



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

# THE RELATIONSHIP BETWEEN SOCIAL CAPITAL AND REGIONAL COMPETITIVENESS IN POLAND

Urszula Bronisz<sup>1</sup> & Wim Heijman<sup>2</sup>

**Abstract:** This article aims at presenting different approaches to the phenomenon of social capital. The concept of social capital is ambiguous and that is why we will highlight a number of definitions of this notion. The central attention of the paper focuses on the relationship between social capital and regional development and competitiveness. The fundamental question concerns the impact of social capital on the regional economic performance. Hence, we will survey the empirical examination of 16 Polish regions in terms of social capital. We will also study whether the regional level of social capital depends on the level of competitiveness. The purpose of this article is also to make a contribution to the discussion concerning the relationship between economic development and social capital.

**Key words:** Social capital, regional growth, competitiveness, Polish regions

## Introduction

Social capital has attracted a lot of attention from scholars and practitioners. It has generated a lot of interest within statistic and policy research. The phenomenon of social capital is one of the most popular concept covering economic and sociologic dimensions, widely used in multidisciplinary research. It is considered as important factor in explaining economic success and development. There are many different approaches and definitions attached to the concept of social capital. However, there is some consensus within social and economic sciences towards a definition that emphasizes the role of networks and civic norms. Social capital is generally understood as the property of the group rather than the property of the individual. The key indicators of social capital include social relations, formal and informal social networks, group membership, trust and civic engagement.

Poland is a part of the former “Eastern Block” and that is why its social capital development differ from the western countries. In 1989 Poland embarked on the process of systemic transformation, and in the initial years the state’s economic policy was dominated by macroeconomic priorities designed to establish a new order after the centralized command system. Hence, regional policy was not perceived as an instrument for balancing out spatial differentiation. Nor was regional development seen as a factor supporting the development of the country as a whole, a factor contributing the identification and use of peculiar features, resources, circumstances and developmental predisposition of individual regions as a specific “value

added”. Since 1989, Poland has succeeded in the transition to a modern market economy, implementing key market reforms including liberalization, deregulation, privatization and other institutional changes. These reforms brought about a remarkable upswing in economic performance and Poland’s international competitive position (Weresa 2006). However, the international dimension of competitiveness requires an assessment of the region’s ability to compete and attract different types of capital indispensable for growth and development. The social capital has undergone changes during the Polish systemic transformation, however, lack of social capital and the need of building it, has been recommended among other by F. Fukuyama for all post communist countries.

This article aims at evaluating the level of social capital in 16 Polish regions, which correspond to the EU NUTS II level. It is becoming clear that regions are now the key source of economic vitality for nation-states. Yet, the analysis of social capital and its relationships with regional income and competitiveness in Poland will be difficult. There a number of research constraints. First of all, the territorial reform in the year 1998 completely changed spatial structure of the country. System of the 49 voivodships was substituted for 16 large regions. Furthermore, Poland’s membership in European Union in 2004 meant necessity of adjusting to European Nomenclature of Units for Territorial Statistics (NUTS). However, the growing knowledge about the role and importance of social capital and its impact on economic development makes it essential to analyze.

The paper is structured into principal sections, followed by a set of conclusions:

<sup>1</sup> Urszula Bronisz, Maria Curie-Skłodowska University, Faculty of Political Science, Plac Litewski 3, 20-080 Lublin, Poland, e-mail: [u-bronisz@tlen.pl](mailto:u-bronisz@tlen.pl)

<sup>2</sup> Wim Heijman, Wageningen University, Social Science Economics of Consumers and Households, P.O. Box 8130, 6700 Wageningen, The Netherlands, Phone: +31 (317) 483450/485455, Fax: +31(317) 485373, e-mail: [wim.heijman@wur.nl](mailto:wim.heijman@wur.nl)

- a review of the concept of social capital including the plethora of definitions that surround this notion (Coleman (1988,1990), Putnam (1993, 1995, 2000), Fukuyama (1995, 2000), Portes (1998), Halpern (1999, 2001), Woolcock (2001) and its impact on the regional development and competitiveness,
- a research framework concerning measuring social capital in Polish regions,
- final results.

## Theoretical foundation

There are a lot of studies concerning the social capital. This notion is defined and explained in many various ways, depending on the context and application of the concept. Social capital emerges in numerous different manners so it is difficult to precisely conceptualize this phenomenon. In terms of theoretical foundation, there is a lot of ambiguity as to what the concept of social capital means. A number of academics and researchers emphasize the increasing role of social capital in relation to many different human areas including economic development, however, it was the work of Robert Putnam (1993, 2000) that launched social capital as a popular forms for research and policy discussion. Social capital is commonly thought as a fourth form of capital, along with financial, human and physical. Like these other forms, it is important determinant of prosperity and its purpose is to make productive activity possible (Coleman 1998). Although, the definition of social capital has remained elusive and ambiguous this notion is also considered as important factor in explaining economic success. Hanifan defined it as: *“those tangible substances that count for most in the daily lives of people: namely good will, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit (Hanifan 1916). Social capital is the opposite of physical capital, which comprises land, buildings and all other forms of private or public owned capital. According to Beekman (2008) social capital “can be recognized by social interactions and their by-products: trust relations, reciprocity and exchanges, common rules and norms, and networks and groups.”*

The Organization for Economic Cooperation and Development (OECD) defines social capital as *“networks together with shared norms, values and understandings that facilitate cooperation within or among groups”* (Cote and Healy 2001), whereas The World Bank (1999) provides more extensive explanation of this term and suggests that *“social capital refers to the institutions, relationships and norms that shape the quality and quantity of society’s social interactions”* and emphasizes that *“social capital is not just the sum of the institutions which underpin a society – is the glue that holds them together.”* The definition created by The World Bank is similar to the most commonly used definition originates from Putnam (1995). He defines social capital as the *“features of social life – networks, norms, and trust – that enable participants to act together more effectively to pursue*

*shared objectives. Social capital, in short refers to social connections and the attendant norms and trust”*. He also argues (Putnam 2000) that social capital *“has forceful, even quantifiable effects on many different aspects of our lives,”* which include such diverse dimensions like better health (Wilkinson 1996), lower crime rates (Putnam 2000), improvement in education (Coleman 1998), greater levels of income quality (Wilkinson 1996), less corrupt and more effective government (Putnam 1995), better economic achievement and lower transaction costs (Fukuyama 1995). Coleman (1990) points that *“social capital is defined by its function, it is not a single entity, but a variety of different entities having characteristics in common: they all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure.”* Social capital generate a lot of advantages. Wollcock (2001) notices that *“one of the primary benefits of the idea of social capital is that it is allowing scholars, policy makers and practitioners from different disciplines to enjoy an unprecedented level of cooperation and dialogue.”*

Much of the general literature concerning social capital is focused on using it to build human capital, in the sense of developing strong communities. However, in recent years, a research has grown up around social capital building for community development (Servan 1997) and for economic development (Grisham 1999, Flora 1998, Talbert, Lyson and Irwin 1998, and Flora, Sharp and Flora 1997). Relationships between individuals, norms and trust all help facilitate coordination and cooperation that enhance productivity (Routledge, and von Amsberg 2002). Flora et al. (1997) call the social capital necessary for successful economic development in entrepreneurial social infrastructure. They assert that cooperation, not competition is more likely to foster economic activity. Putnam, Leonardi and Nanetti (1993) emphasize that traditions of civic engagement, voter turnout, active community group and other such manifestations of social capital are necessary for both good government and economic and financial development, however, the connection between economic prosperity and social capital is not always clear. Definitely, social capital is a multidimensional and dynamic concept and that is why it can be described in numerous ways. Dasgupta (2002) argues that *social capital should not be defined only in terms of the presence of cooperation or some other outcome. Rather than it should be regarded directly as social structure, because social capital is an aspect of human capital, it is also a component of what economists call “total factor productivity”*. Ostrom (2000) points out that *social capital is the shared knowledge, understanding, norms, rules and expectations about patterns of integration that groups of individuals bring to a recurrent activity*. Undoubtedly, one of the greatest weaknesses of the term of social capital is the absence of common agreement of how to measure it. This notion is usually depicted by such categories as trust, associational activity, groups, networks and knowledge. As a social capital measures are also indicated educational achievements and family structures (Robinson and Siles

1998). Furthermore, as a key factor in building social capital are considered non-governmental organizations. Social capital is always desirable since its presence is equated with beneficial consequences. It measures the degree to which community can cooperate to achieve desired results (Buckland 1998). The area where governments have the greatest directly ability to generate social capital is education. However, educational institutions do not simply transmit human capital, they also pass on social capital in the form of social rules and norms (Fukuyama 1999).

## Methodological foundation

The main purpose of this paper is to rank Polish regions according to their performance of social capital and further to compare the received outcomes with their competitive position. The current paper will also examine the impact of distinguished factors of social capital on regional development. Thus, we will see whether the social capital has influence on the regional economic success. In order to present the performance of social capital in Polish regions we will create an index of social capital. We will take into account variables from 3 different categories which are often applied in empirical examinations to estimate the level of social capital. The 3 categories are: knowledge, associational activity and the local election turnout. The comparative analyses will cover the evaluation of following factors:

- knowledge: the number of upper secondary students, vocational education students, tertiary students (academic), tertiary students (occupations),
- associational activity: the number of nongovernmental organization, volunteers, cultural activity, sports and recreation activity, social welfare services,
- local election turnout.

We consider these factors as crucial determinants of social capital. They reflect both community engagement, community spirit and territorial membership. We are aware about the limitation and imperfection concerning the issue of social capital in the context of measuring the regional level of social capital. Therefore, in our survey we will focus almost exclusively on statistical analyses of social capital. The index of social capital will be created as the sum of the standardized values of: upper secondary students, vocational education students, tertiary students (academic), tertiary students (occupations), nongovernmental organization, volunteers, cultural activity, sports and recreation activity, social welfare services, local election turnout. Data of essential measures will be gathered from Polish Central Statistical Office sources.

Our intent of this survey is to evaluate the Polish regional level of social capital. The carried out examination allow us to construct the index of regional social capital and than to compare the position of 16 Polish regions with their locations in the index of regional competitiveness from our previous research (Bronisz, Heijman, Mischuk 2008). In the competitiveness research in order to provide an overall

picture of regional level of competitiveness we followed the Robert Huggins Institute approach (Huggins, 2003). We took into account the impact of three categories: inputs, outputs and outcomes. The key input factors were: business density, knowledge based business and economic participation, although, there were many indicators underneath these subsets. Next, these variables were conceptualized as contributing to the output – productivity, measured GDP per capita. And finally, as the impact of these measures – the outcomes – the earnings and unemployment were given. The 16 Polish regions were ranked according to their scores on each indices. Then was assessed the importance of business density, knowledge based business, economic participation, productivity, earnings and unemployment on the basis of the scenarios created by Huggins Institute. And finally it was possible to achieve the robust results of competitiveness of Polish 16 voivodships.

Next, using a test of significance of correlation coefficient we will be able to observe the relationship between regional development and distinguished factors – determinants of social capital. Than we will also examine the correlation between index of social capital and both, index of regional competitiveness and GDP per capita. Thus, we will find out whether social capital can be regarded as the crucial determinant of regional development and competitiveness.

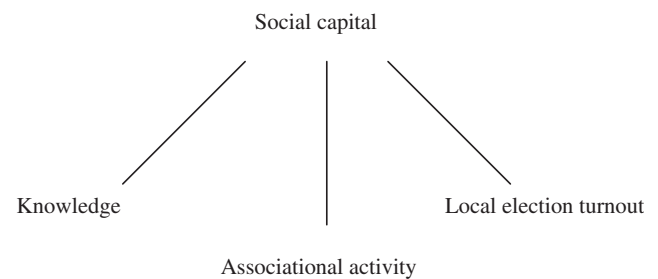


Figure 1

## Results

Poland represents a country with significant regional disparities, however the most competitive Polish regions have not only good economic performance but they are also characterized by high level of social capital. The highest score in the social capital index achieved Śląskie voivodship. In the top head of ranking we could find also Mazowieckie and Małopolskie. These are the regions that have the ability to attract creative and innovative people, to provide high quality cultural facilities and to encourage the development of social networks. These regions are also considered as the most competitive, they are marked by the highest density of enterprises, and the highest level of economic participation. What is more, Śląskie, Mazowieckie and Małopolskie took the best locations in both rankings, concerning the regional level of social capital and regional competitiveness. The most economically disadvantaged regions like Opolskie and Świętokrzyskie are at the same time characterized by poor

social capital performance. But social capital does not always create a regional development. Zachodniopomorskie voivodship took fifth position in the index of social capital but only twelfth in the ranking concerning the overall regional competitiveness. Thus, the surveyed examination can also suggest that regional prosperity may be created in many ways. In order to find out whether determinants of social capital have influence on regional development we examined the impact of 10 variables on GDP per capita. Five of them had significant correlation, namely: the number of upper secondary students (coefficient correlation  $r=0.816$ ), vocational educational students (coefficient correlation  $r=0.708$ ), tertiary students (academic) (coefficient correlation  $r=0.916$ ), social welfare centers (coefficient correlation  $r=0.570$ ) and number of nongovernmental organizations (coefficient correlation  $r=0.728$ ). The statistical irrelevant were following factors: tertiary students

(occupation), physical culture and sport, volunteers, family orphanages, and local election turnout. The most significant relationship had the factor – the number of tertiary students (academic). It can mean that regions with relatively high level of well educated people develop more dynamic and achieve better economic performance. However, the most important factor was tertiary education (academic), whereas the factor tertiary students (occupation) did not have any significant impact on economic development. Some previous studies also revealed significant correlation between educational level and economic development (Bishop 1989, Hanusbeh and Kim 1995, Barro 1998). Those results suggest that this factor should be considered as important feature of social capital. Certainly, one of the key factors of social capital are also non-governmental organization. They have a comparative advantage in community development, they also offer opportunities and access to social development (Buckland 1998). There are some specific features of the Polish non-governmental system (Frysztacki 1996), namely:

- very rapidly growing number of no-governmental institutions,
- strong structure of groups linked with church,
- small size,
- small share of full-time employees,
- high share of public funding of this sector activities.

Using a test of significance of correlation coefficient we also examined the relationship between index of social capital and index of competitiveness and between index of social capital and GDP per capita. Both had significant correlation, however the index of competitiveness had a little better outcome. The problem is the mutual influence of index of social capital and index of competitiveness or GDP per capita. The correlation does not show the direction of the relationship. It is very difficult to distinguish statistically the

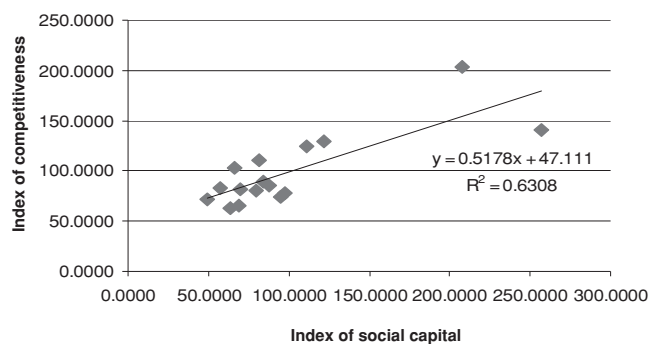
**Table 1.** The social capital index and competitive index of 16 Polish regions (voivodships)

Region	Index of social capital	rank	Index of competitiveness	rank	GDP per capita	rank
pl11 Łódzkie	84.3122	8	88.6415	7	99.8993	7
pl12 Mazowieckie	207.4805	2	203.5300	1	164.2591	1
pl21 Małopolskie	121.9266	3	128.9457	3	92.6930	11
pl22 Śląskie	256.5813	1	140.2345	2	121.8801	2
pl31 Lubelskie	69.7999	11	81.1463	10	75.2354	16
pl32 Podkarpackie	95.1373	6	74.3508	13	75.7185	15
pl33 Świętokrzyskie	63.6111	14	62.7492	16	83.9329	13
pl34 Podlaskie	57.4167	15	83.2733	9	80.9953	14
pl41 Wielkopolskie	81.8520	9	110.2475	5	116.5884	3
pl42 Zachodniopomorskie	98.0425	5	78.0590	12	100.8944	6
pl43 Lubuskie	87.9542	7	85.9641	8	97.0740	8
pl51 Dolnośląskie	111.3091	4	124.4999	4	110.4707	4
pl52 Opolskie	49.6967	16	71.9127	14	93.2258	10
pl61 Kujawsko-Pomorskie	79.9652	10	80.4059	11	96.9875	9
pl62 Warmińsko-Mazurskie	68.7524	12	64.7615	15	84.1883	12
pl63 Pomorskie	66.1626	13	103.5250	6	105.9574	5

Source: Bronisz, U., Heijman W., Miszczuk A (2008) and own calculations.

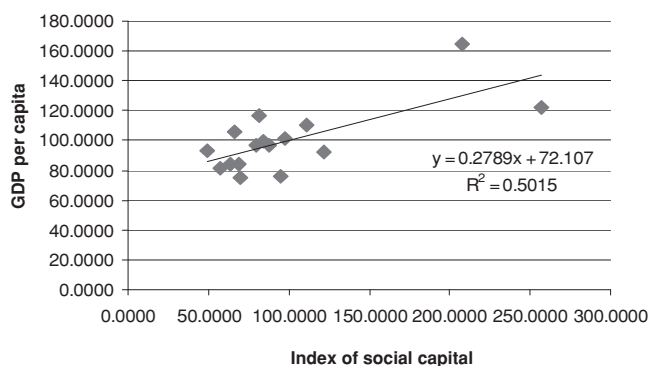
impact of social capital on competitiveness or GDP per capita from the relation proceeded in reverse direction (Herbst 2007). Therefore, it is at least theoretically possible that the regional prosperity and competitiveness create the

**Figure 2.** The correlation between Index of social capital and Index of competitiveness



Source: Own calculations.

**Figure 3.** The correlation between Index of social capital and GDP per capita



Source: Own calculations

regional social capital. But undoubtedly, social capital facilitates mutually beneficial collective actions. Both, social capital and economic development are multidimensional concepts and this makes possible to emphasize and focus on particular aspects of these concepts. But undoubtedly, the results of our research lead to the conclusion that social capital can be regarded as the crucial determinant of regional development and competitiveness.

## Conclusion

In this article we have tried to provide an overview of the phenomenon of social capital by describing theoretical and conceptual foundations and by surveying the empirical study concerning the regional level of social capital in Poland. We have examined 16 Polish regions and carried out the analysis in order to test the hypothesis – is regional economic development related to the social capital? Further, we have tried to measure the level of social capital in Polish voivodships and then rank them according to their achievements and final results. We also surveyed the correlation between index of social capital and both index of competitiveness and GDP per capita.

The received ranking of the social capital enabled us the examination of the regional performance of social capital in Poland. We were also able to compare the performance each of the 16 Polish regions in both rankings, concerning the regional level of social capital and relating to their overall competitiveness.

Although, along with the economic transformation regional and social disparities in Poland became increasingly evident, the ability of individual regions to adopt to fundamental changes in economic environmental rests on a range issues including their socio-economic structure, level of initial development and proximity to capital and innovation, as well as the way in which they are affected by national policy decisions (Gorzela 2000). However, disparities in regional economic growth are a function of regional variations in different types of capital, there is evidence that there is a link between social capital and economic development. The existence of social capital might be helpful to explain economic progress of certain regions, because the use of regions' endogenous resources is the key factor of development in socio – economic sphere. Sometimes social capital can be insufficient for establishing endogenous sustainable development and economic prosperity, but at least it enhances economic capital and development.

## References

**Barro, R.J. (1998):** Human capital and growth in cross-country regression. Harvard University.

**Beekman, G. (2008):** Youth, social capital, and rural development. In 8<sup>th</sup> International Students Summit Tokyo: Tokyo University of Agriculture.

**Bishop J. (1989):** Is the test score decline responsible for the productivity growth decline. *American Economic Review*, 79,1, 178–197.

**Bronisz, U., Heijman W., Miszczuk A. (2008):** Regional Competitiveness in Poland: Creating an index, *Jahrbuch fur Regionalwissenschaft* 28:133–143.

**Buckland J. (1998):** Social capital and sustainability of NGO intermediated development projects in Bangladesh. *Oxford University Press and Community Development Journal*.

**Coleman, J.S. (1988):** Social Capital in the Creation of Human Capital. *American Journal of Sociology* 94:95–121.

**Coleman, J.S. (1990):** *Foundation of Social Theory*. Cambridge, MA: Harvard University Press.

**Coleman J.S. (1997):** *The American Sociologist*, Springer New York, Volume 28, Number 2.

**Dasgupta P. (2002):** Social Capital and Economic Performance: Analytics, mimeo, Faculty of Economics, University of Cambridge.

**Flora, J.L. (1998):** Social capital and communities of place. *Rural sociology*, 63 (4), 481–506.

**Flora, Sharp and Flora (1997):** Entrepreneurial social infrastructure and locally-initiated economic development in the nonmetropolitan United States. *The Sociological Quarterly*.

**Frysztacki, K. (1996):** Voluntary sector and the Development of civil society in Poland, In *Voluntary sector in a changing Society*, Synak, B and Ruzica, Gdańsk-Indianapolis.

**Fukuyama, F.(1995):** Social capital and the global economy. *Foreign Affairs* 74, 89–103.

**Fukuyama F. (1999):** Social capital and Civil Society, The Institute of Public Policy, George Mason University, October 1, 99.

**Gorzela, G. (2000):** Poland in Bachtler, J., Downes, R., Gorzela, G. (Eds.) *Transition, Cohesion and Regional Policy in Central and Eastern Europe*. Ashgate Publishers, Aldershot, UK: 125–154

**Grisham, Vaugun L., Jr. (1999):** *Tupelo: The Evolution of a Community*. Dayton, OH: Kettering Foundation Press.

**Hanifan, L.J. (1916):** The rural school community center. In Subrie, A.L. (eds.) *New Possibilities in education*. Philadelphia, The American academy of political and social science.

**Hanushen E.A., Kim D. (1995):** Schooling, labor force quality and economic growth, working paper. No.411, Rochester Center for Economic Research.

**Herbst, M. (2007):** Kapitał Ludzki i kapitał społeczny a rozwój regionalny, *SCHOLAR*, Warszawa.

**Huggins, R. (2003):** Debates and Surveys Creating a UK Competitiveness Index: Regional and Local Benchmarking, *Regional Studies*, Vol 37.1, 89–96.

**Ostrom E. (2000):** Social Capital: A Fad or Fundamental Concept? In *Social Capital: A Multifaceted Perspective*, P. Dasgupta and I. Seragilden eds. Washington DC: World Bank.

**Portes, A. (1998):** Social capital: Its Origins and Application in Modern Sociology, *Annual Review of Sociology* 24, 1–24.

**Putnam, R.D., Leonardi, R., Nanetti, R.Y., (1993):** *Making Democracy Work*. Princeton University Press, Princeton, NJ.

**Putnam, R.D.(1995):** Tuning in, tuning out: The strange disappearance of social capital in America. *Political Science and Politics* 28(4). 664–683.

**Putnam, R.D. (2000):** *Bowling Alone: American's declining social capital*. *Journal of Democracy*. 6(1). 65–78.

**Routledge, B.R., von Amsberg J. (2002):** Social capital and growth, paper prepared for the Carnegie-Rochester Conference Series on Public Policy.

**Servon, L. (1998):** Credit and Social capital. The community development potential of US microenterprise program. *Housing Policy Debate*, 9 (1), 115–149.

**Weresa M.A. (2006):** Science, technology and innovation in Weresa M.A. (Eds.) *Poland Competitiveness Report 2006 The Role of*

*Innovation*, World Economy Research Institute Warsaw School of Economics

**Woolcock, M. (2001):** The place of social capital in understanding social and economic outcomes. *Isuma: Canadian Journal of Policy Research* 2:1. 1–17.

**The World Bank (1999):** What is social capital? PovertyNet, <http://www.worldbank.org/poverty/scapital/whatsc.htm>