
Economic Development through Clusters-Understanding the Idea of Cooperation in the Opinion of Students: A Case Study

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Abstract:

Purpose: The purpose of the paper is to check how students understand cooperation, which is very important in the contemporary market functioning.

Design/Methodology/Approach: The paper presents a review of literature devoted to the concept of cooperation, co-opetition, and networking and a review of literature and research demonstrating the role of universities in economic development. To find out how students understand the concept of cooperation, co-opetition, and networking, a survey was conducted among university students in selected European regions. This paper uses the example of the University of Applied Sciences case study in Nysa, in Opolskie Voivodeship in Poland.

Findings: The earlier conducted research among cluster managers demonstrates that one of the main reasons for the collapse of clusters is mental barriers. In many cases, members of cluster initiatives do not understand cooperation and co-opetition when joining them. They expect additional benefits, but without their own engagement and acquiring the skill of cooperation. Depopulation and migration processes in some regions are a big problem for the regional market. In subject literature, it is stressed that strong clusters can support regional development, which is particularly important in the case of small and weak regions in terms of endogenous factors.

Practical Implications: Each year, university graduates enter the labor market, and in the future, some of them will be members of various business networks, including cluster networks. Through a survey study, it attempted to verify how students understand the concept of cooperation and clustering.

Originality/value: This article illustrates how the learning process can be focused on finding solutions about strengthening knowledge and competencies for cooperation.

Keywords: Economic development, networking, co-operation, cluster, university.

JEL classification: R11, J11, R23.

Paper Type: Research study.

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1. Introduction

The earlier conducted research among cluster managers demonstrates that one of the main reasons for the collapse of clusters is mental barriers. In many cases, members of cluster initiatives do not understand cooperation and co-opetition when joining them. They expect additional benefits, but without their own engagement and acquiring the skill of cooperation. They are also afraid of getting engaged, leakage of knowledge and information gained from the market, and cooperation with their partners and competitors. The entrepreneurs' knowledge concerning the necessity of cooperation is increasing but does not always translate into a commitment to developing cluster structures. In subject literature, it is stressed that strong clusters can support regional development, which is particularly important in the case of small and weak regions in terms of endogenous factors. The paper's main aim is to check how students understand the idea of cooperation, which is very important in the contemporary market functioning.

The paper presents a review of Polish and foreign literature devoted to the concept of cooperation, co-opetition, and networking and a review of literature and research demonstrating the role of universities in economic development. To find out how students understand the concept of cooperation, co-opetition, and networking, empirical research was conducted among university students in selected European regions. This paper uses the example of the University of Applied Sciences case study in Nysa, in Opolskie Voivodeship in Poland. It is assumed that the role of universities in creating pro-entrepreneurial and pro-cooperative attitudes is important.

The paper is divided into three primary parts. The first part includes an analysis of the phenomenon of cooperation and the clusters and their economic growth role. The second part specifies the role of universities and education and their impact on economic growth. The third part is explorative and presents a pilot study's partial results on a sample of 156 students of the University of Applied Sciences in Nysa, in Opolskie Voivodeship in Poland.

2. Cooperation and Clusters and it's Role in the Economy

Cooperation is the ability to create relations and collaboration, execute tasks as a team, solve common problems, and achieve mutual goals. Cooperation is a critical condition required for effective functioning on the market. In subject literature, it is possible to find many types of cooperation. Among the benefits of cooperation, it is mentioned that relationships and contacts between entities eliminate limitations in knowledge access, allow the use of good and reliable solutions, which in turn contributes to the generation of new ideas and improves the entities' global competitiveness (Szewczuk-Stępień and Klemens, 2019).

The main motivators for cooperation are the economic environment's impact,

expansion of share, increase in sales, meeting customer needs, gathering new ideas and knowledge, and financial needs (Kohnová, Papula, 2019; Kubiciel-Lodzińska, 2018). Regional policy based on strong co-operative systems is conducive to improving citizens' quality of life, supports entrepreneurship, and strengthens the region's reputation. The better economic growth of the region facilitates the creation of regional networks of relationships and creating partnerships between organizations easier. On the other hand, the lower the growth rate, the weaker the relationships between organizations. Such relationships are often characterized by a lack of trust or hostility (Górzyński, 2006).

The global economy imposes the need to function in various types of networks. In subject literature, Castells is considered the precursor of contemporary network connections (Castells, 2007). Business cooperation networks become the core of an innovation system by providing good conditions for creating innovation (Herliana, 2015).

A cooperation network can be understood as a specific form of relations between economic players, based on co-dependencies, cooperation, and trust. According to Johnson and Johnson, trust as a precondition for any cooperation is developed through the processes of being ready to take risks for the others and assuming openness, sharing, acceptance, support, and intention to cooperate (Johnson and Johnson 2006; Cinčera *et al.*, 2019). Networks have been defined as "sets of formal and informal social relationships that shape collaborative action" between (heterogeneous) actors and "that transcend organizational structures and boundaries" (Dredge, 2006).

Nowadays, it is impossible to function outside of a relation network. Cooperation presupposes the establishment of formal or informal networks. The process of building an effective cooperation network requires the active engagement of its members, which is why understanding the importance of this phenomenon by public decision-makers is so important. The indication of the role of cooperation in the strategic documents suggests that public decision-makers are aware of the role and importance of creating a positive environment for developing this phenomenon and make all possible efforts to create favorable co-operative activity conditions for establishing relations and creating values impossible to achieve in case of isolated entity activities (Szewczuk-Stępień and Klemens, 2019). The role of networks between, among others, firms and other firms, universities, institutional environments, research organizations is essential. Without a doubt, as regards firms' collaboration with others, an essential role is played by universities in contributing to knowledge flow (Zygmunt, 2019).

A characteristic cooperation network form is a cluster that is characterized by spatial concentration and strong co-operative relations. Clusters are a phenomenon formed mainly by the market; their creation or development can also be stimulated by a suitable policy supporting such structures (Klemens, 2018). It is believed that the

cluster concept was first introduced to the wider opinion by American economist M.E. Porter. His known definition is: "Clusters are geographically close groups of interconnected companies and associated institutions in a particular field, linked by common technologies and skills. They normally exist within a geographic area where ease of communication, logistics, and personal interaction is possible." (Porter, 2000). It is crucial to understand that relationships, not memberships, define clusters.

A well-functioning network generates a large number of benefits for all group of its members, e.g., increase in mutual trust, development of social capital, moderation of social and economic tensions, legal and organizational assistance, knowledge and information transfer (Klemens, 2015; 2017) what is important to understand, that all actors of the cluster can profit from a various list of benefits. It depends mainly on their involvement in clusters functioning, their attitude, and expectations.

Cluster initiatives help regions govern their economic development and recruiting efforts. They encourage communities to refocus their efforts on existing industries. Strong domestic cluster initiatives could help the regions attract foreign investments (Shehu, Sejfičaj, and Memaj, 2019). The existence of clusters can also result in growth barriers for the region and the structure's members. Cooperation brings many benefits, e.g., the potential of creating innovations or new ideas and knowledge, but the organization must first think about the potential compensates for the effort that must be taken for internal changes (Kohnová, Papula, 2019).

When analyzing the cluster phenomenon, it is necessary to take a look at cooperation. Bengtsson and Kock define co-opetition as a process consisting of a simultaneous clash of two opposite streams of relations: competition and cooperation (2000), in which the parties are competing with each other despite the cooperation (Lado *et al.*, 1997). Co-opetition is specific for a cluster-type network because, on the one hand, the cluster members cooperate to achieve common benefits, but on the other, they compete for the customer, suppliers, etc., in the case of activities which are not covered by the cluster's activity. It is a natural phenomenon because the primary purpose of an enterprise is to achieve profit and grow. It will naturally "defend" some elements that it established and guarantee its profit and position in the market. However, the longer their relations are, the stronger their inclinations towards cooperation and the better the advantages (Cygler, 2013).

3. The Role of the Universities and Education in Economic Development

Currently, knowledge is mainly grasped as competency because the educational process's primary purpose is for the student to acquire a broad skill of functioning in various social contexts, and a competent individual can function efficiently (Kobylarek, 2009; Kochanowski, 2007). A student's competencies are shaped both in the educational process and during additional activities, which can be performed

voluntarily during the studies. These concerns, among others, projects executed, for example, during classes or as supplementation of formal education, e.g., as part of students' clubs. It is also possible to participate in virtual teamwork in which a given project is executed at various universities in the world, which internationalizes the student and builds his or her cross-cultural competencies (Swartz, Barbosa, and Crawford, 2019; Barbosa, Santos, and Prado-Meza, 2020). Another opportunity for improving the students' social competencies and skills is the collaborative writing of scientific papers, among others, in the international environment or engaging in science club activity. In the didactic process, students appreciate the teacher-student relationship because they expect using cross-sectional knowledge and skills. It is a different approach than the parametric evaluation applied for universities, in which the scientific accomplishments and research work's evaluation is key, while titles and publications do not always guarantee good didactic skills or practical experience (Adamska and Dymek, 2018).

Aside from human capital education, perceived as a university's traditional function, whereas its functions' catalog is expanding, which is a dynamic process (Rokita-Poskart, 2015). The specification of a university's role as an institution focusing on social life and creating space for "master-student" relationship meetings became the basis for signing the Bologna declaration in 1988. Its assumed effect was a common higher education area (Krajewski, 2004), one assumed benefit of the equivalence of acquired competencies and diplomas.

The global financial crisis from 2008 coerced the need to redefine the methods for achieving permanent economic revival and growth. The Leuven announcement from 2009 stated that the European higher education system would introduce innovations and integrate education and research. The announcement also specified the priorities for higher education in the coming decade, which include, among other, the following: equal access to graduation opportunities; life-long education; the need to equip students with advanced knowledge; skills and competencies for the entire career; student-focused education-related among others, to creating high-quality flexible education paths that are better adapted to needs and improving the didactic quality of study programs; international openness; student and staff mobility (Bologna Process, 2020; 2009). These elements are currently an integral part of the study programs created at the Polish state universities. In some aspects, they are also subject to evaluation by institutions accrediting fields of study, in Poland, it is the Polish Accreditation Committee.

Quality assurance (QA) systems have been evolving across Europe for more than twenty years. Taking changes in quality assurance into consideration, the perception of academic work changed whereas previously, it was seen as professional work characterized by trust and autonomy, it is now more controlled and structured, with rigid management work procedures (Pinheiro, 2017).

However, particularly European countries can develop their program contents in a

specific framework, indicating the desired teaching effects' competency structures. Achieving the assumed education/learning effects provides the conditions for the equivalence of study programs with varying subject sets and program contents at particular universities and countries, acquiring an equivalent diploma (Klemens and Kucińska-Landwójtowicz, 2019).

It is assumed that the current unfavorable demographic (Heffner, Klemens, and Solga, 2019) and economic situation allow young people to have a definitely broader selection of educational (students' market) and career (employees' market) opportunities. The mass education paradigm is gradually departed towards educating smaller groups of students but based on the high quality.

Universities must also provide knowledge and skills geared to the needs of the labor market. In other words, graduates' qualifications must meet the labor market (European Commission, 2007). From that point of view, the creation of opportunities for students to interact with companies can be seen to contribute to the development of those competencies. Such interaction can be promoted through study visits to industries, seminars from professionals, internships, direct contact between students and professionals, or projects developed by students for solving real industrial/business problems (Lima *et al.*, 2018).

By co-operating with the social and economic environment, universities can develop an education program that suits the labor market needs. The current market circumstances (rising number of R&D institutions, increased demand for knowledge services reported by economic entities, competition in the educational services market) require university managers to monitor the changes taking place in the environment and collect information that enables adapting to them. Universities' competencies should comply with the demand declared by the labor market (Adamska and Dymek, 2018). It is a form practiced quite often, external stakeholder participation in providing opinions on study programs.

However, such a co-operation can create different expectations for partners from the higher education and social and economic environment areas. Creating an adequate study program is a complex process, and its development and approval can take about a year. It is then necessary to implement the program (firstly recruitment, which can be treated as verification of the education program idea), execute it, and, after two years at the earliest (in the case of II degree studies), results can be expected. After that time, we can expect feedback from the graduates, and after several months, from the labor market (Klemens and Kucińska-Landwójtowicz, 2019). In most cases, enterprises expect effects much sooner. However, institutions oriented to long-term development establish co-operation with universities and are prepared for effects postponed in time, but with the assumption that the education process will consider their needs.

It is well known that entrepreneurship is an important factor in developing an

economy (Audia, Locke, and Smith, 2000). Hindle and Rushworth (2002) established that entrepreneurship is a driver of economic growth and national prosperity. Therefore, entrepreneurship or the creation of entrepreneurial attitudes became an appealing direction in the universities' educational process. By shaping entrepreneurial attitudes, graduates can find work or even create it more easily (Li and Wu, 2019). Start-up companies can be one of the tools for creating entrepreneurial attitudes. Start-up companies are competent in creating new ideas and knowledge (Bajzikova *et al.*, 2014). It is well recognized that start-ups' survival in a transition economy may be determined by these firms' human capital and R&D activity (Zygmunt, 2018).

Higher education institutions are presented nowadays as essential in creating the sustainable development of regions and cities by creating intellectual potential and providing valuable backup for innovation processes, which shape the local economy based on knowledge. Also, the role of students in regions economies is crucial. Students can be treated as an important element of the enterprise's functioning because businesses choose a location with access to qualified labor resources. Some students and graduates establish their own companies. It is worth underlining that students create a greater consumer demand due to their presence in an academic center (including accommodation) and their consumer spending (Rokita-Poskart and Mach, 2019; Rokita-Poskart, 2017).

4. Research Methodology and Results

In the 2017/2018 academic year, a pilot study was conducted among the University of Applied Science students in Nysa in Opolskie Voivodeship, Poland, to acquire an answer to questions concerning the students' knowledge and approach to co-operation and clusters.

The study featured the participation of 156 students (94 women and 62 men) from different fields of studies on bachelor's degree (including dietetics, architecture, internal security, finances and accounting, English, nursing, informatics, jazz and stage music, artistic education) (Table 1).

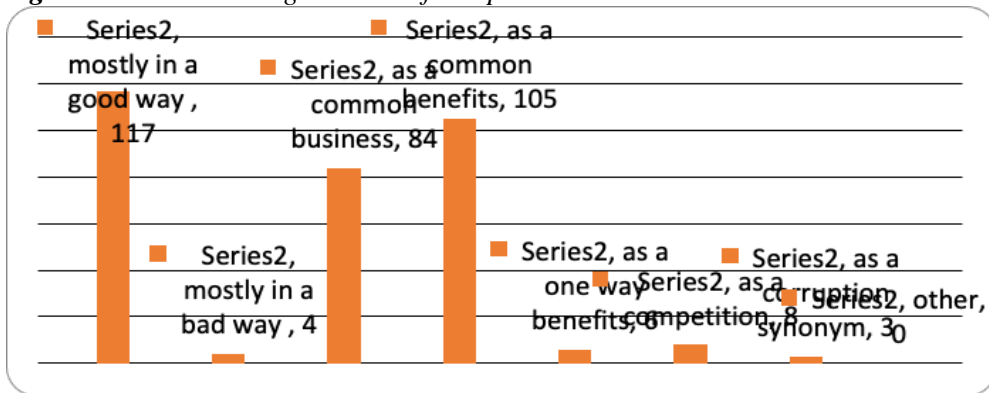
Table 1. *Study Metrics - Statistical Framework*

| Year | Female Studens | Share% | Male Studens | Share% | Stationary Students | Share in % | Part-time Students | Share in % |
|-------|----------------|--------|--------------|--------|---------------------|------------|--------------------|------------|
| III | 86 | 55% | 48 | 31% | 123 | 79% | 11 | 7% |
| IV | 8 | 5% | 14 | 9% | 18 | 11% | 4 | 3% |
| TOTAL | 94 | 60% | 62 | 40% | 141 | 90% | 15 | 10% |

Source: *Own Elaboration based on Research.*

It was used quota-random sampling-based on the share of gender and full-time and part-time students according to central statistical office data (general number of students in Nyski Poviát in the year 2017, 2010 and 2018: 1881). The survey questions varied some were open, and others were multiple-choice questions. The students were asked the question how do you understand the idea of cooperation?

Figure 1. Understanding the Idea of Cooperation



Source: See, Table 1.

The answer to the above question could include a maximum of three points. The vast majority of answers indicated a positive understanding of the phenomenon as common business or common benefits. In general, it is possible to state that the students appreciate co-operation in various aspects of life, whether it is social or student life, or in business. They see that it plays a vital role in business. Interestingly, they perceive co-operation the same way in terms of social life. In terms of student life, it is important, but to a lesser degree. There were nearly no persons who deemed co-operation as meaningless (Table 2).

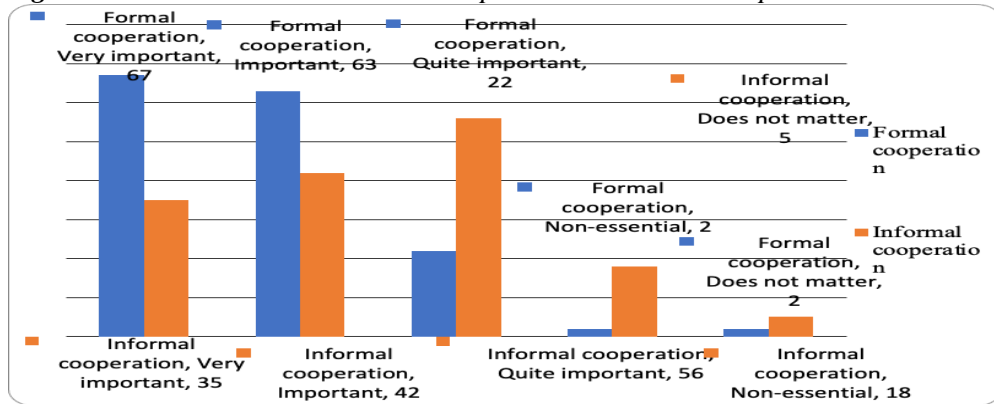
Table 2. Understanding the Idea of Cooperation in Different Life Spheres

| Cooperation in: | Very Important | Important | Quite Important | Non-Essential | Does not matter |
|-----------------|----------------|-----------|-----------------|---------------|-----------------|
| Social Life | 42% | 39% | 13% | 6% | 0% |
| Student's Life | 25% | 44% | 21% | 8% | 2% |
| Business Life | 49% | 37% | 10% | 4% | 0% |

Source: See, Table 1.

It was interesting to study the students' opinions on the importance of co-operation between entrepreneurs. Two forms of co-operation were specified: formal and informal. Here, the students could specify only a single answer for each form of co-operation.

Figure 2. What do You Think about Cooperation Between Entrepreneurs

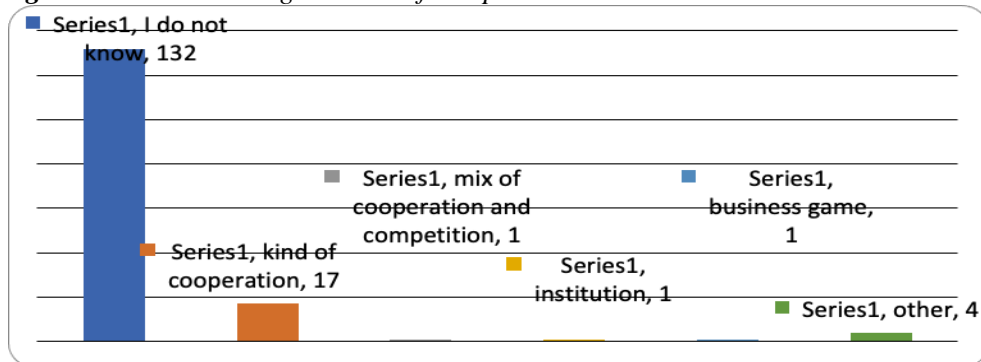


Source: See, Table 1.

The vast majority of students specify in general that co-operation (both formal and informal) between entrepreneurs is important for their correct functioning. However, there are discrepancies when we start to analyze the division into formal and informal co-operation and their importance. 43% of the students taking part in the study (67 students) deemed formal co-operation essential. As for informal co-operation, only 22% (35) deemed it very important. Formal co-operation was deemed important by 40% of students (63 persons), whereas informal - by 27% (42). Only 14% of students (22 persons) deemed formal co-operation as rather important, and 36% of students (56 persons) deemed informal co-operation as rather important. Approximately 2.5% of the persons participating in the study deemed formal co-operation as meaningless, but in the case of informal co-operation, this concerned 15% of the respondents.

Coming back to the idea of co-operation and clusters, it is assumed that it is the informal contacts and networks that play a vital role in their correct functioning (relationship, not membership).

Figure 3. Understanding the Idea of Cooperation



Source: See, Table 1.

The clusters theory points to the phenomenon of competition, which is why the students were asked the following question: How do you understand the expression "coopetition"?

Most students did not encounter this phenomenon and were not able to provide an answer. Only 17 persons (11%) indicated that it is a type of co-operation, and only 1 person stated that it is a combination of co-operation and competition. Therefore, it is possible to state that the phenomenon has not yet been presented to the students as part of the studies.

Table 3. *Student's Openness to Cluster Membership*

| Would You Be Willing to Be a Part of a Cluster? | | |
|---|------------|----------------------|
| Yes: 8% | No: 13% | I don't know: 79% |

Source: See, Table 1.

At the end of the study's effects presentation, it is worth referring to the students' answers to the question of whether you would be willing to become a cluster member (Table 3)? Only 8% of respondents stated that they would be willing to become members of such structures. 13% said no. 79% do not know whether they would want to be members of such a structure.

5. Discussion and Conclusion

The presented study results, which constitute a presentation of only some notions from the study, are a precious source of information concerning the students' opinion on their broad understanding of co-operation and the clusters' concept. The acquired knowledge should incline the academic environment to reflect on the education process in contrast to the education on relational, cooperative attitudes, openness, and entrepreneurship.

Annually, several hundred thousand graduates leave university walls in Poland. In 2018, the number was 327,360. Even though the number of students, and thus of graduates, is declining and this tendency will be ongoing, it is a substantial force in the labor market. Some of them will become members of various types of networks, including business and cluster networks. The question is, how to improve the education process to better prepare students to function in the contemporary market, which constantly evolves. Co-operation within various types of networks is necessary according to the concept of sustainable development. Whether the university can help create the social capital needed to develop entrepreneurship and clusters? Is it possible to conduct the education process to allow the graduates to become flexible in the labor market and open to co-operation and new knowledge, able to be creative and incorporate innovations?

The benefits of various types of networks for regional growth are broadly demonstrated in the subject literature. In order for the structures to be successful and to generate the specified benefits for the economy of the region in which they operate, they must have members who understand the concept of co-operation and its role in the modern world. Many cluster structures broke down because their entrepreneurs were open to additional benefits derived from network membership but were not open to or did not understand the need for own engagement in its growth. It seems that universities are a good place for stimulating pro-entrepreneurial and pro-cooperative attitudes.

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