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**Attitudes of institutions of higher education
in Poland towards regional development processes.
Analysis of their missions and development strategies**

Abstract

This article presents results of the research whose aim was to determine attitudes of higher education institutions (HEIs) in Poland towards cooperation with the socio-economic environment at the regional level. Missions and strategies available on HEIs' websites were examined using one of sociological research methods – content analysis. The collected documents were subjected to a quantitative and qualitative analysis to identify the directions and areas of this cooperation. The study conducted showed a strong connection between the commitment to regional development processes and the type of HEI (public academic HEIs, state higher vocational schools and private HEIs).

Keywords: higher education institution, third mission, content analysis, regional development processes, mission, development strategy.

JEL classification: I23, I28.

Introduction

In an ongoing discussion on the role of education in the process of socio-economic development at different levels of spatial delimitation, higher education institutions (HEIs) are presented as initiators of changes, taking up the challenge arising not only from globalization, but also from local needs. The role of HEI is to contribute to the sustainable development of regional communities, nations and the global community by properly shaping the offer and curricula, and increasing employment opportunities for graduates. This is to be done not only through cooperation with external actors, but also by strengthening the management and

funding of HEIs. HEIs are therefore important institutions of social life and co-creators of economic development [cf.: UNESCO 1998].

The importance of cooperation between HEIs and the environment reflects the view of the so-called third mission, more and more frequently raised in the literature, which complements education and research considered the first and second mission of HEIs. When writing about entrepreneurial universities, B. Clark [1998, 2004] points to the importance of creating bridging organizations linking HEIs with their stakeholders. The third mission, including relations with the business sector, relations with the public sector and relations with non-governmental sector is expressed, among others, in actions such as:

- commercialization of research results,
- participation in regional initiatives aimed at raising economic competitiveness and attractiveness of regions,
- cooperation of HEIs with employees in order to adapt curricula to the requirements of the labor market,
- participation of practitioners from outside HEIs in the process of education and research [Ernst & Young Business Advisory 2009, p. 96].

The essence of the relation of HEIs with economic environment and public authorities is also described by the Triple Helix model of Etzkowitz [Leydesdorff and Etzkowitz 1996, p. 282].

This article is an attempt to engage in the discussion on the role of HEIs in the processes of socio-economic development of the region. The article presents results of research the basic intention of which was to determine the attitude of HEIs in Poland towards the processes of regional development. The research purpose was realized by the author through a diagnosis of directions and areas of HEIs relations with their regional environment which are included in the declarations of their missions and strategies of development. In this study, it was assumed that the action programs of HEIs in the areas of education and research are a functional development of the philosophy and concept of functioning defined at the level of HEIs' mission and strategy. The study has also identified an additional area of analysis, defined as organizational activities and involving gathering and coordinating HEIs' resources: human resources, property, as well as financial and information resources. The presentation of methodology and results of research is preceded by a synthetic discussion of the evolution and conditions of cooperation of HEIs with their environment in Poland.

1. Cooperation of HEIs with stakeholders in Poland – evolution and conditions

In Poland, the nature of the state – HEIs relations may be defined as that of evaluation, which means the legislator's departure from enforcement of guidelines and, at least theoretically, giving HEIs more independence and responsibility for their activities. Direct control of the state over HEIs is replaced by a system of evaluation and financial instruments. Such a scope of independence of HEIs is often referred to in the literature as *conditional autonomy* [Antonowicz 2005].

Thus, grows the importance of external stakeholders – entrepreneurs, public authorities, business-related institutions, professional associations on the goals of HEIs as well as on their conducting education and research work. Such an increase in the impact of various external entities on HEIs in Poland takes place due to at least four interrelated factors:

- the intention of the legislator that the funding system for HEIs should increasingly both enable and force them to raise funds from external entities (due to the ongoing crisis in the Polish public finances and the shaping of the entrepreneurial university model),
- processes of implementation of changes in the higher education system, associated with the accession to the European Higher Education Area (EHEA), in particular within the implementation of the National Qualifications Frameworks (NQF),
- challenges to the education process entailed by the *knowledge based* economy,
- policy of HEIs themselves which see the cooperation with their environment as an opportunity for increasing their market competitiveness.

The impulse to create and regulate the higher education market in Poland was given by *The Law on Higher Education Act* of 1990 [Ustawa z dn. 12 września 1990 r. o szkolnictwie wyższym...] and *The Higher Vocational Schools Act* of 1997 [Ustawa z dn. 26 czerwca 1997 r. o wyższych szkołach zawodowych ...]. In the first of these two acts, the issue of cooperation between HEIs and socio-economic environment was treated initially and marginally, however, one should remember that the legislator's primary goal was different at that time – the release of the higher education market from the state monopoly.

In turn, *The Higher Vocational Schools Act* of 1997, obliged state and private vocational HEIs to perform actions for their environment by promoting technical, technological and economic progress, cooperation with other entities in dissemination of knowledge, cultural, social and economic development as well as defining possibilities of implementation of new solutions and innovations.

In another law regulating the higher education market in Poland – *The Higher Education Act* of 2005 [Ustawa z dn. 27 lipca 2005 r. Prawo o szkolnictwie wyższym...], the legislator also referred to the social functions of HEIs in the context of cooperation with the environment, especially the economic one. It was specified as follows: “The higher education institutions, apart from conducting research and educating students are obliged to cooperate with their economic environment, in particular by selling or free-of-charge hand-over of results of research and development works to the entrepreneurs as well as by promoting the idea of entrepreneurship in academia, in the form of business activity performed within organizationally and financially separated units”.

The amended act *Law on Higher Education* [Ustawa z dn. 18 marca 2011 r. Prawo o szkolnictwie wyższym...], dated March 18, 2011, extended the scope of this cooperation with the social dimension and specifying forms of cooperation. It is worth noting that the so called standards of education – the main regulatory mechanism of education curricula and programs in the Polish higher education system in years 2005-2011 was replaced in 2011 by the NQF, i.e. model descriptions of education outcomes in the two profiles (academic and practical) for eight areas of education. When modifying the education programs, HEIs are obliged to consult the external stakeholders. Reports developed by OECD or the World Bank on the higher education system clearly argue that autonomy – understood as the freedom of the HEI to create the curricula and to decide on the manner of their realization – is a prerequisite for the effective participation of HEI in stimulating economic and social development [Yusuf and Nebeshima 2007, p. 7].

It should also be noted that the relations with the environment are the important criterion for the evaluation of both program and institutional activities of basic organizational units of HEIs by the experts of the Polish Accreditation Commission – the only accreditation institution in Poland making evaluation of the quality of education in all HEIs operating under *The Law on Higher Education Act*. These criteria in particular apply to the process of formulation of the strategy of development of the basic organizational units of the HEI, the process of shaping education programs by these units as well as building and improving the quality management system.

To sum up, during the subsequent years of formation of the higher education system in Poland, the necessity of the conscious and planned shaping of the specified relations with the environment by HEIs has become more and more pronounced. These relations apply to both the processes of drawing on the regional resources as well as the influence of HEIs’ activity on the local and regional development.

2. General framework

If we assume that HEIs plan cooperation with their regional environment in a conscious and responsible way by designing and shaping their teaching, research and organizational activities, such cooperation should be the result of the specific assumptions already defined in documents specifying the adopted philosophy of action, according to the strategic management concept, HEIs' missions and strategies may be considered to be such documents. With the use of the content analysis method, according to methodology triangulation, the author analyzed quantitatively and qualitatively the available strategic documents, the analysis informed by the specified basic research goal as well as by issues arising from this goal. Triangulation of research methods, as emphasized by M. Kostera [2003, p. 97], allows the researcher to achieve a wider context of the studied phenomenon, it ensures a higher quality of research conducted, and decreases the occurrence of measurement errors resulting from the use of only one method.

An examination procedure based on content analysis includes two essential steps:

- determining the linguistic features of the examined text,
- pondering the non-linguistic phenomena on the basis of separate linguistic features (on the basis of the type and frequency of the occurrence of linguistic elements of a specified meaning one ponders the non-linguistic variables).

The link that allows associating variables included in research problems with the language configurations being the indicators of these variables is to develop content categories designed to be the basis for the classification of text units. The construction of the category diagram begins with determining the dimensions of content that are of interest to the researcher. In the final scheme, each category signs a specific category of meanings associated with the given dimension of the content [Mayntz and Hubner 1985, pp. 199-200].

The dimensions of content and analytical categories adopted in the analysis presented in the article are shown in Table 1.

Table 1. Diagram of the dimensions and analytical categories, adopted in research model

Dimensions of content						
Direction of the declared activities for regional development				Area of the declared activities for regional development		
Analytical categories	economic development	social development	cultural-natural development	education activities	research and development activities	organizational activities

The concept of sustainable regional development was the basis for determining the analytical category diagram for the *directions of the declared activities for regional development* dimension. Therefore, the following categories have been singled out: *economic, social, and cultural-natural development*.

For the second analyzed dimension – the *area of declared activities for regional development* – the following analytical criteria have been adapted: *activities in the field of education, research and development activities, and organizational activities*.

3. Methodology and organization of research

In order to obtain the most complete and reliable results, it was decided to conduct a complete research study. Research was conducted in 2013. The data used for research was the list of active public and non-public HEIs supervised by the Minister of Science and Higher Education in Poland (N:386). The analysis of documents was conducted by coding the explicit messages. In order to reduce the risk of subjective classification, the principle of dual coding (the method of competent judges) was adopted.

3.1. Content analysis as a research method

Analysis of the linguistic material allows us to draw conclusions about individual and social non-linguistic phenomena. The language, both spoken and written, is not only an important prerequisite for social action in as much as it involves communication of meanings, but the act of using the language belongs to the category of social behaviors. Through specific messages, we witness certain aspirations, attitudes, judgment of situations, knowledge and adopted assumptions concerning the surrounding world. These aspirations, attitudes, assumptions are co-defined by the social and cultural system in which one functions and that is why they reflect not only characteristics of the authors, but also characteristics of their communities – institutionalized values, standards, socially mediated definitions of situations [Mayntz and Hübner 1985, p. 192].

Content analysis is one of the non-reactive research methods, the ones where the subject of research are things, e.g. documents. This method generally has three applications – description of characteristics of the message, drawing conclusions of the message sender, his/her predecessors or causes of formulation of the message as well as drawing conclusions on the results a given message has on its receivers [Frankfort-Nachmias and Nachmias 2001, p. 344].

Content analysis is most commonly used as a reduction of the text to a much narrower summary or presentation of the meanings contained therein. Some authors restrict the analysis to counting certain words and phrases – it is an element of the so-called explicit coding. A wider analytical scope involves studying the context, the closeness of messages of research interest, and coding the hidden content [cf.: Babbie 2008, p. 364].

Therefore, content analysis is a research technique that objectively and systematically determines and describes the linguistic characteristics of texts in order to determine, on its basis, the non-linguistic characteristics of people and social aggregates. The objectivity of the analysis, understood as intersubjective validity of its results, ensures consistency, and thus research subordinated to the fixed and standardized rules. Standardization of content analysis is ensured by the quantitative analysis, however, at the stage of exploratory and descriptive research a qualitative analysis is also useful [Mayntz and Hübner 1985, p. 193].

3.2. Research material

The data analysed were both mission and strategy documents or only mission documents, when the strategy documents were not available on HEIs' websites. It should be noted that the number of HEIs which defined their mission and strategy may be higher than determined in this study, due to the fact that the author analyzed the messages which were publicly available online. The first stage of the analysis involved identifying the websites of HEIs in order to determine the percentage of universities which publish their missions and strategies on the web. The analysis was conducted separately for each group of HEIs existing within the higher education system in Poland. The results are shown in Table 2.

Table 2. The percentage of HEIs that publish their strategic documents on their websites (N:386)

Total number of HEIs in this category	Percentage of HEIs publishing their mission (%)	Percentage of HEIs publishing their strategy (%)
Public academic higher education institutions		
59	79.6	59.3
State higher vocational schools		
36	55.5	52.7
Private higher education institutions		
291	48.8	10.9

The highest percentage of HEIs publishing their strategic documents on websites is attributed to public academic institutions. In the case of state higher vocational schools, more than half the schools publish their missions and strategies on the web. The lowest percentage of HEIs publishing their strategic documents on websites is observed among private HEIs.

3.3. Specific research purposes

In the course of the analysis undertaken, the explicit importance of the linguistic units was allowed for, and coding of messages aimed at:

- determining the presence of the component of the declared action for the development of a given region or its part in the units (documents) analyzed,

- determining the scope of saturation of the documents with the contents of regional nature by determining the frequency of words and phrases relating to regional development,
- determining the directions of the declared actions for the regional development by the analytical categories adopted,
- determining the area of the declared actions for the regional development by the analytical categories adopted.

3.4. Research assumptions

The presence of commitment to the regional development was identified by the following features present in the documents:

- spatial definitions in the explicit meaning, such as: *region, voivodeship, city, regional, local*, as well as the names of specific regions of Poland (lands) or cities or/and
- expressions – *local/regional government authorities, the closer environment* (due to the presumption of locality).

When qualifying the commitment to the regional development and determining the relations of categories in the *direction of declared actions* dimension, the following linguistic units were taken into account:

- for the “economic development” category: *economy, business, competitiveness, market, enterprise, entrepreneurship, promotion, innovation, employer/s, investments, economical, economic, competitive, enterprising, innovative, market (adj.);*
- for the “social development” category: *society, quality of life, community, civilization, prosperity, system, social development; social, civilizational, humanistic;*
- for the “cultural-natural” development category: *culture, nature, natural environment, heritage, history, natural, cultural, historical.*

When qualifying the commitment to the regional development and determining the relations of the categories in the *area of declared actions* dimension, the following linguistic units were taken into account:

- for the “teaching activities” category: *teaching, teaching activities, education, counseling;*
- for the “research and development activity” category: *research, development, science, design, implementation, R&D, innovation, research, developmental, implementational, innovative;*
- for the “organizational activity” category: *base, infrastructure, employee, infrastructural.*

4. Findings

Strategic documents of 214 HEIs were analyzed during the research. The aim of the first stage was to determine regional content in the analyzed documents. The presence of “the component of activities to the benefit of the region” in the available missions and strategies is presented in Table 3. As can be seen, in the group of public HEIs, the presence this component was found in 87.5% of the observations. In the case of state higher vocational schools, this percentage was the greatest and amounted to 95.7%. With regard to private HEIs, this percentage was 56.6%.

Table 3. The presence of the component of activities for the development of the region in strategic documents of HEIs, available on their websites (N=214)

Type of HEI	Share of HEIs publishing strategic documents (%)
Public academic HEIs	87.5
State higher vocational schools	95.7
Private HEIs	56.6

Only 1 state higher vocational school out of 23 does not provide for activities to the benefit of the region in its strategic documents. In the case of public academic institutions, 6 such schools were found (out of 48). In private HEIs, as many as 43.4% of schools formulate their strategic documents outside of regional problems. It was stated that the type of the school correlates with the presence of the “component of activities to the benefit of the region” in the school’s strategic documents ($R_c=0.4$, $p<0.001$).

In order to determine the intensity of HEIs’ attitude towards involvement in the processes of regional development, the available strategic documents were researched in terms of saturation with content of regional nature based on the frequency of specified linguistic units in relation to the total number of linguistic units in the given document. On a percentage scale, the saturation in question ranges from 0.23% to 30.77%, with an average of 7.4%, median of 5.2% and dominant of 5.9% (except for schools whose strategies do not contain such content, $N=69$).

The following variants of the researched feature were assumed: a very high level of involvement, a high level of involvement, a moderate level of involvement, a low level of involvement, no involvement.

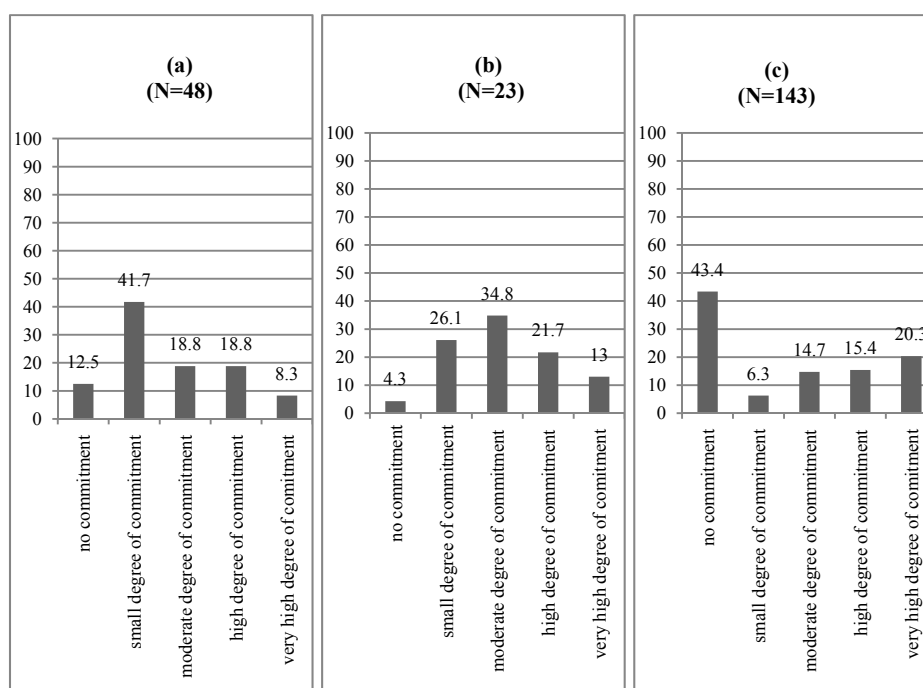
In the total distribution, counting from quartiles of percentage saturation of documents with regional content, it was determined that:

- 69 HEIs showed no involvement (32.2%);
- saturation of content below the 1st quartile of the content’s percentage share in documents total (3.03%, the so-called low level of involvement) refers to 35 schools (16.4%);

- saturation of content up to the median of the content's percentage share in documents total (5.19%, the so-called moderate level of involvement) refers to 38 schools (17.8%);
- saturation of content up to the 3rd quartile of the content's percentage share in documents total (10.44%, the so-called high level of involvement) refers to 36 schools (16.8%);
- saturation of content over the 3rd quartile of the content's percentage share in documents total (10.44%, the so-called very high level of involvement) refers to 36 schools (16.8%).

This division has a signification relationship to the type of the school ($R_C=0.4$, $p<0.001$). The data are shown in Figure 1. The lowest percentage of declaration of regional content in strategic documents as opposed to other types of HEIs was observed among private HEIs. This, however, is the group showing the greatest differentiation – if private schools declare region-oriented content, then the percentage of saturation with such a content is the highest among them, as is the percentage of no involvement.

Figure 1. Distributions of the correlation of the type of school with the presence of regional content in strategic documents of HEIs (%)



- a – public academic HEIs
- b – state higher vocational schools
- c – private HEIs

The presence in the documents researched of the analysis analytical categories adopted for the dimension of direction of declared activities for regional development is shown in Table 4. State higher vocational schools constitute the group of schools where declarations of activities to the benefit of economic, social and natural-cultural development of the given region were observed the most often (professionalization of education within the region). The opposite pole is constituted by private HEIs. In every group of HEIs, the presence of the environmental-cultural motive was observed the least often.

Table 4. The presence of the adopted analytical categories for the dimension of the direction of declared activities for regional development in the strategic documents of HEIs in % (N-145)

Public HEIs (n-42)	State higher vocational schools (n-22)	Private HEIs (n-81)
Economic development		
66.7	86.4	53.1
Social development		
81.0	86.4	42.0
Cultural – natural development		
54.8	63.6	22.2

Returning to the primary issue of research, the following question was also formulated: to what extent does the presence of specific linguistic expressions in strategic documents indicate the school's commitment to participation in developmental processes of the given region? To answer this question, selected statistical correlative approaches were used.

In relation to the first dimension (direction of declared activities for regional development), it was generally observed that the declared content of economic, social and cultural direction correlates significantly ($R_C=0.7$, $p<0.001$; in all three pairs) and these are positive correlations. It was also observed that reference to all the assumed directions of declared activities pertains to every fifth university (21.5%). Meanwhile, nearly half of HEIs, when referring to the regional component in strategic documents, do not specify any specific direction of activities (47.7%).

The second content dimension adopted in the research proceedings, was the area of declared activities for regional development. As already mentioned, the following analytical categories were singled out: education area, research area, and organizational area. The presence of the adopted analytical categories for this dimension is shown in Table 5.

Table 5. The presence of the adopted analytical categories for the dimension of the area of declared activities for regional development in the strategic documents of HEIs in % (N=145)

Public HEIs (n=42)	State higher vocational schools (n=22)	Private HEIs (n=81)
Education activity		
73.8	100.0	63.0
Research and development activity		
83.3	72.7	27.2
Organizational activity		
31.0	77.3	9.9

The area in which universities declared activities to the benefit of regional development the most often was education. In the case of state higher vocational schools, declarations in this area were observed in the case of all the units researched at this stage. In turn, in the area of research and scientific activity, such declarations were most often observed in the group of public academic institutions. The lowest percentages in each analytical category were observed in the group of private HEIs. For the group distinguished by the criterion of the regional component in the school's strategic documents (N=145), declaring of areas correlates, as it did before, in a positive way, and these are significant correlations ($R_{C;educXreseaar}=0.4$, $p<0.001$; $R_{C;educXorg.}=0.5$, $p<0.001$; $R_{C;reseaarXorg.}=0.7$, $p<0.001$).

For the purposes of the research results' deeper exploration, an *indicator of the number of declared activity directions* (IND_DIR) was built, awarding one point for each direction – thus the theoretical value of the indicator ranged from 0 to 3 points. When constructing the indicator, a reference was made to the methodology of building variable designata non-observable in social studies. Similarly, an *indicator for the number of activity areas* (IND_ARE) in strategic documents of the schools was created. An analysis was conducted for all HEIs having the regional component in strategic documents (N=145).

Type of the school significantly diversifies the indicators. In the light of the single-factor analysis of variance, upon verification of the assumptions of its homogeneity, and the Scheffe's test, private HEIs can be attributed the lower IND_DIR (1.17 on average, thus approx. 39% of the possible directionality). On the other hand, public academic HEIs – 66.6% (2.0 on average), and state higher vocational schools – 80.0% (2.4 on average per 3 possible points). Consequently, due to such measurement, public academic HEIs and state higher vocational schools constitute a group similar to each other ($p<0.05$), as compared to private HEIs which differ from them.

However, due to the area of disclosed local tendencies, each school analyzed constitutes a separate segment of higher education. Again, the lowest IND_ARE ought to be attributed to private HEIs (on a scale of 0-3 points, 1.0

point on average; 33.0%). A group significantly different from these are public academic institutions, with an indicator of 1.9 (63.3%). Another group, significantly different from the remaining types of schools, is constituted by state higher vocational schools (indicator of 2.5, thus 83.3%).

Conclusions

In the light of the research presented above, it appears that Polish HEIs, as an element of the region understood in the categories of defined social reality singled out spatially, are aware of the role they play in the processes of its social, economic and cultural-natural development. However, this awareness, and consequently declarations of specific activities are varied depending on the type of the school.

State higher vocational schools, as a sector of higher education system singled out based on formal and organizational criteria, associate their activity with developmental processes of the given region, in both the economic, social and natural-cultural dimension. Pro-regional orientation is clearly visible in all the areas analysed: education, scientific-research work, and organizational activity. Certainly, specificity of these schools resulting from the intention of Polish legislation to establish vocational schools strongly associated with the needs of the host region has a major influence on such a position.

Public academic HEIs create a group with a clearly defined and homogeneous attitude towards involvement in regional development processes. The declared pro-regional stance is particularly clear in the area of scientific and research work.

The group with the lowest indicators for pro-regional orientation are private HEIs. They also show high heterogeneity. The observed positions are extreme: from lack of involvement to declarations of action in all the areas and directions of cooperation. The observed diversity is probably due to the high heterogeneity of this group as a segment of higher education in Poland in terms of, among other things: size (measured by number of students), number of offered courses, and operational stability (financial stability).

The research conducted showed a strong connection between the adopted approach to regional development processes and the type of HEI. Due to the differences between individual types of HEIs in Poland, it appears likely that a significant influence on the stance of HEIs towards regional development processes is played by the management model of the university. This research problem, however, requires a different methodological approach than the one presented in this article.

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