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## **Human and social capital in agricultural and rural development (Polish experiences)**

**Abstract.** Authors define and explain the meaning of two concepts, namely human and social capital and their influence on the socio-economic progress in agriculture and rural areas. The presented studies and analyses point to the link between the growing role of these two factors and the general socio-economic progress. A major part of the paper is devoted to analysing the past and current state of human and social capital in Poland, focusing on their deficiencies and the need to improve their quality. In conclusion the authors note that the significant inflow of financial means after the the Polish accession to the EU as well as structural and administrative changes will not bring in full the possible benefits in the future unless there is an improvement in quality and an increase of creative participation of the human and social capital. The health aspect is also explored in the paper as a crucial element influencing human capital in the Polish rural areas.

**Key words:** human and social capital, development of agriculture and rural areas, health

### **Main concepts and their evolution**

Historically speaking, an agricultural farm and agriculture were defined as a unit of three factors: nature, labour and capital. As a result of progress, i.e. an increase of intensity and productivity but also a development of horizontal and vertical ties, the labour factor started to play a leading role, especially in management, which deals with organising and managing all production factors. This in turn, when used efficiently, brings bigger and better effects in farming and improves the standard of living. The factor responsible for the efficiency of organisation and its effects was distinguished and called human factor or human capital in agriculture. The significance of this factor and its influence on the sector's performance grows together with the general development, because its main importance is expressed in the constant ability to adapt to the changing natural, economic, organisational and social conditions.

The development of research and economic analyses has led several researchers to a statement that better conditions do not always guarantee better results. This means that better quality of the human factor ensures better use of other production factors and smaller probability of making a mistake or incurring a loss. This idea was expressed among others by Moszczeński with the following words: 'There are no good enough conditions in which a bad manager would get good results and there are no bad enough conditions in which a good manager could not get good results' [Moszczeński 1947].

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In the beginning of the 1960s many outstanding Polish and European economists took wide interest and conducted intensive research on human factor issues. Publications prepared by, among others, R. Manteuffel, N. Westermarck, Z. Małanicz and J. Poniowski support quite explicitly the thesis that differences in the efficiency of capital expenditure help to explain only a half of the achieved economic effects. The other half of these effects derives from the influence of human factor, including knowledge, skills, activity and cooperation among people.

The above mentioned scientists in general used the term human factor because the content was related particularly to the influence that people as individuals have on better effects of farming. Simultaneously with the development of agriculture and its level of intensification and productivity the interest given to human and social aspects has increased. In socio-economic studies in agriculture and rural development the term human factor was often replaced by human capital and in macro scale by social capital. These terms became common in use in the eighties and nineties in the XX century and their content was considerably expanded.

The social aspect of human capital was included in a systematic research and studies only just in the 1990s and defined as a social capital. A pyramid diagram (Fig. 1) presents graphically the research results of the role and the influence of human factor and social capital in the socio-economic development. Half of the diagram displays the effects of financial capital and natural resources whereas the other half displays the role of human and social capital (including ethical standards and values, trust, cooperation and solidarity, social involvement, cooperation and collaboration attitude, care for common welfare).

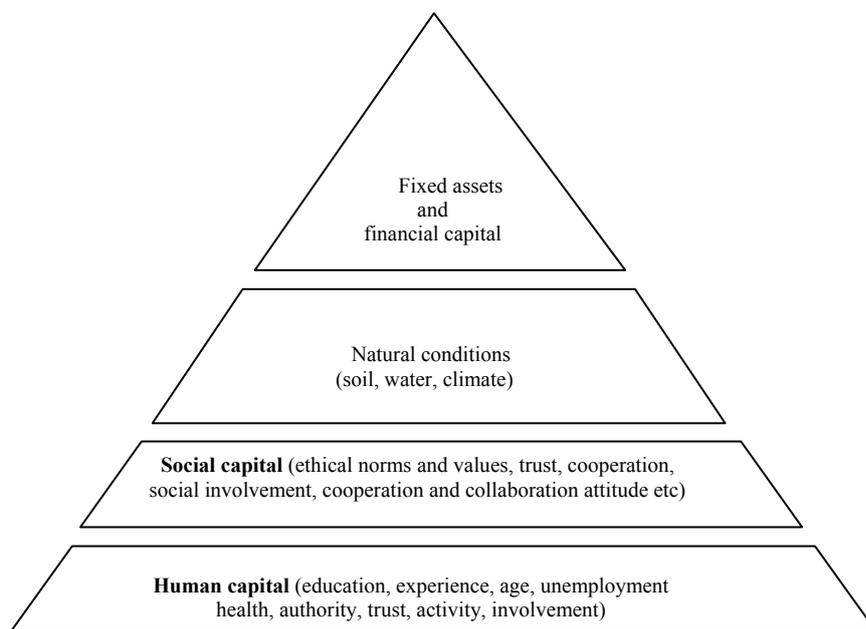


Fig. 1. The role of human and social capital in the socio-economic development

Source: own research..

The concept of social capital was introduced into the sociological vocabulary thanks to the works of J. Coleman, P. Bourdieu, R. Putnam and F. Fukuyama who defined social capital as a set of informal values and ethical norms facilitating cooperation between members of a community. The above mentioned authors believed that social capital belongs rather to a group and not to individuals, but those in turn either benefit from it because of participating in structures endowed with higher social capital, or they lose while functioning in an atomised reality deprived of trust and norms, forcing a necessity to negotiate the rules of cooperation each time. According to the quoted researchers the social capital emerges in the course of cooperation and recurring interactions. These in turn generate norms which, if observed by partners, build a mutual trust and visualise benefits flowing from them. It seems incredibly important to stimulate the creation of an extensive interaction network in order to earn the social capital. Practically speaking a crucial role in raising social capital is played by culture through intergenerational transmission of both experience, but also prejudice and stereotypes, values and norms, beliefs and knowledge. Culture to a significant extent determines the existing in a society tendency to get involved in certain types of relation and cooperation networks.

The intended scope and goal of this paper do not allow to continue these reflections. However today, apart from the human capital concept, the concept of social capital grows in importance, and both notions have an enormous influence on the further socio-economic development in our country after the introduction of European CAP mechanisms and an increase of competition in the agri-food market.

### **Evaluation of the present state of human and social capital resources in Polish agriculture and rural areas**

In the first part of the paper special attention was drawn to the role and influence of human and social capital on the effectiveness of agriculture and development of rural areas. In the last decade an inflow of funds to Poland caused a significant progress in technology and production organisation, which in turn require better knowledge, labour activity, growth of entrepreneurship and active cooperation between individual entities both in the economic and social life. All these changes demand from people who take part in the decision making an ability to adapt to changing conditions and to take advantage of them in the process of economic and social changes.

Therefore the answer to the question what is to be done to achieve the expected profits and progress is: making the most out of and improving the quality of human and social capital. One must be aware that the underdevelopment in this field is vast and deeply rooted in history and unlikely to undergo a quick improvement. Agriculture and rural development in Poland were in the past not given a proper position either in the socio-economic doctrine of the country's development or in the socio-economic practice [Na prostej... 2003].

Also in the period of transformations of the political system in the 1990s the Polish agriculture and the villages suffered the greatest losses which had an altogether negative influence on the process of improving the quality of human and social capital. The development of agriculture and rural areas was subject to a deeply rooted in the Polish society (unlike in any West-European culture) sociological and psychological attitudes of underestimation and disregard by the public opinion of the role and mission of agriculture and rural areas in the development of the whole country and the growth of national

prosperity. Unfortunately such attitudes still predominate despite the fact, which is emphasized by sociologists, that about 80% of Poland's population has indirect family relations with or originates from villages [Fedyszak-Radziejowska 2003]. According to the Central Statistical Office since 2001 the number of people living in rural areas has been increasing, reaching 14.8 million in 2007.

Nowadays the human capital is understood as a set of features which characterise people as individuals, such as education, age, professional experience and several properties of mind and character such as talents, intelligence, activeness, entrepreneurship, righteousness etc. which both separately and jointly determine the quality of human capital but are not a simple sum of individual virtues and are not easily measured. Some of them can only be described and evaluated comparatively [Górecki 1970].

Education is one of the most important features of human capital. The educational and cultural inferiority of the rural population derives from a considerably lower participation of rural people, especially in a higher and secondary level of education. In 2001 the rural population in Poland (aged 15 and above) was educated as follows [Frenkiel 2003]:

- higher education 3.4%
- secondary general 20.3%
- secondary vocational 32.0%
- primary 39.5%
- other 4.8%.

In comparison to urban population the above quoted data displayed a significant difference and the numbers for rural areas are almost three times lower in the case of higher education and almost two times lower in the case of secondary education. The rural population had a higher participation in the primary and the vocational secondary levels of education than the urban one. This was a result of the spread of vocational-agricultural education whose level and effectiveness did not keep up with the urban standards. It must be acknowledged that a comparison of the percentages in 1992 and the above quoted percentages in 2001 demonstrates a certain improvement. It was mainly a result of an enormous economic effort and a growth of aspirations for education among villagers. Although the quantities increased they have however not been followed by the quality of education. For example, according to Kłodziński in 2002 among young people aged 19 and above 15.4% studied at higher schools but only 2.1% in a full-time resident program and 13.3% in a non-resident program [Aktywizacja... 2003]. Apart from that the young people from villages choose to continue secondary and higher education mainly in agricultural schools, not because of their interest in agricultural subjects but because of easier access to and lower costs of such education. What is more, a significant percentage of those who went to agricultural schools 'under compulsion' treat this education not as preparation for staying in agriculture or in the countryside but for an exit.

According to new data the education gap between rural and urban residents has narrowed. The percentage of rural population (aged 13 and over) with secondary education rose from 54% in 2002 to almost 66% in 2006. According to a demographic yearbook the percentage of people with a university degree in the rural areas equalled 6.4%. A study undertaken by the Pentor Research International in 2007 showed that positive attitudes towards education have however weakened in the last years and only 49% of rural inhabitants declared that investments in education will pay off [Polska... 2008]. According to this study 83% of respondents did not intend to supplement their own education (67% in

2006) and about 4% planned to attend language courses. On the other hand the most frequent answer (57%) to the question ‘Which level of education would you want your child/grandchild to achieve?’ was a higher (university) degree [Polska... 2008].

An important influence on the quality of human capital has the population age structure, in particular the process of population aging and the lack of youth to replace the elderly managers of farms. For many years the available demographic statistics has not been optimistic in this matter. Demographically the rural population was usually older than the urban one. This situation was not limited to Poland but present in the majority of countries in Europe. Population ageing in Poland was quicker in the country than in towns. In the 1990s the situation changed when the generation, which migrated from villages to cities in time of its youth, reached the retirement age. The average age of people living in the countryside in 2007 reached 35.5 years (less than for the urban population which was 38.5 years) and the birth rate among rural population is now higher than in towns (10.9‰).

Another significant element of human capital in rural areas, often neglected in the sociological and economic studies, is the health status of rural population, which is evaluated as generally worse than that of people living in towns. Research conducted by the Institute of Rural Health in Lublin shows that, for example, in the rural areas the occurrence of respiratory, muscle and bone as well as eye diseases is higher than in the urban areas. Farmers are also more exposed to the risk of accidents linked to their work and to the consecutive loss of health. This situation is influenced both by infrastructural as well as behavioural factors. Almost 14% of the rural population admitted in 2006 resigning from medical visits because of lack of money or time and of long waiting list. It is also interesting to notice that 53% of rural inhabitants self-estimated their health status as good or very good, 27% as neither good nor bad and 19% as bad or very bad [EU-SILC... 2008].

Poor health and premature mortality inevitably leads to a waste of human capital and also, in many cases, to a limitation of socio-economical development. Global trends indicate that non-communicable, chronic diseases (such as cardiovascular syndromes and cancer, obesity, diabetes) have become the major cause of adult premature mortality (death between 20 and 64 years of age) in developed countries. According to statistical data about 57% of women and 44% of men in Poland (15 years and older) have chronic diseases. The Polish health report of 2004 [Stan... 2006] showed that 48% of rural inhabitants and 56% of urban inhabitants had (or had had) a chronic disease but the percentage gap between the subpopulations is decreasing.

One of the main determinants of public health is a diet. Detailed individual-based analyses of the implications of changing food patterns by the rural population are scarce. However it is clear that the fast development of the food market in Poland since 1990 has led to major changes in the food patterns in the rural households. According to research conducted by the Institute of Food and Nutrition [Szponar et al. 2003] males and females in productive age in rural areas are in general characterised by a higher consumption of energy, total carbohydrates and dietary fibre than their age peers from urban areas. Diet of males in rural areas contained also more fat. Protein intake differed only in the female population and was higher in the urban population. Vitamin C consumption was lower in rural areas (especially among girls). Interesting results were obtained in the case of sodium. Excessive sodium consumption was found in almost all cases, however the dietary sodium intake was higher in the rural population.

In both rural and urban populations an imbalanced diet and excessive food consumption is becoming a big health-related problem. The percentage of overweight and

obesity cases is highest among women and girls in rural areas, respectively 23% and 13.5%. In comparison almost 15% of rural males and 11% of boys were obese. This situation is linked not only to changing nutritional habits but also to the level of physical activity which is lower than in the past. In low income households undernutrition is reported. It was estimated that 10.5% of the rural population lived in 2007 in extreme poverty, compared to 4% of urban population [Sztukięłojć-Bieńkuńska 2008]. The worst situation is noted in the northern and eastern parts of the country.

Unemployment has a very negative effect on the quality of human and social capital. Especially among young people the unemployment wastes their professional activity, but it also has a negative effect on their mental state and fixes a sense of marginalisation. According to research by Kłodziński [Aktywizacja... 2003] the rural areas in Poland were populated in 2002 by almost 1.4 million of unemployed people which constituted 42.7% of the whole number of unemployed in Poland, whereas the rate of unemployment registered in the rural areas amounted to 17,4%. The unemployment rates since Poland's integration with the EU structures is presented in Table 1, which shows that officially the unemployment rates in rural areas are lower than in cities.

Table 1. Unemployment rate based on BAEL, % of economically active population

Unemployment rate	Year		
	2005	2006	2008, I quarter
Urban areas	18.7	14.4	8.2
Rural areas	16.1	13.0	7.9

Source: [Demographic... 2007; Statistical... 2008].

As it is widely known there is a specific category of the unemployed in agriculture, namely people redundant or not fully used at work. This category of latent unemployment was recently estimated at 1 million people [Frenkiel 2003].

What is more the rural unemployment in Poland is extremely regionally diversified and reaches the highest rate in the areas with big numbers of former state farms, whose economic decline caused that almost 400 thousand workers and their families, so almost 2 million people, suffered from the effects of economic transformation. Fortunately the state farms occupied only 20% of agricultural land and the dominating family farms' sector could to some extent absorb the dismissal from employment shock after restructuring industry and other branches of economy. The idle work resources in Polish agriculture and rural areas constitute an important potential, however of lower qualifications, but still offers a possibility which should be taken advantage of, particularly in view of new opportunities after Poland's accession to the EU. Taking advantage of natural and environmental values of the Polish rural areas, the rural and agri-tourism have been blooming. Development of tourism and agri-tourism as well as starting non-agricultural activities is supported from public funds within the EU subsidised programmes. 3600 projects were completed or started in 2004-2007, worth PLN 247.9 million, with the EU subsidies amounting to PLN 173.5 million [Agriculture... 2008]. It must be added that even though in rural areas the economic activity and employment rates are improving, about 18% of people (compared to 8% in towns) face the threat of extreme poverty. It is expected that with the currently increasing earnings and financial aid for development of rural areas, the extent of poverty will decrease [Agriculture... 2008].

Unfortunately in the first years following the accession many farmers and rural areas inhabitants decided to look for jobs outside Poland. According to Pentor's representative 2007 study 3-14% (depending on voivodeship) of farmers declared leaving Poland to work abroad during the 12 months preceding the survey [Polska... 2007]. An even higher result was obtained for the rural population as a whole.

In order to prove the significance of social capital and cooperation between individuals in developing rural areas and agriculture it is enough to mention the success of the cooperative movement which bloomed already at the turn of the 19<sup>th</sup> and 20<sup>th</sup> centuries in several European countries and which developed successfully in several fields also in times of the Second Polish Republic. After Poland's transition from centrally planned to market economy in 1989 the role of cooperatives in agriculture diminished dramatically and the process of creating new horizontal and vertical ties between participants of the agri-food chain was rather slow [Gellynck et al. 2002]. Farmers in many cases were reluctant to cooperate or did not register their organisations. After the implementation of new law regulations in 2000 and introduction of special financial incentives for members of producer organisations after Poland's accession to the EU a growing number of producers realised a need to strengthen their bargaining power [Halicka & Rejman 2006]. In 2003 there were about 100 registered producers' groups in the country, in August 2009 their number amounted to 447 [Agriculture... 2008].

Today there are more and more examples of villages, communes and towns which invest in the development of human and social capital and achieve a higher level of social and economic progress. The inflow of EU funds triggered a new energy wave but also increased the competition and administrative control of public spending, which in turn positively influenced the development of social capital and its creative role in progress [Kapitał... 2006].

## **Conclusions**

The survey of historical and contemporary research and analyses supports the conviction that the socio-economic development of agriculture and rural areas depends significantly on a set of factors labelled by two concepts, i.e. human and social capital. These factors include, among others, education, age, unemployment, health and nutritional status as well as cooperation level.

Despite observed changes the present state and perspectives of improvement in the level of education of Polish rural population cannot be regarded as satisfactory. Apart from formal education an extra-school training and consultancy is needed to improve the quality of human capital. In rural areas and in agriculture the range and level of such training is insufficient and must be regarded as a serious challenge in connection with the further economic and social development.

In the last years the age and unemployment structure of the rural population changed for the better. However a big threat remains linked to the its health status, the crucial determinants of which are the diet, the alcohol consumption and smoking. Further research in this field and implementation of education and action plans are much needed.

The process of integration of Polish agriculture and rural areas with the EU counterparts can be accelerated and its benefits multiplied thanks to social aspects expressed by the quality of human and social capital. A significant inflow of financial

means from both the EU budget and domestic sources can not bring substantial benefits unless a further improvement in the quality and an intensification of the creative role of human and social capital take place.

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