City policies to promote entrepreneurship: A cross-country comparison of Poland and Germany

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Abstract

Purpose: *The policy to promote entrepreneurship plays a central role in the strategic management of cities. Therefore, the research question asks how urban policies in Poland support knowledge spillovers and entrepreneurship in comparison to German cities' policies. Also investigated is how do Polish and German cities support entrepreneurship in different forms (including social entrepreneurship, youth entrepreneurship, and creative industries).* ***Methodology:*** *To answer this question, we have adopted a multiple-case study methodology relying on multiple sources of evidence, primarily strategic documents of the biggest Polish cities in the context of cross-country comparison with selected large cities in Germany, and semi-structured interviews with decision-makers representing municipalities from the analyzed cities in Poland. Building on the concept of the knowledge spillover theory of entrepreneurship, we refer to the approach in which spillovers of knowledge are a strategic lever through which firms distribute innovation and have profound implications for the region's entrepreneurial activities development.* ***Findings/research and practical implications****: The research enriches our understanding of urban policies in Poland that support knowledge spillovers and entrepreneurship, and discovers the possible relationship between factors determining entrepreneurship in Polish and German cities. In all Polish and German cities, entrepreneurship was an important component of economic development strategy. However, Polish cities depend on EU funding to a much greater extent than German cities in implementing their economic*

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development strategies. Cluster strategies in the framework of key cities' industries were embedded in most urban policies, but a majority of Polish respondents believed that their cities should place greater emphasis on this policy. The main challenge for policy-makers is that current entrepreneurial polices should be more effective and oriented towards reinforcing the social perception of entrepreneurship, especially among young inhabitants. ***Originality/value:*** *The research allowed enough data to be gathered to answer the research questions. However, future research validating the results in quantitative study is suggested. Also, some limitations in the research process were highlighted, such as a lack of personal contact with the respondents or different levels of economic development among Polish and German cities. Our research demonstrates the opportunities for knowledge spillover and sharing of good practices between the two countries.*

Keywords: *strategic management of cities, knowledge spillover theory of entrepreneurship, social and cultural entrepreneurship.*

INTRODUCTION

Interest is growing on the impact of entrepreneurship on urban economic development (e.g., Alvarez & Busenitz, 2001; Glaeser, 2007; Isenberg, 2011; OECD, 2018). Scholars have identified entrepreneurship as a process of recognizing opportunities, understanding an idea's or invention's commercial potential, and converting the resulting intellectual capital into successful businesses that create value through innovation (Schumpeter, 1912; Shane, 2007). Moreover, research demonstrates that entrepreneurship is a key factor through which knowledge spillovers stimulate knowledge-based economies. Audretsch et al. (2015) argue that a policy to promote entrepreneurship plays a central role in the strategic management of cities, because knowledge-based entrepreneurship is the key to global competitiveness.

The knowledge spillover theory of entrepreneurship indicates that the level of knowledge-based entrepreneurship is determined by new knowledge creation and whether entrepreneurial absorptive capacity exists to exploit it (Acs et al., 2013). The effectiveness of knowledge spillovers and entrepreneurship has frequently been suggested to depend on factors like a region's enterprise policy and strategy, including start-up strategy (Huggins & Williams, 2011) and public cluster policy (Porter, 1998; Audretsch et al., 2018). Despite the recognition of the importance of new firm formation in urban economic development, a widespread theme in the existing literature is defining the need to support cities' cultural entrepreneurship (Qian & Liu, 2018) and social entrepreneurship (Simón et al., 2016). An example of this theme is the typology proposed by Spencer and colleagues (2005), who

adopted a contingency theory to explain differences in national policies' impact on social entrepreneurship, innovation, and venture creation.

Stough (2003) argues that political and social changes in Central and Eastern European (CEE) countries reduced their investment risk and opened more advanced countries' access to highly skilled and significantly lower-cost workers. These changes resulted in higher-wage, developed countries being forced to invest in new firm creation and jobs in technology-intensive and knowledge industries. Consequently, contemporary regional development policies in those countries focused mainly on innovation, entrepreneurship, firm formation and industrial clustering. By contrast, in CEE countries, growth and development are not necessarily propelled by companies' research and development (R&D) activities (Marelba, 2010). Hence, Poland and Germany were chosen for comparison because of their geographic proximity, strong economic ties and Polish aspirations to catch up with the most developed economies of Western Europe within the next two decades. As Germany is the largest and one of the most advanced economies in terms of technological development in Europe, it offers many opportunities for benchmarking and learning for Poland, including city management practices. The primary purpose of this study is to evaluate current regional development policies in Poland and Germany in their efforts to develop successful innovative environments and provide some insights for the Polish cities, which could allow them to imitate the best practices and follow the path of their most successful German counterparts. As no single policy can be copied and implemented universally to improve regions' performance (Audretsch, 2015), we aim to answer the following research question:

RQ) *How do urban policies in Poland that support knowledge spillovers and entrepreneurship – the key drivers of regions' innovative capacity development to sustain global competitiveness – differ from German cities' policies?*

To answer this question, we have adopted a multiple-case study methodology relying on multiple sources of evidence, primarily the strategic documents of 11 largest Polish cities in the context of cross-country, which were compared with seven selected large cities in Germany. We conducted a series of semi-structured interviews with the decision-makers representing municipalities from the analyzed cities in Poland. Building on the concept of the knowledge spillover theory of entrepreneurship, we refer to the approach described by Agarwal et al. (2010), in which spillovers of knowledge are a strategic lever through which firms distribute innovation and have profound implications for the region's entrepreneurial activities development.

This article is organized as follows: it begins with this introduction, followed by a review of the theoretical strategic orientation of cities' background, the importance of social and cultural entrepreneurship for city development, and actions to promote creative and innovative companies. The methodology is presented in the next section, and the last section reflects on the findings of the study in the context of future policy development.

LITERATURE REVIEW

Enterprise policy and strategy as a key of urban economic development

There is voluminous literature both on entrepreneurship and city development. The special role of regions in the development of innovative capacity to sustain global competitiveness has been a source of inquiries that have recently increased considerably. Starting from the work of Smilor and Wakelin (1990) on key factors in the development of smart infrastructure (talent – technology – capital – know-how model) supported by policy implications, authors have concentrated on company formation and entrepreneurship-oriented policies (Stough, 2003). In pursuing beneficial outcomes of entrepreneurship, governments and regional development organizations enact policies to stimulate entrepreneurial activity (Roundy & Feyard 2019). Scholars consider entrepreneurship to be the most reliable driver of economic growth and community development (Audretsch et al., 2015; Baumol & Strom, 2007; Valliere, 2016). Entrepreneurial activities support job growth and social development (Malchow-Møller, 2011) and economic growth (Galindo & Méndez, 2014; Mumby-Croft & Brown, 2006).

The taxonomy of entrepreneurial theories has been condensed into three major traditions, defined by Hébert and Link (1989). However, the Schumpeterian tradition, which emphasizes the role of the entrepreneur and innovations in the process of economic development, had the greatest impact on further theory development. Similarly, Schumpeter's idea of creative destruction has dominated the framework for entrepreneurship and economic development (Agarwal et al., 2007). According to the Knowledge Spillover Strategic Entrepreneurship (KSSE) theory, introduced by Acs et al. (2008), knowledge is created endogenously. Consequently, industries and regions can grow due to KSSE and can further attract additional human capital as well as its supporting infrastructure.

Cities and regions with higher entrepreneurial activity will introduce greater knowledge spillovers and the resultant commercialization of knowledge, which will lead to economic growth and new jobs creation

(Agarwal et al., 2007). Some cities are much more entrepreneurial than others (Glaeser, 2007). Hart (2003) argues that entrepreneurship policy raises the level of entrepreneurship, concentrating not only on existing entrepreneurs but also on those who consider starting a new venture. Therefore, entrepreneurship policies within regions consist of measures taken to stimulate more entrepreneurial behavior in a region or country (Lundström & Stevenson, 2001). Entrepreneurship policy intends those measures to directly influence the level of entrepreneurial vitality in a country or a region (Lundström & Stevenson, 2005). Regions with their innovative firms and entrepreneurial individuals are henceforth the key contributors to innovation (Breshsnahan & Gambardella, 2004).

Research that explores KSSE through questions related to cities' strategies may be properly addressed by comparisons between two countries. For this purpose, our research analyzes regional policy in selected Polish and German cities to the extent to which such policy accounts for entrepreneurship issues influencing regional competitiveness; these attempts are the first that can significantly contribute to the literature.

Brooks et al. (2019), who examined the role of public policy in the formation of entrepreneurial ecosystems in three Polish cities, argue that Polish attempts to foster entrepreneurial activity had some successes; however, the entrepreneurial ecosystems have still not been created. Previous studies, including Poland in the framework of The Innovative Policy Research for Economic Growth (IPREG) project, were based on an estimation of the total net cost of public expenditure on entrepreneurship policy and the description of the comprehensiveness of these policies (Entrepreneurship and SME Policies across Europe report, 2011). According to Lundström et al. (2014), expenditure on entrepreneurship policy constitutes only 16% of total policy expenditure in Poland, and we observe the same numbers for Flanders. Also, it is broadly similar per capita for Austria, Flanders and Sweden, taking into account differences in wealth. However, entrepreneurship education, policy relevant research, promotion measures and especially innovative entrepreneurship and target policy groups mean values were lower in Poland as compared to Sweden. Hence, our research draws a comparison in the areas that require special intervention. For example, Audretsch et al. (2007) have shown that one area where public intervention can enhance entrepreneurial culture of residents, especially in European countries, is the entity's education policy. Education influences young people's mindsets, skills and attitudes for turning ideas into actions, so that they can be prepared for entrepreneurial careers; it therefore has become a priority in European Union strategy (European Commission, 2010). Similarly, government policy through comprehensive policy strategy and innovative entrepreneurship promotion

can influence the environment for entrepreneurship and increase the innovative capacities of enterprises to address the key global challenges of the 21st century (OECD, 2010). Table 1 presents an overview of the most important factors stimulating knowledge spillover entrepreneurship in different regions.

Table 1. Key factors influencing knowledge-based regional systems of entrepreneurship

No	Authors	Factor influencing regions' entrepreneurial capacity development	Region of research
1	Qian et al. (2013) Lehmann and Keilbach (2019)	Agglomeration and industry specialization	US and Western European areas
2	Qian et al. (2013)	Quality of life	US metropolitan areas
4	Audretsch et al. (2010) Qian et al. (2013)	Social, knowledge and cultural diversity	German cities US metropolitan areas
5	Carayannis and Grigoroudis (2014) Marelba (2010) Lehmann and Keilbach (2019)	Availability of highly skilled and educated people	Western European countries including Germany (Carayannis/Grigoroudis 2014; Marelba 2010) and selected CEE countries including Poland (Carayannis/Grigoroudis 2014)
6	Audretsch and Keibach (2008) Braunerhjelm et al. (2010) Acs et al. (2013) Lehmann and Keilbach (2019)	Spillover and commercialization of knowledge	US and German regions
7	Acs et al. (2013) Fritsch andAmoucke (2013) Qian et al. (2013) Guerrero et al. (2014) Caiazza et al. (2015) Lehmann and Keilbach (2019)	Research university	US metropolitan areas (Qian et al. 2013) and European countries including Germany (Fritsch/Amoucke 2013; Guerrero et al. 2014)
8	Audretsch and Lehmann (2005) Qian et al. (2013) Qian and Haynes (2014) Lehmann and Keilbach (2019)	Infrastructure that enables young firms to absorb necessary resources like business incubators hosted by universities	Germany US regions

No	Authors	Factor influencing regions' entrepreneurial capacity development	Region of research
9	Acs et al. (2013) Ghio et al. (2015) Lehmann and Keilbach (2019)	Innovative clusters	US and Western European regions
10	Braunerhjelm et al. (2010) Marelba (2010) Carayannis and Grigoroudis (2014)	Financial incentives to firms that invest in knowledge creation and diffusion	Western European countries including Germany (Carayannis/Grigoroudis 2014; Marelba 2010) and selected CEE countries including Poland (Carayannis/Grigoroudis 2014), OECD countries (Braunerhjelm et al. 2010)

The importance of social and cultural entrepreneurship

In addition to enterprise policies, we introduce the importance of cultural entrepreneurship, defined by Qian and Liu (2018) as arts and cultural activities leading to new firm formation. Cultural entrepreneurship was recognized as the most creative part of the creative economy, and the authors also show that entrepreneurship itself also requires creativity (Ward, 2004); hence, we focus on the role of government in stimulating cultural entrepreneurial dynamics of local economies (Parker, 2008). More broadly, our empirical exploration may illustrate cultural entrepreneurship as a separate realm within entrepreneurship.

While there is not yet a single agreed-upon definition or typology of social entrepreneurship, Corner and Ho (2010) refer to the concept of opportunity recognition or the identification of opportunities to solve social problems or to create social value. Friedman and Desivilya (2010) describe a range of practices for the creation of new innovative organizations or enterprises to meet social goals and systematic change with economic sustainability or profit. Consequently, social ventures exhibit both entrepreneurial, product-oriented and social-, people-oriented identities, and they share a similar process in acquiring resources for start-ups and growth (Meyskens et al., 2010; Moss et al., 2011). Starting from the research of Albert (2017), Narangajavana et al. (2016), and Simón et al. (2016), our goal is to gain empirical insights into the development of policies to promote and enhance specific types of entrepreneurship like social entrepreneurship and at the same time their contribution to regional sustainability. Hence, we link this part to the work of Zahra et al. (2014), who postulated intersectional studies on social entrepreneurship and international entrepreneurship.

Differences in actions towards creative and innovative companies

One of the main challenges for the strategic management of cities besides entrepreneurship is cluster formation, or any other local structure and organization needed to generate an innovative climate at a regional level (Audretsch, 2015). In this sense, policies targeted at science and technology parks, co-working spaces, technology business incubators, and growing firm clusters seem to be of particular importance (Cooke, 2004). While there is no paucity of research evidence supporting the effectiveness of clusters, we aim to research a direction proposed by Lehmann and Menter (2018). Thus, we argue that regional economic performance is mainly dependent on adequate incentive systems, which encourage universities to engage with industry clusters and infrastructure supporting efficient knowledge and technology transfer. Spigel and Harrison (2017) suggested that government plays a prominent role in leading support programs and bringing actors – mainly firms, public agencies, and universities – together to create public goods.

In this area of public-private sector cooperation in cities, Germany has a long tradition, starting from 1983, the first opening of the German innovation and technology center in (West) Berlin (Heuer 1989). However, according to the Global Entrepreneurship Monitor (GEM) (GEM Report, 2018), in the latest report, both Germany and Poland demonstrate comparable and relatively low overall early-stage entrepreneurial activity. Germany has placed a strong focus on government programs, infrastructure, and financing. Innovation polices supporting new firms started by young people are of particular importance. The GEM results also show that in Poland, the government took various actions supporting the growth of entrepreneurship (e.g., the Constitution for Business) that significantly improved the social perception of entrepreneurship over recent years. Still, current taxes and bureaucracy are not well balanced for entrepreneurial activities and entrepreneurial education at schools. Vocational centers and universities are not effective in building students' entrepreneurial skills and values. Hence, we expect these differences between Germany and Poland to have repercussions for generating knowledge spillovers and entrepreneurship in cities that consequently trigger growth, employment creation, and competitiveness.

METHODOLOGY AND RESEARCH METHODS

Research approach

For our research sample, we selected all of the largest Polish and some German cities. Poland is bordered by Germany to the west**.** Poland covers an area of 312,685 km² and has a population of 38.5 million (in 2015). The capital and largest city is Warsaw, with about 1.7 million inhabitants. Germany is the largest export market for Polish products and services, with an export share of 27.1%. Germany is Europe's most industrialized and populous country. It is famed not only for its technological achievements but also for its contribution to the world's cultural heritage. Poland is Germany's eighth largest export partner, with an export share of 4.4%, ahead of Switzerland. Germany has a population of 81.7 million people (2015); its capital and largest city is Berlin, with about 3.3 million inhabitants. An area of 357,022 km² makes Germany the seventh largest country in Europe.

Despite many differences between the two countries, they also share many similarities. Viewed globally, the two cultures are rather similar, especially from a non-European perspective. Germany is the largest in absolute terms, and Poland is the largest post-Soviet country bordering Germany. Despite a substantial gap between Poland and Germany in terms of annual gross domestic product (GDP 586M USD vs. 4B USD) and GDP per capita (15K USD vs. 48K USD), Poland's economy has been steadily narrowing the gap in the last 25 years after the fall of communism and catching up with Western countries. For example, in 2019, Polish GDP per capita exceeded Portugal's. Over the last 25 years, the Polish economy doubled in size, as measured in terms of real GDP. In terms of GDP per capita (at purchasing power parity), Poland narrowed the gap by nearly half, moving from 32 to 60 percent of the European Union (EU) – 15 average. Key elements of the Polish success story resemble that of the German post-war economic experience, especially relying on social and economic inclusiveness as a driver of economic success (Piatkowski, 2019). Given its economic importance and strong integration in EU value chains, Germany is a source of potentially significant spillovers to other EU countries (European Commission, 2018). The choice of Germany for comparative research was also dictated by a literature review on KSSE theory, where a large number of studies, especially works by the most cited authors in the field like Audretsch and co-workers, were conducted in Germany (e.g. Audretsch & Keibach, 2008; Audretsch et al., 2010).

Research sample

The Unit of Analysis for our study was the policies and strategies in the selected cities. The most popular studies in social scientific research are not exhaustive and complete measurements, but rather measurements based on non-exhaustive and non-random approaches, although it is also fair to say that such studies provide less accurate results than the measurement of the entire population. This conclusion particularly holds for research based on non-random samples, such as target or typical samples as collected over the Internet in Computer-Assisted Web Interview (CAWI) research, which rarely meet the criterion of representativeness in the results, allowing conclusions to be drawn describing a broader community.

According to Churchill and Iacobucci (2010, p. 500): "in such studies, the units are most often selected on the conviction of their desired result." For example, the sample can be constructed with respondents that allow the researcher to get a new perspective on the problem being investigated, where a cross-section of opinion on the subject might not be important. These studies can even be carried out using the researcher's own (often subjective) knowledge about the population and directed by the objectives of the study to what will guarantee more insight or valuable information than any random approach could. As Wasilewska argued (2008, p. 30): "… the essence of purposeful selection of respondents is that only those individuals whose opinion matters provide the researcher optimal information from the point of view of the objective of the study. The researcher selects only those respondents for study, according to his/her best knowledge of the phenomenon being studied". Besides, there is no need to search for all units across the entire population, because some professionals and other experts who are hard to find are only available in specific situations and places like Internet networks. Such databases are even more valid than standard places of data collection like the offices of an organization, for they provide easy and rapid access to people gathered in one place and time, whereas the selection of respondent units for the sample depends on the researcher's judgment, which is made arbitrarily in terms of desirable relationships between traits and the objective of the research.

To sum all these arguments up, when it is impossible or very difficult to compile a list of all units of the population, but the data obtained through arbitrary selection of respondent units are sufficient for the purposes of the study, then it is also appropriate to use non-random samples designed in extraordinary conditions, such as CAWI research. Using such sampling procedures can be justified under one condition: the researchers are looking for the specific behaviours, views, and attitudes of only those who provide

better insight and make up the core of the study. There is, therefore, no need for the sample to be entirely representative, although in our case, the group of respondents recruited reflected the best-selected sampling units, which were supposed to provide the best knowledge on the topic of the investigation. As part of the selection of units for the research sample, these respondents were to provide knowledge about the unusual problem and facts and hence were recruited online through the agency of CAWI research.

Research procedure

We analyzed all the major cities in Poland with a population exceeding 250,000 inhabitants (Warsaw, Kraków, Łódź, Wrocław, Poznań, Gdańsk, Szczecin, Bydgoszcz, Lublin, Białystok, Katowice) because, according to Audretsch et al. (2015), only large cities (urban areas with more than 250,000 inhabitants) benefit most from entrepreneurship where it positively affects their economic development. We also analyzed seven German cities, which were participating in the Federal Ministry of Economic Affairs and Energy (BMWi) programme, "Exist Start-up Germany," or in the "leading-edge cluster competition" of the German Federal Ministry of Education. The "Exist Start-up Germany" programme ended in 2017. According to the Global Startup Ecosystem Ranking (2015), Berlin was the world's most successful city in the number of new start-ups and venture capital investments. Munich, in turn, is one of the leading European university centers, with an extensive start-up network and business accelerators complemented by a vibrant venture capital activity. The "leading-edge cluster competition" by the German Federal Ministry of Education was a component of the High-Tech Strategy for Germany, involving 15 of Germany's leading-edge clusters located in Munich, Dresden, Stuttgart, Karlsruhe, Cologne and Dusseldorf, the cities selected for the research.

To investigate cities' entrepreneurial strategies in depth and within their real-world context, we adopted a multiple-case study methodology described by Lin (2018) preceded by a systematic literature review based on a bibliometric analysis of the existing literature to identify the main characteristics of KSSE theory in the urban context (Armitage & Keeble-Allen, 2008). Also, systematic literature reviews were recognized methods for studying evidence-based policies (Pittaway & Cope, 2007).

Multiple-case studies allowed us to perform both an in-depth examination of each case and to identify contingency variables that distinguish each case from the others. We relied on multiple sources of evidence, primarily strategic documents of the selected Polish and German cities and semi-structured interviews with the decision-makers representing municipalities from the analyzed cities in Poland. In addition, we also gathered information

from additional sources as appropriate, e.g., websites and documents related to the event in a triangulating fashion.

First, we analyzed documents describing the strategic intents of cities, such as vision statements, strategic plans, mission statements, action plans, policies, declarations, etc., which we collectively termed "strategic documents." Next, we developed the diagnostic tool for the strategic management of cities' policies based on the key topics recurring in the literature on entrepreneurship. For each analyzed city, we took into consideration at least two separate strategic documents, e.g., a city's development strategies or plans (we studied 34 strategic documents from 11 Polish cities and 13 strategic documents from German cities).

Choosing an inductive approach through thematic analysis of the content of strategic documents (a data-driven approach) is supported by data gleaned from questionnaires. Such an approach is based on the assumption that not all necessary information is provided in the strategic documents. The objective of the study was to obtain an understanding of a phenomenon and to answer our research question. We made the assumption that the information included in the strategic documents may not provide a comprehensive view of the situation in the cities, as some crucial facts may be omitted. To mitigate the risk, we conducted a complementary on-line survey using CAWI by means of an on-line service (LimeSurvey). We directed our requests to persons occupying managerial positions in the analyzed cities representing city development departments or units. The questions included in the strategic document studies relate to the survey questions and tackled some issues not covered there. We were especially interested in information such as social entrepreneurship activities and actions towards creative and innovative companies, e.g. co-working spaces, which are usually not mentioned in strategic documents.

We developed the questionnaire used in the first stage of our research according to O'Leary's (2014) eight-step planning in textual analysis. The questionnaire took the form of a diagnostic tool. For the semi-structured interviews, we used purposive sampling to select the respondents. According to Babbie and Mouton (2001), a purposive sample is selected on the basis of the knowledge of a population and the purpose of the study. Such samples are selected on the basis of certain features. Therefore, we surveyed a group of respondents perceived to be knowledgeable about entrepreneurship programs for this study. We interviewed 20 respondents from 11 Polish cities comprised of representatives of the cities' development, strategy, or entrepreneurship departments. We divided the questionnaire into the following four sections:

Section I. Enterprise policy and strategy as a key part of urban economic development
Section II. Social entrepreneurship in the city
Section III. Promotion of youth entrepreneurship using public communication
Section IV. Actions towards creative and innovative companies

The questionnaire consisted of 24 questions divided into four sections and employed multi-nominal scales consisting of criteria including 0 = no/disagree, 1 = yes/partly, 2 – yes and don't know. The extension of each answer on the scale varied depending on the specific content of the question. The questions in the questionnaire focused on the content of the documents, e.g. "Do the strategic documents of your city refer to such notions as 'enterprise policy,' 'enterprise strategy' or other terms referring to urban entrepreneurial strategy?" The primary methodology of this study was survey research, with data collected first by sending a link to the on-line survey. In total, we contacted 54 decision-makers from Poland. We received 20 completed and usable questionnaires.

The survey had its limitations. First, all the visual, non-verbal clues that can facilitate contextualizing the interviewee as in a face-to-face interview might be lost. Second, while the questionnaire for German participants was introduced in English, this might have had an impact on the research quality (it was possible to misunderstand or inaccurately understand some questions).

ANALYSIS AND DISCUSSION OF THE RESULTS

The main goal of this paper was to enrich our understanding of urban policies in Poland that support knowledge spillovers and entrepreneurship and discover the possible relationship between factors determining entrepreneurship in Polish and German cities. Bibliometric analysis of literature data allowed us to determine key factors influencing knowledge-based regional systems of entrepreneurship (Table 1) that were the subject of analysis in cities' strategic documents and semi-structural interviews.

The research question asks how urban policies in Poland support knowledge spillovers and entrepreneurship in comparison to German cities' policies. We also investigated how do Polish and German cities support entrepreneurship in different forms (including social entrepreneurship, youth entrepreneurship, creative industries). All key factors influencing knowledge-based regional systems of entrepreneurship indicated in Table 1 were included in the questionnaire. However, in Table 2, we highlight the main findings along with the key characteristics of the policies to promote

entrepreneurship in Polish and German cities. We found these characteristics to be well aligned and similar. However, there are also distinctions across the factors and between the cases. With the strength of the Lander having a significant influence on Germany's federal structure, the political structure of Germany plays a greater role in supporting such policies than the Polish *wojewodztwo* in Poland's unitary system. In all Polish cities, we saw that entrepreneurship was an important component of economic development strategy, and the local "knowledge filter" serves as a catalyst for the transformation of knowledge into economic growth (Marelba, 2010). Currently, in-force policy documents place entrepreneurship as a central tenet of regional economic development intervention that is in line with urban policies of more developed countries like the UK (Huggins & Williams, 2011). For example, in Poznań, entrepreneurship is one of the city's five priorities, while Wrocław introduced a separate document dedicated to its entrepreneurship development strategy "Entrepreneurial Wrocław 2030." The interviewees also confirmed their joined-up enterprise strategies, i.e. integrated policies across different departments and units.

Across Polish cities, regional start-up strategy involves formulating the key direct mode of entrepreneurship. One respondent claimed: "We do not use the term 'start-ups' in Warsaw 2030 Strategy; however, we understand inventors and innovators as start-ups". Many of the start-up target actions described in strategies relate to promoting initiatives that stimulate entrepreneurship, like the acceleration programs Startup HUB Warsaw, Startup Weekend Kraków, as well as Startup Weekend Kids, or Poznań Start-up Forum. However, for Berlin and Brandenburg, start-up companies are a crucial part of a regional innovation system that is clearly identified in the Joint Innovation Strategy of the States of Berlin and Brandenburg (innoBB, 2025). Given the funding options, access to excellence in higher education and research institutes in the region and to the relevant infrastructure, also by promoting start-ups, the German capital is the leading start-up city in Europe. As stated in innoBB 2025, "Berlin offers excellent opportunities for implementing ideas and entrepreneurial vision. It also provides entrepreneurs with superb conditions in which to launch new start-ups (…)." Also, the city of Munich developed the Entrepreneurship Strategy Munich and, together with the Chamber of Commerce and Industry for Munich and Upper Bavaria and four entrepreneurship centers of the Munich universities, undertook numerous activities like Munich Business Startup Office, Munich Crowdfunding Support Program, and Cultural and Creative Industries Teams. As a result, most of the startups in Munich view their location as excellent or good (Deutscher Startup Monitor, 2019). Another German example is in Karlsruhe, where the regional government also supports the start-up movement.

Table 2. Key characteristics of the policies to promote entrepreneurship – a cross-country comparison of Poland and Germany

Key characteristics	German cities	Polish cities
"Enterprise policy," "enterprise strategy" or other terms referring to urban entrepreneurial strategy in the strategic documents of the cities	Urban entrepreneurship is directly related to cities' strategies and to the national strategic documents.	Entrepreneurship is an important factor in cities' strategies. Cities' strategic documents are aligned with other programmes promoting entrepreneurship policy. Urban entrepreneurship policy is aligned to a large extent with the strategic documents at the national level.
The place of business start-ups policies in the urban entrepreneurship policy	Promotion of start-ups and their unique role in urban entrepreneurship policies ensure German cities a leading position in the European cities' rankings of innovation ecosystems.	In most cases, startups are important in urban entrepreneurship policies. Some cities introduced supporting systems for startups based on cooperation with the local business community.
The current status of cluster policy as part of entrepreneurship policy development	The long history of German cluster policy has led to significantly exploiting regional potential to foster regional competitiveness.	Cluster strategy is implemented in most cities, but there is room for improvement. Polish cities show strong reliance on EU funding.
"Social entrepreneurship" in the strategic documents of the city	Social entrepreneurship is becoming an increasingly important concept, and there are examples of cities' actions designed specifically for young social enterprises.	In most cities, a relatively small number of selected strategic documents refer to social entrepreneurship. For some respondents, the concept of social entrepreneurship was unclear due to a large number of definitions. However, there are examples of organizations or enterprises in the cities that tackle the social change and/or address social needs.
Training activities for teachers and school leaders aimed at developing entrepreneurship and creativity among young inhabitants supported by the city	Training activities are undertaken as a part of the long-term cities' policies, often in cooperation with the largest companies in the region.	Cities have taken steps systematically within the framework of long-term policies in this area to support training activities.
The role of other educational institutions, including universities, in supporting entrepreneurial activities of young people in cooperation with the city hall	In all cities, institutes of higher education have anchored entrepreneurship and became an inseparable part of the local innovation ecosystem.	Support for entrepreneurial activities of young people is approached in a number of ways, ranging from workshops, studies and training to cooperation with business incubators, business accelerators and technology parks.
Policies and actions aimed at promoting entrepreneurial attitudes among the citizens of the cities implemented by the municipal authorities	Promotion of entrepreneurial attitudes among the cities' citizens is directly indicated in strategic documents.	Cities are increasingly trying to promote entrepreneurial attitudes among the citizens through various programs financed from, e.g., EU funds. Cities also focus support on providing co-working spaces, which offer opportunities for business development and create the possibilities for innovative start-ups.
Tax relief or other financial incentives for young entrepreneurs; tax exemptions for new start-ups	There are some initiatives but to a very limited extent.	Local taxes and other financial incentives to some extent address the needs of local entrepreneurs but do not fully meet them.
Research conducted by the City Hall regarding the needs of entrepreneurs towards the city's infrastructure	This kind of research is conducted systematically.	There have been only sporadic initiatives in this area.
Incentives and preferences for companies run by young people by means of public procurement for the city's budget	There are no such initiatives.	There is no such support.

The existing literature on KSSE significantly refers to regional cluster formation, which this study aims to provide in the context of CEE countries. As entrepreneurship can be supported by mechanisms operating in clusters (Breshnahan & Gambardella, 2004), such mechanisms have received a great deal of interest within public policies. The components of these cluster policies are particularly concentrated on cooperation and collaboration across related industries, and it was empirically proved these the establishment of clusters influences the economic growth of regions. Lehmann and Menter (2018), who conducted their research in German cities, confirmed the effect of an active public cluster policy on GDP growth. The historically rooted German cluster policy has led the German government to exploit regional potential significantly to foster regional competitiveness (Audretsch & Lehmann, 2015). For example, the Joint Innovation Strategy of the States of Berlin and Brandenburg from 2011 established five main innovation clusters in Berlin: (i) Energy Technology; (ii) Healthcare Industries; (iii) ICT, Media and Creative Industries; (iv) Optics and Photonics; and (v) Transport, Mobility and Logistics. Today, every third company in Berlin is active in these clusters, and together they generate almost 40% of the total revenue of the region's economy (Innovative Capital Region 2020). According to Ni and Qiongjie (2014), the city of Munich was not very supportive of the cluster, but that attitudes changed in the city's new strategy, with some initiatives like the Munich Technology Centre. According to the Polish regional policy-makers interviewed, cluster strategies in the framework of key cities' industries are embedded in most urban policies. Understanding the importance of cluster strategy, a majority of the respondents believed that their cities should place greater emphasis on this policy.

Social and cultural entrepreneurship has gained recognition as a mainstream activity, especially in Europe, and as a global trend to promote more inclusive development. In the European context, the institutionalization of social enterprises has often been related to the intervention of public authorities, e.g. legal framework, public subsidies, etc. (Defourny & Nysses, 2010). Social entrepreneurship, whether in the form of social enterprises or in the form of work to provide some type of collective goods and services, is well recognized in Germany. According to the 2019 German Startup Monitor (DSM, 2019), 36% of German startups consider themselves to be active in the Green Economy and/or in the area of social entrepreneurship. In Poland, interviewees recognized some forms reflecting the corporate social responsibility (CSR) approach, even though the term "social entrepreneurship" is not used as such in legislation. One respondent admitted: "What do you understand by this term? We emphasize corporate social responsibility, but I don't know that it's the same." However,

the understanding of social and cultural entrepreneurship requires taking into account local specifics that shape these initiatives in different ways. One city official admitted: "In the City Development Strategy of Gdynia 2030 we refer to volunteering support, self-help initiatives, informal groups, NGOs and social economy." Most of the respondents also confirmed the existence of enterprises that deal with social problems or respond to social needs.

Previous intensive studies suggest that entrepreneurial activity will tend to be greater where investment in new knowledge is relatively high (Acs et al., 2009), especially in the context of universities (Audretsch & Lehmann, 2005). Our research shows that current polices supporting entrepreneurship education and infrastructure (science and technology parks, business incubators, co-working spaces, etc.) are well developed in all of the biggest Polish cities. One of the city council representatives admitted: "It is hard to imagine Lublin's development without an academic dimension because every fifth resident is a student. The city actively supports the transfer of knowledge, moderates contacts with business, and sets up science-business-local clusters."

Recently, Bruzzi et al. (2020) have developed an innovative multidimensional index, Knowledge-Based City Developing Entrepreneurship (KBCDE), based on 28 indicators grouped into four perspectives: (i) a social and talent-cultural perspective (STC); (ii) an economy and context economy perspective (ECE); (iii) an environmental and infrastructure perspective (ENI); and (iv) an urban innovation system perspective (UIS). The authors examined all capital cities in the EU28 and 32 other cities in the EU that are important hubs, including Munich, Kraków, Dresden, Stuttgart, Cologne, Dusseldorf, and Karlsruhe. On the basis of the dimensions identified and taking into account cities chosen to our studies, Berlin ranked as the best performer in KBCDE, followed by Munich, Cologne, Karlsruhe, Warsaw, Stuttgart, Dusseldorf, Kraków, and Dresden. However, in some components, like UIS reflecting the innovative effort of the urban innovation system, in terms of institutions and resources, Berlin was followed by Munich, Cologne, and Kraków.

The policies of many UE countries provide a set of economic initiatives like tax exemptions, deductions or tax refunds for young innovative companies (Appelt et al., 2016). Some Polish cities have also delineated their respective policies. Surprisingly, according to the OECD Economic Survey Germany: 2018 (OECD, 2018), German cities do not provide any tax benefits for business R&D activities. Yet, many initiatives to attract private capital are in both countries a part in the urban policy.

In fact, cities are in competition with each other and use different strategy planning and dedicated policies to attract capital and talent. However, the main challenge for policy-makers is that current entrepreneurial policies should

be more effective and oriented towards reinforcing the social perception of entrepreneurship, especially among young inhabitants. We also agree with Guerrero and Urbano (2014), who conducted their research in Spain, that the local government in Poland should focus on collecting quality data from universities annually to evaluate universities' contribution and efficiency. One interviewee admitted: "Activities in the city are dispersed; we have no knowledge about actions in this field."

CONCLUSION

This paper provides an overview of the major findings and current gaps in what is known so far about cities' policies to promote entrepreneurship in two large neighboring Central European countries. It seems that the previously mentioned Schumpeterian (Austrian) tradition, which emphasizes the role of the entrepreneur and innovations in the process of economic development, has the greatest impact on strategy implementation in both Polish and German cities. Neither Polish cities nor German cities have implemented any specific measures to enhance the entrepreneurial culture of residents (Audretsch et al., 2007). Despite the large gap in economic development between Poland and Germany, as measured by GDP per capita, Polish cities do not seem to lag behind their German counterparts as far as legal and institutional infrastructures are concerned.

Overall, Polish and German cities follow many of the same approaches in urban policies that support knowledge spillover. Both groups consider entrepreneurship as an important component of economics development strategy. The effect of knowledge spillover on units located in Poland may be slower and less intensive compared with the dissemination of knowledge among neighboring high-tech firms in industrial clusters. On the other hand, as opposed to knowledge sharing among businesses, cities usually do not rely on trade secrets to protect their intellectual property, and there are no major legal restrictions to the sharing of public knowledge and good practices. Once identified and properly codified and/or conceptualized, good practices may be easily shared between cities. Language may be a barrier to knowledge spillover between Poland and Germany, but municipal employees' language skills usually are sufficient to communicate freely. It is worth mentioning that many of the Polish cities in the western part of Poland (e.g., Poznań, Wrocław, Szczecin, and Gdańsk) were part of Germany (Prussia) until 1919 (e.g., Poznań) or 1945 (e.g., Szczecin) and consequently share many similarities in urban design with German cities. Thus, many of the challenges faced by German cities at their earlier stages of development are the same as those faced

by Polish cities today. Therefore, Poland's learning process and diffusion of innovations may be accelerated and optimized (so-called laggard's rent).

Polish cities depend on EU funding to a much greater extent than German cities in implementing their economic development strategies. While tax relief and financial incentives in Polish cities address local entrepreneurs' needs to a certain extent (while not fully meeting them), such tax relief and financial incentives play a much larger role in Poland than in Germany.

Policies to promote industrial clusters are important in both groups of cities, but German cluster policy is more established and started earlier. A majority of the Polish respondents believe that their cities should place more emphasis on cluster development. Therefore, we propose that policy recommendations should be centered on the support of such initiatives. Also, local governments in Poland should focus on collecting quality data from universities annually to evaluate universities' contribution and efficiency. Still, the main challenge for policy-makers is that current entrepreneurial polices should be more effective and oriented towards reinforcing the social perception of entrepreneurship, especially among young inhabitants.

Further research needs to focus on more specific aspects of youth policies, for example, how those policies are aligned with the needs of the local economies and how they support social capital development in the cities. Youth entrepreneurship should be viewed as a broader social attitude, not just an economic activity. The engagement of the youth in entrepreneurial activities should not be measured strictly by economic indicators. The experience and social capital gained during entrepreneurial activities provide an added value to the city, regardless of its economic outcomes. Such aspects of youth entrepreneurship do not seem to receive appropriate attention among researchers in the field.

One limitation in the research process worth mentioning was the lack of visual, non-verbal clues, which could facilitate contextualizing during the interview. As the questionnaire for the German participants was conducted in English, this might have had an impact on the research quality (the questions could have been misunderstood or misinterpreted by the German respondents). The differences in city development between Poland and Germany may not allow for generalizations. As stated earlier, Polish cities rely heavily on non-private, mainly EU funding. Innovation requires the commitment of resources, which in turn need to be financed. Therefore, the decision to invest in innovation depends on two critical factors, namely the initial incentive to allocate resources for innovation and the capacity to raise the necessary financial means (Peneder, 2008). Due to differences in economic development (Polish GDP per capita is roughly three times lower than in Germany), Polish cities may have different priorities regarding public

spending, and youth polices could be underfunded in Poland as a share of cities' total spending.

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Abstrakt

Cel: *Polityka promowania przedsiębiorczości odgrywa kluczową rolę w strategicznym zarządzaniu miastami. Stąd też, pytanie badawcze postawione w artykule dotyczy tego, czym polityka miejska w Polsce wspierająca rozprzestrzenianie się wiedzy i przedsiębiorczość różni się od polityk miast niemieckich. Zbadano również, w jaki sposób miasta polskie i niemieckie wspierają przedsiębiorczość w różnych formach (m.in. przedsiębiorczość społeczną, przedsiębiorczość młodzieży, przemysły kreatywne).* ***Metodyka****: W celu udzielenia odpowiedzi na tak postawione pytanie badawcze, wykorzystano metodologię wielokrotnego studium przypadku, opierając się na różnych danych źródłowych, przede wszystkim na dokumentach strategicznych największych polskich miast w kontekście porównań międzynarodowych z wybranymi dużymi miastami w Niemczech, a także częściowo ustrukturyzowane wywiady z decydentami reprezentującymi analizowane miasta w Polsce. Wykorzystując teorię przedsiębiorczości w zakresie rozprzestrzeniania się wiedzy, odniesiono się do podejścia, w którym rozprzestrzenianie się wiedzy stanowi strategiczną dźwignię, dzięki której przedsię-*

biorstwa rozpowszechniają innowacje, co przekłada się na rozwój przedsiębiorczości w regionie. ***Wyniki / badawcze i praktyczne implikacje:*** *Przeprowadzone badania pozwoliły na wzbogacenie istniejącej wiedzy w zakresie polityk miejskich w Polsce wspierających rozprzestrzenianie się wiedzy i przedsiębiorczość. Jednocześnie, dały możliwość rozpoznania związków między czynnikami determinującymi przedsiębiorczość w polskich i niemieckich miastach. We wszystkich miastach Polski i Niemiec przedsiębiorczość była ważnym elementem strategii rozwoju gospodarczego. Polskie miasta jednak, w znacznie większym stopniu niż niemieckie, wykorzystują przy jej realizacji fundusze unijne. Strategie klastrowe w ramach branż kluczowych miast były osadzone w większości polityk miejskich, chociaż większość polskich respondentów uważała, że ich miasta powinny położyć na nie większy nacisk. Głównym wyzwaniem stojącym przed decydentami będzie prowadzenie bardziej skutecznej polityki przedsiębiorczości ukierunkowanej na wzmocnienie jej społecznego postrzegania, zwłaszcza wśród młodych mieszkańców.* ***Oryginalność / wartość:*** *Badania umożliwiły zabranie wystarczających danych, aby odpowiedzieć na pytania badawcze, jednakże sugerowane jest przeprowadzenie dalszych pogłębionych badań ilościowych na reprezentatywnej próbie potwierdzających otrzymane wyniki. Ponadto, podczas badań odnotowano pewne ograniczenia wynikające z utraty osobistego kontaktu z respondentami czy zróżnicowanego poziomu rozwoju gospodarczego miast polskich i niemieckich. Jednocześnie, badania wskazały możliwości rozprzestrzeniania się wiedzy i wymiany dobrych praktyk między dwoma krajami.*

Słowa kluczowe: *strategiczne zarządzanie miastami, teoria przedsiębiorczości w zakresie rozprzestrzeniania się wiedzy, przedsiębiorczość społeczna i w sektorze kultury.*

Conflicts of interest

The authors declare no conflict of interest.

Citation

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