potential markets, but without being limited by their local markets (see Florida & Jackson, 2010). While the literature has shown that entrepreneurial environments can attract and provide desirable conditions for creative industries (Ó Cinnéide & Henry, 2007), the effect of an entrepreneurial climate is rather unclear in the context of Indonesia. This may be because entrepreneurial activities are born out of necessity rather than in recognition of opportunities (see Singer et al., 2015).

Although our findings are largely in line with the existing literature, creative industries in Indonesia appear to be particularly a phenomenon of the large cities, most notably those on Java and Bali, with a more advanced level of economic development. This reflects the current state of regional disparity in Indonesia: while some major cities have already stepped up to the next stage of economic development, where tertiary and knowledge-based economic activities play more significant roles (Flew, 2002), other regions are still ‘lagging behind’ and focusing on agricultural and industrial activities. This situation may be replicated in

other developing countries, where primate cities demonstrate ‘winner-takes-all’ effects.

Further, we found that the factors and dynamics that explain the distribution of creative industries do not similarly explain the locations of traditional cultural industries. These are assumed to be conceptually different in terms of sources of creativity and the role of intellectual property, and this is reflected in the spatial patterns and explanations for the occurrence of traditional cultural industries. In addition, these traditional cultural industries do not follow trends in creative industries or, in other words, they have clearly distinct development trajectories. Traditional cultural industries are not associated with the human capital requirements of creative industries (i.e., young, highly educated people) and diversified urban economic activities. Given the different spatial patterns and explanations for creative and traditional cultural industries, we suggest that the current policy, which regards both industries as similar, is likely to be inappropriate in some instances. As such, policy strategies so far adopted might be less effective than they could be since they are not tailored to the different elements of creative and cultural industries that each have their own specificities. This implication for policy also seems relevant for other countries that promote traditional industries as creative industries (see Kong et al., 2006).

The current national policy that obliges all local governments in Indonesia to promote creative industries in their localities would also appear ineffective. We therefore suggest that policy strategies should instead be shaped by local specificities, since strategies that foster the development of creative industries are not applicable in every region. It is sensible to promote creative industries in the more advanced regions with sufficient human capital and diverse economic activities, such as some large cities on Java. It is also important to pay attention to other economic sectors that also contribute to regional economies. Given the much greater numbers and high growth rates of traditional cultural industries, it is clear that these are also important although they will affect the local economy in different ways. For regions with large concentrations of traditional cultural industries, policies that aim to stimulate these industries might be more effective than those that encourage the formation of new creative industries.

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Appendix A. Categorizing creative and cultural industries.

No.	Description	KBLI (2006)	KKKP (1996)
Creative industries			
1	<i>Advertising and marketing</i> Advertising service; marketing research service	74300; 74130	8293
2	<i>Architecture and design</i> Architecture consultancy service; interior design	74210; 45404	8294; 5440
3	<i>Visual and recorded arts</i> Photography service; film and video reproduction (re-recording) including by government and private; recording media and reproduction	74940; 22302; 92111; 92112; 22130; 22301	9791; 9628
4	<i>Radio and television</i> Radio and television by government and private	92131; 92132	9627
5	<i>Performing arts</i> Drama, music and other entertainment by government and private; Entertainment supporting services; impresario	92141–92143; 63450	9631; 9632
6	<i>Publishing</i> Publishing book, textbook, atlas, brochure, pamphlet, music books, newspaper, journal, tabloid, magazine, special publishing, and others; printing; news agency by government and private, reporter (freelance)	22110; 22120; 22140; 22190; 22210; 92201; 92202; 92203	3420; 9633; 9634
7	<i>IT, software and computer services</i> Portal services; other multimedia service; hardware and	64323; 64329; 72100; 72200; 72300; 72400	8230

(continued on next page)

Appendix A (continued)

No.	Description	KBLI (2006)	KKKP (1996)
8	software consulting; data processing and database service <i>Research and development</i> Research and development science and engineering, social sciences, humanities, business and management	73120; 73210; 73220; 74140	8240; 8295
9	Traditional cultural industries <i>Antique market</i> Antique product retails and street vendors; government and private museum	52406; 52594; 92321; 92322	6256; 9629
10	<i>Batik and crafts</i> Rug/carpet; batik; embroidery; knitted fabrics; products made of leather or artificial leather; webbing of rattan, bamboo and others; woodcut other than furniture; kitchen tools from wood, rattan and bamboo; other wood, rattan and cork that not classified in other categories; other furniture; glass furniture; products and packaging from glass; furniture from porcelain; clay and ceramic products for home use and other than brick and roof tile; marble and granite products for home and decorative; stone products for home and decorative; furniture from wood, metal; various containers from metal; gemstone; jewellery for private use made of noble and non-noble metals; music instruments; toys; hair; packaging and box from paper and carton; knitting confection, socks and others; footwear for daily use, sport, engineering and others Fashion	17220; 17124; 17293; 17301; 19129; 20291–20294; 20299; 36109; 26121; 26129; 26124; 26201; 26321; 26324; 26501; 26503; 36101; 36102; 36104; 28994; 36911–36913; 36915; 36921; 36922; 36942; 36993; 21020; 17302–17304; 19201–19203; 19209	3214; 3211; 3233; 3313; 3314; 3322; 3323; 3323; 3621; 3611; 3641; 3649; 3692; 3691; 3321; 3812; 3901; 3902; 3904; 3906; 3412; 3213; 3241; 3242
11	Confection from textile and its equipment; from leather; from pelt and or accessories	18101; 18102; 18202	3221; 3222

Appendix B. Correlation tables

For Models 1A and 2A													
	1	2	3	4	5	6	7	8	9	10	11	12	13
1 LQ_CI	1												
2 LQ_FASH	0.154	1											
3 LQ_CULT	−0.140	0.294	1										
4 GRAD	0.702	0.126	−0.154	1									
5 YOUNG	0.310	0.011	−0.220	0.260	1								
6 InPOP	0.269	0.227	0.245	0.153	0.062	1							
7 LQ_SERVF	0.629	0.039	−0.330	0.696	0.319	0.129	1						
8 TOUR	0.157	0.049	0.118	0.138	0.064	0.182	0.091	1					
9 LIVCOST	0.513	0.195	0.056	0.532	0.259	0.379	0.406	0.108	1				
10 SELF_EMPL	0.024	0.018	−0.121	0.081	0.166	−0.186	0.069	−0.027	0.008	1			
11 UNEMP	0.440	0.048	−0.243	0.512	0.277	0.151	0.492	−0.018	0.311	0.257	1		
12 UNRELF	0.323	0.252	0.271	0.306	−0.085	0.348	0.184	0.110	0.483	−0.040	0.077	1	
13 RELVARF	0.588	0.109	−0.041	0.481	0.190	0.407	0.449	0.177	0.538	0.085	0.425	0.452	1

For Models 1B and 2B													
	1	2	3	4	5	6	7	8	9	10	11	12	13
1 LQ_CIE	1												
2 LQ_FASHE	0.014	1											
3 LQ_CULTE	−0.360	0.049	1										
4 GRAD	0.536	0.184	−0.371	1									
5 YOUNG	0.270	0.289	−0.118	0.465	1								
6 InPOP	0.062	0.180	0.003	−0.191	0.1	1							
7 LQ_SERVE	0.301	−0.097	−0.344	0.306	0.141	0.070	1						
8 TOUR	0.034	0.030	0.020	0.071	0.132	0.010	−0.065	1					
9 LIVCOST	0.333	0.198	−0.153	0.614	0.265	−0.030	0.181	−0.067	1				
10 SELF_EMPL	0.012	0.142	−0.086	0.166	0.268	−0.248	−0.053	−0.002	−0.033	1			
11 UNEMP	0.081	0.300	−0.388	0.432	0.518	0.087	0.009	−0.129	0.234	0.492	1		
12 UNRELE	0.395	0.280	−0.150	0.460	0.349	0.160	0.278	0.019	0.437	0.043	0.216	1	
13 RELVARE	0.458	−0.084	−0.406	0.424	0.224	0.098	0.511	0.242	0.275	0.140	0.240	0.447	1

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