The analysis of proximity in the creative sector*

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As creative industries are one of the key factors driving the development of economies worldwide, a growing number of studies try to capture their relevance, attributes, and global role. Globalisation tendencies affect the creative sector too, which arises the questions: ‘Does geographical proximity matter in this sector?’ and ‘What is its role in the functioning, relationship-building and information transfer processes of creative actors?’

In this study, first the changes in the meaning of the term ‘proximity’ are explained and summarised then the definition, categorization and attributes of creative industries are presented. Previous papers have proved that the scope of activities of an enterprise and its size have a significant impact on the importance of spatial closeness. The author’s empirical research has similar findings regarding the creative actors: market-based international partner relations constitute a majority and are considered relevant; spatially close relations are preferred and the total average importance index of geographical proximity is higher in the case of market-based partner relations than those with non-economic organisations. Although virtual platforms offer rapid and continuous connectivity between partners in the creative sector, the need for personal, face-to-face interactions is quite high, especially in the process for contracting with suppliers and clients.

KEYWORDS: proximity, geographical proximity, creative sector

The study of spatial proximity is not novel; however, it has come to the fore owing to a greater appreciation of knowledge and innovation. The spatial concentration of companies, that is, the requirement of geographical proximity has proved to be a prerequisite while accessing information as a relevant resource. On the contrary,

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Virtual spaces, which were formulated through different info-communicational tools, are able to bridge geographic distances; therefore, they can offer closeness to individuals, objects, organisations, and companies that are physically distant. However, the possibility of creating virtual proximity does not unequivocally entail relationship-building between companies. Many soft factors that influence these processes can intensify or speed up the formation and maintenance of partner relations, especially if knowledge-intensive and creative actors are involved.

The creative industry has become a rapidly growing part of the economy; this is manifest, on the one hand, in the employment it generates, and, on the other hand, in the growing trade of its goods and services data all over the world. The study first gives a theoretical overview of the interpretational options of proximity and the different aspects related to judging geographical proximity’s role and relevance.

Moreover, it introduces the creative industry, its definitions, and major attributes. Next, the findings of, and correlations in, the empirical research are described by means of statistical analyses. Cross tabulation analysis and cluster analysis are used to illustrate the most relevant attributes of geographical proximity’s impact on the creative sector.

The aim of this research is to study the following questions: ‘How is geographical proximity to other enterprises evaluated by companies?’ and ‘What is the role of spatial closeness in the case of creative industrial actors?’

1. The changing role of proximity

Regarding geographical proximity and its changing interpretation, two major aspects can be highlighted:

1. ‘death of distance’: focuses on the back-seat position of geographical closeness;
2. ‘re-interpretation of distance’: emphasises the relevance of spatial concentration.

The decrease in shipping and communication costs, that is, the reduction of economic distance (Dusek [2014]), is considered a milestone in the transformative role of geographical distance.

Previous studies have shown that geographical proximity is a necessary but not sufficient prerequisite for innovative organisational relations (Broekel–Boschma [2012], Fisher–Nijkamp [2014], Lengyel [2010], Letaifa–Rabeau [2013]). Thus,
researchers examined other factors that influence inter-organisational relations and the transfer of knowledge and innovation through these organisational channels (Benos–Karagiannis–Karkalakos [2015], Karlsson–Gråsjö [2014], Torre–Rallet [2005]). These soft, but difficult to measure factors, were defined as proximity dimensions that are associated with relational (Harun–Noor–Ramasamy [2019]) and/or virtual spaces (Torre–Wallet [2014]). The terminology used in describing physical spaces or spatial entities stays the same in the case of relational and virtual spaces (Ojala [2015], Drejer–Østergaard [2017]).

Based on the several definitions and their interpretations in the international literature of proximity, Table 1 provides a summary of the categorisation of different proximity notions and their meaning.

<table>
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<th>Categorisation of proximity notions</th>
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<tr>
<td><strong>Real proximity dimensions</strong></td>
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<tr>
<td>Geographical proximity: traditionally interpreted physical distance</td>
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<tr>
<td>Economic proximity: distance that is related to geographical distance in a functional (e.g. linear or scalar) manner; this includes:</td>
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<tr>
<td>– transport network distance;</td>
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<td>– cost distance; and</td>
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<tr>
<td>– time distance</td>
</tr>
<tr>
<td><strong>Sub-real/Relational space and proximity</strong></td>
</tr>
<tr>
<td>Proximity based on social relations: distance that depends on the relationships, as well as the strength and closeness of interactions in the society</td>
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There are basically two types of proximities, depending on their measurability. Real proximity dimensions involve, on the one hand, geographical proximity and, on the other, the so-called economic proximity; the latter is closely related to geographical proximity and can be defined with different units (e.g. with USD in the case of cost distance, and with hours in the case of time distance). Besides the easily measurable proximity categories, a newly defined proximity type – based on the networking and the restructuring of social space and interactions – has come to the fore: sub-real or relational proximity.

The notional system of the relational space and proximity, however, is not based on physical space; it refers to a social relational space. Thus, the meaning of the terminology has changed a lot. Moreover, the interpretation of the different proximity notions depends on the space and the context in which it is used. In order to better
understand the difference between the applied definitions and their meaning, several synonyms are also involved (Brennan–Martin [2012]):

- in the case of the physical or geographical proximity, co-location and co-presence are used to express the fact that the objects are situated in the same space (Bathelt–Turi [2011]);
- while in the case of relational proximity, the word ‘similarity’ is preferred to indicate the closeness, in different ways, between the involved objects (Boschma [2005]);
- according to Andersson and Ejermo [2005], geographical proximity refers to accessibility, while the notion ‘possibility of access’ is applied to soft factors that are part of relational space.

Nevertheless, the process of spatial concentration induced the interpretation of geographical closeness concerned, first, with the spatial concentration in metropolitan areas and their agglomerations (Aguiléra–Lethiais [2015], Morvay [2018]), and the spatial clustering of R&D (research and development) activities (Fujita–Thisse [2002], Boschma–Heimeriks–Balland [2014], Capello–Lenzi [2013]). Companies that settle close to each other spatially can derive several benefits from this closeness; these are defined as agglomeration economies (Cainelli–Zoboli [2012], Krugell–Rankin [2012], Cortinovis–van Oort [2015]).

Overall, the viewpoints listed above deal with both geographical proximity and its changes through, and based on, different economic, social and technological processes. While the first highlights the minimisation of spatial closeness, the second emphasises its re-strengthening role and relevance. According to a previous empirical research (Parr [2002]), the size and the scope of activities of enterprises, and the nature of their relations have an impact on how geographical proximity matters and is evaluated.

The present study explores the role of geographical proximity in the functioning of enterprises in the creative sector, and, particularly, in their relationship-building and maintenance activities.

2. The creative sector

Nowadays, creative industries function as the driving force in the economy and are responsible for economic growth. Creativity and the access to information and knowledge are key factors for development in our globalised world.
Moore [2014]). Creativity means the creation and application of new ideas to produce works and products of art, culture, technology, and science (Kecskés [2018a]).

It should also be highlighted that the examination of the creative industry from different perspectives is a key direction of research and the following are its main metatrends:

- there is a continuous blurring of the line between creative sectors and industries;
- therefore, the measurement and study of creative goods and services are complex and complicated;
- there is a shift in that creative services cover more and more significant parts of the creative sector on the consumer side; however, creative services are interpreted differently;
- UNCTAD (United Nations Conference on Trade and Development) suggests a classification for creative services based on their level of creative content; and
- digitalisation has a deep influence on the creative sector and increases the gap between developed and developing countries (UNCTAD [2018], Boccella–Salerno [2016]).

Creative industries are defined as “the cycles of creation, production and distribution of goods and services that use creativity and intellectual capital as primary inputs” (Flew–Cunningham [2010] p. 3.); however, different classifications can be found about which industries are involved in the creative industry (UNCTAD [2008]). The UNCTAD [2008] provides the widest range of categorisation in which the following industries are classified as creative industries:

- heritage (cultural sites, traditional cultural expressions);
- arts (visual arts, performing arts);
- media (publishing and printed media, audio-visuals);
- functional creations (design, creative services, new media).

The following four main models differentiate between core and partial/peripheral industries: 1. UK DCMS (United Kingdom Department for Digital, Culture, Media and Sport) Model; 2. symbolic texts model; 3. concentric circles model; and 4. WIPO (World Intellectual Property Organization) copyright model (UNCTAD [2018]). If the actors of the creative industries are examined, the NACE (Nomenclature des industries établies dans les Communautés européennes – Statistical Classification of Economic Activities in the European Community; Eurostat [2008]) should be considered as the reference list according to which enterprises in the creative industries...
can be sorted. Based on the studies and classifications listed above, the following sectors will be mapped in the empirical research:

– creative manufacturing industries;
– creative retail;
– ICT (information and communications technology) sector;
– finance; and
– R&D.

3. Empirical research

The main aim of this empirical research is to study the role and relevance of geographical proximity and its changes in the relations with foreign partners of the creative enterprises located in Western and Central Hungary. The research is based on a questionnaire survey with enterprises that was carried out during the spring of 2017 through an online survey platform. The final sample consisted of 610 enterprises in Hungary, in the Western and Central Transdanubia regions. Originally, quota sampling technique was used to represent the enterprises of a region; however, because this study took only the creative enterprises into consideration, the distribution of the enterprises between the two regions is no longer representative.

The sample of this study is made up by 195 enterprises that all belong to the creative industry, according to the Hungarian version of NACE Rev. 2 (Eurostat [2008]). Table 2 summarises the attributes of creative actors participating in the survey.

Only the foreign inter-organisational relations of the examined enterprises were studied; therefore, only the international relations and networking can be described and the research findings concerning the changing role and relevance of proximity are also limited to the international level. Because the findings of this study are part of a wider research (Kecskés [2018a]), and as the main aim of this research is to examine the variable interpretation of geographical proximity in the relationship-building and information-sharing processes of creative actors, only the relevant variables and questions will be analysed.
Table 2

Major attributes of the creative enterprises in the sample, 2017

| Scope of activities                       | – creative manufacturing industries: \(N = 60\); |
|                                         | – creative retail: \(N = 57\); |
|                                         | – ICT: \(N = 10\); |
|                                         | – finance: \(N = 11\); |
|                                         | – R&D: \(N = 57\) |
| Location (region within Hungary)         | – Central Transdanubia: \(N = 101\); |
|                                         | – Western Transdanubia: \(N = 94\) |
| Size                                     | – micro (< 10 employees): \(N = 31\); |
|                                         | – small (11 < > 49): \(N = 49\); |
|                                         | – medium (50 < > 249): \(N = 54\); |
|                                         | – large (> 250): \(N = 61\) |
| Cluster membership                       | – yes: \(N = 33\); |
|                                         | – no but planned: \(N = 33\); |
|                                         | – no and not planned: \(N = 129\) |
| Foreign ownership                        | – yes: \(N = 92\); |
|                                         | – no: \(N = 102\); |
|                                         | – no data: \(N = 1\) |

Note. Here and in the following table, ICT: information and communications technology; R&D: research and development.

Source: Kecskés [2018a].

4. Key findings

The international relational networking of the creative enterprises involved is not complex; 59 of them had relations with six partner types (suppliers, clients, universities, professional institutions, economic development organisations, and national/private research institutions) in the last three years. The majority of companies built relations with a maximum of three partner types. However, the number of enterprises that did not have international relations at all is low (\(N = 9\)); all of them are micro- and small-sized companies.

Based on the partner types, the highest numbers are seen in the case of market-based partners (suppliers and clients): 155 creative enterprises have foreign suppliers, while 163 have foreign customers. The extent of non-economic foreign partner relations is lower: 54 creative enterprises have relations with universities, 53 with professional institutions, 51 with economic development organisations, and 32 with
national or private research institutions. Concerning the market-based international partner relations, most of them are formalised by written contracts (142 with suppliers and 146 with customers).

Regarding the geographical directions of international relations, creative enterprises prefer close partners from neighbouring countries – those within the European Union or other European countries. This tendency is exhibited in both market-based and non-market-based relations.

The relevance of geographical proximity was measured on a 5-point Likert scale, where 1 means ‘the least important’, and 5 means ‘the most important’. The importance of geographical proximity in the relations with international partners has a total average importance index of 3.03 \((N = 189)\); however, if different partner types are examined, the index provides a diverse picture. In the case of non-economic organisations, the total average importance index of geographical proximity is 2.46 \((N = 128)\), while it is higher 3.61 \((N = 188)\) in the case of market-based enterprises. The creative companies consider the spatial closeness of their suppliers to be the most significant (average importance index is 3.66). Spatially close international partners (both suppliers and clients) seem to be the most preferred in the international relationship-building activities of the creative enterprises concerned.

Based on the importance of geographical proximity, the creative enterprises of the sample could be categorised on the basis of a hierarchical cluster analysis. The enterprises evaluated how important the geographical proximity of the different international partners is for their functioning on a 5-point Likert scale. According to the analysis and the Ward method, the three-cluster solution is most suitable because the number of enterprises represented in the clusters is quite balanced (Cluster 1: \(N = 66, 33.8\%\); Cluster 2: \(N = 61, 31.3\%\); and Cluster 3: \(N = 68, 34.9\%\)).

The examination shows a significant difference between the sample enterprises regarding not just the importance of their diverse partners’ proximity, but also their other attributes. Table 3 summarises the cluster analysis’ result, lists the attributes of the three creative clusters, and highlights the major differences between them.

The cluster analysis has proved that the attributes of the creative enterprises have a significant impact on how the relevance of geographical proximity is evaluated. The size of the company and the industry in which the creative enterprise is operating have a key role in it.

Geographical proximity was also studied from other aspects: 1. how creative enterprises evaluate its relevance if other soft factors (cultural proximity dimensions; Kecskés [2019], Kecskés [2018b]) are also involved in the process, and 2. how often geographical proximity is needed in forms of personal, face-to-face interactions (Kecskés [2017]). The first examination dimension shows a result similar to that of the general evaluation of the physical closeness (the average of the index of geographical
proximity in relationship-building and information-sharing processes is 3.03 \( [N = 195] \).

### Classification of the creative enterprises, 2017

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Attribute</th>
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<tbody>
<tr>
<td><strong>Cluster 1</strong> ((N = 66))</td>
<td>– assigns average values for the importance of the geographical closeness of all types of international partners: the most important partner relations are clients (3.28) and universities (3.22), but their relevance is not overriding; – mostly large enterprises ((N = 38)); – mostly active in the creative R&amp;D sector ((N = 40)); – more than half of them possess foreign ownership ((N = 43))</td>
</tr>
<tr>
<td><strong>Cluster 2</strong> ((N = 61))</td>
<td>– reported the highest importance for all kind of international partners, especially for the following: suppliers (4.56), clients (4.56), and other enterprises in the group (4.33); – mostly operating in the creative manufacturing ((N = 19)) and the creative R&amp;D ((N = 15)); – mostly medium-sized enterprises ((N = 25))</td>
</tr>
<tr>
<td><strong>Cluster 3</strong> ((N = 68))</td>
<td>– mostly micro ((N = 15)) and small enterprises ((N = 21)); – mostly active in the creative manufacturing ((N = 22)), creative retail ((N = 21)) and all types of finance ((N = 11)); – evaluates the importance of all partner types as being below average and has the lowest overall values; the highest importance (3.03) is that of the suppliers.</td>
</tr>
</tbody>
</table>

*Source: Kecskés [2018a].*

However, if another perspective is taken into consideration, geographical proximity seems to be more important than what its direct evaluation shows. Creative enterprises were asked about the necessity of physical closeness, that is, face-to-face interactions with their international partners; the findings show that although virtual channels (emails and telephone) are preferred and used the most often, personal interactions are not considered to have secondary importance.

Table 4 summarises that geographical closeness is needed, especially in formalised activities requiring continuous interaction (contracting with clients); in other activities, at least ad hoc interactions are indispensable.

The results show that despite the use of virtual communicational channels in the everyday activities of creative enterprises, geographical/physical proximity is indispensable when it comes to specific international interactions.

Cross-tabulation analysis was used to see the difference between the enterprises of different creative sectors in their evaluation of geographical proximity’s importance. The results show a significant relation between the involved variables...
(Pearson $\chi^2 = 26.76$; $df = 8$; $p = 0.001$) and suggest that enterprises of the creative manufacturing industry consider it the most important (83.3%); for companies in the ICT and financial sectors, it is the least important (70% of ICT companies and 45.5% of finances consider it unimportant). Therefore, it can be seen that the importance of geographical proximity is evaluated differently by the actors in the creative sector. Although it is not absolutely necessary in international partner relations these days, it is needed for some specific, market-based partners and in some special activities (e.g. contracting).

<table>
<thead>
<tr>
<th></th>
<th>The need for personal interactions during different activities, 2017</th>
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<tbody>
<tr>
<td>Contracting with clients and customers</td>
<td>– Continuous face-to-face interactions: 103</td>
</tr>
<tr>
<td></td>
<td>– Ad hoc interactions: 49</td>
</tr>
<tr>
<td>Contracting with suppliers</td>
<td>– Continuous face-to-face interactions: 67</td>
</tr>
<tr>
<td></td>
<td>– Ad hoc interactions: 77</td>
</tr>
<tr>
<td>Product development and production</td>
<td>– Continuous face-to-face interactions: 49</td>
</tr>
<tr>
<td></td>
<td>– Ad hoc interactions: 63</td>
</tr>
<tr>
<td>Technology development</td>
<td>– Continuous face-to-face interactions: 47</td>
</tr>
<tr>
<td></td>
<td>– Ad hoc interactions: 40</td>
</tr>
<tr>
<td>Joint projects</td>
<td>– Continuous face-to-face interactions: 34</td>
</tr>
<tr>
<td></td>
<td>– Ad hoc interactions: 49</td>
</tr>
<tr>
<td>Conferences</td>
<td>– Continuous face-to-face interactions: 37</td>
</tr>
<tr>
<td></td>
<td>– Ad hoc interactions: 55</td>
</tr>
</tbody>
</table>

Though previous empirical research (Kecskés [2018a]) showed that the size of the enterprise has a significant impact on how important it considers geographical proximity, there is no significant result observed for creative enterprises regarding this. However, a specific tendency is visible: small- and medium-sized enterprises consider the spatial closeness of their market-based partners as important (72.3% of small-sized and 71.7% of medium-sized enterprises said it is important). Other attributes of the surveyed creative actors do not influence their answers regarding the role of proximity in their relations with international partners.

### 5. Conclusions

The rapid development of technology and info-communicational platforms and channels ensures a quicker and continuous connectivity between individuals and enterprises all over the world. Information flows through these virtual channels
but the question arises: ‘Does this mean that geographical proximity is not needed anymore to build and maintain inter-organisational relations?’ This question led to this research at both the theoretical and empirical level.

Previous studies showed that although spatial closeness is necessary for the knowledge- and innovation-sharing processes, other factors (the so-called cultural proximity dimensions) can have a more relevant impact.

This research proved that geographical proximity matters in international relationship-building and information-transfer activities of the surveyed creative enterprises. However, it needs to be highlighted that it depends on the partner type, as well as the evaluation by the enterprise of the importance of the scope of activity. Though creative companies of the survey do not possess a complex international relation network, the relevance of market-based partners is established and their spatial closeness is also found to be significant. In conclusion, it can be stated that although permanent geographical proximity is not exclusively needed for all types of interactions between creative actors, it is necessary in an ad hoc way.

References


the 33rd IBIMA (International Business Information Management Association) Conference.


