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WHO'S AFRAID OF POPULATION DECLINE? A CRITICAL EXAMINATION OF ITS CONSEQUENCES

David Coleman, Robert Rowthorn
Oxford University

K e y w o r d s: Population decline, ageing, depopulation, population stabilization.

A b s t r a c t

Population decline confronts almost all the countries of Central and Eastern Europe. Total world population may be declining before the end of this century. Despite that, is a neglected topic in demography, its analysis and its consequences overshadowed by the problem of population ageing. This paper shows that population decline is a diverse phenomenon. The process of decline, and its end-product of smaller population size, have different consequences. Modest rates of decline may be manageable and scarcely perceptible. Smaller population size may be irrelevant to most aspects of political, social and economic welfare and beneficial for environment and sustainability. In the future, adaptation to it may in any case become unavoidable.

KTO SIĘ BOI ZMNIEJSZENIA LICZBY LUDNOŚCI? KRYTYCZNE BADANIE KONSEKWENCJI TEGO ZJAWISKA

David Coleman, Robert Rowthorn
Oxford University

S ł o w a k l u c z o w e: spadek liczby ludności, starzenie się, wyludnienie, stabilizacja populacji.

A b s t r a k t

Prawie wszystkie kraje Europy Środkowej i Wschodniej stają wobec problemu zmniejszenia się liczby ich ludności. Również całkowita populacja świata może się zmniejszać przed końcem obecnego stulecia. Stanowi to zaniedbany temat w demografii, a jego analizy i konsekwencje są przysłaniane przez problem starzenia się populacji. W artykule pokazano, że zmniejszenie liczby ludności jest zjawiskiem odmiennym. Proces zmniejszania się i jego wynik w formie mniej liczebnej populacji mają różne konsekwencje. Umiarkowane tempo spadku może być możliwe do kontrolowania i odczuwalne w sposób nieznaczny. Mniejsza liczba ludności może być nieistotna dla większości aspektów sytuacji politycznej, społecznej i ekonomicznej, a korzystna pod względem środowiska i zrównoważonego rozwoju. W przyszłości dostosowanie się do tego może okazać się nieuniknione.

Introduction

Fear of population decline, censuses to warn of it and pro-natalist and other policies to avert it, are almost as old as states themselves (GLASS 1940, TEITELBAUM, WINTER 1985). Rulers and states in the past and present, and stateless tribal societies, found affirmation, strength and protection in population growth and cause for alarm in decline as symptom, and cause, of failure and weakness. Where increases in productivity are difficult or almost unimaginable and where international trade is a zero-sum game, population becomes with land the chief factor of production, its increase to be encouraged by any means including conquest, the prohibition of emigration, and enslavement; its diminution to be avoided at all costs. Mercantilist thinking gave first place to the power and wealth of the state and regarded population as a prime factor, to be increased irrespective of the effect on individual standards of living.

Between the two world Wars, birth rates in many Western European countries, and in the US, fell to below the level of replacement (VAN BAVEL 2001). The prospect of population decline implicit in those rates, formalized into alarming population projections (e.g. CHARLES 1938), prompted several governments to adopt pronatalist policies to avert the 'twilight of parenthoood' and 'race suicide'. The recovery of the birth rate, and the 'baby boom' blew away those fears in most Western countries, at least for a while. Instead the world concerned itself with over-population. But since the end of the 20th century, the demographic, political and business worlds have rediscovered population decline. For the latter, at least, this prospect is unappealing (see LONGMAN 2004). However, in some densely populated countries such as the Netherlands, public opinion has for some time been notably relaxed about the prospect of population decline (ROZENDAL, MOORS 1983). And for some years after the Second World War, the governments of the UK and of the Netherlands encouraged emigration, partly in order to ease domestic overcrowding. Many of the numerous Dutch citizens emigrating from the Netherlands in recent years have cited overcrowding among other the factors that have driven them from their homeland (VAN DALEN, HENKENS 2007).

Until the 1980s, demographic transition theory took for granted that populations emerging from the transition would resume the previous pattern of maintenance of numbers sustained by approximately replacement-level fertility. That assumption was convenient, reasonable but evidence-free (*World Urbanization Prospects*. 2002, DEMENY 1997). Fertility in much of the developed world, except for Central and Eastern Europe, remained resolutely below replacement level from the 1970s onwards, emulated by a growing number of developing countries, reviving the concerns of the 1930s (CHESNAIS 1996).

The era of rapid and sustained population increase was a short one in the broad sweep of human history, as REHER (2007) has pointed out. It dates back for little more than two centuries and is now drawing to a close in the West, with profound political and strategic implications. Before that 'great population spike' (ROSTOW 1998), population decline was a constant preoccupation and a not infrequent experience (GLASS 1973, BIRABEN 2004).

Population decline – the current reality

Today, after the unlooked-for irruption of the baby boom, all its birth rates, with the exception of the United States, New Zealand, Iceland and (almost) France, have returned to below the level required to maintain the population. Without migration, the Western world faces population decline in the short or medium term given current levels of fertility. Many developing countries are likely to follow that example within a few decades. Natural increase remains positive in parts of North-West Europe and, thanks to recent increases in fertility, in the Czech Republic, Poland and Slovakia. Elsewhere, deaths exceed births especially where chronic low birth rates have exhausted positive demographic momentum and turned it negative (Japan – OGAWA et al. 2005, Germany – SCHWARTZ 1998, BIRG 2002). The last generations completely to replace themselves in Western Europe were born in the 1950s (SOBOTKA 2008).

Countries with 'natural decline' in 2008 included Italy, Germany and most countries in Eastern Europe and the Russian Federation, and Japan (Tab. 1). Germany's population fell after 1974 (Federal Republic) and then again from 2005 after a period of immigration-fuelled growth. There, official projections gloomily assume a stagnant total fertility of 1.4, and a decline to 68.7 million by 2050 even with 100,000 net immigrants annually (*Berölkerung Deutschlands...* 2006). Japan's population tipped over the edge into decline in 2006. There, official projections, gloomily assuming a future total fertility of a perpetual 1.26, see the population falling from 127.8 million in 2007 to 95.1 million in 2050, by which time natural decline would have reached 1.16% per year (Government of Japan 2009, tables 1.4, 1.6). In China, Hong Kong, Korea, Taiwan and Singapore, despite very low total fertility, demographic momentum still keeps births ahead of deaths.

Ageing and depopulation through emigration can become institutionalised if movement to attractive destinations is easy (e.g. BRETON et al. 2009). In Ireland emigration became embedded in the culture in the 19th and the first half of the 20th centuries. (KENNEDY 1993, DALY 2006). East of the Elbe, population decline has been accelerated not only by emigration (HAUG 2005) and by low fertility, but also, in the unreformed former republics of the Soviet

Union, by high levels of mortality (DAVANZO 2001, CHAWLA 2007, *National Demographic Strategy*... 2007). In 2008, deaths exceeded births in 14 countries in Europe, and in thirteen, total population was declining after taking migration into account (Tab. 1).

Table 1

Natural and total population change in Europe, 2008 (per 1000 population)

States with increasing population 2008 (first 14)				States with declining population 2008 (all)			
natural increase descending order		total increase descending order		natural decline descending order		total decline descending order	
10.51	Ireland	Ireland	14.59	-0.06	Italy	Croatia	-0.30
6.34	Albania	Switzerland	14.05	-0.27	Lithuania	Estonia	-0.39
4.55	France	Norway	13.10	-0.48	Estonia	Lithuania	-0.51
3.97	Norway	Kosovo	12.80	-0.82	Moldova	**Russia**	-0.74
3.51	UK	Spain	12.03	-1.45	Romania	Romania	-1.39
3.03	Netherlands	Slovenia	10.99	-1.89	Croatia	Hungary	-1.41
2.90	Spain	Czech Republic	8.32	-2.05	Germany	Moldova	-1.45
2.19	Belgium	Belgium	8.22	-2.55	Russian Fed.	Belarus	-1.84
2.00	Switzerland	Sweden	8.00	-2.68	Belarus	Germany	-2.04
1.97	Finland	Italy	7.28	-3.07	Hungary	Latvia	-4.23
1.94	Sweden	United Kingdom	7.21	-3.11	Latvia	Bulgaria	-4.41
1.94	Macedonia	Denmark	7.19	-14.29	Bulgaria	Serbia	-4.57
1.91	Denmark	France	5.75	-4.57	Serbia	Ukraine	-4.96
1.41	Czech Republic	Netherlands	4.95	-5.28	Ukraine		

Note: states below 1 million population excluded. Serbia – total change unknown.
Source: Eurostat Data in Focus 31/2009, Table 1.

The exciting 'decline' in Europe's population, current and projected, of which the media are so fond, arises mostly because of the lumping together of Eastern Europe (including the European former Soviet Union) with all the other regions of Europe (Fig. 1). The most severe decline is projected for Eastern Europe, with more modest declines in the longer term for Western Europe, and growth, not decline, for Northern Europe.

Taking all this together, the expectation for the future of the developed world is a picture of expanding diversity, not a collective descent into oblivion.

These are only projections. Viewed as forecasts, projections are always wrong. What matters is how wrong. For thirty years, birth rates in Western Europe have been relatively stable. According to the Euro-barometer survey of 2006, women in all European countries except Austria want at least two children (TESTA, GRILLI 2006). Postponement or delay in childbearing, universal since the 1970s, deflates annual births and period indices of fertility.

Period birth rates recover when postponement ends. Partly for this reason, birth rates have risen recently in almost all European countries, as in the US

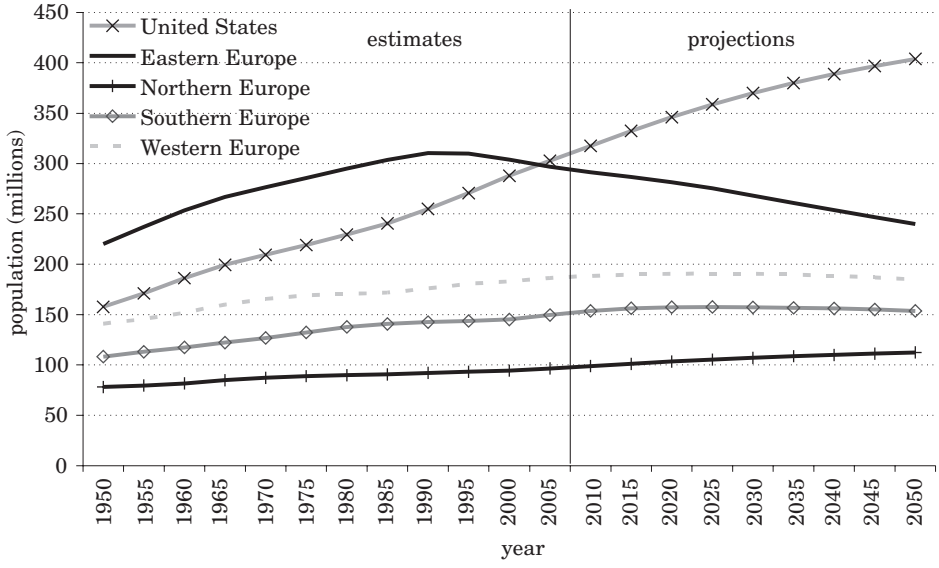

Fig. 1. Population estimates and projections, USA and major European regions, 1950–2050 (millions)
Source: UN 2008 – based medium variant projections.

and Australia (SOBOTKA 2008, MYRSKYLÄ et al. 2009). While in some it is now close to replacement (France 2.02, UK 1.96 in 2008), few demographers believe that fertility will generally return to replacement level (e.g. LESTHAEGHE 1999, FREJKA et al. 2004). Persistence of very low fertility over a long period may socialise new generations into very low expectations for family size; a 'low fertility trap' (Lutz et al. 2006), to be reversed only with the greatest difficulty (*Strong Family and low Fertility*... 2004). UN projections assume that all countries will eventually converge to a TFR of 1.85 (UN, 2009). With constant mortality and no migration, such a fertility rate implies an eventual decline in population of around 0.35% p.a.

Migration, the most important factor now in Western population dynamics, is the most volatile and the most difficult to project (TEITELBAUM 2001). The potential importance of future migration in Western Europe, assuming the continuation of current trends, can be gleaned from Figure 2. the latest projections expect all the countries of Central and Eastern Europe to have smaller populations in 2025 compared with 2010 except the Czech Republic and Slovakia, although the projected decline is less than in earlier projections.

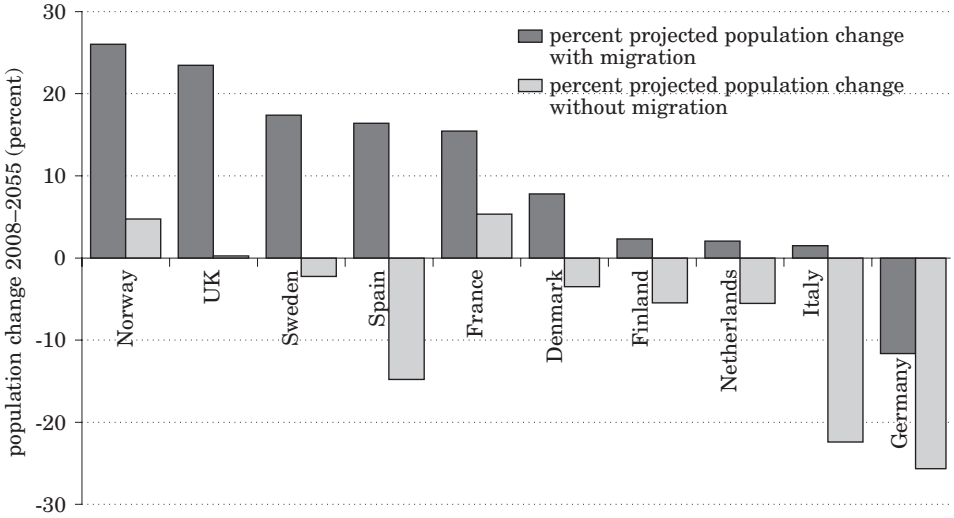

Fig. 2. Population change in selected European contries 2000–2055, percent, with and without migration

Source: Eurostat 2007.

Population decline and population ageing – divergent sisters

Population decline is often treated as a sub-text of population ageing, which has received the greater attention. In some aspects those processes proceed in parallel, in others they diverge. Decline and ageing may share a common cause in low birth rates, but one does not cause the other. Any reduction in birth rates promotes population ageing, even in youthful societies. Decline only follows (excepting the effects of migration) when the birth rate falls below the death rate. Inward migration (in the youthful pattern usually experienced to developed countries) acts similarly upon both, tending to reduce population ageing and decline, and preventing or reversing decline altogether if it is on a large enough scale. A reduction in mortality has opposite effects – tending to increase population, or at least to moderate decline, while (in modern societies) also exacerbating population ageing.

Sub-replacement fertility, continued for many years in the absence of migration, has divergent effects on age structure and on population size. Ignoring migration and mortality, it makes the population older for about two generations before the age-structure comes to rest upon a new, older but stable distribution. Population size follows a different path. That continues downwards at an eventually constant rate. In the medium to long run the effects on age-structure are modest; on population size eventually highly significant, tending towards extinction.

Reasons for fearing population decline

When considering the objections to population decline, and its possible benefits, it is important to make a distinction between the prospect and process of decline, and the fact of having a small population, or a smaller one than hitherto. A distinction must also be made between absolute and relative decline. A relative decline in population may still be a cause of concern if population growth falls behind that of political or economic rivals. Finally, the pace of decline matters. A given reduction in population will have different implications depending on whether it occurs gradually through the course of centuries or is compressed into a few decades.

Economic growth

As labour (equivalent to population) is one of the key inputs to production it is axiomatic that population growth increases total output (GDP) as long as additional workers can be employed. This is illustrated by the American experience. During the twentieth century GDP per capita grew at virtually the same rate in the USA as in Western Europe (2.0% p.a. and 1.9% p.a. respectively)[1]. However, the USA experienced much faster population growth (1.3% as compared to 0.5%) with the result that total GDP also increased much faster. In 1900, the total output of the US economy was 46% of that of Western Europe as a whole. By 2000 the figure was 106%. Conversely, declining population implies slower output growth, unless it is compensated by acceleration in productivity. Confidence in growth in numbers may underpin confidence among investors and inventors that their products and services will be launched onto a growing market that will sustain demand, and that a growing labour force can match demand with the required output. In theory, a larger population size permits greater economies of scale and division of labour, thus improving productivity. Manufactured products with high development costs come within the reach of growing capital markets.

In a closed economy, population decline, or even the end of population growth, pulls the rug from under these advantages and reverses them. It is accompanied by a greater degree of population ageing with all its costs. With given productivity, GDP declines *pro rata* with numbers of people. Economies of scale may diminish. Shrinking markets and a diminished workforce could squeeze profitability – declining domestic demand accompanied later, as the

[1] These data were compiled by Angus Maddison and are available at www.ggdc.net/**maddison**/Historical.../horizontal-file 03-2007.xls.

workforce contracts, by rising wage pressures from an increasingly scarce labour supply. Weaker investment – discouraged by the prospect of declining markets – would mean that plant ages and is less competitive. If cheaper imports replace domestic supply, domestic manufacturing capacity gets hollowed out. The psychology of the market becomes defensive, pessimistic and risk-averse when the cushion of population growth is no longer there, according to JACKSON and HOWE (2008, p. 113).

A falling population base implies higher taxes to maintain existing infrastructure or to fund indivisible new projects. Eventually, the State may have to abandon some of the infrastructure – amalgamating schools and hospitals and restricting repairs. A contracting housing market, and falling public investment in infrastructure, reduces demand for building materials and construction work. If decline were across the board, smaller communities could become unviable.

In a closed economy, declining population thus puts the spotlight on increasing standards of individual productivity and consumption to maintain the level of investment and confidence. Vulnerability to slumps may be higher without the prospect of long-term growth in demand to buoy up confidence. Products with high research and development costs can no longer be contemplated solely from the resources of the national economy. Ireland was a unique example of population decline in Europe from the 1840s to the 1950s, although only a nation-state from 1922. Official reports drew attention to high overhead costs in provision of services, the limited domestic market, the discouragement of risk-taking, the lack of optimism about prospects. (WALSH 1974).

Military security

Other things being equal, big counties have more political and military power than small ones (MCNICOLL 1999, KENNEDY 1988, KAGAN 2003). Population decline *ipso facto* reduces the potential size of armed forces. GDP, smaller than hitherto, can no longer support the domestic development of expensive equipment, which must then be imported at a cost to the balance of payments or foregone. The mechanisation of warfare and the advent of nuclear weapons have not eliminated the importance of the balance of numbers between powers at similar levels of development. A classic example is the failure of French population to grow in the 19th century, following its very early fertility transition. France began the 19th century as Europe's demographic, military and economic superpower. It ended it on a par with the United Kingdom and Germany, to which it lost two provinces in 1871. Near-defeat in the First World War reinforced fears of population decline (see TEITELBAUM, WINTER 1985),

confirmed by the final catastrophe of 1940 among other reverses (SAUVY 1987, Ch. 8). More recently, the power residing in the Kremlin has diminished with the diminution of population, space and economy under its control. After the loss of its satellites in 1989 (total population with the Soviet Union 385 million) and the break-up of the Soviet Union itself in 1991, Russia will face an even further loss of capacity if its population declines as projected from 148 million in 1990 to 116 million by mid-century (BALZER 2005, *World Population Prospects*. 2009). The relative decline of the Western powers projected for the 21st century, compared with the population increases of third world countries, magnified by their economic growth, promises a radical shift in the strategic balance (e.g. JACKSON, HOWE 2008).

Civil political power

Numbers also matter in the peaceful exercise of power. Population determines representation in many international bodies (although not the United Nations), and is correlated with economic power. Representation in the European Commission and the European Parliament is directly related to population, although with a favourable weighting for small countries. G8 membership depends on GDP, closely related to population within today's developed realm. Over a few decades relative rank-orders of population will change, with consequences for economic and political weight in the international order (MCNICOLL 1999), including the rank-order of size in the EU. The UN 2008 – based projections suggest that Germany's population will be eclipsed by that of the UK by 2050, with France not far behind – a development of considerable symbolic power, if nothing else. Smaller countries such as Bulgaria (SUGAREVA et al. 2004) and Hungary fear damaging depopulation. More broadly, the relative and eventual absolute decline of the population of Europe invites an unfavourable strategic outlook compared with the continued rapid growth of the USA (KAGAN 2003), diminishing Europe's importance to the USA as an ally in competition with other, growing global centres of power and wealth.

Is population decline really such a problem?

Population decline, therefore, is seen as bringing some disadvantages to any society.

Rapid decline in countries such as Bulgaria has pathological social and economic causes provoking emigration and low rates of birth and survival

exacerbated by the process of decline itself in a vicious circle. The population declines currently in progress and projected for other countries in Europe are more gentle, buffered by immigration and greater longevity and, recently, some recovery in birth-rates. Germany's decline, projected to mid-century, would take population size back to the level of 1955, in Poland to the level of 1967, in Italy to 1977. None of the dire effects foreseen above were apparent in those populations in their earlier, smaller size.

The rapid decline and ageing in the rural areas of South-Eastern Europe is an extreme acceleration of a normal process. Over more than a century in all developed societies, efficient agriculture has produced more and cheaper food and occupied a much smaller proportion of the workforce (SAVILLE 1957, FESER et al. 2003). As rural populations decline, their numbers may sometimes fall below the critical minimum threshold for maintaining local services (SUTTER, TABAH 1951). But this out-migration liberates a workforce for urban industry, services and specialisation. Not all grieved to leave the often impoverished countryside, or the 'idiocy of rural life'. And in some countries, counter-urbanisation has partly reversed the trend, although not to the agricultural sector (CHAMPION 1989, 2000).

So far we lack much empirical evidence that modern population decline will depress innovation, investment or individual wealth – the process has scarcely begun. Population in all the major West European countries, including the UK, had almost ceased to grow from the 1970s until the 1980s, until the revival of immigration from the mid 1980s. In Germany (Federal Republic) numbers fell slightly from 1973 to 1985. Despite that, German GDP continued to grow substantially, by 26% over the period compared with 29% for 13 countries of Western Europe (UNECE Economic Survey of Europe 1989–90 table A.1). No crisis of business confidence ensued, or was even discussed, or is now. However the mood in Japan is more despondent (CHAPPLE 2004, AKIHIKO 2006, COULMAS 2007). However, economic pessimism about Japanese prospects is not universal. Over the decade 1995–2005 Japanese GDP rose by 11.9% and population by 1.8%. The IMF forecasts that in the following decade, 2005–2015, population will fall slightly by 1.2%, but GDP will rise by a further 10.6% (IMF WEO database).

On closer scrutiny, some of the problems listed above lack substance, or may be advantages. Current recession apart, the practical concern most often voiced is not unemployed resources and unemployment, as feared by KEYNES (1936), but a shortage of labour hampering output, and inflationary wage pressures. Concern about GDP can only be justified if national power, defence and international influence are given a greater weight than individual welfare. Naturally, total GDP tends to expand with total population size, but this has no necessary bearing upon individual welfare. As SAUVY (1969, Ch. 6) pointed out, the 'power optimum' that gives greatest comfort to strategists and to

rulers may be quite different from (usually bigger than) the population size that optimises individual welfare. The interest of the poor might be quite other. Those who sell their labour do better by making themselves scarce, not abundant.

On a global scale, there is no evidence of a positive relationship between population size and GDP per head, or between the growth rates of these variables (Fig. 3, 4). The same is true amongst the industrial countries (not

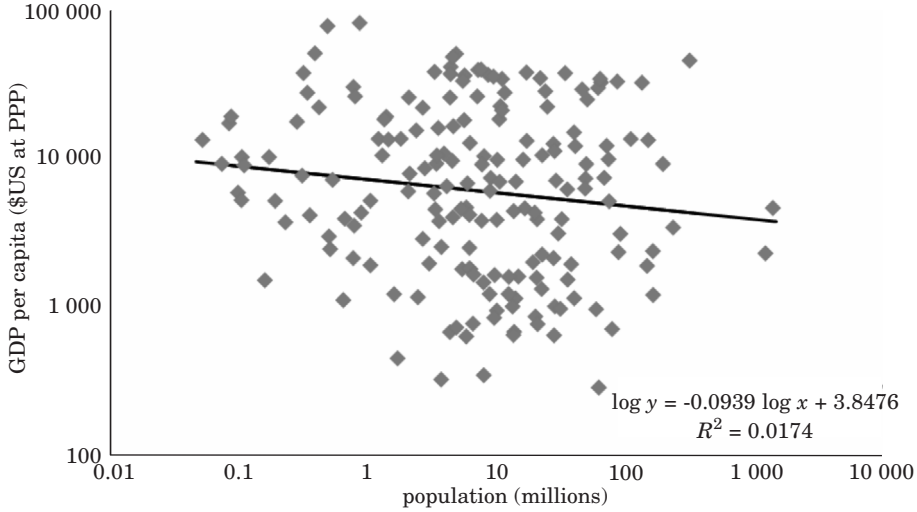

Fig. 3. GDP per capita and population, 180 countries, 2006
Source: IMF, WEO data bases. All countries for which data are available are shown.

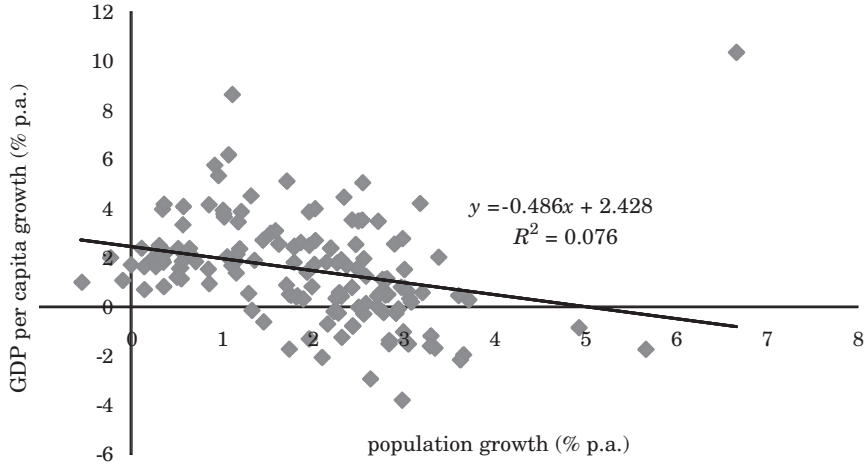

Fig. 4. Growth rates of GDP per capita and population: 147 countries, 1980–2006
Source: IMF, WEO data bases. All countries for which data are available are shown.

shown separately) and also over a much longer time period.. Using data from MADDISON (2007) we computed growth rates over the twentieth century as a whole for a sample of 12 major West European economies, together with Canada, the USA, Australia, New Zealand and Japan. A regression of growth GDP per head on population growth yielded a correlation coefficient equal to -0.12. With Japan excluded the correlation was -0.25. Moreover, small industrial countries are just as rich as large ones. (BARLOW 1994, KELLEY et al. 1995, SHEEHEY 1996, BARRO, SALA-I-MARTIN 2003). Economic growth measured simply as GDP growth, as opposed to increase in GDP per head, has no bearing on individual welfare, as the UK House of Lords (2008) has emphasised in its recent report. A number of European countries have lost territory and (in most cases) the corresponding population over the last century (Austria, the United Kingdom, Germany, Sweden), without adverse consequences for the individual standard of living. While a large domestic market is obviously an advantage, as the US example shows, equivalent advantage may also arise from the adoption of free trade or membership of a trading block such as the European single market. The same principle applies to military and political affairs, where countries too small to have much influence on their own can increase their leverage by joining alliances. However, as the EU and NATO illustrate, alliances can be fraught with problems and can rarely mobilize their combined diplomatic or military resources as effectively as a large centralized state.

Small countries within a peaceful international order can have influence out of proportion to their size, such as the Irish Republic and Iceland (KREBS, LEVY 2001, WEINER, TEITELBAUM 2001, Ch. 3). Their impotence makes them convenient as neutrals. Some smaller states earn part of their living as uncontroversial hosts to international bodies. Small nations, with the same vote as the biggest, are thereby disproportionately influential in the UN General Assembly and are over-represented among EU institutions. For the most part, it would be vain for countries locked into modern low-fertility demographic regimes to seek radically to change their position in the international league table of population size. And to try to do so through mass immigration would risk a serious breakdown of cohesion.

On the question of economies of scale, the significance of this factor depends on the extent to which overseas markets can compensate for the diminution of domestic ones. Free trade makes national-level population decline less important because it increases the proportion of output that is exported. Countries with a small population typically export far more than large countries at the same stage of development. For example, in 2008, total US exports of goods and services were equal to 5.9 thousand dollars per capita. The corresponding figures for Finland and the Netherlands were 24.1 and 44.3

respectively (WTO database). Smaller economies, however, may lack the resources to invest in new highly competitive products requiring expensive research and development. But that can also apply to very large countries – there may only room in the world for two major manufacturers of civil aircraft, and two or three of aero-engines, and a diminishing number of volume car manufacturers, for example.

As regards demand, some earlier worries have lost impact. Consumer demand for ever-cheaper goods appears to be insatiable – contrary to what KEYNES (1936) and REDDAWAY (1939, 1977) – and before them Malthus – had feared. Reddaway's concerns were primarily directed to the economy of a manufacturing nation, not one where services predominated, and seem to have been wrong even then. Superior macro and micro-economic policies have developed in the post-war years, with floating exchange rates, more open international trade, better management of inflation and (in many countries) a less regulated labour market and price mechanism. Consumer demand has been fuelled by the accelerating inventiveness of (ever-cheaper) consumer products promoted by advertising in ways unheard of in earlier times, the outsourcing of manufacturing, and borrowing. The recent economic crisis had nothing to do with population decline but was provoked by high consumption fuelled by excessive debt and failings in the financial sector..

Some claim that declining numbers, or small size, deprive countries of critical mass for research and development, driving specialists abroad. But between the prosperous countries of Western Europe there is no brain-drain from small to larger populations. Scholarship has always been mobile and international, and technical innovations in small countries (e.g. Nokia, and nuclear power, in Finland; advanced jet fighters and other weapons in Sweden) do not support such fears. The related notion advanced by SIMON (1981), that population size and growth is essential because it produces more geniuses, to the general good, seems a priori absurd. The briefest refection upon the intellectual output of 5th century Greece, and of renaissance Florence, with the stagnation that followed, or the relative intellectual sterility of much larger populations then and today, allow us to dismiss it. There is no significant association between population size and the number of Nobel Prizes awarded per million of population (Fig. 5). The smaller populations do better – first in rank is Iceland, the first eight (mostly Nordic) all have populations under ten million except for the United Kingdom.

Downturns in house-building are often regarded as heralds of economic decline, depressing demand for other products and leading to layoffs among building workers (although that could be mitigated if many are immigrants). Falling house-prices erode the asset value for the aged population, on which some in property-owning countries rely for their pensions through equity

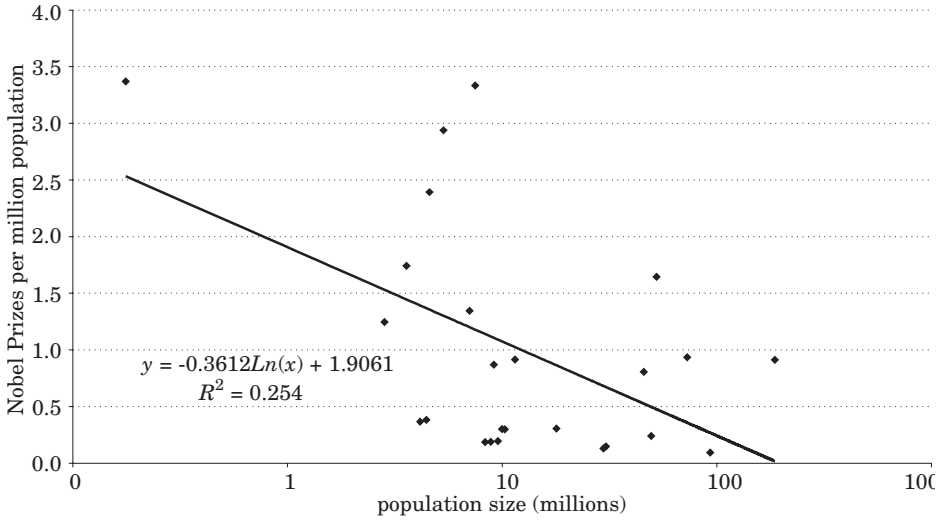

Fig. 5. Distribution of Nobel prizes per head of population, in relation to population size 1900–2002
Note: 25 countries are included, most of which were economically developed by 1900; mostly European plus United States and Japan. All other countries had negligible or zero Nobel Prizes.
Sources: The Nobel Foundation; population data from the United Nations.

release. Would population decline thereby trigger a perpetual slump? In fact, large and damaging fluctuations in house prices and demand have so far had little to do with demographic change, at least in the UK. Their recent instability has been provoked by the growth of highly-geared mortgages and by the use of property as an inflationary hedge in which a huge proportion of private asset value – £3 trillion in the UK, twice GDP – has been buried in unproductive brickwork.

Furthermore, in most countries household growth is far ahead of population growth and will continue after the latter ends, being driven by independent trends which have substantially reduced household size over the last century: divorce, longer survival, a more independent youth. The trend towards smaller household size, however, has already slowed in the US and UK. In the UK, the land element in house prices is very high (40% of the price or more). Those constraints, in turn, follow in part from the pressures on land in a densely-populated island, especially one long addicted to houses rather than to flats. In the UK and elsewhere there has been an irrational tendency to run two inflation systems (national inflation bad, house-price inflation good) leading to inflationary bouts of equity withdrawal. A smaller emphasis on construction in the overall GDP, arising from population stabilisation and

decline might eventually benefit national economies, once household growth had run its course. Economic stimulus cannot depend upon continued population growth that cannot in the end be sustained.

The other side of the argument: the merits of population stabilization and decline

On the economy as a whole, long ago the end of population growth was seen by the Royal Commission on Population (1949) as a relief from the balance of payments problems that have plagued the UK and other countries for most of the 20th century, as competitive advantage in manufacturing was lost. Some imports of food, fuel and raw materials, (in Japan all fossil fuel and most raw materials) are unavoidable. With fixed land area there are limits to sustainable food output; with fewer people self-sufficiency is easier and with it some relief from balance of payment costs. With food cheap on the international market, and wartime threats long forgotten, concern about food security has waned. But this concern is re-emerging as the era of abundant global food surpluses appears to be drawing to an end (ROBERTS 2008), a crisis hastened by global climate change and population increase.

As population diminishes and the stock of capital goods does not, the ratio of capital to population improves and average person should be wealthier. Resources can be directed to improve standards, not to make wider provision for a growing population (REDDAWAY 1939). However the capital stock needs eventually to be renewed and the annual cost of maintaining the complete transport network and other infrastructure may be unchanged, so that with a much smaller population the cost per head would be greater. Once these factors are taken into account, it is less obvious that, over the long run, a much smaller population benefits from inheriting a capital stock designed for its more numerous ancestors. Lower levels of usage in fixed distribution systems of drinking water and sewage disposal, for example arising from population decline and other factors in Eastern Germany, can cause serious technical problems potentially affecting health (HUMMEL, LUX 2007). But in the shorter term, a modest reduction in size would take population back to a more comfortable stage when congestion on the same transport networks was less. In many countries, certainly the UK, infrastructure provision – notably in transport – has lagged badly behind population growth and other factors of demand. London is already under serious water stress as a consequence of rapid population growth, among other factors (*London State...* 2010). To avert temporary crises, a large desalination plant will operate in London from 2010 – an extraordinary expedient seemingly more appropriate to the Gulf States or to Australia

The scarcity of labour in a declining population will inconvenience employers. But there are two important compensations. Employers will be obliged to review the efficiency of their operations and introduce equipment and techniques to increase productivity, substituting capital for labour and creating demand for higher technology products in a more 'knowledge-based 'economy (*Incredible shrinking countries* 2006, LIND 2006). Governments would be obliged to accelerate overdue reforms of retirement age. Much greater efforts would have to be made to mobilise the substantial population of unemployed youth, and the 'underclass', into the workforce. With abundant labour, immigrant or otherwise, this part of the population; unattractive to employers, can be ignored, remaining in its marginalised and often criminalized state. Mobilising this population would improve average income, cut crime and reduce inequality.

Costs of congestion and crowding should decline with smaller population, and journey to work times fall. Traffic could decline *pro rata* with population. With a much smaller population, lower density could increase some journey times, but lower density might have the paradoxical effect of making population more geographically concentrated, as some areas became effectively depopulated and it becomes more efficient to move to inner urban areas (MÜLLER, SIEDENTOP 2004). With fewer people, fewer resources need to be devoted to new dwellings and their associated infrastructure once household formation had also ceased to grow. Housing, much criticised recently in the UK for its cramped plots, could be built at a somewhat lower density as in the earlier 20th century, with gardens free from the threat, or the temptation, of infill. Unsatisfactory housing, especially in peripheral social housing estates requiring apparently perpetual refurbishment, would be demolished and returned to open land. Costs of housing and of land would eventually fall with a stable or declining population. That might encourage family formation, as discussed later.

Environmental aspects of decline

The environmental consequences of lower population density could be considerable, and mostly favourable. Human population growth has been the biggest threat to wildlife (HAMBLER 2004, Ch. 2). Most encroachment on countryside would cease. With a relaxation of pressures, the intensification of agriculture, that makes much of the countryside a wildlife desert, would be relaxed. Some marginal land could revert to wilderness, as in previous eras of population decline (e.g. 6th century and late 14th century Europe). Expensive sea defences protecting low-lying coastal land no longer needed for agriculture

could be abandoned, enabling land to be reclaimed by sea and saltmarsh. In Western Europe, especially the UK, most 'nature' is man-made. The climatic climax vegetation (the stable natural state without human interference) over most of Europe is forest, to which untended land would revert within a century or so, after an unaesthetic interval of scrub. Succession from agriculture back to forest brings a greater richness of species (HAMBLER 2004, Ch. 7), and trees are effective carbon sinks.

Emissions and pollution of all kinds would fall, but only roughly *pro rata* with population size with benefits for human health (COSTELLO et al. 2009). Households are a most important source of emissions, resource consumption and damage to biodiversity (LIU et al. 2003). Household numbers typically increase faster than population and could continue to grow even when population had started to decline. In the UK, for example, in 2007 the domestic sector consumed 28% of all energy generated and was responsible for 26% of UK CO_2 emissions; the single most important source except for transport. Energy consumption in the sector grew 20% from 1970 to 2007, mostly due to growth in the number of households. Projected population growth will prevent the UK from meeting its self-imposed target to reduce emissions by 20% from 1990 levels by 2010 (BOARDMAN 2005), even if nothing else does. The environmental effects of the faster population growth in the US, Canada and Australia (O'CONNOR et al. 2008) are correspondingly more potent, with US oil use projected to increase by 43% by 2025 (MARKHAM, STEINZOR 2006). The projected diminution of Japanese, Russian and eventually Chinese populations must be accounted a blessing as regards emissions, the consumption of hardwood forest products, the protection of whales and other marine species, and mammals used for traditional medicine.

The inevitable end of growth

The final argument is that population growth, and economic growth measured as GDP, must come to an end. Evidence for unavoidable shortage of fresh water in many parts of the world, even more than projections of food shortage, is mounting. Growth in population and economy together are bringing about their own limitation, if forecasts of the climate change that they provoke have any validity. The demographic consequences of climate change are even more difficult to project than climate change itself; uncertainty piled upon uncertainty. The higher latitudes of the Northern hemisphere may be able to support more population than at present. The lookout for some other areas is severe, including many with high population growth in fragile arid lands in the tropics (e.g. BOKO et al. 2007). Projections of climate change,

although controversial and uncertain, have now crept within the range of conventional population projections, although for the most part not incorporated into them. If the populations of the world do not reverse their growth, then negative feedback from our previous activities may force us to do so, in disagreeable ways. But prognoses must be cautious. The sharp declines in population forecast in 'Limits to Growth' (MEADOWS et al. 1972, 1992) devalued later warnings based on better evidence.

Conclusions

Widespread sub-replacement fertility has focused attention on population decline. That is already underway in a number of countries: in Germany, in Poland and many other countries in Central and Eastern Europe, and in Japan. Some think it will become universal. Population decline and population ageing in modern societies share a common cause in low fertility. But one does not cause the other. In recent writing, much more attention has been given to ageing than to decline, unlike the position in the 1930s (GLASS 1936, CHARLES 1938).

The process of population decline inevitably brings problems, although rates of decline might hardly be perceptible to contemporary observers. A smaller stable population, once achieved, could have advantages. Smaller population size might of itself arrest further decline and permit the resumption of growth. The notion of homoeostatic feedback between population size and family building was the foundation of Malthusian population theory (MALTHUS 1802) and its existence is well documented for earlier centuries (e.g. WRIGLEY, SCHOFIELD 1981, LEE 1985, WILSON, AIREY 1999, CLARK 2007). Those processes have been neglected in much recent population thinking. LEE (1987) The advent of population decline suggests that a reconsideration is overdue.

Negative feedback in modern societies may have been underestimated. Populations may have 'overshot' their sustainable or comfortable limits. Inevitably there are lags, protracted by the inertia of culture and tradition, between the beginning of negative effects upon family welfare of larger surviving family size and larger population, and the responses of individuals to it (EHRLICH, KIM 2005). Demographic momentum exacerbates the delay. Fertility at or below replacement level was reached in most Western European countries by the 1930s. But their populations have since increased by between 20% and 80%, partly thanks to the transient baby-boom and to migration but mostly as a consequence of demographic momentum. Density-dependent responses may still be discernible in modern human populations, at provincial level. Recent studies in European countries have shown a negative relationship

between population density and fertility, controlling for the effects of other variables (LUTZ et al. 2002, 2005, KULU et al. 2009). Negative feedback can be important at the national policy level as well, in attempts to manipulate demographic behaviour to avert the dire consequences implicit in the persistence of current demographic behaviour, and thereby to falsify the population projections that herald the bad news. In some counties of the rich world political pressure is growing for an explicit recognition of the need for measures to increase the birth rate, however ideologically unacceptable pronatalist policies may have been regarded in even the recent past. (MCDONALD 2006).

Defining optimum population for modern societies is difficult if not impossible. While it is clear that the process of decline has numerous drawbacks, these are only important if the decline is fast and protracted. Smaller population size, however, has social, economic and environmental advantages. And it may be forced on us, as a requirement for our survival, if the ultimate feedbacks from our growth arising from climate change come to pass (DYSON 2005).

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HIGH LEVEL OF TEMPORARY CONTRACTS OF EMPLOYMENT IN SPANISH LABOUR MARKET: CAUSES AND REMEDIES

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K e y w o r d s: spanish labour market, rate of temporary contracts, efficiency of labour market, segmentation of labour force, employment stability.

A b s t r a c t

The purpose of this paper is to highlight figures of the situation of Spanish labour market regarding the high rate of temporary contracts and reflect on its causes as well as on the legal measures taken to change the situation, drawing some conclusions about the poor results of legal measures implemented for changing this situation during almost two decades.

WYSOKI POZIOM TYMCZASOWYCH UMÓW ZATRUDNIENIA NA HISZPAŃSKIM RYNKU PRACY: PRZYCZYNY I SPOSOBY POPRAWY SYTUACJI

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S ł o w a k l u c z o w e: hiszpański rynek pracy, wskaźnik umów tymczasowych, sprawność rynku pracy, segmentacja siły roboczej, stabilność zatrudnienia.

A b s t r a k t

Celem artykułu jest zwrócenie uwagi na dane z hiszpańskiego rynku pracy dotyczące wysokiego wskaźnika umów czasowych oraz pokazanie przyczyn tego zjawiska. Przedstawiono także środki prawne podejmowane w celu zmiany tej sytuacji oraz sformułowano pewne wnioski dotyczące słabych wyników funkcjonowania środków prawnych wprowadzonych w celu zmiany tej sytuacji w okresie dwóch dziesięcioleci.

Introduction

One constant problem of Spanish labour market is related to the high percentage of temporary workers existing since the mid-1980's when new labour law rules were settled in order to increase employment levels. In fact, it could be said that the high level of temporary contracts existing nowadays in Spain is the result of the policies adopted then for combating another crucial problem of Spanish labour market: the unemployment level.

Whenever this policy helped in the past to reduce the unemployment, it has had non-desired effects which have determined different Spanish Governments to reduce the rate of fixed-term contracts in employment statistics. But this aim has found several difficulties mainly related to the apparition of an employers' culture. According this weak links are prevalent because they are seen more efficient and less troublemaker and the absence of an effective legislation for promoting indefinite contracts of employment and reducing temporary ones.

In order to draw some conclusions, the paper is divided into five parts. The first one is dedicated to put in evidence the excessive presence of temporary contracts in Spanish labour market and its connection with high unemployment levels. Part two tries to analyze key factors that explain high percentage of temporary employment contracts. In the third one it the legal framework of temporary employment contracts is presented. The fourth part deals with the different legal measures taken to reintroduce employment stability. Finally, part five contains the conclusions drawn.

The important presence of temporary employment contracts in Spanish labour market

Spanish labour market shows some significant data which reveals its main problems. Those are related, on one hand, to the constant high percentage of temporary contracts of employment and, on the other, to the level of unemployment.

The high presence of temporary contracts of employment in Spanish labour market has repeatedly been pointed out as one of its main problems[1], despite

[1] That is the case, for example, of the successive Council Recommendations on the implementation of Member States' employment policies laid out in the context of the European Employment Strategy: Council Recommendation of 14 February 2000 (O.J. 25 February 2000, L 52); 19 January 2001 (O.J. 24.1.2001, L 22); 18 February 2002 (O.J. 1.3.2002, L 60); 22 July 2003 (O.J. 5.8.2003, L 197) 14 October 2004 (O.J. 29.10.2004, L 326) or 25 June 2009 (O.J. 15 July 2009, L. 183) where high levels of employment under fixed term contracts is shown as one of the main serious challenges of Spanish employment performance and therefore it is asked to Spain to revise the regulatory

successive measures adopted throughout the years by the Spanish Parliament and different Governments in order to reduce this percentage and the negative effects it has on workers, economical growth, companies running, and social protection system[2].

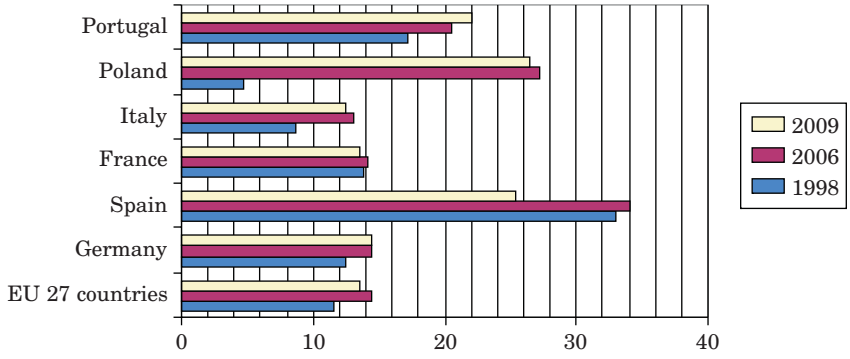

Fig. 1. Employees with a contract of limited duration (annual average) (% of total number of employees)

Source: EUROSTAT

Despite this situation has recently suffered some variations – the percentage of temporary contracts is reduced, according to Eurostat data, from 34% in 2006 to 25.4% in 2009 – it seems not to be due to the policies adopted but mainly because of the economical crisis that started to show its effects in Spanish economy in mid – 2008. In fact, the easiest and cheapest way of

framework to make permanent contracts more attractive for employers and to discourage the use of fixed-term contracts so as to counter the segmentation of the labour market.

[2] Since 1984, several legislative measures have been adopted with this aim with no much success. That is the case, among others, of Ley 22/1992, 30 July, which intended to increase active employment policies for promoting the engagement with indefinite employment contracts of certain collectives with especial problems for entering into the labour market; Ley 63/1997, 26 December, which claimed to strength Spanish capability for creating employment in order to fight against high rate of unemployment (22%), labour precariousness (34% of employment contracts were then temporary) and high rotation in employment contracts; Ley 12/2001, 9 July, which introduces measures directed to given strength the principle of stability in employment adding new limits and additional guarantees in temporary contracts; Ley 43/2006, 29 December, that acknowledges as Spanish's labour market main problems the reduced occupational rate and activity of women, the unemployment rate (still above EU average) the persistence of segmentation between temporary and indefinite contracts and, above all, the high rate of temporary contracts (twice as EU average); or finally Ley 35/2010, 17 September, that points out the relevant proportion of workers with temporary contracts as one of the weakness of Spanish model of industrial relations and therefore aims to promote employment stability by means of reducing the unjustified use of temporary contracts and promote a wider use of indefinite contracts.

reducing the plaintiff and fixing it to the new necessities, when the enterprises – mainly in Construction sector – started to suffer the effects of the current crisis, was to extinguish temporary employment contracts.

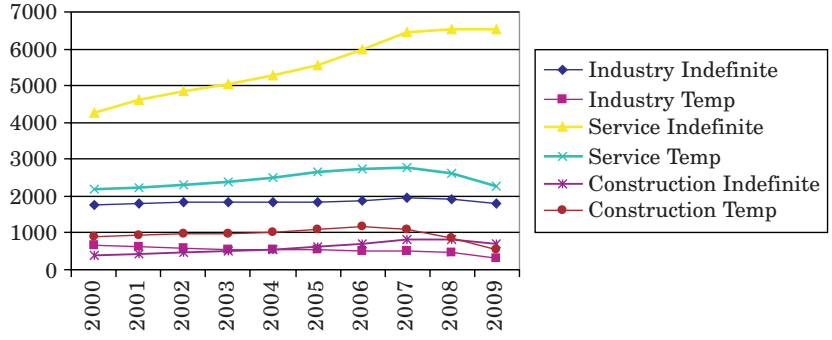

Fig. 2. Number of workers in Construction Sector (in thousands)
Source: Anuario de Estadtsticas del Ministerio de Trabajo e Inmigración

On the other hand, as it regards to unemployment figures, they have traditionally been among the highest within the European Union, except for those years in which Spain was experiencing an important economical and employment growth mainly because of the activity in Construction sector. In any case, even in those years, according to Eurostat data, the Spanish unemployment rate (8.5) was above the average in the European Union (8.2 as far it regards EU 27 countries; 8.4 for Euro Area 16 countries).

Key factors for explaining the high percentage of temporary employment contracts in Spanish labour market

Probably the first factor for the persistent high rate of temporary contracts in the Spanish labour market is related with the impact of Construction and Services sectors in Spanish economy and employment levels[3], as these sectors concentrate the higher levels of temporary work.

However, it is possible to individualize several factors related to the labour market agents that can help to explain the present situation of temporary work in Spain.

[3] According to *Anuario de Estadtsticas del Ministerio de Trabajo e Inmigración*, in 2009 72,38% of global number of workers were employed in Service sector (34,90% of them with temporary contracts); 10,32% in Construction (81,61 with temporary contracts) and 17,30 in Industry sector (17,91 with temporary contracts). Considering global data, in 2009, Service sector represented 72,05% of all workers with temporary contracts; Construction sector 17,84% and 10,11% Industry sector.

The legislative role. The role played by Spanish employment legislation must be highlighted. Despite the general rule that employment contacts are for an indefinite period of time, so that it is necessary some objective factor for a contract of a limited period of time (which is been called *causality principle* in temporary contracts of employment)[4] the legal exceptions to this rule have historically contributed to increase the level of temporary employment. In fact, some exceptions were soon foreseen in such principle, introducing a kind of temporary contract possible even if no objective enterprise's need or factor existed, and whose main goal was to promote employment. But the main attack to the causality principle in employment's contract was introduced in 1984. When the Spanish unemployment situation was dramatic after the economical crisis of the seventies, new labour rules were implemented in order to promote job creation and these rules where based on the idea of rendering easier temporary contracts for enterprises.

The legal option to promote temporary contracts of employment had its results in terms of reducing unemployment, but after some time it revealed its negative effects, that is to say, the segmentation of labour market. Some years after this new legislation was implemented, it could be possible to distinguish between two different groups of workers. On one hand, those with permanent contracts offering certain standards of job protection (normally older workers) and, on the other, those with temporary contracts with almost no restriction on hiring and firing (normally young people) who entered in a rotation cycle of temporary contracts and temporary jobs even if for carrying out permanent activities. Of course great doses of management flexibility among new workers were reached thanks to this legislation, allowing the enterprise to adopt its dimensions in term of employees to the economic and productivity conditions. But it had negative impact on other important aspects as human capital investment (i.e. investment on training) and the consume potential of these workers who were often poorly paid and with not stability in their jobs.

The collective bargaining role. Collective agreements played its role in promoting beyond any reasonability temporary employment contracts when many of them allowed this kind of contacts out of legal limits or using all its potential, contributing in that way to render more precarious these contracts. That was the case, as for example, of the temporary contract related to production needs (*contrato eventual*) in relation with collective agreements used the legal possibility of extending its maximum duration in an abusive way, recognising the possibility of signing temporary contracts with a maximum duration of six years (ESCUDERO RODRÍGUEZ 1997, p. 226, LÓPEZ GANDÍA 1997, p. 42).

[4] Art. 15 *Estatuto de los Trabajadores*.

The attitude of tribunals before the existing abuse in temporary contracts. Spanish tribunals have played their role in the present situation, providing too flexible interpretation of labour law regarding temporary contract. That was the case, as for example, when was considered according to the law the excessive clauses about temporary limits of "*contrato eventual*" settled by collective agreements (ESCUDERO RODRÍGUEZ 1997 p. 238) or the flexible requirements that some collective agreements recognized for the "*contrato de obra o servicio*" (contract for the performance of a specific task or service) admitting the possibility than collective bargaining could regulate new forms of this temporary contract beyond the law requirements[5]; or considering as non permanent activity those who were linked to specific financial support for its realization[6].

Finally, **the employers' attitude**, installed in what has been called "culture of precariousness" not only because of the fluctuant economical cycles and the fear that this brings to the agreement for indefinite contracts (OLLO LURI, GOMARA HERNÁNDEZ 1999, p. 1053), but for multiple factors such as the bigger subordination and dependence of workers with temporary contracts than those with indefinite contracts, the fact that workers with temporary contracts are less likely to join trade unions, or because of easier termination of contract in that case (ESCUDERO RODRÍGUEZ 1997, p. 214).

According to this "culture of precariousness", employers have been taking advantage not only of the legal possibilities of engaging under fixed-term contracts but they have used them beyond the legal framework, using such contracts in circumstances the law doesn't allow them.

Legal framework for temporary contracts in Spanish employment legislation

In Spanish labour legislation there are three main kinds of temporary contracts: a) Temporary causal contracts: contracts directed to attend certain temporary organizational and productive circumstances in the enterprise. These contracts can only be arranged for attending temporary activities. b) Temporary non-causal contracts: contracts directed to promote employment of certain groups of people, so not related with any need of temporary activities. c) Training contracts: contracts directed to enhance certain workers

[5] SSTSJ Cataluna 7 December 2002 (JUR 2003/33175); 25 July 2002 (RJ 2894); STSJ Madrid 28 May 1998 (RJ 5318).

[6] SSTS 10 April 1995 (RJ 3038); 23 April 1996 (RJ 3398); 23 September 1997 (RJ 7296); 7 May 1998 (RJ 4585); 11 November 1998 (RJ 9623); 18 December 1998 (RJ 1999/307); 28 December 1998 (RJ 1999/387), 10 December 1999 (RJ 9729) or 30 April 2001 (RJ 4613).

to enter into the labour market and, at the same time, to give additional training to them.

Within the first category (causal temporary contracts) there are three different contracts: 1º. – Contract for the performance of a specific task or service (*contrato de obra o servicio*) where the term of the contract is the period required for the performance of the work or services to be rendered, provided that the work or services are specific, so that they have a substantial difference with the companies' normal activity. 2º – Contract due to production needs (*contrato eventual*). This contract covers the excess market demand for products or services. This type of contract normally is limited to a maximum duration of 6 months within a 12-month reference period, but collective agreements may modify the maximum duration within certain limits. 3º – Interim contract. This contract covers the situation in which an employee has a right to reserve a job pursuant to any legal provision, collective bargaining agreement, or individual agreement, or where it is necessary to fill a job temporarily during the process of selection or promotion to a permanent position. The duration of an interim contract is the same as that granted to the employee to reserve the job, or that of the selection or promotion process with the general limit in this second case of three months.

Within the second category (non causal temporary contracts) there are two contracts that pretend to promote employment of two different categories of people who show bigger difficulties to get into the labour market: handicapped and, since 2007, people in situation of social exclusion. In both cases the contract has a maximum duration of three years and the enterprise can employ under these contracts even if workers are going to cover permanent activity.

Two different contracts exist as well under the third category of temporary contracts (training contracts) They are, on one hand, apprenticeship contract (*contrato para la formación*) which is basically thought to give an opportunity of employment and learning a profession to young and non qualified people. On the other, work-practice contract (*contrato en prácticas*) which aim is to offer an opportunity of a first employment to people who have "recently" finish their studies[7], so that a practical work can give experience and complement to their theoretical knowledge. In both cases the maximum duration of the contract is of two years, even if collective bargaining can fix a maximum limit of three years (four if the person to be employed has the condition of handicapped) in case of apprenticeship.

What is necessary to underline is that from all these possibilities of temporary work, Spanish employers prefers *contrato de obra o servicio* and

[7] The current regulation requires that the studies have been finished within a period of five years before the contract is to be done, or seven years if the person to be engaged has the condition of handicapped.

contrato eventual. These two contracts represent the vast majority of contacts done even if they belong to the category of causal temporary contracts.

Table 1

Registered temporary contracts by Sector and modality in 2009

Specification	Total	Agriculture	Construction	Industry	Services
Temporary contracts	12 709 423	1 720 631	701 900	1 527 577	8 759 315
Obra o servicio	5 469 156	849 287	277 004	1 259 626	3 083 239
Eventuales	5 465 298	852 896	316 911	245 069	4 050 422
Interim	1 502 009	3 450	70 842	6 351	1 421 366
Work-practice *(prácticas)*	43 289	100	4 454	3 549	35 186
Apprenticeship *(para la formación)*	61 527	247	3 683	6 525	51 072
Handicapped	13 135	101	1 084	684	11 266
Sustitution for retirement at age of 64	2 120	9	316	167	1 628
Replacement *(relevo)*	34 162	105	12 223	2 065	19 769
Partial retirement	36 518	111	13 945	2 096	20 366
Others	82 209	14 325	1 438	1 445	65 001

Source: Anuario de Estadtsticas del Ministerio de Trabajo e Inmigración. 2009.

Measures taken to promote indefinite contracts of employment and reduce temporary ones

As the high rates of temporary contracts have been considered as negative and ineffective for the labour market, many measures have been adopted in order to promote indefinite contracts trying to make them more attractive for employers in comparison to temporary contracts. For doing so Spanish legislation has taken action in both indefinite and temporary contracts.

Measures taken on temporary contracts. Even if not always with the same determination, and sometimes trying to react against the collaterals effects produced by themselves, since 1994 many legal acts have been adopted in order to reach the reinstatement of the *causality principle* and overturn the existing situation with temporary contracts of employment. This various legislation has focused in:

– Reducing the possibility of engagement under non causal temporary contracts by reducing, in several steps, the collectives to be engaged under this contract, so that since 1997 this contract has only been possible with handicapped people, even if in 2007 another collective has been added: people in situation of social exclusion, but only if engaged under certain conditions[8].

[8] This actuation partially explains the increasing number of causal temporary contracts beyond legal provisions and the role displayed by collective agreements making more flexible temporary contracts. ESCUDERO (1997) p. 223, 224 and 241.

– Limiting reductions on social security contributions paid by an employer, in order to promote employment, mainly to indefinite contracts of employment. Nowadays, temporary contracts of employment can benefit of this reductions only if celebrated with certain collectives: handicapped; women with the condition of victims of gender or domestic violence and people in situation of social exclusion.

– Establishing limits to the possibilities of collective bargaining related to the duration of causal temporary contracts.

– Recognising the principle of equal treatment between workers with temporary contracts and those with indefinite ones[9], what supposed to banned certain clauses of collective bargaining less favourable to employees with temporary contracts and not always declared illegal by Spanish employment tribunals[10].

– Making causal temporary contracts (except interim) more expensive by means of rising the cost of its social contributions[11] and fixing an indemnity at the termination of the causal temporary contract[12], even if collective bargains can establish any other quantity.

– Regulating measures in order to prevent abuse arising from the successive fixed-term employment contracts[13]. In that sense, in 2006 appeared a measure[14] trying to avoid the same person to be continuously occupying the same position in the same enterprise by several temporary contracts, appealing to collective bargaining to stop the abuse of temporary contracts with different employees for occupying the same position job. By means of Ley 35/2010 this mechanism has been modified so that now is not relevant if the position job occupied by the worker has been the same or not, and not only in the same enterprise but also in the same group of enterprises[15].

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[9] What became compulsory after Council Directive 1999/70/EC of 28 June 1999 concerning the framework agreement on fixed-term work, which in its clause 4 stands that fixed-term workers shall not be treated in a less favourable manner than comparable permanent workers solely because they have a fixed-term contract or relation unless different treatment is justified on objective grounds.

[10] i.e. STS 31 October 1997 (RJ 7687)

[11] Since Ley 49/1998, 30 December, percentage for calculating employers contribution for unemployment was rose by law from 7.8 to 8.3 (9.3 if part-time) and with Ley 12/2001, 9 July, and increase of 36% in the percentage for calculating contributions for non professional accident or illness was established for temporary contracts with a duration of less of seven days.

[12] This indemnity was equivalent to 8 days of salary per year of service since Law 12/2001 and has been recently, by Lay 35/2010, 17 September, risen to 12 days of salary per year of service (even if this measure is going to be gradually implemented, so that will be effective since 1-1-2015)

[13] Such measure has a strong connection with Council Directive 1999/70/EC of 28 June 1999, which in its clause 1 states that its purpose is to establish a framework to prevent abuse arising from the use of successive fixed-term employment contracts or relationships.

[14] Like previous measure this is only applicable to *contrato de obra* and *contrato eventual* which are, as shown before, those to be much more spread in Spanish labour market.

[15] Whenever a person had been employed under temporary contracts (*obra o servicio* or *eventual*) for 24 months within a period of 30 months in such circumstances, the condition of indefinite contact is going to be recognized.

– A new measure introduced with Law 35/2010 consists of establishing a maximum duration of *contrato de obra o servicio* of three years (collectives agreements can rise this limit till four years)[16].

Measures taken on indefinite contracts. Nevertheless, the actions taken in order to reduce the rate of temporary contracts have reached indefinite ones, so that the willingness of bigger employment stability in Spanish labour market has been pursued not only by trying to render a bit more expensive and less easier temporary contracts, but also trying to introduce more flexibility in indefinite contracts.

It is a constant claim made by Spanish employers and theirs associations that termination of indefinite contracts is expensive, and this is said to be the main reason to prevent employers to engage under indefinite employment contracts. Somehow Spanish labour law has taken notice of this claim and so has implemented some actions in employment protection legislation for permanent workers, in order to make cheaper the termination of indefinite contracts.

Even if Spanish labour law establishes a causal principle for termination of contracts[17], the consequences of a dismissal not founded on a causal basis let us draw a different conclussion. This is because only when dismissal implies violations of fundamental rights or affects workers in certain circumstances (i.e. after applying for a maternity leave) the consequence is that of obligatory reinstatement of worker in his/her job[18]. In all other cases, even if the cause alleged for dismissing is completely false, the employer's decision is going to be qualified as wrongful dismissal (*despido improcedente*) whose effects are:

– Employer's option[19] between either reinstatement or termination of contract with the obligation, in that case, of paying an indemnity calculated on grounds of workers' years of service (45 days of wage for each year of service, with a maximum of 42 months of salary).

– Whatever the employers' option, the obligation of paying salaries relating to the period of legal proceedings as *lucrum cessans* (*salarios de tramitación*).

In case of legitimate dismissal, only when it is based on an objective cause there is the employers' obligation for paying an indemnity (20 days of wage for each year of service, with a maximum of 12 months of salary) which obviously is not to be paid to the employee in case of a disciplinary dismissal.

[16] Whereas this measure is going to help to limit the number of non causal temporary contracts is quite controversial, considering that it could be understood as a legalization of this temporary contracts *(obra o servicio)* even if not for temporary needs of work, a condition its duration doesn't exceed of the legal limits.

[17] According to this principle, only if there is a real cause (subjective – related to workers behaviour and failure to fulfil his/her duties: disciplinary dismissal; or objective – such as, i.e., economical, technical, organizational or productive causes) the contract can be extinguished.

[18] This is the consequence, as well, in case of collective redundancy without following the legal procedure.

[19] This option belongs to the worker only in case of workers' representatives or if otherwise established in collective or individual agreement.

Considering what is said about consequences of dismissal according to Spanish Employment Law, measures adopted for reducing the cost of terminations of indefinite contracts of employment consist of:

– Excluding employers obligation of paying "*salarios de tramitación*" whenever the condition of wrongful dismissal is accepted by the employer within a period not longer than 48 hours after the dismissal and only if the legal indemnity is consigned to the dismissed worker.

– Establishing a new indefinite contract with inferior legal indemnities in case of wrongful dismissal ("*contrato para el fomento de la contratación indefinida*"). In such contracts, if the employer decides an objective dismissal (excluding collective redundancies), the indemnity in case of wrongful dismissal is reduced to 33 days of wage for each year of service, with a maximum of 24 months of salary. This contract, introduced in 1997, is aimed to increase employment level of certain collectives of unemployed people and to promote transformation of temporary contracts into indefinite ones, and since Ley 35/2010 the collectives to be hired using this contract have been broadened.

– Reducing the cost of objective dismissals (including collective redundancies) for indefinite contracts of employment which duration was longer than one year at the moment of their termination. This measure, introduced by Ley 35/2010, allows the employer to recover part of the amount of money paid as indemnity, so that the equivalent of 8 days of wage for each year of service out of the 20 in which the indemnity consist in theses cases, will be refund by the Wages Guarantee Fund (FOGASA).

Conclusions

Despite the fact that all Spanish Governments in almost the last two decades have officially declared their intention of reducing the high rates of temporary contracts, measures adopted have not had great impact on it. When questioning about the main problems for the efficiency of measures trying to reach higher rates of stability several aspects must be mentioned:

1. Some measures have little impact on employers' behaviour related to engagement. In such category measures directed to increase the cost of temporary work can be included. In fact, even if since 2001 there have been two measures of that kind, they do not really contribute to render temporary work much more expensive because, on one hand, the increase of social contributions only affects contracts lasting less than seven days; and, on the other, the indemnity to be paid do not seem to be a real barrier considering the average duration of temporary contacts and that indemnity is calculated on grounds of employment duration of service, so that only if it arrives to one year the employee would have the right for 8 days of salary.

Table 2

Registered temporary contracts by duration and modality in 2009

Specification	Total	Till 1 month	From 1 to 3 months	From 3 to 6 months	From 6 to 12 months	More than 12 months	Non determined
	12 709 423	4 453 274	1 539 184	1 009 906	308 375	94 796	5 303 888
Obra o servicio	5 469 156	577 785	140 998	128 485	119 381	16 676	4 485 831
Eventuales	5 465 298	3 267 229	1 308 238	758 535	130 472	824	–
Interim	1 502 009	573 167	87 235	44 707	9 660	3 077	784 163
Work-practice *(prácticas)*	43 289	–	–	25 556	13 265	4 468	–
Apprenticeship *(para la formación)*	61 527	–	–	45 502	13 614	2 411	–
Handicapped	13 135	–	–	–	12 056	1 079	–
Sustitution for retirement at age of 64	2 120	–	–	–	1 992	128	–
Replacement *(relevo)*	34 162	192	186	340	1 275	32 169	–
Partial retirement	36 518	168	25	56	421	32 752	3 096
Others	82 209	34 733	2 502	6 725	6 239	1 212	30 798

Source: Anuario de Estadtsticas del Ministerio de Trabajo e Inmigración. 2009.

2. Measures related to introduce flexibility in dismissal are not effective due to:

a) Creating a new indefinite contract with a cheaper indemnity in case of wrongful dismissal on objective grounds (33 days per year of service instead of 45) has not help to overturn the situation increasing the rate of indefinite contracts. The possibility – illegal but spread in labour management practice – of putting forward objective cause whereas only subjective cause existed for the dismissal, and the enlargement of collectives with whom it is possible to use the contract, carried out by Ley 35/2010, have not changed the situation of this contract as shown in the following table[20].

b) Termination of contract in case of illegal use of temporary employment contracts has the same effects as if the contract was indefinite, with no other disadvantages. Normally employees irregularly contracted with a temporary contract do not claim for this reason until the employer decides to end once and for all their employment relationship. When that happens (and if the employee can prove that he was contracted temporally out of the cases envisaged by law) termination of contract will be qualified as a wrongful dismissal as if it was an indefinite contract. Administrative sanction (a fine which can be from 626€ till 6250€) to the employer because his abuse of temporary contacts could only exist if an infringement procedure would be open by Labour Inspectorate, but this will require, in cases like the one described here, employee's denunciation.

[20] Ley 35/2010 came into force on September the 19th, but it was preceded by a *Real Decreto Ley* (Real Decreto Ley 10/2010, 16 June) in which enlargement of collectives in case on this contract was already established and came into force on the June the 17th.

Table 3

Evolution of employment contracts by modality in November 2010

Specification		Absolute data month	Variations			
			previous month		interanual*	
			absolute	relative	absolute	relative
Indefinite contracts	Indefinite "ordinary"	50 008	-10 244	-17.00	-382	-0.76
	Fomento de la contratación indefinida (fci)	11 062	-1 332	-10.75	-4 863	-30.54
	Handiccaped (only with benefits on employer's social contributions)	129	-143	-52.57	-34	-20.86
	Handiccaped f.c.i.	551	-54	-8.93	31	5.96
	Converted into indefinite	46 381	1 482	3.30	5 959	14.74
	Indefinite contracts	108 131	-10 291	-8.69	711	0.66
Temporary contracts	*Obra o servicio*	507 551	-60 846	-10.70	25 230	5.23
	Eventual	482 546	-22 470	-4.45	23 712	5.17
	Interim	135 982	3 482	2.63	2 628	1.97
	Handiccaped	1 349	99	7.92	185	15.89
	Subs. Retirement at 64	211	22	11.64	60	39.74
	Total replacement	1 567	1	0.06	-1 264	-44.65
	Partial retirement	2 276	-37	-1.60	-873	-27.72
	Work-practice	4 042	-1 834	-31.21	564	16.22
	Apprenticeship	8 800	3 820	76.71	3 467	65.01
	Other contracts	5 024	-554	-9.93	-968	-16.15
	Temporary contacts	1 149 348	-78 317	-6.38	52 741	4.81
Total registered contracts		1 257 479	-88 608	-6.58	53 452	4.44

* Relative to same month of previous year
Source: Ministerio de Trabajo e Inmigración. Servicio Pxblico de Empleo Estatal.

c) The fact that in Spanish Employment legislation indemnity in case of wrongful dismissal is calculated on grounds of duration of service does not help to increase rate of indefinite contracts, even if Spanish tribunals have stated that in case of continuity of service under different temporary contracts the duration of service must be counted since the contract that started that situation. Ley 35/2010 established the willingness of changing this situation and made the duration of service less important in relation with the indemnity to be paid to the employee in case of wrongful dismissal. Anyway this is a legal option to be developed in future.

3. The different Spanish Governments that have dealt with this matter have been reluctant to implement effective measures to prevent non causal temporary contracts, because of the existing fear of the consequences in terms

of employment levels. One example of this fear can be found in the recent Ley 35/2010. This law has decided to rise the cost of indemnity in case of termination of certain temporary contracts (basically *obra o servicio* and *eventual*) from 8 days of salary till 12 days, per year of service. Yet this compensation of 12 years is going to be reached gradually so that temporary contracts signed till 31-12-2011 will have an indemnity of 8 days; those signed since 1-1-2012 will have an indemnity of 9 days; 10 days for those signed since 1-1-2013; 11 days for those signed since 1-1-2014; and, finally, 12 days per year of service for contracts signed since 1-1-2015. The explicit reason for this progressive implementation of the measure is given in the introduction of Ley 35/2010 where it is said that such a measure must be implemented gradually and progressively because of the – negative – influence it could have on employment creation.

This behaviour based on prudence could explained that even if in the introductions of the different laws dealing with the problem, the will of overturn the situation is proclaimed, the specific measures adopted do not show the same determination. That happened in 1994, when Ley 10/1994 declared its intention to reinstall the causality principle in temporary employment and yet non-causal temporary contracts were not removed (BAYLOS GRAU 1993, p. 3.) and the situation is the same in the last legal measure (Ley 35/2010) that recognises the possibility of a maximum duration of four years for the *contrato de obra*.

Conclusion

The aim of this paper is to highlight the situation of Spanish labour market in relation to the high rates of temporary employment contracts and reflect about its causes and the legal measures taken to overturn the situation, drawing some conclusions on the poor results of legal measures implemented for at least the last two decades in order to change this situation.

The culture of precariousness installed in Spanish entrepreneurs for different reasons; the existing fear for adopting determined policies aimed to reduce abuse in temporal hiring, and dismissal costs calculated on the basis of seniority constitute the main reasons for the failure of attempts to reduce the high rates of temporary employment in the Spanish labour market

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PROFESSIONAL ACTIVATION OF THE UNEMPLOYED OVER 45 YEARS OLD

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K e y w o r d s: unemployment, professional activity, elderly pe ople.

A b s t r a c t

In the article the results of survey carried among 75 people unemployed over 45 years old were presented. The survey shows that these people tend to have rather low qualifications but are trying to increase their competences and to find a proper job. They are also aware of their advantages like: dutifullness, responsibility, experience and life stabilization. But, on the contrary, when we analize the employers' attidute towards these group of pe ople, it occurs to be full of stereotypes basing on a belief that elderly workers are simply worse than the younger ones.

AKTYWIZACJA ZAWODOWA OSÓB BEZROBOTNYCH POWYŻEJ 45 ROKU ŻYCIA

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S ł o w a k l u c z o w e: bezrobocie, aktywność zawodowa, osoby starsze.

A b s t r a k t

W artykule przedstawiono wyniki sondażu diagnostycznego przeprowadzonego wśród 75 osób bezrobotnych powyżej 45 roku życia. Wyniki analizy wskazują, że osoby te z reguły mają niskie kwalifikacje, jednak są aktywne w podnoszeniu kompetencji i poszukiwaniu zatrudnienia. Są także świadome swych atutów: obowiązkowości, odpowiedzialności, doświadczenia i stabilizacji życiowej. W postawach pracodawców przeważają natomiast stereotypy oparte na założeniu, że starsi pracownicy są gorsi od młodszych.

Introduction

The contemporary stage of civilization development is sometimes described as post-modernism with particular characteristics such as common variability, liquidity and lack of permanence (BAUMANN 2007). This results from accelerated outdating of products, states, needs and technologies becoming. Nothing is permanent; what is new will soon be old and everything that is good will soon be replaced by the better. And the word "soon" reflects the nature of the rate of those changes. Everything changes and changes at the same time. Consumerism that is the core of the post-modernism means depreciation of products as of the moment of floating them to the market and satisfying the needs/whims in a way that they should create new needs/ whims (BAUMANN 2006). Change, as the sign of the times applies even to the climate, although it is the unintended consequence of human activities that forces adjustment (coping with) inconsistent weather conditions. That accelerated obsolescence of material, behavioral, organizational, institutional and technological conditions of life and work also cause accelerated obsolescence of employee qualifications and usefulness. This results in the need for continual updating of the professional knowledge and skills as well as obtaining the abilities of acting under the conditions of change. This involves not only the skills in adapting the change but the creativity, the ability to generate change. However, as life shows, human ability to accept changes decreases with the age, and creativity decreases even further. As a consequence, the problem of employment and professional use of the "older" people is becoming increasingly important in the developed countries. In this context the term "older" until recently applying to the people aged fifty plus (50+ programs) currently applies to the people over 45 years of age and it can be expected that the limit of being "older" would soon move to encompass even younger people. At the same time the average life expectancy increases. Longer vocational activity is also expected (proposal of higher retirement age). As a consequence, reconciliation of the accelerated obsolescence of the employee with longer active vocational life is becoming an important issue (KOŁODZIEJCZYK-OLCZAK 2005).

The vocational activity index for people over 45 years is much lower than in case of the younger age groups. Their share in the structure of the unemployed is also higher. The common stereotypes concerning the elder workers that discourage employers from employing people over 45 years of age are among the factors causing those phenomena. Those stereotypes assume that elder people are less flexible, present more claims, get sick more frequently, do not want to get trained, learn foreign languages or get to know new technologies. The concerns among employers are also caused by the legal commitments making it impossible to make an employee in the protected age redundant

(*Rynek*... 2007). The low level of vocation activity among the elder people has many negative consequences for those people as well as consequences for the general public and the economy (Enterprise Europa Network). As a consequence, in all the European Union countries, including Poland programs are initiated and activities are undertaken to retain or restore the abilities of vocational functioning in the market of people over 45 years of age. This is also one of the specific goals of the Human Capital 2007–2013 Operational Program.

This paper contains the results of questionnaire-based survey conducted on the group of 75 persons (including 44 women) aged over 45 years registered as unemployed with the County Labor Office in Ostrołęka. The study aimed at identification of barriers hindering finding employment by those people and identification of their competences, attitudes and expectations related to employment.

Results of studies

Demographic changes in the majority of the European countries including Poland cause that the share of the elder people in the population structure increases while that of the younger people decreases. The forecasts by demographers indicate that by 2020 the number of the people aged 50–64 years will increase by 26% while the number those aged 20–29 years will decrease by 20%. This means that for natural reasons the interest in employing the elder people and problems involved will be increasing. Among the unemployed registered at the County Labor Office in Ostrołęka in 2009 the share of the people aged over 45 years increased from 16,9% in January to 20% in December. Long-term unemployed represented a significant part of that group, which confirms the thesis that with age it is increasingly hard to find a job and falling out of the labor market frequently means staying outside it for a long time. Unemployed aged over 45 years generally possess low level of education, which is confirmed by evaluation of qualifications of the people covered by the survey as 33% of the respondents possessed basic vocational education and 5% elementary education. The respondents represented various vocations; the majority of them (15 persons) before becoming unemployed used to work as sales assistants or office workers (14 persons). The majority of the respondents had the history of employment exceeding 20 years (55%). The group covered was diversified as concerns the duration of unemployment. The largest group (39%) was unemployed for less than 6 months while as many as 35% were unemployed for longer than 24 months and 11% were unemployed from one to two years. The causes of loss of employment by the covered group

could be divided into two groups – objective and subjective factors. The first group includes the factors independent of the employee such as liquidation of the employer, restructuring, liquidation of workstation. The respondents also indicated factors such as dishonesty of the employer, without however indicating the type of it. The subjective factors were dependent on the employee and included loss of the license to work at a given position (e.g. loss of the driving license), violation of employee duties or resignation from work. The women pointed at unequal treatment comparing with the men, which was expressed by, among others, making the woman redundant immediately on return from the child care leave.

According to the respondents, there are many reasons that caused them remaining unemployed. They drew attention, among others, at their shortcomings concerning qualifications and general education, including lack of command of a foreign language limiting the possibilities of working abroad, not satisfying the expectations of the employer, lack of experience in the vocation learned, difficult travel to the place of work, poor ability of moving on the labor market.

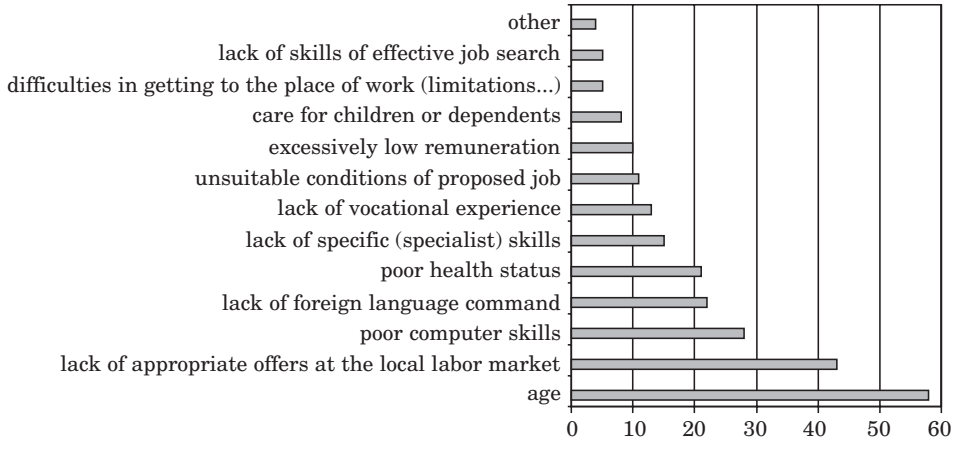

Fig. 1. Factors hindering getting a job according to the respondents

The vast majority of the respondents (58 persons) indicated age as the major factor hindering finding a job (Fig. 1). This is not just a subjective feeling of those people as it is confirmed in the reasons given by employers for refusal of employing those people (Fig. 2).

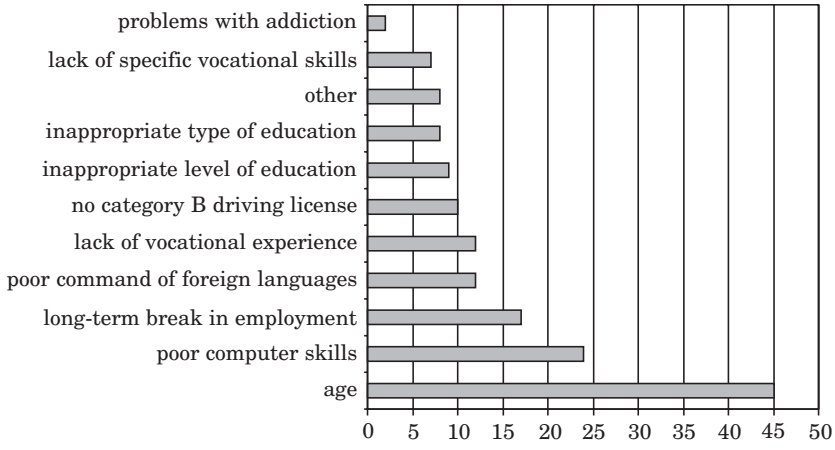

Fig. 2. Arguments for refusal of employment given by the employers

Employers are unwilling to employ long-term unemployed, which confirms the general regularity that the longer you are unemployed the more difficult it is to return to work. Probably for that reason some of the respondents resigned consciously from searching for a job loosing the faith in success of such efforts and expecting generation of income from accidental, unofficial work or various forms of the state aid.

It is characteristic that among the factors hindering finding a job the respondents indicated first the external factors that were independent off them (age, situation in the labor market) and only farther they indicated the factors that they had influence on (qualifications, skills). Some of the factors are of relative nature resulting from the excessive expectations of the employer or the candidate for work, which leads to resignation from the employment offer. That involved offering unfavorable work conditions, excessively low remuneration, requirement of the extended workday as well as on Saturdays and Sundays or poor reputation of the employer.

Lack of the possibility of employing 37% of the respondents at positions using IT equipment is a confirmation of the general opinion, upheld also by the respondents and partly the employers indicating that lack of preparation for use of the IT represents an important obstacle to employment of the people aged over 45 years. At the same time 69% of the respondents expressed the readiness for reskilling or/and acquiring new qualifications listing most frequently operation of computers and fiscal registers.

The respondents did not limit themselves to just following the job offers available at the labor office in their search for employment. All the respondents confirmed that they undertook also other efforts to find a job (Fig. 3).

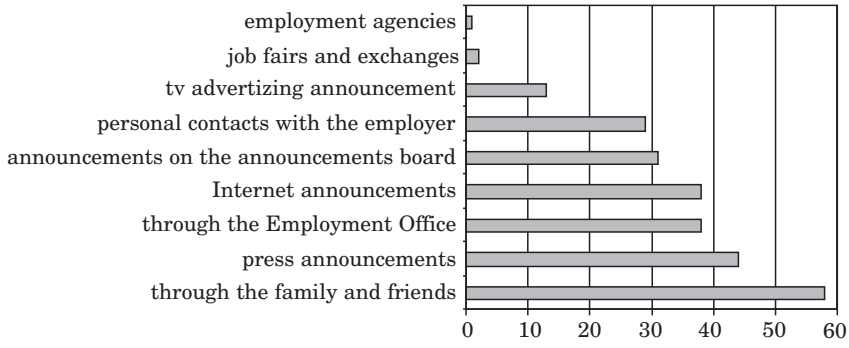

Fig. 3. Methods of searching for a job used by the respondents

The majority of the respondents realized their strengths as compared to the young people and they knew how to use them in their contacts with the potential employers. They classified, among others, long years of vocational experience, responsibility, life stabilization, additional qualifications possessed and flexibility in adjustment to the employment conditions as their strengths. The majority of the respondents (ca. 67%) stated, that they were able to define their vocational goals, move in the labor market as well as write a CV or the motivation letter and prepare for the qualification interview. On the other hand, the remaining persons agreed that they were not prepared appropriately for searching for a job and had problems with, e.g. preparation of application documentation. This could result from the fact that the majority of them used to work for years for the same employer and did not have to deal with the problems involved in changing the place of employment.

In addition to the eventual consent for reskilling the respondents did not project making any major changes in their lives just to get employment. This concerns the decision on change of the place of residence (55% exclude such a possibility), going abroad (38% of negative responses) or taking employment in a location away from the place of residence (34% of negative responses). Lower mobility of the elder persons than the younger person is a natural characteristic and results from social and economic "establishment" increasing with the age. A large proportion of the people, however, does not categorically reject the above possibilities and would make choices in specific situations only. This also applies to setting up own business activity where the same proportion, 30%, of the participants accept and reject that possibility. The determination to find employment is diversified among the participants in the study and dependent on numerous factors, including the family situation. Some of the people, particularly those aged over 55 years, would like to get a calm, light and well-paid job in good atmosphere, near to the place of residence to live

"decently" till retirement while some participants would take any job just fast and without any initial conditions, even seasonal work, even "black" work, just to obtain the possibility of earning any money. Some of the participants, however, resigned even the hope of finding a job.

In the open questionnaire question concerning the strengths of candidates for employment aged over 45 years the respondents most frequently indicated rich vocational and life experience, availability, responsibility, dependability and conscientiousness, skills of logical thinking, hard working, honesty, reasonability, stability and discipline. In their opinions using the above characteristics they can compete with the young employees and employers could use their potential for development of their businesses. Opinions of the respondents concerning that issue are expresses, among others, by the following statements: "... the employee aged over 45 years is active and can work not worse than a younger employee. He/she also possesses work experience and can be active and faithful and honest in performance of the tasks", "... is more reliable, persistent, accurate and he cherishes the job more".

Conclusions

The problem of employment and vocational activity of people aged over 45 years will increase as a consequence of demographic changes and growing population of the elder people as well as the need to employ the potential that those people represent. Currently, on the other hand the increased intensity of eliminating the mature people from the labor market is observed. The negative consequences of that phenomenon are to be prevented by various programs of support for people aged 45+ and popularization of knowledge on the need and for and benefits of employing such people among the employers. The employers should realize that the share of the elder employees, as a result of demographic trends and processes, would increase systematically. The retirement age can be increased by 5 years and as a consequence somebody who currently is 45 years old will become equivalent to the present day 40 years old in the labor market. The results of the study indicate that:

1. The unemployed aged over 45 years are people with rather low qualifications although possessing vast vocational and life experience. Those people, although in their majority active in the labor market, encounter numerous barriers to employment of which the age is the major one. The vast majority of those people express readiness for reskilling or acquiring knew knowledge to return to or gain on attractiveness as employee at the market. The mobility of those people, however, is lower.

2. People aged over 45 years that are unemployed express high readiness to improve their qualifications in the areas in highest demand among the

employers such as knowledge of information technologies and computer skills or command of foreign languages. At the same time they are aware of their strengths resulting from experience, responsibility and reliability as well as life stabilization and others. They are also able to move actively in the labor market.

3. The attitudes of the employers frequently reflect functioning of stereotypes resulting from the assumption that the elder of the candidates for work is worse; as a consequence it is necessary to promote and encourage employers to use objective, non-discriminatory evaluation criteria to candidates for employment. It is also necessary to popularize the knowledge on employees' age structure management.

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NEW INFORMATION AND COMMUNICATION TECHNOLOGIES AS THE FACTOR OF SOCIAL INCLUSION

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K e y w o r d s: new information and communication technologies, social inclusion, e-inclusion, technological determinism, digital divide, IT skills and competences.

A b s t r a c t

The paper presents the opportunities and limitations in using new information and communication technologies as a factor of social inclusion. It consists of three basic parts. The first part presents the actions for development and use of new technologies as factors of economic growth and employment increase undertaken within the frameworks of programs of the European Union and its Member States during the recent years. Use of new information and communication technologies has an increasing role as a factor of economic growth, social development and social inclusion.

The second part of the paper deals with the access to and use of the information and communication technologies in Poland and comparison of the situation in Poland and in other Member States. Here the paper indicates the existing disproportions and threats for the information society.

Part three criticises the technological determinism putting excess stress on technological aspects while underestimating the social aspects.

The examples of good practices from a few selected EU Member States where the use of new information and communication technologies was combined effectively with the measures for social inclusion also support the social approach to the introduction and use of modern information and communication technologies.

NOWE TECHNOLOGIE INFORMACYJNO-KOMUNIKACYJNE JAKO CZYNNIK INKLUZJI SPOŁECZNEJ

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S ł o w a k l u c z o w e: nowe technologie informacyjno-komunikacyjne, inkluzja społeczna, e-inkluzja, determinizm technologiczny, digital divide, umiejętności i kompetencje informatyczne.

Abstrakt

W opracowaniu przedstawiono możliwości i ograniczenia w wykorzystywaniu nowych technologii informacyjno-konunikacyjnych jako czynników inkluzji społecznej. Składa się ono z trzech zasadniczych części. Część pierwsza przedstawia działania na rzecz rozwoju i wykorzystywania nowych technologii jako czynników wzrostu gospodarczego i zwiększania zatrudnienia, podejmowane w programach unijnych i krajów członkowskich w ostatnich latach. Wykorzystywanie nowych technologii informacyjno-komunikacyjnych jako czynnika wzrostu gospodarczego, rozwoju społecznego i inkluzji społecznej odgrywa coraz większą rolę. Część druga opracowania traktuje o dostępności i wykorzystywaniu technologii informacyjno-komunikacyjnych w Polsce i porównaniu sytuacji w Polsce z innymi krajami członkowskimi. Wskazano na występujące dysproporcje i zagrożenia w tworzeniu społeczeństwa informacyjnego. W części trzeciej skrytykowano determinizm technologiczny, w którym kładzie się nadmierny nacisk na aspekty technologiczne z jednoczesnym niedocenianiem aspektów społecznych. Na społeczne podejście do wprowadzania i wykorzystywania nowych technologii informacyjno-komunikacyjnych wskazują również przykłady dobrych praktyk z kilku wybranych krajów UE, w których wykorzystywanie nowych technologii informacyjno-komunikacyjnych łączono skutecznie z działaniami na rzecz inkluzji społecznej.

Introduction

New technologies represent new possibilities and opportunities for better living for the entire societies of the 21st century. At the same time, however, they carry with them threats in the form of the digital divide and digital exclusion. Overcoming those threats is given increasing attention in, among others, programs of information society building and programs of socioeconomic development.

The paper aims at presenting a concise review of actions aiming at combating digital illiteracy undertaken at the level of the European Union and in Poland during the recent years. At the same time it criticises the phenomenon of the technological determinism and indicates the need for wider consideration of the issues of social exclusion.

E-inclusion is both the social necessity and the economic opportunity.

Increased role of the ICT in the process of socioeconomic growth in the EU

The European initiatives supporting economic growth and competitiveness of the European Union in the global scale increasingly often indicate the key role of information and communication technologies (ICT) in the transformation of all the EU countries to the phase of the information society. The European Commission on numerous occasions pointed out that the ICT development level and the availability of the global information resources will increasingly determine the individual and group position as well as the position of individual countries in the international systems.

Numerous initiatives, starting with the report by Martin Bangemann "Europe and the global information Society – Recommendations to the European Council (1994), Report "The information society: from Corfu to Dublin", the European Union Green Paper and many initiatives under the name of eEurope have shown that the issues of the information society have been and still remain one of the major pillars of the widely understood development strategy.

Information and communication technologies have become the key element of the Lisbon Strategy because of their role in the process of economic growth and social development. The sector of ICT hardware and services has been one of the most innovative and productive sectors during the recent years. Increasingly extensive application of technology, according to many analysts, guaranties increase of productivity, effectiveness and competitiveness of regions and enterprises. Modern information and communication technologies increasingly form an integral part of all industrial and service markets (Challenges for the European). The renewed Lisbon Strategy placed also a significant stress on innovation and building the economy based on the knowledge as well as improvement of conditions for operating business and regional conditions of growth and development. Initiating the Partnership for Growth and Employment at the European Council summit in 2005 the knowledge and innovation were considered the drivers of sustainable growth and it was concluded that building the fully integrated information society on the base of the information and communication technologies (ICT) applied widely in public services, small and medium enterprises as well as households was necessary.

A year after revision of the Lisbon Strategy in 2005 that took the form of the European Commission and Member States partnership for economic growth and employment the review of performance of the Sustainable Development Strategy (SDS) was also conducted. As a result, in June 2006, the European Council the Revised European Union Sustainable Development Strategy addressed to the enlarged Community and considering a wider, global dimension of the undertaken challenges was accepted (Ministerstwo Gospodarki).

On the 11th of June 2006, the Ministerial Declaration[1] concerning actions in preventing digital exclusion was taken unanimously at the Ministerial Conference "ICT for an inclusive society" organised by the Austrian Presidency, European Council and European Commission in Riga. It was agreed that information and communication technologies are a powerful driver of development and employment growth.

On the base of the comprehensive analysis of challenges facing the information society and on the base of extensive consultations with the stakeholders on

[1] Ministerial Declaration – 11.06.2006 Riga, Latvia.

the preceding initiatives and instruments[2], the European Commission initiated the five year comprehensive strategy for information society development "i2010 – A European Information Society for growth and employment" and proposed three priorities[3] of the European policy in the field of the information society and media:

i. the completion of a **Single European Information Space** which promotes an open and competitive internal market for information society and media;

ii. strengthening **Innovation and Investment** in ICT research to promote growth and more and better jobs;

iii. achieving an **Inclusive European Information Society** that promotes growth and jobs in a manner that is consistent with sustainable development and that prioritises better public services and quality of life.

To solve the appearing difficulties and meet the current challenges the 10 goals of the Local Agenda for the i2010 program were formulated that should be implemented in all the European countries. Among them the following should be highlighted from the perspective of our considerations:

– full access to on-line services for all citizens of Europe in 2010 and establishing Public Internet Access Points (PIAP's) in every European town;

– awareness and inclusion; each local and regional authority should conduct the campaign to involve the public, the SME's and the local organisations in the joint effort for implementation of the assumed program and help in understanding the social value of the ICT. The importance of appropriate training in use of on-line services and training programs for economically and socially excluded groups should be highlighted here as well as the need for financial support for such groups;

– e-participation – allowing, by means of digital systems, participation in decision taking processes on local issues influencing the work conditions and living standards directly;

– digital solidarity – each local and regional authority should participate in the digital solidarity initiative supported by the UNO for combating the digital divide in the global scale. It was also proposed to establish the global fund for digital solidarity and the digital solidarity agency.

The next long-term program of the European Union countries socioeconomic development, which is a modified continuation of the Lisbon Strategy, is called "Europe 2020 – A Strategy for Smart, Sustainable and

[2] eEurope Initiative and the communication on the future of European audio-visual regulatory policy, COM(2003) 784.

[3] i2010- A European Information Society for growth and employment, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM (2005), Brussels, 1.6.2005.

Inclusive Growth"[4]. Its assumptions, as highlighted by Jose Manuel Barroso, are more jobs and higher standard of living. Instead of a single supreme goal, this Strategy assumes the package of five main qualitative headline targets[5] (determined individually for the individual Member States while considering their specific conditions and abilities). That strategy also employs a new implementation instrument in the form of the so-called flagship initiatives for achievement of the three main, mutually interlinked priorities of the strategy: smart, sustainable and inclusive growth. In each of them the information and communication technologies have an important position.

– Smart growth means increasing the role of knowledge and innovation as the drivers of the future development. The necessity for improving education quality, improvement of research activities results, support of knowledge and innovation transfer in the EU as well as full use of information and communication technologies were highlighted. Innovative ideas should be converted into new products and services that would assure economic growth and creation of new jobs and that would help in solving social problems in Europe and worldwide;

– Sustainable development means building the sustainable and competitive economy making efficient use of the resources, more environment friendly and employing the current technological achievements of Europe;

– Inclusive growth means strengthening the position of the citizens by assuring high levels of employment, investments in qualifications, combating poverty and modernising labour markets, systems of training and social protection to help the people predict the changes and cope with them and to build the coherent society.

Within the frameworks of the three presented priorities, the European Commission presented seven flagship initiatives the implementation of which will allow achievements of the assumed targets of the strategy: – "Innovation Union", – "Youth on the move", – "Digital agenda for Europe", – "Resource efficient Europe", – An industrial policy for the globalisation era, – "An agenda for new skills and jobs", – "European platform against poverty".

Each of the proposed flagship initiatives of the Europe 2020 strategy should consider to a larger or smaller extent the issues related to popularisation and

[4] The new European strategy for employment and economic growth called Europe 2020 was accepted at the EU summit in Brussels on the 17th of June 2010.

[5] Increase of the current employment rate of the population aged 20–64 from the current 69% to at least 75%,

– achievement of 3% GDP investment in the R&D,

– reduction of the greenhouse gases emissions by at least 20% as compared to 1990 or 30% under favourable condition, increase in the share of energy from renewable sources to 20% of the final energy consumption, 20% increase in energy efficiency,

– reduction of school dropout and increase in the share of people aged 30–34 with a degree or a diploma,

– reduction in the number of people living below the poverty line.

availability of information and communication technologies, the issues of digital divide and the methods of using such technologies.

The "Digital agenda for Europe" is the first of the seven flagship initiatives presented in the strategy that got into the implementation stage (Digital agenda for Europe...). "The objective of this Agenda is to chart a course to maximise the social and economic potential of ICT, most notably the internet, a vital medium of economic and societal activity: for doing business, working, playing, communicating and expressing ourselves freely". The ten year period of the Digital agenda for Europe implementation is to contribute to achievement of lasting economic and social benefits from the homogenous digital market based on the fast internet and interoperative applications. The Agenda, similar to the i2010 initiative preceding it, is a strategic document containing around 100 actions of legislative and extra-legislative character in the area of the information society.

Based on the wide consultations, the conclusions contained in the Grenada Declaration[6] and the resolution by the European Parliament, seven problematic areas were identified around which the major actions will be focused.

As Neelie Kroes, Vice-President of the European Commission responsible for the implementation of the Agenda said, "priority in the digital revolution must be given to the interest of the European citizens and entrepreneurs and in that way we must make optimal use of the ICT potential for creating new jobs, sustainable development and social inclusion". Next to the issues such as establishment of the new, uniform market, improvement in development of ICT standards, improvement of confidence and safety, stimulation of pioneer research and innovation in the ICT sector, attention was also focused on the necessity of increasing the access of the Europeans to the fast and very fast internet and equipping all the Europeans with the information skills and access to internet services. Very fast internet is necessary to assure economic growth, creation of jobs and welfare as well as assuring access of the citizens to the contents and services they demand. Only 1 percent of the Europeans have access to the fast fiber-optic connection with the internet while in Japan that share is 12 percent and in South Korea 15 percent.

An increasing volume of daily tasks is performed via the internet, starting from the search for a job and applying for it and ending with paying taxes or booking of tickets. Using information and communication technologies, including the internet, has become an integral part of our daily life. However, around 30 percent of the Europeans have never used the internet although the network offers access to an increasing range of services. Closing the digital gap

[6] The Ministers of telecommunication accepted on 19.4.2010 the "Grenada Declaration" for the purpose of establishing the uniform digital market.

may increase the opportunities of the people from less privileged social groups to participate in the digital society and use such services as e-education, e-administration or e-health. The information competences have been included among the eight key competences of fundamental importance for the people functioning in the knowledge based society (Recommendation of the European Parliament and the Council of 18 December 2006 on key competences for lifelong education). The key competences are those that all the people need for self-fulfilment and personal development, being active as citizen, social integration and employment.

An important place among the designed measures has also been given to the use of modern technologies in services to the elderly (Ambient Assisted Living, AAL). The common EU and Member States program covering, among others, the task of monitoring the health of patients, general access to telemedical services, internet assistance in the field of social services, etc. will open new areas for employing the ICT to serve the most vulnerable members of the society.

Providing public services by electronic means: e-administration is another immensely important field for employing modern technologies. Services of e-administration may decrease the costs, save the citizens, and entrepreneurs, time and help in decreasing the risk of climate change as well as natural and caused by human activities threats as a result of sharing the data and information on the environment. Despite a high level of availability of e-administration services in 2009 only 38% of the EU citizens used internet to access services of e-administration. The European governments committed themselves that by 2015 they would popularise user focused, personalised and multi-platform e-administration services. The current focus of public authorities on the domestic needs is unfavourable for mobility of enterprises and citizens. Europe needs better administrative cooperation for the purpose of development and implementation of crossborder internet based public services.

All pillars of the digital agenda possess the international dimension and that dimension is key to implementation of the planned measures, in particular considering the strategic importance of the internet. According to the Tunis Agenda[7] Europe must play the leading role in supporting internet management in the possibly most open way supportive for the public inclusion.

Analysis of the status of development of the information society in Poland, the rapid increase in importance of information and services provided by

[7] The summit in Tunis (WSIS 2005) accepted two documents: Tunis Commitment and Tunis Agenda for the Information Society. The Agenda committed the governments, international organisations, private sector and civic society to build the information society in which the major role is played by the people, the inclusive society focused on development and free from discrimination.

electronic means and, as a consequence, increasingly wide use of information and communication technologies in the economy, administration and daily life of citizens were the premises for development of the Strategy for development of information society in Poland by 2013 (Strategia rozwoju społeczeństwa informacyjnego do roku 2013. 2008). The vision of the strategy: "Active society achieving high quality of living in the personal and social perspective" and the assumed mission: "Enabling the society to make common and effective use of the knowledge and information for harmonious development in the social, economic and personal dimension" have become the base for determination of the strategic directions for Poland in the field of the information society development. Within the frameworks of three areas: The Man, The Economy, The State the key directions of activities and initiatives the implementation of which is necessary for achievement of the determined strategic goals were identified.

In the first area THE MAN attention was focused, among others, on the necessity of increasing the level of motivation, awareness and skills in the area of using the information and communication technology, the need for adjusting the educational offer to the labour market requirements, inevitability of increasing the level and accessibility of education and popularisation of the principle of lifelong learning thanks to the use of modern technologies and the need for increasing the social, cultural and political activity.

In the area of THE ECONOMY the necessity of improving the effectiveness, innovation and competitiveness of companies and by the same of the Polish economy in the global market and better use of information and communication technologies for facilitating communication and cooperation between companies was pointed at.

In the third area, THE STATE, the importance of availability and effectiveness of public administration services provided by electronic means was highlighted.

The principles of review and development as well as available sources of financing prepared within the frameworks of the Strategy represent an important element for implementation of the assumptions of the Strategy of information society in Poland.

Efficient achievement of the targets assumed in the Strategy requires the diagnosis and appropriate choice of the means of implementation as well as coordinated measures undertaken at various levels. Limitation of digital exclusion through identification and elimination of the existing educational, economic and geographic barriers is necessary.

Availability and use of new information and communication technologies – disproportions and threats

Poland, as the EU Member State, must consider the strategies, guidelines, priorities, initiatives and instruments developed at the EU level in its economic and social policy. In the world of global competition the developing states must follow the changes and starting later than others they must take much effort to close the gaps at an accelerated rate. Experiences of numerous countries show that expenditures on the efficient application and absorption of the information and communication technology products represent the best support to economic and social development.

Let's remember that already in 2002, in the conclusion of the United Nations Development Program (UNDP 2002) „Poland and the Global Information Society" indicates the major threats related to informatization of the country and the attention was brought to the issue of information exclusion of the Polish society as both exclusion from the community of the most developed societies and the increasing digital division within our country.

As of 2001, the World Economic Forum in collaboration with the INSEAD – The Business School for the World prepares the yearly report on the development and modernisation of network infrastructure and use of information and communication technologies in the global world. The main tool of the report is the NRI (Networked Readiness Index)[8]. The NRI is defined as the level of readiness of the country or society for participation and obtaining benefits from the development of information and communication technologies. The NRI for each country is based on several tens of data grouped into three categories:

– legal-economic environment index: market, policy and regulation, infrastructure;

– readiness (skills, knowledge, education) index): individual, business, administration;

– usage index (availability, costs): individual, business, administration.

In March 2010, the latest report (The Global Information Technology Report 2009–2010), was published presenting, among others, the level of the ICT development in Poland as compared to the other countries of the European Union and the world. Considering all the analysed factors Poland with the score of 3.74 ranked 65 among 133 countries covered, which, independent of the opinion on the NRI itself (opinions of analysts are diversified), is not

[8] NRI (Networked Readiness Index) is built as a combination of 68 variables of which 27 are the so-called hard data, coming from, e.g. the International Telecommunication Union, the United Nations Organisation or the World Bank while the remaining 41 are the soft data obtained from expert studies.

a satisfying result. Among the EU-27 countries we ranked the last but one position just ahead of Bulgaria (ranked 71 with the score of 3.66).

In the digital economy ranking of the Economist Intelligence Unit 2010 (EIU) Poland ranked 39 in the group of 70 countries.

The top ten most advanced countries are: Sweden, Denmark, USA, Finland, The Netherlands, Norway, Hong Kong, Singapore, Australia and New Zealand. The bottom of the ranking was occupied by: Ecuador, Nigeria, Vietnam, Sri Lanka, Ukraine, Indonesia, Pakistan, Kazakhstan, Algeria, Iran and Azerbaijan.

The ranking is based on the analysis of one hundred factors aggregated in six categories with different weights expressed as percentages. Those are, e.g. the ease of connections and infrastructure, business environment for the digital technologies, legal and political aspects as well as application in business and by consumers. The ranking introduced first 10 years ago initially focused on the ease of access to the internet and mobile telephony and network coverage. Currently the EIU assumes for the starting point the evaluation of how generally the internet and mobile connections are accessible and tries to evaluate to what extent digital technologies translate into benefits to the economy and social life and what their quality is.

As indicated in the report by the Office of Electronic Communication (UKE)[9] in almost 1/3 of the municipalities in Poland less than 30% of residential units possess access to the internet. Analysis of use of the services showed that the vast majority of municipalities (97.8%) make very limited use of wideband services (links with transfers of ≥ 2Mbit/s). The quality of the links (mainly the data transfer speed) is one of the elements characterising the quality of technology. According to the latest Cisco report (quality of links was surveyed in 72 countries) Poland ranked 30 together with Slovakia while all the other EU countries are ahead of us.

During the first year of implementation of the Strategy for development of information society in Poland by 2013 the Department of Information Society of the Ministry of Interior and Administration drafted the report named The information society in numbers 2009 (Społeczeństwo informacyjne...). The areas of the information society development: The Man, The Economy and The State defined in the Strategy represent the frame of reference for the data and analyses presented in the report. The chapter of the Social diagnosis 2009 by Dominik Batorski titled "Use of information and communication technologies" was also devoted to the diagnose of the information society in Poland and the conditions, methods and consequences of using modern technologies. Let us then have a look at the statistical data that respond to the questions of our

[9] The data comes from over 1500 telecommunication enterprises; http//www.eke.gov.pl

interest: how computerised the households are?; what internet access infrastructure we have?; what are the differences in the access to the internet?; what use of the information and communication technologies we make?; what information skills the residents of Poland possess and in what way we develop our information skills. The answers to those and other questions will allow us illustrating the division lines, disproportions and threats as well as the trends in that field.

During the first half of 2009, over 60% of households possessed a computer and the continual growth, although smaller during the last two years than previously, can indicate gradual saturation of the market. However, not all possessing a computer at home make use of it. As many as 17.3% of the Poles aged over 16 years are people who do not use a computer although they have a computer in their own household. Those are usually the elderly people, people with poorer education, working in agriculture as well as pensioners and retired people. Also, fewer household members use a computer in small towns and in rural areas (BATORSKI 2009).

The wideband internet access rate is considered currently one of the most important indicators of economic development of countries. What then are the possibilities of using information and communication technologies by the Polish society. Although the number of wideband fixed links per 100 residents in Poland is increasing very fast (during the period from January 2008 until January 2009 the penetration index increased from 8.4% to 13.2%) Poland still ranks below the European Union average of 22%. Similarly and fast the percentage of households with internet access increased (from 11% in 2002 to 48% in 2008) but still Poland is lagging behind the average for the 27 Member States, which is 60%.

The largest disproportions in the internet access relate to the income groups. In 2008, in group of households with the income below PLN 1250, as many as 83% did not have access to the internet (studies by the Central Statistical Office (CSO)) while in the group with the income exceeding PLN 2600 there were 20% of such households.

Availability of computers and internet at households is highly diversified depending on the family type. Both a computer and the internet access are much more frequently present in households of couples with children. Presence of the school age children has immense importance for possessing a computer and the internet access (as many as 91% of households with a learning member have a computer and 79% have the internet access). The data indicates what great driving forces for investing in new technologies the school age children and efforts to secure their development are.

Analysis of the CSO data indicates that from 2005 until 2008 the percentage of people who had never had contact with the internet decreased significantly in all the social groups in Poland.

However, the decrease in the group threatened by digital exclusion was not large enough to close the gap. Still more than a half of the people aged 45–54, as many as 72% of those aged 55–64 and over 90% of those aged 65–74 do not use the internet. Similarly high percentages of people who have never used the internet is found in the groups of farmers, unemployed as well as pensioners and retired people.

The statistical data illustrating the situation as concerns the use of modern technologies show clearly that despite many actions aiming at limiting the digital divide in Poland more than a half of the population, and in some groups over three fourths and more do not use modern information and communication technologies. Possessing an internet-connected computer does not mean that the information and communication technologies have been well established in those households and that they are used in an optimal way as compared to the opportunities offered.

In Poland, similar to the other European (and not only) countries the internet serves most frequently communication (42.3%), followed by finding information (32.6%) and complementing the knowledge (27.7%). Participation in on-line training ranks the last (1.5%) and applies mainly to the youngest age groups (3.4% in the 16–24 years age group and 2.6% in the 25–34 years age group).

Possessing an internet-connected computer (the transfer rate is also an important consideration) is just the first step to be able to use the contents and services offered in the net. First, awareness of their existence and second possessing adequate skills of operating the available equipment are necessary. The statistical evaluation of the computer skills of the residents of Poland does not look too well, particularly in the group of the people with the high skills. Compared to the European leaders (Luxembourg, Norway, Iceland, Denmark and Austria) or even the European Union average we rank only third from the bottom of the ranking.

Age and level of education are the main factors differentiating our computer skills. Although the distance separating the residents of Poland from the average European Union level is smaller in case of the internet using skills still at the domestic level those differences are much larger than in case of the computer skills. This is determined mainly by the age, level of education and the place of residence (urban/rural).

To be able to limit the existing divides we must diagnose the factors influencing the level of use of modern information and communication technologies in daily lives. **Lack of the need to use it** is the most frequently declared cause of lack of the internet access at home (in case of **45%** of households) The other causes included mainly the excessively high hardware costs – 29%, excessively high access costs – 26% and lack of skills in case of 23%

of the households. Lack of technical possibilities for connecting to the network was declared by just 8% of the households. In the groups threatened by exclusion the above causes manifested even more clearly.

Another question worth answering is that concerning the level of the internet access at Polish enterprises. The internet is an extremely important business tool used in numerous areas of operation of businesses such as sales, financial settlements, transmission and transfer of information, promotion, advertising, search for suppliers, competition identification, public relations, performance of work from a distance, etc. As concerns the internet access, Polish enterprises have achieved the EU-27 average level with 100% access in case of large enterprises, 99% access in case of medium and 91% in case of small enterprises). Within that seemingly positive image the low level of use of wideband access represents a negative aspect. In 2008, only less than 60% of enterprises had wideband access to the internet, which ranked us 25 among the EU-27 countries. It is worth noticing that the hardware connected to the internet in enterprises serves mainly using the services of internet banking and on-line services of public administration. Much less frequently the net connected hardware available is used for training purposes. In 2008, 57% of enterprises in Poland possessed their own websites and the major function of those websites was to present products and pricelists (43%). Only 6% of the enterprises made on-line purchasing and 4% on-line payment possible.

Perception of benefits they might gain through investing in the ICT is the factor motivating enterprises to implement and use the information and communication technologies. Two thirds of the enterprises that implemented IT projects during the years 2007/2008 saw reorganisation and simplification of routine activities as the major benefits. More than a half of the respondents believed that the ICT implementation gave minor or no benefits at all in the field of releasing the resources, increasing incomes or development of new products or services.

The status of development of the teleinformation infrastructure and the skills of using it among both the citizens and the enterprises represent the base for the effective operation of e-administration. Providing a wide spectrum of electronic services, improvement of their level and by the same increasing satisfaction of the recipients of those services is one of the major tasks of the electronic administration. As of 2007, all administration agencies in Poland use computers and the internet access. However the percentage of those using the services of e-administration does not look excessively optimistic. In 2008 (Stan informatyzacji urzędów... 2009), only 16% of people aged 16-74 conducted official transactions via the internet of which 14% searched for information on public administration websites, 10% downloaded official forms and only 5% uploaded completed forms to the administration agencies. The small percen-

tage of people using e-administration services results probably from the not excessively developed offer. The possibility of conducting the entire range of official transactions by electronic means during the surveyed year was offered by just 7% of administration agencies. Almost all the agencies offered their customers the possibility of obtaining the information on their services from their websites (97.4%), a smaller percentage (80%) the possibility of downloading the forms and only 22% the possibility of uploading the completed forms.

Using a Public Internet Access point (PIAP) is also impossible in many municipalities of Poland because more than a half of such municipalities (56.4%) do not have such a point while in 20% of the municipalities there is only one such point available.

Who then can use and uses e-administration services? Similarly to the computers and internet the on-line contacts with the public administration is used the most frequently by people with tertiary education, professionally active, particularly working on own account and young people living in towns with over 100,000 residents. In those groups the interest in using e-administration services is high and only 5% of the internet users do not plan settlement of official transactions by the internet. E-administration services are not used or used extremely rarely by people with lower education, unemployed, farmers, pensioners and retired people as well as people in the 55–74 years age group and residents in rural areas.

The presented picture of the development and use of modern technologies in numbers shows where the dividing lines are situated and who is threatened by the digital exclusion. As Krzysztof Głomb – President of the Association "Towns on the Internet" said during the 14th Conference "Towns on the Internet" – "This is the sad picture of the Polish internet revolution. Digital illiterates will not develop the Polish knowledge based economy, competitive in the European or global scale. The severe gap in competences characterising the majority of Poles aged over 45 years weakens significantly the dynamics of Polish economy and questions the sense of implementation of numerous initiatives proposed in the government report Poland 2030". The participants of the conference prepared the memorandum under the title that says a lot "Digital Poland of Equal Opportunities"[10], which presents the summary of proposals and recommendations of the community of territorial government activists and territorial government organisations concerning the changes in the development of the information society in Poland.

All the proposed activities have their weight but in the context of the subject considerations I would like to draw attention to the necessity for

[10] Memorandum on the necessity of changes in managing the information society development in Poland – "Digital Poland of Equal Opportunities".

development and implementation of a general program of the digital education of adult Poles called the Digital Poland of Equal Opportunities during the years 2011–2014. Its implementation, as we read in the Memorandum, should unite the efforts of the government, regional and local territorial governments as well as specialised businesses and nongovernment organisations. The communities of digital exclusion the needs of which have been identified in social studies: on one hand the people over 45 years of age, residents in rural areas and small towns, the disabled, women and entrepreneurs and on the other the employees of the public sector, including the decision-makers should be the main target group of that continuous education of adults program. The program should make use of the already existing infrastructure of public access to the internet – the municipal centres, libraries, Voluntary Fire Service units, schools, tele-centres and the PIAPs that for several years have been proposed to fulfil the tasks of proliferating the training activities and popularisation of internet use and use of the global network content similar to the units of that type operating in other countries.

Activities for development of the ICT and e-inclusion

The actions taken so far for the development of the ICT and e-inclusion considered the priorities of the European policy in the field of the information society consequential to the assumptions of the Lisbon Strategy as well as the initiatives eEurope – a information society for all' and its continuation – "i2010 – a European Information Society for Growth and Employment". Analysis and evaluation of the activities undertaken so far as well as the community and subject discussions in the area of our interest have become the base for elaboration of the Strategy for development of information society in Poland by 2013.

Assuring secure and fast access in the section of the "last mile" for households and small enterprises, particularly in rural areas still remains the current problem in the development of mass informatization of the country. Assuring general access to the electronic services and modern information and communication technologies creates new opportunities for the economy and social development. Actions related to the electronic business (e-business), electronic administration (e-government), distance learning (e-learning) and electronic medical services (e-health) are particularly important for the potential economic growth and creating new services. Public administration in its contacts with citizens and business entities will be required to expand the offer of services available by means of the electronic information media (Strategia rozwoju kraju... 2006).

The current practices and successes achieved so far in the information society infrastructure development in the regional aspect, both European and Polish, indicate clearly the need for investment in the areas such as the public internet access points, development of tele-centres and tele-cottages, wideband access, information technology education and promotion of good practices in the field of innovation. Development of internet nets and expanding their active use in business, culture, education and administration is particularly important for poorer developed regions that are lagging in that area more than the metropolitan regions. Closing the gaps in the level of access to and use of the net and the ICT has been one of the major tasks of the regional policy for many years (Projekt Narodowej Strategii Rozwoju Regionalnego na lata 2007–2013. 2005).

The action plan contained in many programs for informatization of Poland assumed that everybody that does not possess access to the internet at work or at home should have the possibility of such access in the near vicinity. That idea formed the base for establishing tele-centres as Public Internet Access Points – PIAP. Involvement of the Member States in such development of the information society infrastructure, particularly in rural areas and in small towns has become one of the targets of the European Union structural policy. It was projected that stimulating the economic development of those areas would contribute to:

– increasing professional activity
– stopping unfavourable migration trends
– diversification of the sources of support of the local population (decreasing unemployment rate by creating alternative jobs outside the sector of agriculture)
– acceleration of agriculture restructuring process
– increasing the level of education
– creating conditions for preventing the "information/digital exclusion and digital illiteracy"

Tele-centre, which is the place for providing and performance of generally available services adjusted to the needs of local communities teleinformatics related needs is one of the public internet access point type. Experiences of many countries show that Tele-centre may successfully fulfil the service, information and education point function. Internet access points may not limit their activities to providing physical access to the computers and network but they must become the centres of competence and increasing their educational role will allow closing the gaps in the levels of skills and needs of the users.

As concerns the Polish initiatives in the field of establishing the Tele-centres we should mention:

– **"Ikonka" Program** – covering establishment of the internet access points in public libraries of all the municipalities in the given voivodship.

– **PIAPs** – according to the principle of sustainable development and active cooperation with residents of many towns and municipalities a decision was taken on construction of a network of the Public Internet Access Points. Within the frameworks of the IROP projects implementation 1021 internet access nodes and 1238 public internet access points have been built.

– **Municipal Information Centres (GCI)** – are units operating in the comprehensive way allowing the local community access to modern information transfer technologies influencing development of local initiatives and promoting enterprises operating in the region.

– **Internet Education Centres (ICK)** – during the years 2007–2009, within the frameworks of three EU programs 693 ICK were established on the base of the Voluntary Fire Service units.

– **Tele centres and tele-cottages** – units established within the frameworks of the Community Initiative Equal "Tele-work as an opportunity in combating inequality and discrimination in the labour market" project implementation.

– **Model project "Culture Information Success** – the **PIAP network in the voivodship"**. Modernisation and construction of public internet access mainly in rural areas and small towns with up to 20.000 residents in the municipalities of the voivodship (municipal tele-centres, county tele-centres, voivodship tele-centres, info-kiosks, automatic information points) was the subject of the project.

From the perspective of the digital education implementation of a number of projects and measures is worth remembering:

– ECDL (European Computer Driving Licence), which is the honest proof and objective measure of actual computer skills accepted in all the European Union countries.

– educational training project n@utobus (Wireless Internet Bus)[11], building technological awareness through development of the internet use skills.

– preparation, under the sponsorship of the Ministry of Interior and administration, of the television program "E-lementarz" (broadcast by the TVP as of April 2007) promoting the idea of the information society, modern technologies and teleinformation solutions as well as their applications in daily life, including also public administration, Police and emergency services.

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[11] Project implemented by the Ministry of Interior and Administration in collaboration with the Economic Education Foundation and the IT sector partners.

– Interkl@sa[12] Program supporting educational processes at schools, in particular in the regions threatened by digital exclusion.

Despite investing almost PLN 2 billion of the European funds in informatization of administration and computerisation of public education, consequent equipping Polish schools with computer laboratories, creating public internet access points in rural communities, incurring immense outlays on informatization of the public sector and numerous educational initiatives, the Poles do not notice the benefits resulting from information systems implementationm (*Polska Cyfrowa*... 2010). The Polish society is digitally stratified. More than 13 million of adult Poles are digital illiterates – the people who, first of all, have no motivation and skills allowing use of the ICT, which is an obvious manifestation of digital exclusion.

From the model of the flame to the model of the clothing – searching for the optimal paths of combining the digital development with the inclusive social development

The search for optimal methods of combining digital development with inclusive social development is not an easy task, which is confirmed by numerous examples and results of experimental studies. Already many years ago it was established that access to the ICT is the necessary condition but in itself insufficient to assure digital integration and achievement of the demanded benefits for the individual as well as the results that might be consequential to it for the society. Informatization understood as a factor of socioeconomic development is a continuous and dynamic process requiring continual monitoring and systematic improvement. Digital exclusion is a much wider problem than just the digital divide. The term "digital divide", today frequently considered inadequate and obsolete (*Analiza wiedeńska*... 2009), was popularised in mid-1990s by the US National Telecommunications and Information Administration. Initially the notion meant division of the society into two opposite groups of which one had access to the modern information technologies (computer, internet) while the other did not have such access. That division was dependent on the income, ethnic origin, age, education, marital status or place of residence. A similar division was also applied in the

[12] Program Interkl@sa was developed in 1998 under the sponsorship of the Parliamentary Commission of Education, Science and Youth. Soon after it was supported by the Ministry of National Education, important nongovernment organisations and many private businesses. The patronage of the program was taken by the Telewizja Polska S.A., Polskie Radio and Gazeta Wyborcza. In cooperation with the Polish-American Freedom Foundation and assistance of Poznań Supercomputer-Net Centre of the Polish Academy of Sciences, Interkl@sa created the first in Poland, non-commercial educational portal www.interklasa.pl.

global scale dividing the countries into those that used the modern information and communication technologies and those that did not have access to such technologies. That binary, black-and-white division into those connected and those not connected to the net represented an immense simplification and frequently lead to the conclusion that the gap can be closed by applying the digital solutions increasing accessibility of the computers and the internet. In this approach, however, the complex context in which the information hardware was to operate was not considered.

The focus on just the technology referred to as the technological determinism assumes that presence of technology in itself will lead to social changes. Christopher Dede from the Harvard's Graduate School of Education called it the **model of the flame**, according to which it was considered that the computer by its sole presence will generate learning and development similar to the flame generating the heat.

Based on such thinking the governments, the private sector, foundations and charities allocated hundreds of millions of dollars to overcome the digital divide understood in that way without paying much attention to the social conditions within which those new technologies were applied. Programs based on good intentions frequently strayed in unexpected directions and ended in real disaster when people tried to solve complex social problems by limiting themselves to supplying the hardware.

Already in 1999, in New Delhi the experiment was initiated in cooperation with the Indian Institute of Information Technologies that involved providing access to the computers and the internet for children from the poorest districts of the city. The program was approved by the organisers as a breakthrough model for providing information to the poor in towns and by the same of crushing the barriers to the information century. After 9 months of that experiment the minimally invasive education proved to be minimally effective education. Excessive focus on the hardware without sufficient attention paid to pedagogics and education schedules gave no effects beyond providing a new and attractive entertainment.

After ten years, in the spring of 2009, two American economists – Ofer Malamud from the University of Chicago and Christian Pop-Eleches from Columbia University analysed the effects of a large Rumanian government project within the frameworks of which the poorest families were allocated € 200 grants for purchase of computers for the household (LESZCZYŃSKI 2010). The program has been in operation for several years and as the surveys conducted in the spring of 2009 the money actually goes to the poorest and the vast majority of them actually spend the grants awarded to them on purchase computers for the household. Hardware manufacturers and distributors that participated in the program were encouraged by the Rumanian ministry of

education to install free educational software. Unfortunately, although the educational software was available free of charge it was used to the minimal extent while in almost all the computers games were installed that became the major attraction substituting for watching the television, doing the homework or traditional reading. Children from the families that won the grants did much better than the others (possessing no computer at home) in the test of general cognitive abilities and the test of computer skills but achieved a clearly worse result in education. In the families where there is no tradition of reading books or spending time on learning the computer that is only a tool becomes a toy.

In small towns of the United States Bill Gates presented computers to libraries believing that access to the internet would stop escape of the population from rural areas. Internet connections improved and diversified the life of the local communities allowing interpersonal contacts at a distance but did not stop the outflow of population in search for a job. Availability of employment and not the internet access was the main factor influencing the behaviours of the local population.

Many more examples of that type can be found. Studies on the digital divide conducted in the USA and many other countries as well as observation of the attempts at reducing that divide and implementation of modern technologies in the developed and developing countries have shown that the **model of the clothing** (Christopher Dede) that provides the heat but is tailored to the individual needs and abilities is a much better model then the model of the flame. Not only the issue of unequal access to the computers but, first of all the use made of them have become the major issue.

The technological determinism was criticised rightly in the communities supporting the absolutely different approach called the social information sciences. Implementation of new technologies should be conducted in a specific context that encompasses the hardware, software, supporting materials, infrastructure, education and also the people in different roles and mutual relations. The technology and the social systems influence one another in a similar way as the biological populations and their environment (Warschauer 2003).

This is undoubtedly confirmed by the examples of new solutions combining elements of infrastructure with local organisational, educational and social solutions in an innovative way. Considering a significant number of the initiatives undertaken in different countries I will limit the presentation to a few selected solutions that were appreciated at the ministerial conference devoted to e-inclusion that took place in Vienna in 2009 (WRIGHT 2009).

As of 1996 until the present time, Estonia within the frameworks of the "Tiger jump" program (referring in its name to the rapid economic growth of

the countries of south-eastern Asia) has equipped all schools with computers and wideband access to the internet. For the purpose of program implementation the government established the foundation with the same name that implements consecutive projects (e.g. "Scientific tiger", "Learning tiger", "Technological tiger", "Robot tiger") related to modern information and communication technologies.

Immense stress in the implemented activities was placed on equipping the pupils, students and teachers with IT skills and competences. As of 2006, within the frameworks of the "Learning tiger" program the focus was on the e-learning, its contents and improving qualifications of the teachers. Implementation of programs is evaluated after completion by the teachers as well as the students and parents. Training within the frameworks of the implemented programs is free and teachers are awarded certificates on completing them. To define the training needs the "Tiger jump" foundation created the educational standards of competences in educational technologies. The teachers most active in e-learning or use of modern methods of education received (free) 4,000 laptops that they may use at school and at home. Aiming at streamlining the didactic process the "School life" portal was established which is the forum for exchange of experiences, gathering didactic materials as well as modifying and complementing them. The teachers training program obtained financial support from the Intel and Microsoft companies. The "Tiger jump" project was positively rated at numerous international conferences and, as practice shows, may be applied in other countries.

The program implemented by a nongovernment organisation in Norway called "Seniornett Norge" is another interesting solution. The initiative continued for 12 years now covers training on use of the ICT and e-inclusion of people aged over 55 years. Every year in the entire country the so-called "Senior surfing day" is organised that aims at encouraging the elderly people to get interested in the use of technology in family life as well as opportunities for obtaining the necessary skills in that field. The network of "Clubs" or training centres where the seniors may start and continue their IT education forms the basic platform of operation. This is supported by both the economic reasons (banking, tax and trade services) as well as the social reasons. To reach hundreds of thousands of the seniors not using the internet it was necessary to focus on training the trainers working in the systematically expanded net of clubs, which gives the effect of the pyramid. In 2008, more than 100,000 seniors over 65 years of age entered the internet for the first time, which is, to a significant extent, the effect of the program. Effective attracting the seniors to participate in the program assumes going through consecutive stages:

1) the motivation stage during which the fears of the seniors have to be overcome and the new opportunities offered for them by the computer and the

internet must be shown presenting at the same time how that technology may improve their quality of living,

2) the education stage during which the specific characteristics of that age group (e.g. simple terminology, readiness to answer all the questions, controlled exercises, patience in correcting mistakes, appropriate distribution of activities over time, etc.) must be considered,

3) the support stage during which the senior has the possibility of using the contacts and help if needed.

There is a high risk that the seniors, after completing the 24-hour course, will lose their skills if they are not using and strengthening them. The idea of the "Clubs" has an advantage in that respect over the traditional training centres because the effect of training is strengthened by the opportunity of practical exercises and obtaining help not only from the trainers (in their majority volunteers) but also other participants and members of the Club. The program is supported financially with government grants and the private sector, including banks, interested in the seniors using their banking e-services. The authors of the idea of the "Clubs" are convinced that they are a good solution, maybe the best in Europe in attracting the seniors to use the ICT and encourage other countries to apply it.

In the majority of countries, libraries play an important role in e-inclusion offering those interested access to the computers and the internet. The city library in Tampere (Finland) in addition to classic task of making available the computers connected to the net and training in the basic computer skills has developed a novelty, so far unknown solution in the form of the "Netti-Nysse", the bus equipped with the necessary hardware that allows those still e-excluded from the city of Tampere and its surroundings acquisition of the skills of using the equipment and the internet in practice. The new media and the new challenges related to them require a new approach. The idea "of putting the net on wheels and driving it to the people" is to assist in the initial contacts with the computer and the internet and in acquiring the basis IT skills. The training process managed by trainers takes place in groups consisting of a few people and allows training participants acquiring the basic knowledge on computers and the internet as well as practical use of that knowledge. This is a new, informal, free and easy way of assisting the people and lowering the obstacle on the path to the information society. The "Netti-Nysse" bus has been in operation since 2000 (in 2005 the old bus "Netti-Nysse I" – The Mother, was replaced by the new "Netti-Nysse II"), it enjoys immense interest and sympathy, particularly among the elderly and those who wish to participate in training must register three months in advance. To use the skills acquired in the bus the residents of Tampers have unrestricted access to over 140 internet access points as well as the opportunities for further training at

the library branches where the so-called "Net Square" was established and where help can always be obtained. The internet bus from Tampere has visited a number of European countries presenting its experiences. The European and domestic prizes and awards are the expressions of appreciation for the creators of the "Netti-Nysse".

Under the motto of creating the digitally and socially inclusive town the City Council of Milton Keynes in the United Kingdom embarked on the initiative aiming at assuring access to the technology for the disabled residents, providing assistance in development of the information skills, increasing employment opportunities and achievement of economic benefits thanks to the connection to the net. The founders of the idea attacked e-exclusion on a number of fronts. They made wideband internet connections available throughout the entire city of 250,000 people, rented hundreds of computers to families in need and not affluent families (for the symbolic fee of £ 1.5 per week), provided training in the computer skills, implemented the e-health application and the avatar (virtual assistant) on the City Council website to facilitate the contact between the residents and the office. As of 2006, development of the network of digital service centres assuring free access to the ICT equipment and training managed by specialised agencies has started. The project implemented in Milton Keynes serves achievement of the targets related to e-inclusion in the innovative, low cost, environment friendly, easily rolled-over and, first of all, suitable to the needs of the residents way.

The wealth of positive actions taken for e-inclusion is confirmed by the list of projects awarded by the European Commission. Already in 2008, out of almost 500 projects presented 35 were awarded in 7 subject categories concerning the youth, the elderly, e-access, digital literacy, cultural diversity, inclusive public services and geographic inclusion[13].

The information and communication technologies, as can be seen from the presented good practices should not exist as external variables implanted from outside for the specific purposes. The technologies should be included in the social system and social processes. From the policy perspective the aim of introducing the technology for the marginalised groups is not just overcoming the technological divide but continuation of the social inclusion process.

The most general conclusions resulting from the considerations presented can be reduced to the following statements.

During the recent years the increased interest in the here discussed problems can be noticed, which is expressed by the diversified program initiatives at the European Union level as well as the level of the individual countries and other entities.

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[13] European Commission: e-Inclusion Ministerial Conference Vienna 30 November – 2 December 2008. Conference Report 2009.

The position of Poland in the international rankings is not satisfactory. The appropriate approach to the here discussed issues expressed by considering hot only the technological aspects (which has taken place to a significant extent so far) but also the social aspects is important. Only then we may aim at social inclusion using the information and communication technologies really effectively.

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TRANSNATIONAL CORPORATIONS AS DOMINATING ENTITIES IN THE CONTEMPORARY GLOBAL ECONOMY

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K e y w o r d s: transnational corporation (TNCs), globalisation, internationalisation strategies.

A b s t r a c t

Transnational corporations (TNCs) achieved domination, in global scale, over the domestic enterprises and sometimes even over the national economies, particularly in the developing countries. The TNC as a relatively new form of enterprise organisation was defined by the UNO during the 1970s. Since then the corporations have been improving their competences and skills effectively pushing the domestic local players out from the markets. They achieve competitive advantage thanks to the effect of scale and adjustment of the marketing-mix to the local customer. The scale of their operations is exemplified by the comparison of revenues from sales of just 10 largest corporations with the GDP of developed countries. In 2005, the top ten TNCs generated revenues amounting to USD 1.9 billion while the GDP of the United Kingdom was USD 2.2 billion and that of Poland USD 0.3 billion USD (World Investment Report 2006).

Corporations induce economic growth in the individual countries while the increasing number of mergers and acquisitions evidences existence of a new direction of changes in the global economy. The global economic slowdown initiated by the American crisis in the real property market in 2007 decreased the value of mergers and acquisitions by 64% in 2009 as compared to 2008. Nevertheless, it should be pointed out that until that time corporations developed greatly while crossborder mergers and acquisitions in 2005 reached the value of USD 462 billion while in 2008 they reached the record of USD 707 billion. The decrease in value of those transactions resulted during the recent times from their decreased number and low valuation of enterprises suffering from crisis.

KORPORACJE TRANSNARODOWE JAKO DOMINUJĄCE PODMIOTY WE WSPÓŁCZESNEJ GOSPODARCE ŚWIATOWEJ

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S ł o w a k l u c z o w e: korporacje transnarodowe, globalizacja, strategie internacjonalizacji.

Abstrakt

Korporacje transnarodowe (KTN) zdominowały w skali globalnej przedsiębiorstwa krajowe, a niejednokrotnie nawet gospodarki narodowe, szczególnie krajów rozwijających się. KTN jako stosunkowo nowa forma organizacji przedsiębiorstwa została zdefiniowana przez ONZ w latach 70. XX w. Od tamtej pory korporacje doskonaliły swoje kompetencje i umiejętności, skutecznie wypierając z rynków krajowych lokalnych graczy. Przewagę konkurencyjną uzyskują dzięki efektowi skali oraz dostosowywaniu marketingu mix do lokalnego odbiorcy. Na skalę ich działalności wskazuje porównanie przychodów ze sprzedaży tylko 10 największych korporacji z PKB rozwiniętych krajów. W 2005 r. pierwsza dziesiątka KTN osiągnęła przychody w wysokości 1,9 bln USD, przy czym PKB Wielkiej Brytanii wyniósł 2,2 bln USD, Polski natomiast 0,3 bln USD (World Investment Report 2006).

Korporacje implikują wzrosty gospodarcze w poszczególnych krajach, a postępująca liczba fuzji i przejęć jest dowodem na istnienie nowego kierunku zmian w światowej gospodarce. Spowolnienie gospodarcze na świecie zapoczątkowane amerykańskim kryzysem na rynku nieruchomości w 2007 r. zmniejszyło wartość fuzji i przejęć o 64% w 2009 r. w porównaniu z rokiem 2008. Należy jednak zaznaczyć, że do tego czasu korporacje świetnie się rozwijały, a transgraniczne fuzje i przejęcia w 2005 r. opiewały na wartość 462 mld USD, natomiast w 2008 r. osiągnęły rekordowe 707 mld USD. Spadek wartości tych operacji wynikał w ostatnim czasie ze zmniejszonej ich liczby oraz niskich wycen przedsiębiorstw dotkniętych kryzysem.

Introduction

Before we start our divagations on the transnational corporations (TNCs) we should first define that term and point out the different approaches to the enterprises development strategy found in the subject literature. One of the pioneers of strategic management, H.I. Ansoff, during the 1950s, defined four forms of enterprise development. Organisations may increase sales of products in the current markets, which Ansoff names market penetration, implement innovative products (product development), expand sales to cover new geographic markets (market development) or diversify the activities. Every enterprise goes through those stages with different intensity aiming at the optimal level of number and types of products and services offered as well as their geographic coverage (ANSOFF 1957, p. 114). Domestic enterprises as well as transnational ones are forced to make the choice of the appropriate development path.

A number of concepts of transnational organisations exist in the literature. ZORSKA (1998, p. 156) explains differences between them. The transnational corporations as different from international, multinational and global enterprises possess the highest competences thanks to which they are able to achieve global coverage of production and focus on local adjustments.

The international strategy requires the lowest outlays. It involves increasing the scale of production and sales within several countries without adjusting the product and the marketing to the local market. More advanced multina-

tional strategy according to which products and services producers focus on the needs of buyers from specific countries offers higher competitiveness in the foreign markets. They adjust goods and services to specific cultures, traditions and economies. Entering every new market requires changing the marketing-mix, which involves the costs of production diversification. Corporations, in a natural way, aim at decreasing the costs. That is why the global strategy represents a solution for some of them. Global enterprises look for advantage in large-scale production of a standard product. They target their offer to the clients with the same needs worldwide. They achieve advantage from production scale and excellent technology securing high quality of the product. Global corporations have a strong bargaining position and sell goods at attractive prices, which is possible thanks to distribution through the largest retail networks in the world. The transnational corporations, however, are the most dangerous competitors in the market. In addition to the fact that they gain on the effects of comparative benefits and costs positioning the operations in a possibly large number of locations, they focus on adjustment to the local market. The risk involved in that strategy, particularly to the domestic entities is maintaining low costs as the global corporation and conquering local niches that could be filled by the domestic producers (ROMANOWSKA 2009, pp. 105–107).

In the discussions on the TNCs we cannot bypass globalisation, which is the determining factor for development of entities of that type. The process means increasing mutual interrelations in the global scales at various, social, political or trade levels. The barriers in the contemporary world are eliminated (MARZĘDA 2007, p. 36). Civilisation and technology progress in the form of modern means of transport, electronic banking, development of *e-commerce*, economic integration within a group of countries (e.g. the EU, MERCOSUR, ASEAN, NAFTA) occurs at a very rapid pace. In the context of integration and standardisation of life worldwide the problem of loss of identity and culture has emerged. During the times of globalisation, maintaining national or local identity is made difficult by the transnational corporations, which spread uniform standards among societies of different countries.

The aim of that paper is to prove the thesis that transnational corporations hold the leading role in the economy. They cover all the continents with their activities causing global consequences for the economy and the society.

Methodology of research

For the purpose of the research scientific publications and periodicals, subject literature as well as the *World Investment Report* – WIR – by the *United*

Nations Conference on Trade and Development – UNCTAD, the United Nations agency surveying transnational corporations and direct foreign investments were used.

All the empirical data used concern the transnational corporations according to the UNCTAD definition, i.e. entities that possess control over factories, mines, sales offices and similar entities in two or more countries. That definition was subject to evolution during the last quarter of the 20th c. and currently it provides that the TNCs because of the organisational, financial and formal-legal aspects consist of the parent company and its affiliates. The parent company domiciled in one country controls foreign affiliates by possessing shares in their equity or the rights of vote at the meetings of shareholders. The simplified definition of a transnational corporation is necessary for identification and systematisation of business entities surveyed by the UNCTAD.

Position of transnational corporations against the background of global economy

The number of such corporations can evidence how important the role of transnational corporations in the global economy is; in 1999 there were just 60.000 TNCs while in 2008 their number already exceeded 80.000 (WIR 2010, p. 17). The dynamic of spreading of that business form results from the global economy development rate. Contemporary global economy is characterised by a different structure than just 50 years ago. The United States, Japan and the European Union (particularly Germany, the United Kingdom and France) are the major players but Brazil, Russia, India and China (the BRIC countries) also play an important role in the international trade. The BRIC countries are no longer classified as emerging markets because they follow the development path with economic growth rates higher than in the other developing countries. The share of those countries in generating the global GDP, the increasing global demand, the purchasing power of the residents and possessing resources in demand among the Western corporations caused that the TNCs are highly visible in the BRIC countries. What is more, based on the example of enterprises from the developed countries, Chinese, Brazilian or Indian corporations that want to compete in the international market have emerged.

The strong position of the transnational corporations in the global market is characterised by their number, volume of sales and geographic coverage of operations. Changes in the number of transnational corporations worldwide are presented in Table 1.

Table 1

Number of parent companies and foreign affiliates worldwide in 1999, 2004 and 2006

Company type	Year			Change in 2006 as compared to 1999 [%]
	1999	2004	2006	
Parent company	59 902	61 582	77 175	28.80
Daughter company	508 239	926 948	773 019	52.10

Source: own work based on the World Investment Report 2001 2006, 2007 (UNCTAD).

The significant increase in the number of both the parent companies and the daughter companies between 1999 and 2006 results from good market standing and the dynamic development of the BRIC countries, particularly China. As of 2002, the stock exchanges worldwide were dominated by the bull, which allowed investments. The situation changed relatively recently, after the crisis initiated in the United States in 2007. That situation translated into the results of enterprises, frequent bankruptcies, increase of unemployment and slowdown of national economies. Decrease in activity of corporations during the recent years is reflected, for example, in the decrease in the number as well as the value of mergers and acquisitions (Fig. 1).

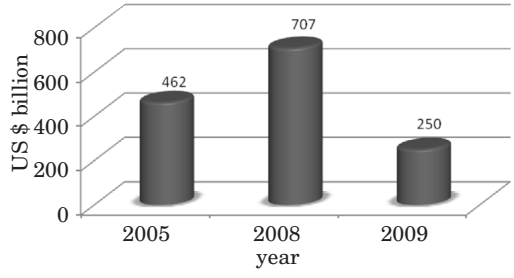

Fig. 1. Cross-border M&A at current prices in billions of dollars globally during the years 2005, 2008, 2009

Source: own work based on the World Investment Report 2010 (UNCTAD).

Mergers and acquisitions represent one of the development strategies for enterprises very willingly employed by transnational corporations. They represent a relatively easy method of entering the target market of another country. The corporation takes over an enterprise from a similar industry and then it can not only enter another country relatively inexpensively but also eliminate a competitor. Cross-order mergers and acquisitions – M&A – may be either of horizontal nature, when the integration takes place in the same industry and

the effect of synergy is achieved, or vertical or conglomerate nature, that is by entering a new type of industry (ALBERCIAK 2002, p. 43).

The record values of transactions were reached between 2000 and 2002 and they were caused by speculations in the internet companies sector. After explosion of the speculative bubble, a significant revival in the M&A market occurred only after 2005. At that time spectacular transactions such as the merger of American Online and Time Warner into the largest in the world media company took place. The value of that transaction was USD 94 billion. In 2007, the British investor RFC Holdings BV acquired the Dutch ABN-AMBRO Holding NV for USD 98.2 billion.

The global financial crisis or 2007 caused by the collapse in the American real property market and later collapse of the market in many industries caused that the global value of mergers and acquisitions in 2009 decreased as compared to 2008 by 64.7% (WIR 2010, p. 16). Decreasing prices of stocks in many cases were not sufficient as the incentive for acquisition and resulted in bankruptcies of many global giants such as, for instance, the automotive corporations in the United States of the largest banks such as Lehman Brothers, which used uncontrolled mechanisms of financial leverage. After collapse of that largest investment bank in 2007 the value of the New York Stock Exchange listed companies decreased by USD 400 billion.

Poor economic situation of the recent years had a negative impact on the standing of most of the global economy players. The majority of countries recorded a decrease in the gross domestic product and an increase of unemployment and that, in many cases, resulted in the public finance crisis, for example in Greece, Ireland or Spain in 2010. However, the transnational corporations as the group of the strongest enterprises has for many years been the leader in the volumes of generated revenues or assets.

Comparison of the revenues of just the 10 largest non-financial corporations in the world from over 77 000 of the transnational corporations existing in 2005 with the GDP generated by selected countries at that time indicates the importance of those organisations. Figure 2 presents the relations between the revenues of the largest TNCs and the richest countries as well as Poland.

The volume of revenues generated by the 10 leading non-financial TNCs during the years 2001–2005 was just slightly lower than the GDP generated at that time by the United Kingdom. The difference between those two values in 2005 was just ca. USD 300 billion that is close to the nominal GDP of Poland during that year. In 2005, Japan generated ca. USD 4.5 billion, which exceeded the revenues from sales of the analysed enterprises more than twice. It should be stressed once more that the value of revenues covers the largest corporations only. In 2005, that meant mainly corporations from the United States and the United Kingdom (Tab. 2).

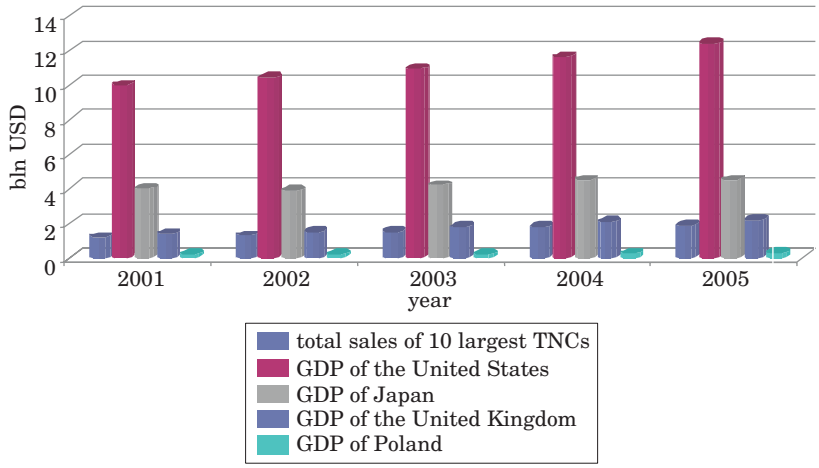

Fig. 2. The GDP of selected countries and total volume of sales of the 10 largest transnational corporations as concerns the foreign assets during the years 2001–2005
Source: own work based on the World Investment Report 2003–2007 (UNCTAD).

Table 2
10 largest non-financial transnational corporations worldwide as concerns the volume of foreign assets in 2005

Rank	Corporation	Country of origin	Industry
1	General Electric	United States	Electronics
2	Vodafone	United Kingdom	Telecommunication
3	General Motors	United States	Automotive
4	BP	United Kingdom	Fuels
5	Royal Dutch/Shell Group	United Kingdom/Netherlands	Fuels
6	ExxonMobil Corporation	United States	Fuels
7	Toyota Motor Corporation	Japan	Automotive
8	Ford Motor Company	United States	Automotive
9	Total	France	Fuels
10	Electricite de France	France	Electricity / gas

Source: World Investment Report 2007 (UNCTAD).

The latest UNCTAD report of 2010 indicates that the composition of the top ten corporations has not changed significantly. In 2008, General Electric still dominated while Ford recorded a significant degradation ranking 16 among top 100 corporations (WIR 2010). General Electric has maintained the global leader position for a number of years. The corporation consists of the NBC Universal (media and entertainment), GE Money (banking for retail customers), GE Industrial (industrial products), GE Healthcare (pharmacy,

medical services), GE Infrastructure (infrastructural technologies and financing them) and GE Commercial Finance (banking for business clients). The number of business sectors in which that corporation specializes is surprising. Those business sectors of the General Electric Corporation do not generate equal revenues (Fig. 3).

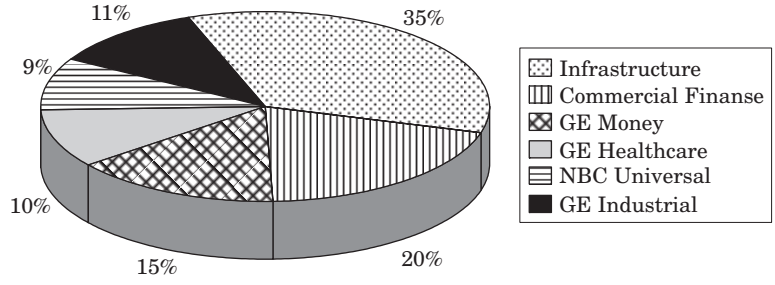

Fig. 3. Share of the *General Electric* corporation segments in generating its total revenues in 2007
Source: own work based on the GE Annual Report 2007.

By consumers General Electric Corporation is associated mainly with the brand of electric products. They are manufactured by the GE Industrial company, which, nevertheless, has not generated the largest share in the revenues of the Corporation (11% in 2007). The vast majority of revenues were generated by GE Infrastructure, which deals with production and development of modern technologies in aviation engines, power sector, oil and gas industry, rail transport systems and water processing technologies.

Economic and social aspects of activities of transnational corporations

The best visible effect of the TNCs expansion is the increase in the value of capital flows. In the literature they are most frequently defined as all movements of capital across the border recorded in the balance of payments and made by the households, enterprises, commercial banks, local authorities and central banks (GÓRNIEWICZ 2007, p. 68). This works covers only the capital movements performed by enterprises for which the drive to maximise the profit was the motivation. This includes the Direct Foreign Investments (DFI) and portfolio investments. The key difference is the involvement of the investing enterprise in the economic activity in the country in which the capital has been placed. Portfolio investments do not involve the investor directly while the direct foreign investments are the consequence of decisions aiming at

conducting business activity in the host country. Portfolio investments are mainly limited to purchase of securities issued by the State or enterprises, including long- and short-term debt securities, stocks and shares by the investor. The United States, United Kingdom, Japan, Luxembourg, Germany, France, Italy and the Netherlands are the countries that are the major importers and exporters of portfolio investments (ZORSKA 1998, p. 27). The direct foreign investments made in the form of green field or brown field investments play a much more important role. The first group apply to creating a new enterprise from zero while the later ones represent investments in already existing business entity in the host country. Similar to mergers and acquisitions they represent enterprise development strategies (ROMANOWSKA 2009, p. 154) that are most frequently employed by corporations.

Analysis of historical data allowed identification of countries that attracted the most capital in the form of the direct foreign investments in 2007 (Fig. 4).

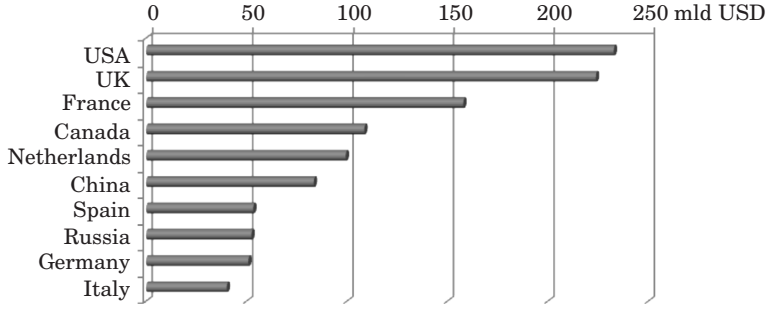

Fig. 4. Volume of the Direct Foreign Investments inflow into the 10 largest recipient countries in 2007
Source: own work based on the World Investment Report 2008 (UNCTAD).

Direct foreign investments flow into the highest economically developed countries but in 2007 among the top ten recipients we also have the dynamically developing China. In the indicated year 2007, the United States received just above USD 230 billion of capital. Despite the financial crisis that started during that time the inflow of the DFI was lower than in 2006 by just around USD 4 billion. A similar volume of capital was received by the United Kingdom in 2007. Those two countries were followed by Canada, other countries of Western Europe and China. Concentration of capital in the two most competitive economies in the world (the European Union and the United States) seems obvious as a consequence of the highest political stabilisation and significant progress of civilisation in those regions of the world. The last decade, however, showed the economic power available to China. The country receives more capital than Germany or Italy. The competitiveness of that far-eastern econ-

omy attracts investors who are eager to position their production there because of the low manufacturing costs.

Transnational corporations originate mainly from the United States, the EU 15 and Japan and they position their daughter companies in the developed economies as well as in the developing countries with large market potential. As indicated in the 2010 UNCTAD report, 72% of all corporations originated from the developed countries while the rest originated from the developing countries. That proportion decreased as compared to 2000. At that time, 79% of all TNCs originated from the developed countries. This is another piece of evidence indicating the improving position of the developing countries, including the BRIC in the global economy.

The direct foreign investments result in various consequences for the host countries receiving the new investors. Balancing the situation of the economy, e.g. by booking them as positive entries in the balance of payments of the country and the increase in exports by companies with participation of foreign capital represent positive effects of the inflow of the DFI. The gross domestic product in the host country increases as a result of increased revenues in co-operating enterprises and in the B2B (*business to business*) sectors. The host country gains benefits from road infrastructure and investment land improvement by local authorities or new investors. Additionally, new investments are followed by funds for research and development. The largest non-financial corporations in automotive industry allocated several billions of USD for R&D activities in 2002 (Ford Motor Company – USD 7.2 billion, DaimlerChrysler – USD 5.9 billion, General Motors – USD 5.4 billion, Toyota Motor Company – USD 4.6 billion – World Investment Report 2004 data).

As concerns human resources employed with the inflow of the DFI another significant outcome of the TNCs development should be pointed out. They contribute significantly to creating new jobs not only in the directly branches of the corporation but also in the enterprises co-operating with them (suppliers, carriers, distributors). Changes caused by mass scale appearance of transnational corporations have not only the financial-economic dimension but also the social dimension. This involves, first of all, millions of employees of the corporations, then the consumers of the products of the corporations and other people who experience the presence of transnational corporations in their environment.

In 2011, it is impossible to disregard the issue of mass redundancies of employees employed by the largest TNCs referred to in the media as the "crisis victims". The dramatis situation in employment was influenced partly by the common practice of applying short-term employment contracts (NOWICKI 2009, p. 2). On one hand the corporations contributed to creating flexible forms of employment applied in liberal economies while on the other the ease of

terminating employment became the cause of the social drama. This is evidenced by for instance the data concerning thousands of Americans made redundant by the largest corporations in 2008 and 2009. Theoretically strong trade unions function in the American corporations. The example of that was the situation in Detroit, USA, where three corporations: General Motors, Ford Company and Chrysler could not adjust in a flexible way the number of employees to the production needs as a consequence of protests by those unions. As the consequence of the necessity to support financially even the employees that were made redundant (the social package for employees enacted in 1950 in Detroit transferring social care from the State to the employers) increased the costs of American corporations that were unable to meet the Asiatic competition of Honda and Toyota or German competition by the BMW or Volkswagen (ZALEWSKI 2009. pp. 80–83). During recession the decrease of costs is achieved, first of all, through reduction of employee wages and salaries by from a few to several tens percent, which means an increase of social dissatisfaction and deterioration of the situation of households.

ZORSKA (2007, p. 95) described changes caused by expansion of corporations. It influences, in an obvious way, the increase of employment in the locations of new investment projects but also contributes to retaining jobs in collapsing enterprises. In case of a market slowdown the first actions taken by corporations involve divestments and decreasing production capacity. This represents the unquestioned behaviour of the enterprise in case of a decrease of demand for the goods manufactured by it. However, in global scale, TNCs employ millions of people and in many cases the local production facilities employ the majority of the population of a given settlement. In 2008, the American network of hypermarkets, Wal-Mart, had the largest employment among the top 100 TNCs with 2.1 million people worldwide. For comparison, the wealthiest corporation, General Electric, employed 323.000 people (WIR 2010, annex table 26). Transnational corporations allocate much larger financial and material resources to human capital development. They spend more funds generated from the enterprise profit on R&D as well as additional training: specialist, IT and language for their employees. Courses of that type frequently involve employment of local suppliers and contractors to assure adequately high quality of products and services.

Building social responsibility in the enterprise represents a relatively new trend that appeared with development of corporations. Corporations fight for positions in the rankings of socially responsible enterprises. The two most popular indexes classifying enterprises according to the corporate social responsibility – CSR were created in the USA. They are FTSE4Good and Dow Jones Sustainability Group Index. Presence in the FTSE4Good ranking is the matter of prestige in the international arena and the element in enterprise

evaluation by potential investors. In the majority of the global stock exchange listed companies preparation of the CSR report enclosed to the financial statements is a duty but in smaller countries activities of that type are still a novelty. In 2007 in Poland only a few enterprises published their reports concerning environmental, ethical and social involvement of business. They were treated, however as a component of public relations and promotion and not as a form of corporate social responsibility management (DĘBEK 2007, pp. 76–77).

Presence of transnational corporations in a given country offers positive impacts for the society and the economy but it is also not free off negative aspects. They are listed, first of all, by adversaries of progressing globalisation. In the domestic market, development of TNCs may cause elimination of local entrepreneurs and, as a consequence, decreasing employment in domestic plants. Additionally there is the "domino problem" which means spreading reduction of employment from the parent company to the foreign branches (GÓRNIEWICZ 2007, p. 84). That phenomenon was visible during the last market collapse in the earlier mentioned Detroit.

Loss of sales markets by domestic enterprises resulting frequently from increased imports of foreign products is another negative outcome of spreading activities of TNCs. This influences deterioration of the balance of payments of the host country. In the financial aspects there are transfers of profits to the countries of origin or countries with more favourable taxation conditions. Additionally the problem of transfer prices appeared. It occurs when a product of one of the corporation plants is the raw material for another plant. As a result transfer prices are based on market prices or costs but there are also contractual (negotiated) prices and double prices (cost and market based). They depend on the inflation and exchange rate in the recipient country and the supplier country (BAĆKOWSKI, SOJAK 2003, pp. 20–25). Transnational enterprises use transfer prices to minimise tax burdens and to control the financial results of the headquarters aiming at satisfying the claims by shareholders.

Conclusion

Evaluating the importance of corporations in the contemporary global economy we must refer to the economic and social consequences of their operations that were discussed earlier. Transnational corporations are responsible to a significant extent for flows of capital in the form of direct foreign investments. Domestic enterprises have no sufficient financial, technological or production capacity to achieve a compatible scale of operation. The competi-

tive combat for consumers and suppliers has become uneven because the position of smaller domestic entities is much weaker. The network of international economic links developed during the last decades thanks to the activities of organisations of that type. Corporations operate in all business sectors and in all countries with particular focus on sectors with high entry barriers to which domestic competitors have no access.

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PROBLEM OF FAIR COMPETITION ON THE SINGLE EU MARKET – THE CASE OF POTATO STARCH

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K e y w o r d s: Market Competitiveness, Starch Quota, Polish Agriculture.

A b s t r a c t

Integration of Polish agriculture is recognized as a success. Nevertheless some remarkable difficulties have emerged. Some of them are related to low production quotas in the dairy, sugar and starch sectors.

The authors argue that the level of potato starch quota inscribed for Poland is incompatible with the principle of fair competition in the inner EU market. The quota ceiling of a mere 145 thousand tons is a heavy constraint to the processing plants – their total processing capacities are estimated at some 220–260 thousand tons. Therefore, they are utilized at c. 56–66%, leading to the increase of unit costs of starch production by about 9,2% and a decrease in the competitiveness.

Another point is the ratio of the quota to the volume of harvests: 0,1121 for Denmark, 0,057 for Germany and (only) 0,0131 for Poland. Furthermore, the domestic consumption of starch products in Poland is two-fold bigger than the quota with a resultant increase in importation. Paradoxically, such practices are pronounced in spite of the unutilized natural resources of Polish agriculture – a high proportion of light soils. The temporary solution is to increase the quota – the long-run one is to rethink the concept of the quota system – under the new CAP reform.

ZASADA UCZCIWEJ KONKURENCJI NA JEDNOLITYM RYNKU UE A KWOTA SKROBI ZIEMNIACZANEJ PRZYDZIELONA POLSCE

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S ł o w a k l u c z o w e: konkurencja na rynku, kwota skrobiowa, rolnictwo polskie.

Abstrakt

Integracja rolnictwa polskiego jest uznawana za sukces, występują jednak znaczące trudności. Część z nich jest związana z niskimi kwotami produkcyjnymi w sektorach: mleczarskim, cukrowniczym i skrobi.

Autorzy wykazują, że przydzielony Polsce poziom kwoty skrobi ziemniaczanej jest nie do pogodzenia z zasadą uczciwej konkurencji na jednolitym rynku UE. Limit wynoszący zaledwie 145 tys. ton jest uciążliwą barierą dla przetwórstwa – moce przerobowe zakładów to 220–260 tys. ton. Są wykorzystywane zaledwie w ok. 56–66%, co zwiększa koszty jednostkowe o ok. 9,2% oraz przyczynia się do zmniejszenia konkurencyjności.

Innego rodzaju argumentem jest relacja kwoty do poziomu zbiorów ziemniaka: 0,1121 dla Danii, 0,057 dla Niemiec i zaledwie 0,0131 dla Polski. Co więcej, zużycie skrobi na krajowym rynku w Polsce jest dwukrotnie wyższe niż przyznana kwota, co powoduje wzrost importu. Sytuacja taka występuje, paradoksalnie, mimo nie w pełni wykorzystywanego potencjału produkcyjnego polskiego rolnictwa – dużego udziału gleb lekkich. Rozwiązaniem doraźnym jest zwiększenie przyznanej kwoty, perspektywicznym – zmiany w samej koncepcji kwotowania produkcji, w ramach zreformowanej wspólnej polityki rolnej.

Introduction

The 20-th century had been a very turbulent one for Poland with three major political transformations and two concurrent transformations of the system of national economy. The first, a political one, was introduced in Autumn 1918, when Poland recovered the independence after 123 years of partitions. Two further transformations covered both the political and economic systems. As a result of the 2-nd World War, since 1944, the system of "real socialism" had been overruled upon Poland with a "socialized" national economy and the democracy of the "dictatorship of the proletariat", having nothing in common with real democracy.

In 1989, Poland rejected the oppression of the Soviet-styled socialist system as the first country in the region – the "bulk" of the national economy had been privatized and the system of democracy was re-introduced.

Peaceful development in Poland cut the outbreak of the war on 1-st September 1939. And the country would come back on the track to normal development only 50 years later, when – in September 1989 – the first non-Communist Prime Minister in the Central and Eastern European Countries announced the departure from rules of the Centrally Planned Economy and a turn to a market-oriented one.

Changes introduced 20 years ago made possible Poland's membership in the NATO and the European Union.

System transformation and European integration

System transformation vs. the pre-accession period

In the period preceding Poland's accession to the European Union there were widely spread fears among the farmers (GAZIŃSKI 2006) – they were in no way irrational since in those years the European Union was indeed a bad neighbour for farmers. In the early 1990s the liberalization of Polish foreign trade took place which contrasted with numerous support mechanisms for the Community agriculture and its protection against imports from third countries. It led to a long-term negative balance of trade in agricultural goods with the Union countries which was against the so-called asymmetry principle contained in the Association Treaty, signed in Brussels 16-th December 1991. What is more, the export subsidies, which were not available for Polish manufacturers, eliminated Polish products from other markets, even the Kaliningrad Oblast. It should be added that other exporters including the USA also experienced such difficulties. These matters of argument were the topic of the GATT Uruguay Round negotiations, finished in 1994. Noteworthy is the fact that in the so-called Cairns Group of states opposing the European Union there was also Hungary, the country which stood as a candidate for the Union since 1994.

Systemic transformation, commenced in 1989, obtained the support of the Communities in the form of the PHARE program (*PHARE w Polsce...* 2007). In the first years of the program implementation, the means designed for rural areas and agriculture were quite modest. In the period preceding the accession a special pre-accession program for agriculture, referred to as SAPARD, was introduced which, among other things, was supposed to prepare beneficiaries to make efficient use of structural funds in the period preceding the accession.

The accession negotiations were uneasy and lasted over four and a half years (terminated on 13th December 2002); the area of "agriculture" belonged to the toughest ones. What evoked the most controversy was the issue of direct subsidies as well as the access to the purchase of land by foreigners on the other hand. Still in July 1997 the European Commission prepared a multi-volume report "Agenda – 2000" (DRAGO, GAZIŃSKI 1998), in which it was agreed that direct subsidies should not be paid to the new member states at all. Such a standpoint was maintained for nearly five years until a compromise was reached on partial and gradually increased levels of these measures of support: from 25% in the first year of membership to 100% by the year 2013.

The government of J. Buzek in turn insisted on the 18-year-long transition period regarding the opportunity to purchase land by foreigners as a trump card. Unfortunately, his followers were not able to make use of it. During his

stay in Brussels, W. Cimoszewicz, the then Minister of Foreign Affairs, made a considerable concession from this initial position and obtained nothing in exchange. Indirect results of this were among others low milk and potato starch quotas which were imposed on Polish negotiators who had no sufficient assets to reach more favorable solutions.

Experiences of the first years of the EU membership

One of the consequences of Poland's entering the European Union was the introduction of the principles of the Common Agricultural Policy. As an outcome of more than ten years of transformation, Polish economy has undergone a thorough reconstruction. It also refers to agriculture, which at the moment of accession was much closer to the model of the market economy than the "manually" steered Union agriculture. An example of that can be the implementation of the system of dairy quoting which will probably be withdrawn in the next budget period.

In the initial years of membership in the Union, some positive phenomena were disclosed. An increase in prices for a range of agricultural goods took place which unfortunately, as could have been expected, has turned out to be temporary. The negative balance of agricultural trade with the Community states, which lasted for a number of years, turned out to be positive already in the year 2003, preceding our membership. From the very first months of membership in the Union till the end of 2004 Polish agricultural exports were increasing at a very fast pace. In comparison with similar period in the previous year. Exports to the "old" member states increased by about 62.7% and by 52.6% to the "new" member states. Poland soon gained the position of the biggest food exporter in the region of the Central and Eastern European Countries whereas Hungary came in at the second place (KALISZUK 2005).

Covering agriculture with direct subsidies and with a number of support programs from the Community budget have brought in a noticeable growth of income. The parity of agricultural income increased from 65% in 2003 to 83% in 2006 (WILKIN, NURZYŃSKA 2008). It was accompanied by the improvement of moods and growth of support for Poland's membership in the European Union in comparison with the pre-accession period.

In the Polish rural areas, it is possible to observe several variable trends of change:

i) the share of farms in the group of rural households is decreasing. It is estimated that out of the overall number of 4.4 million, the households connected with farming make up around 49% which is less than half;

ii) a new phenomenon is the reversal of the negative migration balance, which stands for the fact that at present more people settle in the countryside than leave it;

iii) even in the farming families the farm has ceased to be the largest source of income. Life requires that a multifunctional development should not only be a theoretical expression but a driving-force to search for additional income beyond agriculture;

iv) the number of farms is decreasing (within the period of 2002–2007 there was a fall of 11.8%), whereas their average acreage is increasing;

v) the level of education in rural areas is improving but it is still considerably inferior to the city (in 2007 the percentage of people with higher education was over threefold higher in the city than in the countryside).

The change in the political and economic systems, as well as the accompanying changes European integration, gave Polish agriculture and rural areas new opportunities for growth in comparison with the previous period. Unfortunately, they are neither given once and for all nor smoothly, which is painfully proved by e.g. the present level of milk purchase prices. Although the Common Agricultural Policy turned out to be positive in the first period of membership due to the inflow of means connected with that, it is still an imperfect mechanism which requires new solutions. Initial benefits started to run out, while more and more difficulties have emerged. The source of some of them are low production quotas that were fixed to Poland within the accession negotiations – this refers to dairy products, sugar and starch.

The aim of this study is to analyze the problem of the productive capacities of the potato processing plants in Poland from the point of view of maintaining the conditions of fair competitiveness which constitutes one of the fundamental principles of functioning in the inner EU market (*EU competition policy*... 2004).

The starch quota as a constraint to the potato economy

Influence of the low starch quota on starch production costs in Poland

Before the end of Poland's accession negotiations to the European Union, which took place in December 2002 in Copenhagen, the Polish Ministry of Agriculture and Rural Development took the stand to apply for the starch quota of 260 thousand tons, whereas the minimal quota to be accepted by our country was 185 thousand tons. It should also be noted that the domestic starch production quota in Poland set for the year 2004–2005 was

242 thousand tons (*Act of regulation...* 2001). The fact that we were finally granted the quota of 145 thousand tons, which made up only 56% of the one applied for, came as an unpleasant shock. With the support of the Ministry of Agriculture and Rural Development as well as the representatives of the starch sector, Polish deputies to the European Parliament, upon the initiative of J. Wojciechowski, applied to increase the domestic ceiling for the next year (2005/2006) to 180 thousand tons. In spite of the almost unanimous resolution in favor of the motion by the European Parliament, even such tiny changes were not allowed.

The processing potential of the Polish starch potato processing plants is assessed at 220–260 thousand tones. Imposing on the country a limit at the level of 145 thousand tones means that the existing production capacities and the value of invested capital are utilized only within 56–66%. Assuming the net profitability of starch industry plants in 2008 at the level of 2% as well as a 30% share of fixed costs in the total starch production costs, increasing the scale of starch production in the plants from 130 thousand tones (an increase of 38.5%) causes a fall in starch production costs by 8.5% per unit. Changes in starch production cost structure are presented in the example of an X potato industry plant (anonymous due to trade data protection) in Table 1. Increasing the scale of starch production in the production season from 8 to 16 thousand tones caused a decrease of starch potato costs by nearly 10%.

Table 1

Structure of costs of potato starch production [%] in the potato processing plant "X" according to the yearly processing capacities (2003/04 vs. 2005/06)

Cost item	Yearly production capacities [tons]	
	16 000	8 000
Raw material (potatoes)	48.3	37.1
Processing	25.5	17.6
Total costs of production (1 + 2)	73.8	54.7
Starch marketing (selling)	5.2	8.3
Administration and office	2.3	1.9
General	18.8	35.2
Total costs of starch manufacturing	100.0	100.0
Total costs per 1 ton of starch (PLN)	1 590.6	1 757.4

Source: own calculations based on the data from the processing plants.

The high cost of potato starch production in Poland caused by low levels of utilization of the production capacities of processing plants made it in turn impossible to increase the prices for the purchase of potato as a resource to

produce starch up to the level ensuring profitability. As the data in Table 2 show, potato starch cultivation in Poland is characterized by negative profitability. In this situation, farmers, especially those growing starch potatoes on a smaller scale, resign from contracts with processing plants. As a consequence, it is difficult to utilize even such a low limit of starch production which has been assigned to our country.

As a result, the production from the Polish starch industry is burdened with exceedingly high fixed costs in comparison with their competitors from other EU-member states, which hampers their competitiveness. In this case the principle of maintaining the conditions of fair competitiveness on the uniform European market should stand for setting equal relations between given member states and the starch production quota fixed to them.

Table 2

Calculation of costs and profitability of starch potato cultivation [PLN/ha], assumed yield of 30 tons/ha

Item of input	Year 2007/08	Year 2008/09
Potato seeds, purchased	830	625
Potato seeds, own cultivation	410	431
Pesticides	720	820
Fertilizers	785	1540
Machinery exploitation	1090	1520
Draught power	1320	2110
Credit costs of purchased inputs (yearly interest rate – 3%)	100	115
Labour	600	600
Total direct costs	5855	6241
Indirect costs (lump, 10% of the total direct costs)	585	624
Total costs (9 + 10)	6440	6865
Total costs per 1 ton of marketed potatoes	215	229
Total value of production	6300	6750
Assumed prices of marketed potatoes (PLN per 1 ton)	210	225
Calculated profit (PLN per 1ha)	-140	-115

Source: own calculations based on the field survey of the IHAR Bonin.

The relation of the starch production quota to the volume of potato harvests and domestic demand for starch

The essential element of the comparative analysis the potato starch market is the relation of the quota to the cultivation area and to the volume of harvests. Decisively, Poland has the lowest relative starch production quota

out of the biggest potato producers among the European Union members. For instance, the starch production quota per 1000 tons of potatoes accounts for 112 tons for Denmark, 57 tons for Germany, and only 13.1 tons for Poland (Tab. 3). Even more unfavorable for Poland is the relation of the starch quota to the potato cultivation area.

Table 3

Major EU-15 potato starch producers*

Country	Starch potato quotas (tons) 2004–2008	Acreage of potato cultivation (1000 hectares) in 2007	Average potato harvests (mln. tons) 2004–2007	Starch potato quota as calculated per:	
				1 ha of cultivated potatoes	1000 tons of harvested potatoes
Germany	656 300	273	11.5	2.4	57.0
The Netherlands	507 400	161	6.9	3.1	73.5
France	265 400	158	6.7	1.7	39.6
Denmark	168 200	38	1.5	4.4	112.1
Sweden	62 100	29	0.9	2.1	69.0
Finland	53 200	28	0.7	1.9	76.0
Austria	47 700	23	0.7	2.1	68.1
The Czech Republic	33 700	32	0.8	1.1	42.1
Poland	145 000	570	11.1	0.3	13 .1

* Quota for remaining 5 EU member countries (Spain, Latvia, Lithuania, Slovakia and Estonia) fixed at the level of 9900 tons.

Source: own calculations based on the data from: HAMBLOCH et al. (2007, p. 127).

The volume of the starch production ceiling granted to Poland is also disproportionate to the requirements of the inner market. As the overall (potato and other) starch balance shows, until the year 2003–2004 the domestic demand for Poland was about 180 thousand tons of starch and starch products. For this reason, the net import was low (Tab. 4). Following accession to the European Union, the volume of domestic starch consumption increased to over 300 thousand tons, which means that the net import of 100–200 thousand tons is necessary. The deepening gap between production and consumption indicates that the quota granted to us is incompatible with the increased demand of the domestic market.

Table 4
Balance of exports, imports and production of starch and starch products in Poland during the period 2001–2008, thousand tons

Item	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009*
Total exports of starch products	68.5	89.8	108.4	120.4	141.4	117.6	107.5	91.4
– in these: potato flour and starch	40.9	57.5	72.9	54.4	64.0	28.5	34.7	436.6
– other starch products	27.6	32.3	35.5	66.0	77.4	89.1	72.8	54.8
Total imports of starch products	85.0	95.0	109.9	205.9	246.2	332.7	275.4	204.7
– in these: potato flour and starch	0.4	0.4	0.2	4.6	9.8	19.5	7.6	10.7
– other starch products	84.6	94.6	109.7	201.3	236.4	313.2	267.8	194.0
Balance: exports/imports	-16.5	-5.2	-1.5	-85.5	-104.8	-215.1	-167.9	-113.3
Production of potato starch	135	165	178	158	130	79	115	130
Domestic consumption (production minus exports plus imports)	151.5	170.2	179.5	243.5	234.8	294.1	282.9	243.3

* forecast.
Source: Own calculations based on: DZWONKOWSKI (2009).

Significance of starch potatoes in the structure of harvests

The next argument for increasing the potato starch production ceiling fixed to Poland results from differences in the structure of potato utilization as well as their role in the regions with less fertile soils that are threatened with marginalization (REMBEZA 2005). In the majority of EU states consumption and processing into foodstuffs, and in some of them also processing into starch, dominate in the structure of potato utilization (ZIMOCH-GUZOWSKA, CHOTKOWSKI 2006). In Poland the overall utilization of the potato for feed is decisively higher. This entails numerous and unfavorable consequences since the potato production for feed is located mainly in the regions with less fertile soils which have a much bigger share in Polish agriculture (about one third) than in other EU member states. In recent years the level of feed consumption is decreasing fast which leads to the decrease of the potato share in the structure of harvests. It leads to the extensive plant production which puts the balanced agriculture in the regions with less fertile soils at risk.

The increase of starch production quota would enable the enlargement of potato production in the regions with less fertile soils and partially counterbalance the consequences resulting from the decrease of potato production for feed. Correspondingly, an increase in the starch quota should be treated not only as a way of more in-depth utilization of the processing capacities of plants and better adaptation to the market demand, but also as a factor which prevents degradation of agricultural production in less favored areas.

Conclusion

The above analysis explicitly shows that the specific economic market factors in the country, such as the processing capacities of plants, volume of internal demand as well as the significance of potato in the structure of harvests were not taken into consideration in the process of setting the potato starch production quota for Poland. Since fair competitiveness constitutes the overriding principle of functioning in the European Union, the urgent amendment of the starch quota set for our country seems to be grounded. Moreover, with respect to this regulation, the exceptional mode of procedure should be applied due to the fact that previous attempts to change this state of affairs were not successful. The paradoxes of the situation caused by low starch quota in Poland bring into question the point, if – in the long run – the whole concept of quotas, as such, is to be rethought and needs more decisive reforms.

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FOREIGN INVESTMENTS AND DISPARITIES IN REGIONAL DEVELOPMENT

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K e y w o r d s: foreign investments, location, regional development.

A b s t r a c t

Investments are crucial in creating economic growth and development on national and regional level. Specific kind of investments are foreign investments. Above their impact on labour market and economic entities of a host country, they also contribute to transfers of technology, methods of management and indirectly to quality of products and services.

The aim of the article is to identity the level of interdependence between location of enterprises with foreign capital and regionally diversified level of economic development in Poland. The conducted analysis was based on utilisation of data concerning the number of economic entities with foreign capital in regions (NUTS 2) of Poland as well as the number of people employed in enterprises with foreign capital, that were collated with GDP *per capita* of regions.

Empiric findings brought to the conclusion that location of enterprises with foreign capital was concentrated in regions of Western Poland and in Mazowieckie voivodship. At the lowest pitch enterprises with foreign capital concerned regions of Eastern Poland. The analysis revealed high statistical dependency between concentration of employed in economic entities with foreign capital in Polish regions and GDP *per capita* of that regions. More enterprises with foreign capital were located in regions with higher GDP *per capita* as well as more workers were there employed. In 2007 GDP *per capita* explained 84.89 per cent of spatial distribution of economic entities with foreign capital (measured by the number of workers). Additionally, the described phenomenon was growing in size through the last years (mostly due to Mazowieckie voivodship).

INWESTYCJE ZAGRANICZNE A DYSPROPORCJE W ROZWOJU REGIONALNYM

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S ł o w a k l u c z o w e: inwestycje zagraniczne, lokalizacja, rozwój regionalny.

Abstrakt

Inwestycje odgrywają istotną rolę w kreowaniu wzrostu i rozwoju gospodarczego, zarówno na poziome centralnym, jak i regionalnym. Specyficznym rodzajem inwestycji są inwestycje zagranicznie, które oprócz oddziaływania na rynek pracy oraz podmioty gospodarcze kraju goszczącego, w pewnym stopniu przyczyniają się do transferu technologii, metod zarządzania oraz pośrednio poprawy jakości wytwarzanych produktów i usług.

Celem artykułu jest wskazanie stopnia współzależności między lokalizacją przedsiębiorstw z kapitałem zagranicznym a poziomem rozwoju gospodarczego regionów Polski. Przeprowadzona analiza opierała się na wykorzystaniu danych o liczbie podmiotów gospodarczych z kapitałem zagranicznym w województwach oraz liczbie osób zatrudnionych w przedsiębiorstwach z kapitałem zagranicznym, które zestawiono z PKB *per capita* regionów.

Badania empiryczne wykazały wysoką koncentrację przedsiębiorstw z kapitałem zagranicznym w zachodniej Polsce oraz w województwie mazowieckim (mierzone ilorazem lokalizacji przedsiębiorstw oraz pracujących). Najmniejsza koncentracja podmiotów z kapitałem zagranicznym dotyczyła natomiast wschodniej Polski. W trakcie prac analitycznych zaobserwowano statystyczną zależność między koncentracją pracujących w podmiotach z udziałem kapitału zagranicznego w różnych regionach Polski a PKB *per capita* tych obszarów, zgodnie z którą statystycznie więcej pracujących i podmiotów z udziałem kapitału zagranicznego znajdowało się na obszarach o wyższym poziomie zamożności. W 2007 r. PKB *per capita* opisywał 84,89% przestrzennego zróżnicowania podmiotów z kapitałem zagranicznym (mierzonym liczbą osób pracujących). Dodatkowo zaobserwowano zjawisko nasilającego się przestrzennego zróżnicowania lokalizacji przedsiębiorstw z kapitałem zagranicznym w skali regionalnej (za które głównie odpowiada województwo mazowieckie).

Introduction

Investment projects represent an important component determining the future economic growth and development. The positive influence of the capital accumulation increase is reflected in the generated economic growth of the country. This is the second after productivity increase supply factor of economic growth of Poland during the years 1994–2007 according to the neoclassical Solow-Swan growth model (NAZARCZUK, MARKS-BIELSKA 2009, p. 271). The high investment rate in the cross section of the regions is the condition of stable economic growth and in the long-term it stimulates economic growth and closing the gap between the economically weak regions and the economy of the country.

The specific role of the foreign investments involves not only the influence on the labor market (mainly through creating jobs and reduction of unemployment) but also the influence through multiplication effects and cooperation with local entities on the economy of the host region. Foreign investments, in addition to the inflow of capital, involve availability of modern production technologies and management methods, innovation, availability of sales markets, they proliferate entrepreneurial attitudes, indirectly influence the improvement of production quality, effectiveness of the economy and increase the

income of the population (BOJAR, KURYS 2009, p. 33, DZIEMIANOWICZ, p. 4). That is why they contribute to growth and economic development of regions (ALFARO et al. 2004, p. 108), although (as highlighted by the authors of the referenced work) the level of development of the local financial markets is of key importance for achievement of positive effects from location of the foreign direct investments. The growth in itself resulting from the direct foreign investments is achieved mainly through the financial markets.

Goal and methodology of studies

The paper aims at presenting the level of correlation between the location of enterprises with participation of foreign capital and the level of economic development of the regions of Poland. The conducted analysis was based on the information on the number of business entities with foreign capital and employment in enterprises with participation of foreign capital, which was compared with the GDP *per capita* of the individual regions.

During the analytical work the definition of the foreign investors by the Central Statistical Office (GUS[1])) was applied, as the definition by the NBP would narrow the research sample excessively (UMIŃSKI 2002, pp. 21–22). Considering the fact that the most frequent form of enterprises with foreign capital is the commercial company such entities were subjected to the analysis. The so-called location quotient was applied for analysis of concentration of enterprises with foreign capital. This is a popular indicator used for analysis of industry and employment companies within specific economic sectors of the region or the share of the region within a larger area, e.g. the national economy (GUIMARAES et al. 2009, p. 360). It is described by the formula:

$$\mathrm{LQ} = \frac{e_i/e}{E_i/E},$$

where:
e_i – employment in enterprises with foreign capital in the region (other economic categories such as e.g. the number of enterprises can also be used); e – total employment in the region, E_i – national employment in enterprises with foreign capital, E – national employment.

[1] GUS considers the entities that possess foreign capital and conduct business activity to be foreign investors. In case of the NBP approach the acceptance of the limit of the foreign partner's share of at least 10 percent would limit the research sample significantly compared to the GUS definition.

The value of the LQ=1 indicator represents the share of employment in enterprises with foreign capital equal to that in the national economy. The value of the LQ>1.25 indicator represents relative specialization of the region.

The basic measures of dispersion, i.e. spread and variability coefficient were applied for assessment of changes in the level of concentration of enterprises with foreign capital (absolute values) during the years 2003–2008. Computation of the location quotient was done on the base of the data on the number of enterprises with foreign capital and the number of people working in such enterprises.

During the studies the hypothesis was verified according to which location of enterprises with foreign capital contributes to establishing the differences in the GDP *per capita* in voivodships of Poland. More frequent location of enterprises with foreign capital in the voivodships with high GDP *per capita* is the cause of that phenomenon. The Pearson's correlation coefficient (that allows determining the level of correlation between the studies phenomena) was used for verification of that thesis. The significance level of 0.01 was assumed. On the other hand, the determination coefficient was used to show to what extent the variability of the explanatory variable (GDP *per capita*) explains the variations in the effect variable (the number of enterprises with foreign capital), i.e. to what extent the spatial diversification in the GDP *per capita* describes the distribution of enterprises with foreign capital among voivodships. In the work the data for the years 2003–2008 concerning location of enterprises with foreign capital and for the years 2003–2007 describing the regional GDP parameters was used.

Location of enterprises with foreign capital

Location of enterprises (also those with foreign capital) means positioning in the space of economic activity and refers directly to the algorithm (method) of selecting the place for operating the business in the national, regional and local scale (WIELOŃSKI 2007, p. 9). The location decisions are influenced by numerous factors of objective (and frequently measurable) factors as well as subjective factors dependent on the individual characteristics and system of values of the investors. The major factors considered in taking the enterprise location decisions include (GODLEWSKA 2001, pp. 14–15, PARYSEK 2007, p. 14, WINIARSKI 1999, p. 52):

– access to resources necessary to conduct business activity (e.g. resources of labor, raw materials base),

– economic, social and technical infrastructure, transport access, environment status,

– "adjustment" of the economic activity type performed to the manufacturing structure of the local economy and availability of skilled labor,

– identification of limitations and hazards to the economic activity conducted,

– size of the regional and local markets as well as possibilities of their development,

– level of economic, civilization-cultural and system of values development, preferences and priorities of the local population,

– general safety level,

– possibility of cooperation with other business entities, scientific and educational institutions, etc.,

– effectiveness of authorities in relations with investors.

The assessment of the potential location for conducting business activity depends on the type of planned or performed activity, planned volume of production, distance from the sales market, infrastructure level development as well as the knowledge and perception of space of the investor and his subjective evaluation of importance of individual factors (in case of small enterprises the behavioral factors are frequently of major importance) (PONIATOWSKA-JAKSCH 1999, p. 34). Investment activity of a given area depends on the individual demand for specific factors of location, size and structure as well as character of the investment project by a given investor. The better the correlation between the characteristics of a given area and the demands of the entrepreneur, the largest are the chances for positioning the business in a given place (BUDNER 2004, p. 24). Specific locations can be characterized by high attractiveness for location of only highly specialized industries and at the same time low attractiveness for business in all other industrial sectors.

The choice of location remains correlated significantly with the level of generated costs, possibilities of market expansion and labor productivity (KUCIŃSKI 1998, p. 25). Choice of the optimal place for location of the enterprise is determined by the possibility of assuring convenient conditions for operation of the specific business entity. It is done through identification of the locations offering the possibly lowest costs of procurement, sales, investment outlays, labor costs as well as those allowing cooperation with local and regional partners, production of high quality goods and services and access to qualified labor force.

In view of the empirical research conducted in Poland from the regional perspective (GOLEJEWSKA 2008, p. 203) *favorable location and transport connections, absorptive sales market in the region, high supplies and low costs of labor, possibility of taking over vacant production facilities and relations between the foreign investor and the region* are considered the most important factors for location of foreign capital projects. Additionally, the factors that

could have significant influence on attracting foreign capital included: economic potential of the region (partially developed as a result of absorption of the European Union funds) and activities of local authorities undertaken to attract foreign capital.

Diversified economic characteristics of regions, similarly to uneven distribution of resources, availability of skilled labor, technical infrastructure quality and, first of all, different levels of attractiveness for investments caused spatial diversity in saturation with foreign capital among the regions of Poland[2].

Studies conducted by CHIDLOW et al. (2009, p. 129) showed that foreign investors for which the sales market, knowledge and benefits of agglomeration were the main location factor chose Mazowieckie voivodship as the location for their business despite considering also other regions. The investors that based their choice on low costs of resources, availability of labor and geographic location as the main factors favored other regions to Mazowieckie voivodship.

Analysis of location of the Foreign Direct Investments (FDI) during the years 1995–2005 presented uneven distribution of those entities among the regions of the country (GOLEJEWSKA 2008, p. 203). The statistical analysis conducted by that author allowed identification of regions that were the "winners" (Mazowieckie, Silesian, Wielkopolskie, Lower Silesian and Małopolskie) and the "losers" (Świętokrzyskie, Podkarpackie, Warmińsko-Mazurskie, Lubelskie and Podlaskie) as concerns attractiveness to the foreign capital. Additionally, the majority of the investment projects with participation of foreign capital implemented by 2000 (69 percent of the capital invested) were concentrated in metropolitan areas (or in the largest cities of Poland) while corridors of up to 15 km from the major national roads agglomerated 59 percent of such investment projects (DOMAŃSKI 2001, pp. 98–99, 104).

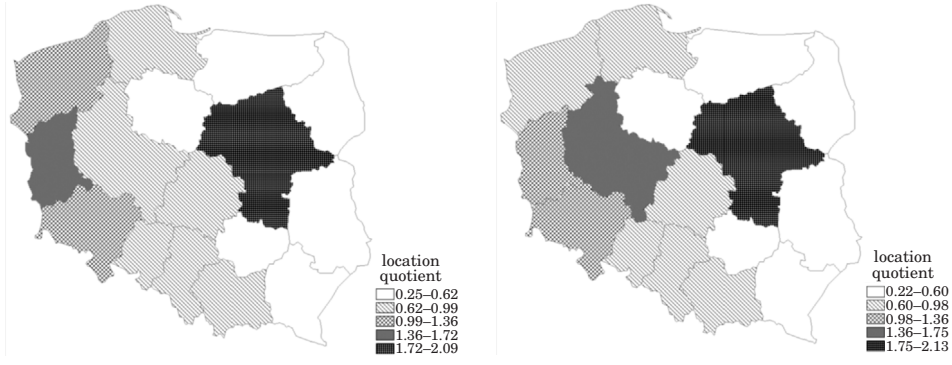
Synthesis of the presented research results might lead to the conclusion that the wealthier regions were at the same time more attractive to foreign investors. The global literature describes that phenomenon in different ways. For example, the regional GDP does not determine the inflow of Japanese foreign investments into China (CASSIDY, ANDREOSSO-O'CALLAGHAN 2006, p. 525), while other studies (COUGHLIN, SEGEV 1999, p. 26) identified GDP, productivity and coastal location as the additional determinants of foreign investments inflow into China. This paper is an attempt at verifying that issue in case of the realities of Polish economy.

[2] The statistical correlation between the level of the investment attractiveness of the region and presence of foreign capital is presented, among others, in the paper by NAZARCZUK, LIZIŃSKA (2009, p. 134).

Discussion of the results of studies

Location of enterprises with participation of foreign capital was diversified spatially among the regions of Poland (Fig. 1). The conducted analysis showed the highest concentrations of enterprises with foreign capital (measured by the location quotient) in voivodships: Mazowieckie (2.09), Lubuskie (1.36), Lower Silesian (1.19), Western Pomeranian (1.02) while the lowest concentrations of such enterprises were observed in the voivodships of Eastern Poland: Podlaskie (0.25), Świętokrzyskie (0.27), Lubelskie (0.38), Podkarpackie (0.39) and Warmińsko-Mazurskie (0.45).

Additionally, during the years 2003–2008, the distance between Mazowieckie voivodship and the other regions of the country in attracting foreign capital increased (after excluding that voivodship from the analysis the variance coefficient responsible for the spatial distribution of the entities with foreign capital throughout voivodships of Poland decreased significantly from 136.7 percent to 74.81 percent in 2008).



entities employment

Fig. 1. Concentration of entities with foreign capital in 2008

Source: own work.

As concerns the employment in foreign enterprises the highest values of location quotient were obtained by: Mazowieckie (2.13), Wielkopolskie (1.38), Lower Silesian (1.33) and Lubuskie (1.05) voivodships while the lowest values described four voivodships of Eastern Poland: Podlaskie (0.22), Lubelskie (0.25), Warmińsko-Mazurskie (0.32) and Świętokrzyskie (0.34) and additionally Kujawsko-Pomorskie (0.48) voivodship.

The highest density of entities with participation of foreign capital was recorded in Mazowieckie voivodship (mainly Warsaw) and in the western

regions of Poland. Those regions at the same time were among those with the highest GDP *per capita* in Poland. The results obtained indicated a significant linear correlation between the concentration of entities with participation of foreign capital and the GDP *per capita* in the regions of Poland (Poland=100). The values of the linear correlation coefficient were statistically significant (at the significance level of 0.01), and their values indicated an increasing correlation between those two categories (increase from 0.8818 in 2003 up to 0.9214 in 2007). Additionally GDP *per capita* in 2007 described 84.89 percent of spatial diversity of entities with participation of foreign capital (measured by employment). Additionally the degree of explanation of the spatial diversity of employment in enterprises with participation of foreign capital during the years 2003–2007 increased by 7.13 percent points, which implies increasing spatial diversity of employment in those entities (tab. 1).

Table 1

Correlation between concentration of enterprises with foreign capital and the level of economic development of regions

Statistical measures	2003	2004	2005	2006	2007
Location quotient (employment) and GDP *per capita* (PL=100)					
Correlation coefficient	0.8818	0.9032	0.9169	0.9150	0.9213
Determination coefficient	0.7776	0.8158	0.8407	0.8373	0.8489
Location quotient (entities) and GDP *per capita* (PL=100)					
Correlation coefficient	0.7893	0.8028	0.8277	0.8377	0.8154
Determination coefficient	0.6230	0.6445	0.6851	0.7018	0.6649

Source: own work.

Location of enterprises with participation of foreign capital was less dependent on the GDP *per capita* (linear correlation coefficient was 0.8154 in 2007), which allowed concluding that its variance explained 66.6 percent of location of enterprises with participation of foreign capital. This indicated higher influence of other factors determining location of entities with participation of foreign capital (among others the presence of Special Economic Zones, diversity in the technical infrastructure quality, human resources quality, nearness of metropolitan centers, etc.).

Summary and conclusions

On the base of the conducted analyses, the formulated research hypothesis assuming that the location of enterprises with participation of foreign capital contributes to establishment of differences in the GDP *per capita* in Polish

voivodships was verified positively. The results obtained presented a significant correlation between affluence of the region (measured by GDP *per capita*) and the concentration of enterprises with participation of foreign capital (and employment in those entities). Relatively frequent location of enterprises with participation of foreign capital in voivodships with a high level of GDP *per capita* indicates an important role of the regional markets size and availability of resources in determining location decisions. High concentration of entities with the regions with high GDP *per capita* is correlated to high wages, large population and relatively high productivity of labor in those areas of the country. At the same time, in most affluent areas of the country the largest scientific centers and metropolitan areas that are highly attractive for location of foreign investment projects are situated. They assure access to the resources of qualified labor, they have convenient transport connections and well-developed social, economic and technical infrastructure.

Relatively more frequent location of foreign investment projects in more affluent regions contributed also to establishment of the differences in the level of regional development as it hindered gaining positive effects from location of such projects in case of less affluent regions. Considering the consequences of foreign direct investments location for regional economies that frequently involved, in addition to the flow of capital, the transfer of knowledge, management methods, cooperation with local entities, tightening competition and improving quality of produced products and services, it should be concluded that actions aiming at increasing investment attractiveness (and improvement of the image) of less affluent regions are necessary. The Program of Economic Promotion of Eastern Poland and activities implemented in individual regions (e.g. the project "Consistent investor service system in Warmia and Mazury") are examples of the positive direction of activities in that field.

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INVESTMENT PROPERTY IN THE POLISH ACCOUNTING ACT AND IN INTERNATIONAL ACCOUNTING STANDARDS

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K e y w o r d s: investment property, International Accounting Standards, Accounting Act, initial recognition, measurement after recognition.

A b s t r a c t

The article tackles the issue of investment property in International Accounting Standards and in the polish Accounting Act. It describes the importance of applying the IAS in the view of clarity of financial statements. The main part of the article focuses on the definition, initial recognition and subsequent measurement of investment property. The article describes the differences and similarities between the polish Accounting Act and the IAS in the case of investment property. The most important difference is due to the fact that the polish Accounting Act does not allow the use of the revaluation cost model. The Accounting Act does not separate the definition of investment property from investment in general and does not supply solutions for valuation of property acquired for non-monetary assets.

NIERUCHOMOŚCI INWESTYCYJNE W USTAWIE O RACHUNKOWOŚCI I W MIĘDZYNARODOWYCH STANDARDACH RACHUNKOWOŚCI

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S ł o w a k l u c z o w e: nieruchomość inwestycyjna, Międzynarodowe Standardy Rachunkowości, ustawa o rachunkowości, wycena.

A b s t r a k t

W artykule opisano zagadnienie nieruchomości inwestycyjnych w Międzynarodowych Standardach Rachunkowości i w polskiej ustawie o rachunkowości. Wyjaśniono znaczenie stosowania standardów międzynarodowych w kontekście przejrzystości sprawozdań finansowych. Główna część

artykułu skupia się na omówieniu definicji, ujęcia początkowego oraz późniejszej wyceny nieruchomości inwestycyjnych. Opisano również różnice i podobieństwa między ustawą o rachunkowości a MSR w kwestii nieruchomości inwestycyjnych. Najważniejsza różnica wynika z braku dopuszczenia przez polską ustawę możliwości wyceny nieruchomości inwestycyjnych za pomocą modelu z przeszacowaniem na kapitał z aktualizacji wyceny w wyborze modelu kosztowego. Ustawa nie wyodrębnia nieruchomości inwestycyjnych z inwestycji ogółem, a także nie podaje rozwiązań dla przypadków szczególnych, jak wycena nieruchomości inwestycyjnej nabytej za pomocą aktywów niepieniężnych.

Introduction

The article focuses on regulations regarding investment property in International Accounting Standards, particularly in IAS 40 "Investment Property" and in the Polish Accounting Act. Since the amendment of the Accounting Act in 2008 these problems were analyzed in a general way, mainly in textbooks intended for researchers and professionals of accounting and financial controlling.

Aim of search and methods of studies

The article aims to present and explain the differences between the IAS and the Accounting Act in the case of investment property. Furthermore, it analyzes the most important discrepancies by the use of an empirical example.

The research method consisted of analyzing the literature of the subject regarding investment property. Relevant paragraphs of the Polish Accounting Act before and after the amendment dated on 18th March 2008 and IAS 40 "Investment Property" were analyzed in the view of their influence on economic entities, the most important differences were presented in a form of an empirical example. Furthermore, in order to clarify the issue of investment property, the relevant regulations were presented in a synthetic tabular form.

Importance of applying the IAS

Every process on the international market is linked, which is related to the "shortening of the distance" and "rapprochement" of the actions taken in different, often remote parts of the world (WINIARSKA 2006, p. 9). Economic entities functioning on international markets should present their endeavors in a comparable way, and their financial statements should be subject to uniform rules regardless, of the place where they were prepared. During the

times of globalization the significance of the International Financial Reporting Standards (IFRS) grows, because the financial statements prepared according to the rules presented in the IFRS are clear to all participants of the market play around the world (OLSZEWSKA, PODEL 2004, p. 80).

In Poland, the Accounting Act is the basis of accounting regulations. Its provisions specify the framework for keeping and auditing accounting books, preparing financial statements and rendering services in accounting (WALIŃSKA 2009, p. 13).

It is import ant to note, that the Accounting Act is subject to constant evolution in the direction pointed by the International Financial Reporting Standards. These changes resulted in the amendment of the accounting act in the year 2000 and 2008 (WALIŃSKA 2009 p. 212).

Investment property in the IFRS is regulated by IAS 40 which replaced IAS 25 in the scope of measurement of investment property (WALIŃSKA 2007, p. 178). IAS 40 came into force on January 1st 2001 (HELIN 2006, p. 223).

Definition of investment property

Investment property is defined as land, buildings or parts of buildings which are held by the owner (or the lessee under financial lease) who treats them as a source of income from rent or keeps it for appreciation of their value (WALIŃSKA 2007, p. 178).

The International Accounting Standards give a very precise definition of investment property by describing specific examples of what kind of property may be considered as investment property.

In order to verify if a given property may be considered as investment property, the IAS suggest to use the cash flow method or the purpose method.

If cash flow is generated due to ownership of property, it is considered as investment property (IAS 40.7). When the property is owneroccupied, cash flow is generated rather from ordinary business and not from the sole fact of owning the property. Another method is implemented by judging the purpose of the property. The reason for which the property is being used should be clearly distinguished. If it is not used in production nor supply of goods nor services nor for administrative purposes and will not be sold in ordinary course of business it is investment property. The IAS raise the issue of partial use of the property. When a business entity uses part of the property as owner-owned property and a different part as investment property, then for accounting purposes it should treat those parts separately, if they can be separately sold. If these parts cannot be divided, the entity can consider the property as investment property, under the condition that only an insignificant part is used for

production purposes (HELIN 2006, p. 225). IAS also underline that judgment is needed to determine whether a property qualifies as investment property and give an example of a passive investor in a hotel and a manager who outsources the day-to-day services retaining the direct management. The entity should elaborate criteria allowing for clear and coherent qualification, in the view of the definition of investment property (HELIN 2006, p. 225).

IAS also tackle the problem when a property is leased to a subsidiary or a parent. In the view of a capital group, the property cannot be treated as investment property, however in the case of the entity leasing out the building it may meet the criteria of investment property.

In Poland, the amendment of the Accounting Act in the year 2008 has changed the definition of investment. Investment is understood as assets held by an entity for economic gain from the appreciation of their value, receiving revenue from interests, dividends, profit shares or other gains also from a business transaction, and particularly financial assets, property, intangible assets which are not used for owner purposes but are held for receiving economic gain (UoR 3.1.17).

The Accounting Act has been adapted to IAS 40 in the case of the definition as the standard does not limit the notion of investment property to acquired property, as it was in the Accounting Act before the amendment (WALIŃSKA 2007, p. 178). This change has widened the definition of investment by changing the term "acquired" into "held". It is very important, as in the view of the amended act, a property which was build by the owner or a property that has changed its purpose may be classified as investment property. Before the amendment only acquired property could have been considered as investment property. Unfortunately, the legislator has not included the full scope of possible parameters of initial recognition of property, as the regulations concentrate on assets acquired by the means of monetary items (HELIN 2009, p. 49).

Initial recognition of investment property

According to International Accounting Standards, the initial recognition is at cost. The cost is not increased by:

– start up costs which are not absolutely necessary to make the property operational

– operational losses incurred after the property becomes operational

– abnormal amounts of wastes, materials, labour or other resources (IAS 40.23).

The cost of acquisition of assets is understood as the total of monetary items paid on the title of acquisition of the asset at the moment of its

acquisition or construction or when a specific amount can be attributed to a given asset when the initial recognition is subject to specific requirements of the IFRS/IAS (HELIN 2006, p. 226).

When an investment property is acquired in exchange for non-monetary assets or a combination of monetary and non monetary assets, the property should be measured at fair value unless it is impossible to determine it in a justifiable way (IAS 40.27).

Measurement after recognition of investment property

The IAS and the Accounting Act allow for a choice of the subsequent measurement between the fair value model and the cost model. However, the IAS suggest to use the fair value model.

The cost model is based on the same rules used to measure fixed assets and intangible assets. This method represents a cautious approach, where the measurement is based on the historical cost, which is depreciated in time, through systematic amortization (WALIŃSKA 2009, p. 212). The Polish Accounting Act does not allow for the appreciation of the value of an investment measured at cost. In special circumstances it may happen through a regulation of the government, but such an eventuality does not have an actual significance. It is important to note, that the measurement, which assumes that the value of the investment may only decrease, seems inadequate with the purpose of the investment, which is generally made for capital appreciation according to the definition given by the legislator in article 3.1.17 of the Accounting Act.

Another aspect that has to be considered, is that generally the IAS does not permit the change of the accounting policy of using the fair value model into the cost model. The IAS states that it would be highly unlikely to change from the fair value model to the cost model in order to present the situation of the entity in a more reliable way (IAS 40.31).

Fair value model

The IAS gives a very exhaustive description of how the fair value is understood in the case of investment property. The standards describes with scrutiny the methodology of estimating the fair value of investment property and regulations regarding the rules and possibilities for transfer between the balance groups and the consequences of such transfers (HELIN 2006, p. 234).

According to the IAS, when estimating the fair value, excessive and underestimated prices due to specific conditions should be excluded. Moreover,

transaction costs incurred during the sale or during other forms of disposal of the estimated properly should not be included (HELIN 2006, p. 228).

According to the IAS an entity is encouraged, but not required, to determine the fair value of investment property on the basis of measurement by an independent real estate expert who holds recognized and relevant professional qualifications and has recent experience in the location and category of the investment property being valued (IAS 40.32).

The Accounting Act demands the fair value to be estimated by an expert in real estate at least once every five years. Moreover the measurement at fair value demands evaluating the fair value for every last balance day (WALIŃSKA 2009, p. 213).

Changes in fair value are recognized in loss or profit (IAS 40.35). The Accounting Act states that the changes in fair value should be recognized in other operational loss or profit regardless if it concerns the changes of the value of the investment exceeding the historical cost or are connected with the change of the value lower than at the moment of initial recognition (WALIŃSKA 2009, p. 212–213). The IAS also gives guidance on how to act when there are no similar transactions or the market for similar transactions is limited. In the case of the Polish Accounting Act there are no detailed descriptions, which is connected with the structure of the Accounting Act which does not comment on the articles. A National Accounting Standard regarding investment property has not been elaborated up to the end of 2009. However according to article 10.1.3 of the Accounting Act, in the case of problems which were not tackled by home regulations, entities may use the National Accounting Standards issued by the Accounting Standards Committee and when there is no national standard, the entities may use the IAS (UoR 10.1.3).

Cost model

The IAS suggests that the cost model should only be used when it is impossible to determine the fair value on a continuing basis (IAS 40. 53). The standard, with regard to the cost model, refers to the IAS 16. The Accounting Act and IAS 16 have convergent regulations as to the initial recognition. However IAS 16 allows for two methods of measurement after initial recognition: the historical cost model (depreciation model) and the revaluation model. The Polish Accounting Act allows only for the depreciation model to be used. The act does not present rules for revaluation. According to the Accounting Act, the value of fixed assets may grow only due to other, distinct, regulations issued by the Minister of Finance. The act, emphasizes that, the new, capitalized, value of the non-current assets should not exceed its fair value. The definition of fair value is coherent with the IAS (NIEDZIÓŁKA 2007).

Transfers

When transferring a property from investment property into other categories, their actual value kept in the books should be used as the new initial recognition value (HELIN 2006, p. 230). If the property was owner-owned and measured according to IAS 16 and will be measured according to its fair value, than the differences will be recognized in the revaluation reserve. If the property was considered as supplies, the differences are recognized in loss or profit of the given period (HELIN 2006, p. 230).

According to article 3.32.c of the Accounting Act in the case of transfers of investment property into fixed assets, which were measured at fair value, the differences will be recognized in other operational loss or profit.

Empirical example

TransGlobal enterprise has acquired a small office block for the amount of 1 000 000 PLN intended for rental. The building has been recognized in long-term investment. According to an independent real estate expert the value of the investment grew during the balance year by 20 000 PLN.

Case 1: The accounting policy of the business unit states that the investment will be measured at cost according to the rules presented in the Polish Accounting Act. Regular amortization will be performed over the period of 40 years in the amount of 25 000 PLN per year and eventual impairments will be written off if necessary.

The balance value of the investment at the end of the first year is 975 000 PLN (1 000 000 PLN – 25 000 PLN = 975 000 PLN). The operational costs due to amortization amount to 25 000 PLN.

Case 2: The accounting policy states that the investment will be measured according to the revaluated cost model consistent with IAS 16.

The balance value of the investment at the end of the first year is 994 500 PLN (1 000 000 PLN + 20 000 PLN – (1 020 000 PLN/40 years) = (1 020 000 PLN – 25 500 PLN = 994 500 PLN).

The growth of the value of the investment is recognized in the revaluation capital. The operational costs due to amortization amount to 25 500 PLN.

Case 3: The accounting policy states that the investment will be measured according to the fair value model.

The balance value of the investment at the end of the first year is 1 020 000 PLN (1 000 000 PLN + 20 000 PLN = 1 020 000 PLN). Other operational profit is 20 000 PLN.

The balance value of the same investment may amount at the end of the balance year to 975 000 PLN, 994 500 PLN and 1 020 000 PLN according to the

chosen accounting policy. The financial result may be reduced by 25 000 PLN (case 1), 25 500 PLN (case 2). In case 3 the financial result has been increased by 20 000 PLN.

According to the above, the choice of a given accounting policy may influence the value of investment property and the financial result. The lack of the possibility to use the revaluation cost model in the Polish Accounting Act may create significant differences in the balance sheet and the profit and loss account of the entities that prepare their statements according to the Polish regulations and those that use the IAS.

Comparison of Polish regulations and the IAS for investment property

Table 1

Comparison of Polish regulations and the IAS for investment property

Accounting Act	International Accounting Standards
1	2
Fixed assets with the exception of 3.1.17 are understood as assets and equal to assets of an expected economical usage longer than a year, complete, usable and designated for own-usage including – land, rights of perpetual usufruct, buildings, premises, titles to cooperative flats, titles to cooperative premises (UoR 3.1.15).	The future economic benefit embodied in an asset is the potential to contribute, directly or indirectly, to the flow of cash and cash equivalents to the entity. The potential may be a productive one that is part of the operating activities of the entity. It may also take the form of convertibility into cash or cash equivalents or a capability to reduce cash outflows, such as when an alternative manufacturing process lowers the costs of production (IAS, Framework for the Preparation and Presentation of Financial Statements 53). Tangible items are understood as that which: (a) are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and (b) are expected to be used during more than one period. (IAS 16.5).
Investment is understood as assets held by an entity for economic gain from the appreciation of their value, receiving revenue from interests, dividends, profit shares or other gains also from a business transaction, and particularly financial assets, property, intangible assets which are not used for owner purposes but are held for receiving economic gain (UoR 3.1.17).	Investment property is held to earn rentals or for capital appreciation or both (IAS 40. 7).

cont. table 1

1	2
The value at recognition is the price of acquisition or the costs incurred to create the fixed asset, including the costs incurred to make improvements, extensions, rebuilding, modernization or reconstruction resulting in a greater value of the fixed asset in comparison to the state before the improvements, extension, rebuilding, modernization or reconstruction (UoR 32.1-5).	The cost of an investment property is not increased by: (a) start-up costs (unless they are necessary to bring the property to the condition necessary for it to be capable of operating in the manner intended by management), (b) operating losses incurred before the investment property achieves the planned level of occupancy, or (c) abnormal amounts of wasted material, labour or other resources incurred in constructing or developing the property. IAS (40. 23). An entity evaluates under this recognition principle all its investment property costs at the time they are incurred. These costs include costs incurred initially to acquire an investment property and costs incurred subsequently to add to, replace part of, or service a property. An investment property shall be measured initially at its cost. Transaction costs shall be included in the initial measurement (IAS 40.17).
	One or more investment properties may be acquired in exchange for a non-monetary asset or assets, or a combination of monetary and non-monetary assets. The following discussion refers to an exchange of one non-monetary asset for another, but it also applies to all exchanges described in the preceding sentence. The cost of such an investment property is measured at fair value unless (a) the exchange transaction lacks commercial substance or (b) the fair value of neither the asset received nor the asset given up is reliably measurable. The acquired asset is measured in this way even if an entity cannot immediately derecognize the asset given up. If the acquired asset is not measured at fair value, its cost is measured at the carrying amount of the asset given up (IAS 40.27).
Assets and liabilities are measured at least once every balance sheet day: property and intangible assets regarded as investment according to the rules presented for fixed assets and intangible assets in 31, 32.1-5, 33 or according to the fair value (UoR 28. 1).	With the exceptions noted in paragraphs 32A and 34, an entity shall choose as its accounting policy either the fair value model in paragraphs 33–55 or the cost model in paragraph 56 and shall apply that policy to all of its investment property (IAS 40.30).
The fair value should be measured at least once every 5 years by a real estate expert. If it is not possible to determine the fair value of investment other than property, then their price is at the cost of acquisition or the costs incurred during the process of construction. The fair value of financial investment made abroad is determined according to the rules of the host country (UoR 28.1.9).	An entity is encouraged, but not required, to determine the fair value of investment property on the basis of a measurement by an independent who holds a recognized and relevant professional qualification and has recent experience in the location and category of the investment property being valued (IAS 42.32).

cont. table 1

1	2
Other operational loss or income is understood as loss or income connected indirectly with the business operations of the entity and particularly costs or losses connected with maintaining property, intangible assets considered as investment and the actualization of the value of the investment, also connected with the transfer of the investment to fixed assets or intangible assets if they were measured at fair value (UoR 3.1.32).	The changes of fair value are recognized in loss or profit (IAS40.35).
Other operational loss or income include the actualization of the value of the investment connected with the transfer of the investment to fixed assets or intangible assets if they were measured at fair value (UoR 3.1.32).	For a transfer from investment property carried at fair value to owner-occupied property or inventories, the property's deemed cost for subsequent accounting in accordance with IAS 16 or IAS 2 shall be its fair value at the date of change in use. If an owner-occupied property becomes an investment property that will be carried at fair value, an entity shall apply IAS 16 up to the date of change in use. The entity shall treat any difference at that date between the carrying amount of the property in accordance with IAS 16 and its fair value in the same way as a revaluation in accordance with IAS 16 (IAS 60–61). For a transfer from inventories to investment property that will be carried at fair value, any difference between the fair value of the property at that date and its previous carrying amount shall be recognized in profit or loss (IAS 40.63).

Source: IAS – Framework for the Preparation and Presentation of Financial Statements, IAS 16, IAS 40, Accounting Act.

Conclusion

Different countries use a variety of legal regulations and a wide array of practical solutions to describe given economic occurrences in the language of accounting. It is important to note, that common and uniform principles in IFRS/IAS significantly increase the clarity of financial statements.

Polish regulations in the amended in 2008 Accounting Act in the case of investment property do not differ greatly from the rules presented in the International Accounting Standards. However, the lack of the possibility to use the revaluation model when investment property is measured at cost, may generate important differences between a financial statement prepared according to the Accounting Act and the IAS, especially when the real estate prices have a soaring tendency. Another issue is that the Accounting Act does not tackle the problem of assets acquired through non-monetary items. International regulations contain very clear indications regarding actual solutions, which are lacking in the Polish Accounting Act. Moreover, the Accounting Act

does not separate investment property from investment in general. The definition of investment property in the Accounting Act should be clearly divided from the definition of investment, because the economic reality indicates that the issue of investment creates a lot of problems. It is necessary to elaborate a National Accounting Standard regarding investment property in order to limit arising doubts in practical implementation.

Translated by authors

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ASSETS AND PROVISIONS FOR THE DEFERRED INCOME TAX – NATURE AND PRESENTATION IN THE FINANCIAL STATEMENT

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K e y w o r d s: assets for the deferred income tax, provisions for the deferred income tax, positive and negative temporary differences of assets and liabilities, balance sheet and tax value of the balance sheet assets and liabilities items.

A b s t r a c t

The article is devoted to the nature of the deferred income tax. It presents the terms concerning the presented issue as well as the principles and records for establishing and releasing the assets and provisions for the deferred income tax. The considerations were supported by an example of determining the deferred tax for the basic balance sheet items and the method of presenting them in the financial statements of the entity.

AKTYWA I REZERWY Z TYTUŁU ODROCZONEGO PODATKU DOCHODOWEGO – ISTOTA ORAZ PREZENTACJA W SPRAWOZDANIU FINANSOWYM

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S ł o w a k l u c z o w e: aktywa z tytułu odroczonego podatku dochodowego, rezerwy z tytułu odroczonego podatku dochodowego, dodatnie i ujemne różnice przejściowe aktywów i pasywów, wartość bilansowa i podatkowa pozycji aktywów i pasywów bilansu.

A b s t r a k t

Artykuł poświęcono istocie odroczonego podatku dochodowego. Przedstawiono w nim terminy dotyczące omawianego zagadnienia oraz zasady i ewidencję tworzenia i rozwiązywania aktywów i rezerw z tytułu odroczonego podatku dochodowego. Rozważania poparto przykładem ustalania podatku dla podstawowych pozycji bilansowych oraz sposób ich prezentacji w sprawozdaniu finansowym jednostki.

Introduction

The International Accounting Standards Committee devoted the International Accounting Standard 12 Accounting for Taxes on Income that became effective as of 1981 to the issue of the income tax. In 1998 the IAS 12 was updated and reissued under the name of Income Taxes. It consists of more than 90 paragraphs with examples (Międzynarodowy Standard Rachunkowości nr 12 Podatek dochodowy, 1999, p. 1375)

In Poland, the history of accounting for the income tax goes back to the year 1995 and it was introduced by the Act of the 29th of September 1994 on accounting. In the Act just one article, art. 37, consisting of 10 paragraphs was devoted to the deferred tax. The domestic regulations in that field are complemented by the National Accounting Standard 2 Income Tax published in 2004, which contains the detailed development of the provisions of the Act and has similar content, structure and volume as the IAS 12 (KAMIENIECKA 2009b, p. 36).

On matters not regulated by the provisions of the Act in case of determining the deferred income tax, the entities may use the National Accounting Standard (KSR) No. 2 Income tax. It defines the principles concerning inclusion, valuation and presentation of receivables and payables for the income tax and assets and provisions concerning the deferred income tax as well as the principles of revealing the information concerning them in the financial statement (*Odroczony podatek dochodowy*. 2010, p. 64).

The deferred income tax is determined only by legal entities conducting business activity that are payers of the income tax the financial statements of which are subject to audit and publication according to art. 64 section 1 of the Act on accounting. Other entities may resign determination of the deferred income tax (legal entities the financial statements of which are not subject to compulsory publication) if this does not have a material influence on their assets and financial standing as well as the financial result. The decision on resignation from determining the deferred income tax should be reflected in the documentation describing the accounting principles (policy) assumed for application by the entity (*Rezerwy i aktywa z tytułu odroczonego podatku dochodowego – wybrane zagadnienia*. 2008, p. 9).

The aim of the article is to discuss the nature of the deferred income tax by means of the presentation of the basic terms and definitions concerning the analyzed subject. The presented example shows the method of determining, recording and presenting the assets and provisions for the deferred income tax in the financial statement.

Assets and provisions for the deferred income tax

As a consequence of the temporary differences between the value of assets and liabilities represented in the accounting ledgers and their tax value and the tax loss that might be deductible in the future, entities are required to establish provisions and determine assets for the deferred income tax of which they are payers. We deal with temporary differences when according to both the regulations on accounting and on the income tax they influence the gross financial result and the tax base in the same amount but this occurs during different reporting periods (*Odroczony podatek dochodowy*. 2010, p. 65).

The differences between the tax value and balance sheet (accounting) value of components of assets and liabilities that are temporary differences in their nature, from the perspective of the consequences to the tax settlements are divided into: (1) positive (taxable) temporary differences, which – when the carrying amount of the asset or liability is recovered or settled – will result in the future periods in an increase of the tax base, and (2) negative (deductible) temporary differences, which – when the carrying amount of the asset (its book value) or liability is recovered or settled – will result in the future periods in a decrease of the tax base.

The so-called balance sheet approach is applied for including the deferred income tax in the accounting ledgers and its representation in the financial statements. The key of that approach is that balance sheet items related to the temporary differences (assets and provisions) are determined and only later the influence of those differences on the financial result is established. The opposite philosophy is applied in the result approach (OLCHOWICZ 2003, p. 70). The temporary differences appearing when the balance sheet method is applied are presented in table 1.

Table 1

Appearance of temporary differences while applying the balance sheet method

ASSETS
(*Wb*) Balance sheet value > Tax value (*Wp*) Positive temporary difference "Reserve for the deferred income tax" appears
(*Wb*) Balance sheet value < Tax value (*Wp*) Negative temporary difference "Assets for the deferred income tax" appear
LIABILITIES
(*Wb*) Balance sheet value > Tax value (*Wp*) Negative temporary difference "Assets for the deferred income tax" appear
(*Wb*) Balance sheet value < Tax value (*Wp*) Positive temporary difference "Reserve for the deferred income tax" appears

Source: own work based on (FIJAŁKOWSKI 2005, p. 483).

The value of assets and provisions for the deferred income tax depends on: the amount and sign of the amount of temporary differences (negative or positive) as well as the income tax rates that will be effective during the years during which, according to the projections, accounting for the assets and provisions will take place and during which they will influence an increase or decrease of the tax base.

The assets for the deferred income tax are set at the amount projected in the future for deduction from the income tax as a consequence of the negative temporary differences that will cause a decrease of the income tax computation base and the deductible tax loss computed considering the prudential principles.

Negative temporary differences develop when the tax value of assets is higher than their book value or when the book value of liabilities exceed their tax value. Those are the differences then that will be deductible from the taxable income. They may appear in both the assets and the liabilities.

Provisions for the deferred income tax are established at the amount of the income tax payable in the future as a consequence of positive temporary differences, i.e. the differences that will cause increasing the base for computation of the income tax in the future.

The amounts of assets and provisions for the deferred income tax are established considering the income tax rates effective during the year in which the tax liability appears (in 2009 that rate was 19%).

The deferred income tax is not established for permanent differences between the balance sheet value and the tax value of items of assets and liabilities, as the permanent differences are the differences that will never be settled. They cover the assets or liabilities recovery or settlement of which – according to the provisions of the Act of the 15th of February 1992 on corporate income tax – is not considered a tax cost or income and as a consequence they do not influence the tax base.

The (1) depreciation of cars on the part of the value that exceeds EUR 20 000 equivalent, (2) reimbursed, amortized or neglected taxes, payments to the PFRON, (3) costs of enforcement related to nonperformance of liabilities, (4) interest for arrears in payment of budget or other liabilities to which the regulations of the Tax Ordinance are applicable may be treated as permanent differences (*Ustalamy odroczony podatek dochodowy*. 2009, p. 5)

Determination and recording of the temporary differences of assets and liabilities

The inclusion of assets and provisions for the deferred income in accounting ledgers takes place by means of: (1) booking the change only between the status as at the end and the beginning of the reporting period in the balances of

the provisions and assets for the deferred income tax or (2) countering the entries of their status as at the beginning of the reporting period and booking the status determined as at the end of the reporting period (*Rezerwy i aktywa z tytułu odroczonego podatku dochodowego – wybrane zagadnienia*. 2008, p. 5) The choice of the booking solution depends on the entity.

Table 2

The typical transactions concerning the assets and provisions for the deferred income taxes represented in the ledgers

Operation	Debit account	Credit account
Assets for the deferred income tax determined with negative temporary differences	65–0*	87**
Writing off the excessive item of assets for the deferred income tax or resignation from activating it	87**	65–0*
Provisions for the deferred income tax established for the positive temporary differences	87**	83–0***
Release of the excessive provisions or resignation from establishing them	83–0***	87**

* 65–0 "Assets for the deferred income tax"
** 87 "Income tax and other compulsory charges on the financial result"
*** 83–0 "Provisions for the deferred income tax"
Source: Rezerwy i aktywa z tytułu odroczonego podatku dochodowego – wybrane zagadnienia (2008, pp. 6, 7).

Table 3 presents the balance sheet (book) and tax value of assets as at the balance sheet date of the 31st of December 2009. As at the 1st of January 2009 the balance on account 65–0 "Assets for the deferred income tax" amounted PLN 14 000.

The entity decided that the deferred income tax is booked in the accounting ledgers only by means of changes (increase or decrease) in the balances of assets for the deferred income tax as at the end and as at the beginning of the reporting period. The assets for the deferred income tax as at the end of the reporting period amount: (8170 PLN + 16 340 PLN) = 24 510 PLN while at the beginning of the period they amounted to PLN 14 000. As at the balance sheet date the assets for the deferred income tax should be increased by the amount of (24 510 PLN – 14 000 PLN) = 10 510 PLN.

Booking description:
PK – Assets for the deferred income tax: 10 510 PLN
Debit account 65-0 "Assets for the deferred income tax"

Table 3
Balance sheet and tax values and temporary differences of assets as at the balance sheet date – the 31st of December 2009 [PLN]

Balance sheet items of assets	Value [PLN]		Ratio of balance sheet to tax value	Temporary differences (col. 2 – col. 3)		Deferred tax [PLN] (19% * col.5 or 6)	
	balance sheet	tax		positive	negative	provisions	assets
Fixed assets: – initial value: 300 000 – balance sheet depreciation: 60 000 – tax depreciation: 50 000	240 000	250 000	*Wb<Wp*	–	10 000	–	1 900
Stocks and shares: – according to purchase prices: 65 000 – according to market prices: 50 000	50 000	65 000	*Wb<Wp*	–	15 000	–	2 850
Finished goods: – according to manufacturing costs: 100 000 – according to the net sale price: 82 000	82 000	100 000	*Wb<Wp*	–	18 000	–	3 420
Domestic liabilities: – principal: 8 000 – interest accrued as at the balance sheet date: 1000	9 000	8 000	*Wb>Wp*	1 000	–	190	–
Foreign liabilities: – principal: 50 000 – exchange rate differences accrued as at the balance sheet date: 5000	55 000	50 000	*Wb>Wp*	5 000	–	950	–
Total				6 000	43 000	1 140	8 170

Source: own work based on *Rezerwy i aktywa z tytułu odroczonego podatku dochodowego – wybrane zagadnienia* (2008, p. 7).

Credit account 87 "Income tax and other compulsory charges on the financial result"

Table 4 presents the balance sheet (book) and tax values of liabilities as at the balance sheet date of the 31st of December 2009. As at the 1st of January 2009 the balance on account 83–0 "Provisions for the deferred income tax" amounted 3000 PLN.

Table 4

Balance sheet and tax values and temporary differences of liabilities as at the balance sheet date – the 31st of December 2009 [PLN]

Balance sheet items of liabilities	Value [PLN]		Ratio of balance sheet to tax value	Temporary differences (col. 2 – col. 3)		Deferred tax [PLN] (19% * col.5 or 6)	
	balance sheet	tax		positive	negative	provisions	assets
Domestic liabilities: – principal: 20 000 – interest accrued as at the balance sheet date: 1000	21 000	20 000	*Wb>Wp*	–	1 000	–	190
Foreign liabilities: – principal: 40 000 – negative exchange rate differences accrued as at the balance sheet date: 5000	45 000	40 000	*Wb>Wp*	–	5 000	–	950
Liabilities for not disbursed remunerations for work and retainer contracts: 30 000	30 000	0	*Wb>Wp*	–	30 000	–	5 700
Provisions for retirement compensations of employees: 10 000	10 000	0	*Wb>Wp*	–	10 000	–	1 900
Provisions for warranty repairs: 25 000	25 000	0	*Wb>Wp*	–	25 000	–	4 750
Bank loans: – loan principle: 100 000 – interest accrued: 15 000	115 000	100 000	*Wb>Wp*	–	15 000	–	2 850
Total				–	86 000	–	16 340

Source: own work based on *Rezerwy i aktywa z tytułu odroczonego podatku dochodowego – wybrane zagadnienia* (2008, p. 7).

Provisions for the deferred income tax as at the end of the reporting period amounted to 1140 PLN and as at the beginning of that period amounted to 3000 PLN. As at the balance sheet date the provisions for the deferred income tax should be decreases by the amount of (3000 PLN – 1140 PLN) = 1860 PLN.

Booking description:

PK – Release of the excessive provisions established: 1860 PLN

Debit account 83–0 “Provisions for the deferred income tax”
Credit account 87 “Income tax and other compulsory charges on the financial result”

Presentation of assets and provisions for the deferred income tax in the financial statements

Balance sheet

The provisions and the assets for the deferred income tax are presented in the balance sheet separately. The Provisions and assets can be compensated if the entity possesses the title authorizing it to consider them simultaneously in computations of the tax liability amount. This applies to the situations when assets and provisions for the deferred income tax concern one title of settlements. Compensation in also possible when reversing the differences to which they apply occurs at the same time and as a consequence of the specified legal transactions (FIJAŁKOWSKI 2005, p. 496), (GIERUSZ 2002, p. 155).

The provisions and assets for the deferred income tax are treated as long-term provisions and assets respectively and they are presented in the following balance sheet items:

ASSETS
A. Fixed assets
V. Long-term accruals
1. Assets for the deferred income tax
(the data in tables 3 and 4 indicate that those will amount to PLN 10,510)

Liabilities
B. Liabilities and provisions for liabilities
I. Provisions for liabilities
1. Provisions for the deferred income tax
(the data in tables 3 and 4 indicate that those will amount to PLN 1860)

Profit and loss account

The income tax influencing the financial result and presented in the profit and loss account for a given reporting period covers: the current part (for payment) and the deferred part. The deferred income tax decreases or increases the current tax. The deferred part presented in the profit and loss account represents the difference between the status of provisions and assets for the deferred income tax as at the end and as at the beginning of the reporting period.

O*. or L**. Income tax, including:
– current tax
– deferred tax
or
O. or L. Income tax, including:
– current tax
– provisions established for the deferred income tax
– released provisions for the deferred income tax
– assets established for the deferred income tax
– released assets for the deferred income tax

*Comparative version of the profit and loss account
** Computation based version of the profit and loss account

Determination of the deferred income tax influencing the gross financial result on the base of the data from tables 3 and 4

1. Assets for the deferred income tax:

(End balance – Start balance) = (24 510 PLN – 14 000 PLN) = 10 510 PLN

2. Provisions for the deferred income tax:

(End balance – Start balance) = (1140 PLN – 3000 PLN) = (-) 1860 PLN

3. Deferred income tax:

(-) 1860 PLN – 10 510 PLN = (-) 12 370

This is the deferred income tax that will influence decreasing the current part of the income tax.

Cash flow statement

In the cash flow statement prepared by means of the indirect method the changes in the status of assets and liabilities for the deferred income tax will be represented in the following way:

A. Cash flows from operational activities
II. Total adjustments
5. Change in the status of provisions
9. Change in the status of accruals

Specification of changes in equity capital (fund)

In case of allocation of the assets and provisions for the deferred income tax to the equity capital (fund) (capital from valuation update) they influence changes of that capital (fund) in item:

1.a.5.1. Change in the capital (fund) from valuation update for the deferred income tax

Introduction to the financial statements and Supplementary information and clarifications

In the introduction to the financial statements, in point 7, the company accounting policy concerning accounting of income tax over time should be presented among other items.

The data on a change in the status of assets and provisions for the deferred income tax should be presented and discussed in the following positions of the supplementary information and clarifications:

Section 1 point 8 Data on the status of provisions according to the purpose of establishing them as at the beginning of the financial year, increases, utilization, release and final status.

Provisions for the deferred income tax

Section 1 point 11 List of important items of active and passive accruals Assets for the deferred income tax

Conclusion

The duty of determining the deferred income tax is a consequence of the divergences between the regulations on accounting and the regulations on the income tax. The value of provisions for the deferred tax is the amount of the income tax payable in the future determined according to the positive temporary differences. The value of assets for the deferred income tax is the amount of tax that is projected to be deductible from the income tax in the future determined according to the negative temporary differences and deductible tax loss.

The ways for identifying the temporary differences, determining their nature, methods of analyzing changes in temporary differences (i.e. "reversing" them) and determining on that base the adjustments (release of assets and provisions for the deferred income tax) are the issues to be decided by each economic entity. It is recommended to undertake the effort to solve the problem by tabulation using a computer spreadsheet, e.g. Excel, which facilitates transfer of data for consecutive periods, automation of computations, particularly important on input of various changes and updates, possibility of automatic obtaining of collective data needed for bookings (FIJAŁKOWSKI 2005, p. 490).

Correct determination of the temporary differences is a difficult issue in accounting and it requires deep knowledge on the accounting law and the tax law.

Provisions and assets for the deferred income tax are determined and recorded in ledgers as at the end of the financial year for correct preparation of

the year financial statements. If the deferred income tax is determined as at the end of each reporting period then with the same frequency the current tax must be determined, even if it is determined with lower frequency for ordinary tax settlements (e.g. half-yearly or yearly return).

Economic practice shows that entities are willing to establish assets for the deferred income tax and avoid revealing and presenting reserves for that tax. This is one of the instruments that serve creating the financial result (increasing the net profit or decreasing the loss, higher dividend disbursements) (KAMIENIECKA 2009a, p. 96) Both the KSR No. 2 and IAS No. 12 require applying the principles of prudential computation during recording of assets and provisions for the deferred income tax. This involves the duty of presenting the assets for the differences the settlement of which is possible and the necessity of including write offs for impossibility of settlement of the assets established during the earlier years.

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APPLICATION OF KULLBACK-LEIBLER RELATIVE ENTROPY FOR STUDIES ON THE DIVERGENCE OF HOUSEHOLD EXPENDITURES STRUCTURES

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K e y w o r d s: Kullback-Leibler relative entropy, Shannon's entropy, similarity of structures, divergence of structures.

A b s t r a c t

The paper proposes the possibility of employing the methods defined on the grounds of the information theory to research on socioeconomic phenomena. The presented measures are Shannon's entropy and Kullback-Leibler relative entropy (divergence) applied for quantification of the degree of concentration of structures and the degree of divergence between structures analyzed in the dynamic approach respectively. The paper presents studies on the degree of divergence between structures of average monthly per capita expenditures in households in Poland during the years 2000–2008.

WYKORZYSTANIE ENTROPII WZGLĘDNEJ KULLBACKA-LEIBLERA DO BADANIA ROZBIEŻNOŚCI STRUKTUR WYDATKÓW GOSPODARSTW DOMOWYCH

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S ł o w a k l u c z o w e: entropia względna Kullbacka-Leiblera, entropia Shannona, podobieństwo struktur, rozbieżność struktur.

A b s t r a k t

W artykule zaproponowano możliwość wykorzystania metod zdefiniowanych na gruncie teorii informacji do badania zjawisk społeczno-ekonomicznych. Prezentowane miary to entropia Shannona oraz entropia względna (dywergencja) Kullbacka-Leiblera wykorzystane odpowiednio do kwantyfikacji stopnia koncentracji struktur oraz stopnia rozbieżności między strukturami analizowanymi w ujęciu dynamicznym. W artykule zbadano stopień rozbieżności między strukturami przeciętnych miesięcznych wydatków na osobę w gospodarstwach domowych w latach 2000–2008 w Polsce.

Introduction

Analysis of socioeconomic phenomena is also frequently accompanied by comparison of the level of those phenomena during a certain period with the level of those phenomena during another period. Studies on similarity or dissimilarity of structures characterizing economic phenomena changing over time represent a special case of such analyses. Any comparative analyses concerning the dynamics of socioeconomic processes should be carried out by applying appropriate statistical methods allowing quantification that is methodologically correct and univocal for interpretation. At the same time the increase in the level of complexity of the phenomena investigated is continually contributing to the development of statistical methods applied to research on such phenomena. The wide spectrum of methods allowing comparison of structures is offered by the taxonomy of structures, although, in their majority they are measures of similarity (or dissimilarity) that are the functions of the metrics of the distance between the components of such structures. In this paper application of Kullback-Leibler entropy (divergence) for quantification of the level of divergence between structures according to the dynamic approach is proposed. Shannon's entropy was also used for investigating the level of concentration of the structures.

The article aims at presenting the potential for applying the methods defined on the grounds of the information theory in the studies on socioeconomic phenomena. The application goal of the paper is to investigate the level of divergence between structures of the average monthly per capita expenditures in households during the years 2000–2008 using the Kullback-Leibler measure.

Shannon's entropy

In this paper, according to the definition by Strahl (*Taksonomia struktur*... 1998), the structure will be understood as the object described by the structure (or share) indicators' vector. Determination of the S^n vector is justified in case when the characteristic X that is subject to the investigation satisfies the attribute of additivity that is when the sum of the values of the individual variants of the characteristic makes economic sense.

Indicators of structure (or indicators of share) α_i for $i = 1, 2,..., n$ that are respective components of the structure S^n, satisfy the following conditions:

(1) Normality: $0 \leq \alpha_i \leq 1$ $(i = 1, 2,..., n)$,

(2) Condition of unit sum: $\sum_{i=1}^{n} \alpha_i$ (i = 1, 2,..., n).

The indicators of structure α_i for $i = 1, 2,..., n$ represent the relative numbers of occurrences of specified variants of the characteristic X in the investigated population. Knowledge of the indicators of structure will be used in this paper for quantification of the level of concentration of the X characteristic value and quantification of the divergence and dissimilarity with other standardized structures in both spatial and dynamic format.

The characteristics of the distribution of structure indicators $S^n = [\alpha_1, \alpha_2,..., \alpha_n]$ concerning the degree of diversification and concentration may be investigated by means of Shannon's entropy. The Shannon's entropy of S^n structure is defined as follows:

$$H_S(S^n) = H_S(\alpha_1,\alpha_2,...,\alpha_n) = \sum_{i=1}^{n} \alpha_i \log_2 \frac{1}{\alpha_i} \tag{1}$$

The Shannon's entropy H_S given by the formula (1) satisfies the characteristics specified, e.g. in the works by (PRZYBYSZEWSKI, WĘDROWSKA 2005, LAVENDA 2005):

1. it is a non-negative value, $\forall \alpha_i \in [0,1]\ H_S(S^n) \geq 0$,
2. it assumes the value of 0, when one of the structure coefficients $\alpha_i = 1$ for a certain i ($i = 1, 2,..., n$), the remaining coefficients are equal to 0,
3. satisfy the characteristic of symmetry: $H(\alpha_1,\alpha_2,...,\alpha_n) = H(\alpha_{(1)},\alpha_{(2)},...,\alpha_{(n)})$,
4. assumes the highest value equal to $H_S(S^n) = \log_2 n$, when all the structure coefficients α_i are equal to each other for i = 1, 2,..., n:

$$\alpha_1 = \alpha_2 = ... = \alpha_n$$

5. it is concave: $\forall \alpha_i \in [0, 1]\ \frac{\delta^2}{\delta {\alpha_i}^2} H_S(x) \leq 0$.

Shannon's entropy H_S of the structure $S^n = [\alpha_1,\alpha_2,...,\alpha_n]$ is treated as the measure of uncertainty related to the distribution of the coefficients of structure α_i for $i = 1, 2,..., n$. The value of entropy H_S depends exclusively on the frequency of appearance of the i-variant of X characteristic, i.e. the indicators of structure (or share). If structure S^n has the form of [0, 0,..., 1] this means that the fund of the investigated X characteristic is concentrated in a single variant. Entropy $H_S(0, 0,..., 1) = 0$, which means that there is no uncertainty related to achievement of characteristic X, and the distribution of the characteristic is determined. The attribute of symmetry that Shannon's entropy possesses causes that component $\alpha_i = 1$ ($i = 1, 2,..., n$) may be any i coordinate of structure S^n. On the other hand the maximum uncertainty as concerns obtaining one of the variants of the X characteristic is linked to the

presence of the structure $\left[\frac{1}{n}, \frac{1}{n},...,\frac{1}{n}\right]$. The total deconcentration taking place then accompanies the situation when the entropy $H_S\left(\frac{1}{n}, \frac{1}{n},...,\frac{1}{n}\right)$ is not maximal for the structure vector with n components. This means that the distribution of the investigated characteristic transforms into an even one. The values of entropy $H(S^n)$ are standardized within the range of $H(S^n) \in [0, \log_2 n]$, and as a consequence, knowledge of $H(S^n)$ may be useful for identification of the level of concentration of the characteristic. Understanding of concentration using entropy applies to concentration of units around certain values.

Kullback-Leibler relative entropy

Knowledge of measures of similarity of structures characterizing the investigated objects or phenomena is the starting point for the majority of taxonomic procedures. The measure of similarity of structures usually is a function of the measures of the distance of their partial indicators. As a consequence of involvement in numerous studies on similarity of structures undertaken in relation to socioeconomic phenomena that issue has been presented in many publications. The review of the most important methods for measurement of the similarity of structures has been presented in the works by, e.g. NOWAK (1990) and MŁODAK (2006).

In this paper the measure defined on the grounds of the information theory will be used for quantification of the level of dissimilarity of structures. The relative entropy also referred to as the Kullback-Leibler (KL) divergence was proposed by Kullback and Leibler in 1951 and found numerous applications, in particular for investigating the "distance" between two distributions of probability $\{p(x_i)\}$ and $\{q(x_i)\}$ (DHILLON et al. 2003, ZHANG, JIANG 2008) or two models: actual $f(x)$ and theoretical $g(x, \theta)$ (ASADI et al. 2005, PIŁATOWSKA 2009).

The study of similarity of structures is of static or dynamic nature and as a consequence the analysis of similarity of structures is considered in the n-dimensional space or the variability of structures over time is investigated. In this paper the similarity of structures according to the dynamic approach will be studied. The structures with n components will be considered: structure S_t^n characterizing the investigated phenomenon at the time t expressed by the vector of structure (or share) indicators $S_t^n = [\alpha_{1t}, \alpha_{2t},..., \alpha_{nt}]$ structure S_τ^n characterized the investigated phenomenon at the time τ expressed by the vector of components $S_\tau^n = [\alpha_{1\tau}, \alpha_{2\tau},..., \alpha_{n\tau}]$. The components of vectors $[\alpha_{1t}, \alpha_{2t},..., \alpha_{nt}]$ and $[\alpha_{1\tau}, \alpha_{2\tau},..., \alpha_{n\tau}]$ satisfy the conditions of standardization and unit sum.

Kullback-Leibler relative entropy for the pair of structures S_t^n and S_τ^n is defined by the formula (DHILLON et al. 2003):

$$\mathrm{KL}(S_t^n,S_\tau^n) = \sum_{i=1}^{n}\alpha_{it} \log \frac{\alpha_{it}}{\alpha_{i\tau}} \tag{2}$$

The KL divergence is the measure of divergence, dissimilarity between two structures. In the formula format defined in that way structure S_τ^n defined in the time τ is treated as the base structure. In the literature the term of Kullback-Leibler "distance" appears frequently but that is a misleading term as KL relative entropy does not satisfy the characteristics of distance metrics, i.e. the conditions of symmetry and inequality of triangle (DHILLON et al. 2003).

Kullback-Leibler relative entropy may be expressed as the difference between the so-called cross entropy of structures S_t^n and S_τ^n and Shannon's entropy of structure S_t^n (HUN, YANG 2007):

$$\mathrm{KL}(S_t^n,S_\tau^n) = \sum_{i=1}^{n}\alpha_{it} \log \frac{\alpha_{it}}{\alpha_{i\tau}} =$$

$$= \alpha_{1t} \log \frac{\alpha_{1t}}{\alpha_{1\tau}} + \alpha_{2t} \log \frac{\alpha_{2t}}{\alpha_{2\tau}} +\ldots+ \alpha_{nt} \log \frac{\alpha_{nt}}{\alpha_{n\tau}} =$$

$$=\alpha_{1t} (\log \alpha_1 - \log \alpha_{1\tau}) + \alpha_{2t} (\log \alpha_{2t} - \log \alpha_{2\tau} +\ldots+ \alpha_{nt} (\log \alpha_{nt} - \log \alpha_{n\tau}) =$$

$$= \sum_{i=1}^{n} \alpha_{it} \log \alpha_{it} - \sum_{i=1}^{n} \alpha_{it} \log \alpha_{i\tau} =$$

$$= \sum_{i=1}^{n} \alpha_{it} \log \frac{1}{\alpha_{1\tau}} - \sum_{i=1}^{n} \alpha_{it} \log \frac{1}{\alpha_{1t}} =$$

$$= H_S(S_t^n, S_\tau^n) - H_S(S_t^n) \tag{3}$$

H_S (S_t^n, S_τ^n) entropy is called the cross entropy (ZHANG, JIANG 2008). The more similar the structures S_t^n and S_τ^n are the more the cross entropy aims at Shannon's entropy $H_S(S_t^n)$, hence the difference in formula (3) aims at zero. For identical structures $S_t^n = S_\tau^n$ the equality of cross entropy and Shannon's entropy takes place $H_S(S_t^n, S_\tau^n)$, which means that for identical structures the Kullback-Leibler relative entropy is zero. Formula (3) allows intuitive cognition of the KL divergence as the "cost" of identifying the indefiniteness of the distribution of structures S_t^n when the indefiniteness of the distribution of structure S_τ^n is known.

The values of the KL measure are always non-negative and unlimited, which means that with appearance of increasing differences between structures S_t^n and S_τ^n they increase to infinity (DHILLON et al. 2003). The KL relative entropy is asymmetric, which means that $KL(S_t^n, S_\tau^n) \neq KL(S_\tau^n, S_t^n)$ for $S_t^n \neq S_\tau^n$, and that is why that measure should not be treated as the distance between the structures but as the divergence while considering one of the structures to be the base structure (WĘDROWSKA 2010). In the literature proposals of a symmetric measure being a function of Kullback-Leibler divergence exist (CAVANAUGH 1999, HUNG, YANG 2007).

Study of the divergence of household expenditures structures

Studies on the budgets of households play an important role in the analyses concerning the living standards of the people. Next to the information on incomes and expenditures of specific population groups it also provides the information on the level and structure of expenditures. In the study of the households; expenditures structure it is important to investigate whether divergences in the observed structure over a certain period of time exist.

The study covered the structure of the total average monthly per capita expenditures in the household during the years 2000–2008. The data considered originate from the publication by the Central Statistical Office concerning the budgets of households containing results of studies for 2008 (*Budżety*... 2009).

Food and non-alcoholic beverages have the highest share in the structure of expenditures in each individual year although it can be noticed that the share decreases systematically and 2008 was the lowest (at 25.56% of total expenditures). Expenditures related to the use of the apartment that range from 17.88% to 21.01% of total expenditures represent another important item in the structure of expenditures.

Quantification of the divergences between the structures of expenditures during the years 2000–2008 will be done applying the KL relative entropy. The symbolic graph that is the graphic illustration of the multidimensional data offers the possibility of the initial assessment of similarity of the investigated structures (Fig. 1). Elements of the star graph corresponding to structures of expenditures during consecutive years differ from each other, which is indicated by the radii representing the identified elements of the structures.

Table 1

Structure of average total monthly per capita expenditures if households during the years 2000–2008

Item	Year								
	2000	2001	2002	2003	2004	2005	2006	2007	2008
Expenditures of households	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Food and non-alcoholic beverages	0.3082	0.3096	0.2954	0.2777	0.2808	0.2812	0.2714	0.2664	0.2556
Alcoholic beverages, tobacco products and narcotic drugs	0.0300	0.0305	0.0299	0.0285	0.0274	0.0273	0.0268	0.0270	0.0263
Clothing and shoeing	0.0552	0.0528	0.0525	0.0512	0.0493	0.0507	0.0539	0.0571	0.0550
Use of apartment	0.1788	0.1885	0.1992	0.2101	0.2026	0.1965	0.1973	0.1841	0.1889
Apartment equipment and running the household	0.0594	0.0488	0.0500	0.0502	0.0490	0.0497	0.0510	0.0553	0.0546
Health	0.0444	0.0452	0.0453	0.0490	0.0505	0.0503	0.0491	0.0494	0.0483
Transport	0.0994	0.0878	0.0855	0.0857	0.0907	0.0891	0.0877	0.0932	0.1007
Communication	0.0351	0.0430	0.0450	0.0468	0.0468	0.0531	0.0515	0.0502	0.0475
Recreation and culture	0.0669	0.0652	0.0644	0.0655	0.0677	0.0684	0.0714	0.0760	0.0795
Education	0.0144	0.0148	0.0161	0.0153	0.0151	0.0131	0.0140	0.0137	0.0125
Restaurants and hotels	0.0140	0.0139	0.0162	0.0173	0.0176	0.0185	0.0196	0.0190	0.0200
Other goods and services	0.0494	0.0511	0.0498	0.0504	0.0505	0.0496	0.0510	0.0529	0.0523
Pocket money	0.0084	0.0096	0.0096	0.0095	0.0101	0.0095	0.0119	0.0132	0.0156
Other expenditures	0.0365	0.0394	0.0413	0.0429	0.0418	0.0429	0.0433	0.0424	0.0431

Source: Central Statistical Office.

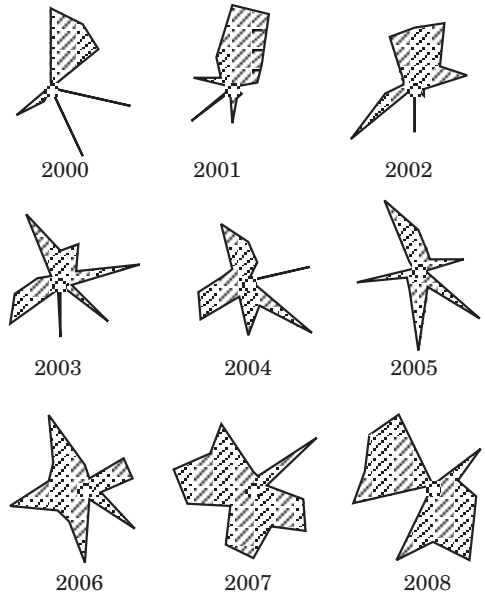

Fig. 1. Star graph of the structures investigated

Source: own work with assistance of the STATISTICA software package

On the base of formula (1) the value of Shannon's entropy was determined for each of the structures of the total average per capita expenditures in households during the years 2000–2008, and next the values of the Kullback-Leibler relative entropy were computed assuming the structure from the period immediately preceding the analyzed period and the structure of 2000 as the base structure. The results of computations are presented in Table 2.

Table 2

Shannon's entropy and KL relative entropy for the structures of average monthly expenditures during the years 2000–2008

Year	Shannon's entropy $H_S(S^n)$	Kullback-Leibler relative entropy $H_S(S_t^n, S_\tau^n)$	
		base structure for the period $\tau = t - 1$	base structure for the period $\tau = 2000$
2000	3.1736	–	–
2001	3.1727	0.00452	0.00452
2002	3.1973	0.00146	0.00755
2003	3.2192	0.00170	0.01310
2004	3.2221	0.00067	0.01115
2005	3.2311	0.00103	0.01364
2006	3.2615	0.00112	0.01551
2007	3.2919	0.00179	0.01427
2008	3.3024	0.00158	0.01897

Source: own computations.

Knowledge of Shannon's entropy may serve quantification of the level of concentration of the distribution of the average monthly expenditures funds. The values of entropy $H_S(S_t^n)$ Sfor structures representing consecutive years are similar and show minor differences from the maximum value of the entropy for the structure with 14 components at $\log_2 14 = 3{,}8074$. As a consequence we can talk about poor concentration of the average monthly expenditures in one of the variants that is the expenditures on food and non-alcoholic beverages.

Investigation of the level of divergence between the structures applying the chain approach assuming the structure from the period immediately preceding the analyzed period as the base structure indicates low level of divergences. The highest value of the KL measure occurred in the divergence between the structure of the average monthly expenditures in 2001 and the structure of those expenditures in 2000. Consecutive values of Kullback-Leibler relative entropy indicate minor divergences between the analyzed structures.

Quantification of the level of divergence between the structure of the average per capita expenditures in households during the consecutive years and the structure of 2000 indicate slightly larger differences. The structure of expenditures in 2001 was the closest to that of 2000. The consecutive years indicate increasing divergences of structures from that of the year 2000. The largest divergence occurred in case of the structure for 2008, which was a consequence of the decrease in share of the expenditures on food and non-alcoholic beverages by ca. 5 percent points as compared to the year 2000.

Conclusion

The paper presents the possibility of applying Shannon's entropy and Kullback-Leibler relative entropy in studies on properties of the structures of average monthly per capita expenditures in households during the years 2000–2008. The results obtained indicate that the studied structures are characterized by poor level of concentration and small changes during the period considered. The divergences showing the largest variability in the structure of expenditures were observed for the structures of 2008 as compared to the structure of 2000 although the level of those changes is minor as indicated by the value of the Kullback-Leibler measure.

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THE EFFECTIVENESS OF SIMPLE DIVERSIFICATION IN COMPARISON TO MARKOWITZ PORTFOLIO THEORY

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K e y w o r d s: simple diversification, portfolio effectiveness, systematic risk, specific risk.

A b s t r a c t

Analysis of capital investments at Warsaw Stock Exchange during the period of from 2004 through 2009 was the main goal of the study. The analysis was conducted on the base of the classic Markowitz portfolio theory and construction of multi-component balanced portfolios. The studies conducted indicate significant advantage of portfolio investments over the investments in individual securities. The largest risk decrease was recorded in case of the portfolios consisting of up to 5 securities.

Markowitz optimization applied in the studies allowed finding the portfolios much more secure, at the assumed rate of return, than the multi-component balanced portfolios. The results indicate significant importance of optimization models in the design of the portfolios of securities.

SKUTECZNOŚĆ DYWERSYFIKACJI PROSTEJ W PORÓWNANIU Z KLASYCZNYM MODELEM MARKOWITZA

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S ł o w a k l u c z o w e: dywersyfikacja prosta, efektywność portfela, ryzyko systematyczne, ryzyko specyficzne.

A b s t r a k t

Głównym celem pracy jest analiza ryzyka inwestycji kapitałowych na GPW w Warszawie od 2004 do 2009 roku. Analizę przeprowadzono na podstawie klasycznej teorii portfelowej Markowitza i budowy wieloskładnikowych portfeli równomiernych. Wyniki badań wskazują na znaczną przewagę inwestycji portfelowych nad inwestycjami w pojedyncze papiery wartościowe. Największy spadek ryzyka zaznaczył się dla portfeli składających się do pięciu walorów.

Wykorzystana w badaniu optymalizacja Markowitza pozwoliła na znalezienie portfeli znacznie bezpieczniejszych, przy założonej stopie zwrotu, od wieloelementowych portfeli równomiernych. Wyniki wskazują na niebagatelne znaczenie modeli optymalizacyjnych w konstrukcji portfeli papierów wartościowych.

Introduction

Risk in as inherent component of economic activity. It is visible particularly well in stock exchange investments where a large fluctuation of the rates of return occurs. The capital investments, in particular those in stocks, are characterized by significant risk resulting from numerous factors influencing the levels of quotes. Those factors can be independent of a given security and have a constant, systematic influence on the rates of return levels. This means they represent the so-called systematic non-diversifiable risk. The examples of variables that are systematic risk factors could be the market, inflation, interest rates, liquidity, macroeconomic and political changes risks (JAJUGA 1998). The other risk factors related to the activities of the individual issuers represent the source of the so-called specific, diversifiable risk. The investors, in building their investment portfolios take efforts to limit the risk in such a way that a decrease in prices for some stocks are balanced by increases in prices of other stocks. Construction of balanced portfolios containing equal shares of stocks of different enterprises represents the simplest method of diversification. According to the theory, with the increase in the number of assets in the portfolio its total risk decreases' this is confirmed by studies conducted at the Warsaw Stock Exchange (MARKOWSKI 2001). Construction of the effective portfolio, that is a portfolio with minimum risk for a given rate of return is a better method for risk elimination. The investors, however, for practical reasons, are building balanced portfolios, which are not the safest portfolios.

This study aimed at verifying to what extent investors building balanced portfolios expose themselves to excessive specific risk that could be diversified by applying the Markowitz model (1959). Analysis of the effects of simple diversification, that is the decrease of risk in balanced portfolios with expanding their composition by a larger number of stocks was another task of that study. The risk diversification study will be conducted considering sector membership of the companies used in the analysis.

Simple diversification versus optimal diversification

For the first time the bases of risk analysis in the form of the portfolio theory were presented by MARKOWITZ (1952). His theory marked the beginning of wide studies on capital investments and contributed immensely to formulation of the theory of investment choices and acquiring knowledge on the mechanisms determining the prices of financial instruments. The investment portfolio is an aggregated financial instrument consisting of individual instru-

ments (e.g. stocks, bonds, treasury bills) forming that portfolio in the defined proportions. The following analysis encompasses the fundamental elements of the portfolio analysis and it will be limited to investing in risky instruments only.

Each instrument is characterized by the expected rate of return μ_i. The expected value of the rate of return for a given portfolio is the weighted average of the values of the expected rates of return for the individual instruments where the shares of each of the instruments in the entire portfolio represent the weights (COPELAND, WESTON 1979, pp. 146–147):

$$\mu_p = [\mu_1, \mu_2, \ldots, \mu_K] \begin{bmatrix} x_1 \\ x_2 \\ \vdots \\ x_K \end{bmatrix} = \underline{\mu}^T \underline{X} \tag{1}$$

where μ_p – value of the expected portfolio rate of return; $\underline{\mu}^T$ – vector $(1\times K)$ of the expected values for the individual instruments; $\underline{X}$ – vector $(K\times 1)$ representing shares of instruments (x_i) in the portfolio; K – number of instruments in the portfolio.

According to the portfolio theory, the shares of individual securities in the investor's portfolio sum up to one, so:

$$\underline{X}^T \underline{I}_K = 1 \tag{2}$$

where $\underline{I}_K$ – vector $(K\times 1)$ of ones, and in the market without possibilities of short sales the shares satisfy the inequality:

$$0 \le x_i \le 1; \ (i = 1, \ldots, K) \tag{3}$$

Individual securities (portfolios) may during a given period assume different values of the rate of return. The more those rates deviate from their average rate of return the higher is the risk of the given investment. The variance of the rate of return that is expressed by the square form that follows is the measure of risk that is the diversity of the achieved levels of the rate of return on a given investment (COPELAND, WESTON, 1979, p. 147):,

$$\sigma_P^2 = [x_1, x_2, \ldots, x_K] \begin{bmatrix} \sigma_{11} & \sigma_{12} & \ldots & \sigma_{1K} \\ \sigma_{21} & \sigma_{22} & \ldots & \sigma_{2K} \\ . & . & . & . \\ . & . & . & . \\ \sigma_{1K} & \sigma_{2K} & \ldots & \sigma_{KK} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ . \\ . \\ \end{bmatrix} = \underline{X}^T \underline{\Omega} \underline{X} \tag{4}$$

where σ_P^2 – variance of the rate of return of the risky instruments portfolio; $\underline{\Omega}$ – positively determined matrix (K×K) of variances and covariances of the rates of return between the individual instruments.

The portfolio of capital investments may consist of one (single stock portfolio), a few, several or even, theoretically all the stocks available in the market. Each portfolio consisting of the sane stocks may contain them in different proportions. Minimization portfolio variance, that is decreasing the overall risk at the assumed level of the expected rate of return, is the goal of diversification.

In the portfolio theory context the nature of diversification can be presented in a simple way on the example of investments in the balanced portfolios, i.e. portfolios in which the shares of individual stocks in the portfolio are equal. The total portfolio risk expressed by the variance using formula (4) or in the scalar notation (ELTON, GRUBER 1998, pp. 72–73):

$$\sigma_P^2 = \sum_{i=1}^{K} x_i^2 \sigma_i^2 + \sum_{\substack{i=1 \\ j\neq 1}}^{K} \sum_{j=1}^{K} x_i\, x_j\, \sigma_{ij} \tag{6}$$

can be limited significantly. Accepting the assumption of identical weights of individual stocks in the portfolio the above formula can be written as follows:

$$\sigma_P^2 = \sum_{i=1}^{K} \frac{1}{K^2}\, \sigma_i^2 + \sum_{\substack{i=1 \\ j\neq 1}}^{K} \sum_{j=1}^{K} \frac{1}{K} \frac{1}{K}\, \sigma_{ij} \tag{6}$$

which after transformations is reduced to the format of:

$$\sigma_P^2 = \frac{1}{K}\, \overline{\sigma}_i^2 + \frac{K-1}{K}\, \overline{\sigma}_{ij} = \sigma_P^2 = \frac{1}{K}\, (\overline{\sigma}_i^2 - \overline{\sigma}_{ij}) + \overline{\sigma}_{ij} \tag{7}$$

where: σ_i^2 – average variance of the rates of return of companies in the portfolio; $\overline{\sigma}_{ij}$ – average covariance between the rates of return for the companies in the portfolio.

The above notation indicates that with the increase of the population K of the balanced portfolio, the first component of the portfolio variance aims at zero. That component represents the so-called diversifiable part of the total risk in the balanced portfolios that is the part that can be eliminated by combining individual securities into a portfolio. The second element of the

balanced portfolio variance is the covariance risk that cannot be avoided in the simple diversification process. The risk of a very well diversified balanced portfolio will then aim at the level of the average covariance of the rates of return of the stocks included in the portfolio and it will express the level of the systematic risk. The influence of the number of securities in the portfolio on the level of that risk is presented in Figure 1.

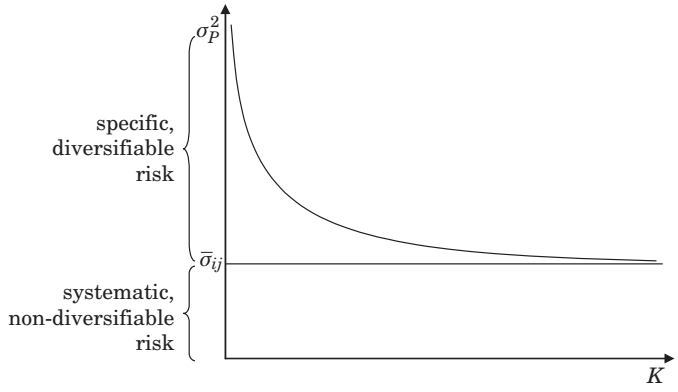

Fig. 1. Influence of the portfolio population on the risk size
Source: own work.

Balanced portfolios, even the most elaborate ones, may, but do not have to, represent investments assuring obtaining the minimum risk level at the required rate of return (effective portfolios). This results from the ineffective structure of the share of stocks in those portfolios, which make decreasing their total risk impossible.

In line with the above, simple diversification understood as expanding the size of the portfolio by adding new investments, will lead to limiting the risk, however, only skillful selection of the shares of stocks based on the covariances matrix analysis allows limiting the risk to the absolute minimum. The problem of determining portfolio weights minimizing the variance for the assumed level of the rate of return may be presented in the following way as an issue of the square programming:

$$\sigma_P^2 = \underline{X}^T \, \underline{\Omega} \, \underline{X} \rightarrow \min. \tag{8}$$

at given, linear limiting conditions:

$$\mu_P = \underline{\mu}^T \, \underline{X}, \qquad \underline{X}^T \, \underline{I}_k = 1 \tag{9}$$

The determined portfolios, minimizing the rate of return variance at the assumed level of the expected rate of return create the minimum risk set, which in the system of risk-revenue assumes the form of a parabola. The above situation is presented in Figure 2.

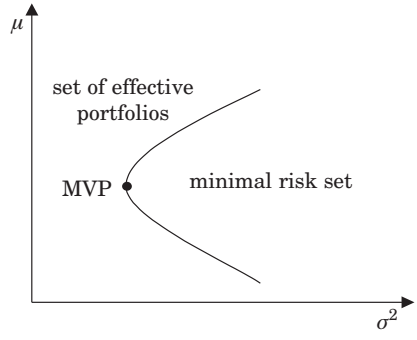

Fig. 2. Minimal risk set and the border of effective portfolios
Source: own work based on HAUGEN (1996).

The investors will consider only the portfolios situated on the upper arm of the parabola because only those generate the highest revenue at the approved risk level. Such portfolios, as a consequence, will form the set of effective portfolios. The MVP portfolio is the portfolio with the lowest risk that can be achieved.

Data

Information for the period of 2004–2009 was used for examining the level of capital investments; risk at Warsaw Stock Exchange. During the period covered 137 stocks belonging to the sectors of industry (79), finance (26) and services (32) were listed all the time. The time series on monthly rates of return were used in the studies.

The study applied the procedure of random generation of portfolios with the required population from among the initial set of the individual stocks[1]. To test the effects of simple diversification all the portfolios generated were balanced, i.e. the portfolio weights for each stock were equal to $x_i = 1/K$. In the study the portfolios with the population $K = 1, 2, 3, 4, 5, 10, 15, 20, 25$ were generated. With the exception of the single-element portfolios the number of

[1] The authors of this paper used the software by Maria Blangiewicz, M.Sc. (University of Gdańsk, Faculty of Management) written in the GAUSS language.

which was equal to the number of stocks in a given sector, for the remaining K values 1000 portfolios were generated at random for each of them.

Generating portfolios with different and systematically increasing number of stocks in the portfolio allowed analysis of portfolios risk diversification effects. The diversification coefficients d_k used in the study were computed according to the formula (BOŁT, MIŁOBĘDZKI 1996):

$$d_k = \left(\frac{\overline{\sigma}^2_{P,K}}{\overline{\sigma}^2_{P,1}}\right) \cdot 100 \tag{10}$$

where $\overline{\sigma}^2_{P,K}$ – average variance of the rate of return for a balanced portfolio consisting of K stocks; $\overline{\sigma}^2_{P,1}$ – average variance of the rate of return for an individual stock.

The problem of determining the vector $\underline{X}$ of the shares of stocks in the effective portfolios for the assumed rate of return was solved using the Wolf algorithm programmed in the Delphi language (RUTKOWSKA-ZIARKO 2005).

Results

The analysis of simple diversification effects on the base of the achieved rates of return of all the stocks during the period of 2004–2009 is presented in Table 1.

Table 1

Average rate of return, variance and diversification index of balanced portfolio determined on the base of all the listed companies

K	$\overline{R}_{P,K}$	$\overline{\sigma}^2_{P,K}$	d_K [%]
1	2.26	414.26	100.00
2	2.27	240.19	57.98
3	2.26	179.98	43.45
4	2.27	151.09	36.47
5	2.27	133.73	32.28
10	2.26	98.74	23.83
15	2.26	87.15	21.04
20	2.27	81.27	19.62
25	2.27	77.38	18.67
Optimal portfolio	2.27	10.56	2.55

Source: own computations.

The computed value of variance for individual securities is 414,26%^{2} for the average rate of return at ca. 2,27%. The risk level is subject to a significant reduction when consecutive stocks are added to the portfolio. It can be seen that the greatest decrease of risk occurs for portfolios of up to 5 stocks, for which the variance decreases three times as compared to the individual stocks. The further increase in the portfolio population causes slower and slower decrease of the risk. Thanks to the effects of portfolios diversification over 80% of the total risk for the individual securities can be eliminated. Elimination of total risk in the form of the diversification curve is presented in Figure 3.

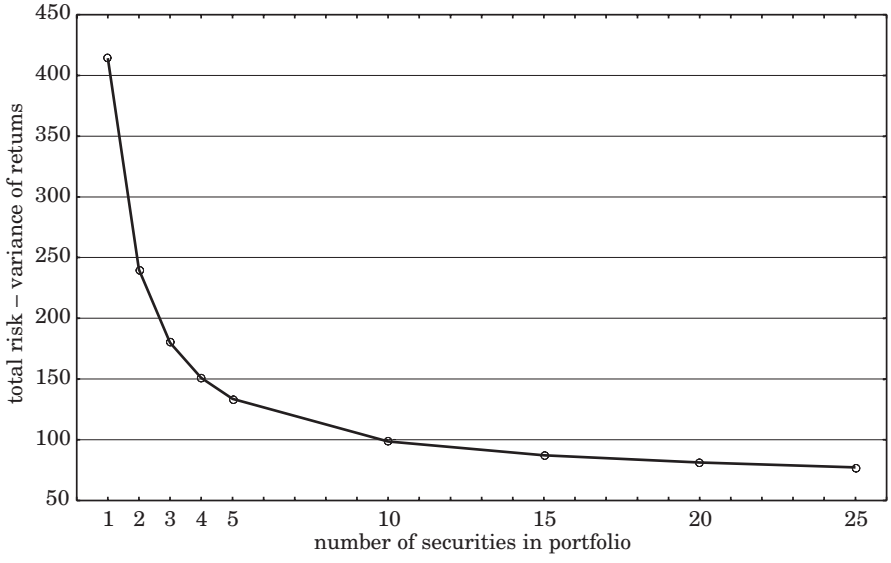

Fig. 3. Diversification curve for equally-weighted portfolios calculated basis of all securities quoted in period sample 2004–2009

Źródło: own calculations.

The optimization procedure for the assumed rate of return at 2.27% determined the effective portfolio with the variance of 10.56%^{2}. The Markowitz portfolio is characterized then by a few times lower risk than balanced portfolios of 25 elements. The effective portfolio consisted of the stocks of 25 different industrial companies. For 14 stocks their share in the portfolio was at least 0.01. Next the minimum risk portfolio was determined. The variance of that portfolio was 7.84%^{2} with the average profitability of 1.47%. That portfolio consisted of 20 different stocks although the shares of 5 of them were lower than 0.01.

Identical studies of simple and optimal diversification effects were conducted for the three main stock exchange sectors. The results are presented in Tables 2–4.

Table 2

Average rate of return, variance and diversification index of balanced portfolio determined on the base of industrial sector companies

K	$\overline{R}_{P,K}$	$\overline{\sigma}^2_{P,K}$	d_K [%]
1	2.35	414.40	100.00
2	2.35	237.54	57.32
3	2.35	178.70	43.12
4	2.35	150.37	36.29
5	2.35	132.00	31.85
10	2.35	97.64	23.56
15	2.35	85.58	20.65
20	2.35	79.82	19.26
25	2.35	75.22	18.15
Optimal portfolio	2.35	12.63	3.05

Source: own computations.

Table 3

Average rate of return, variance and diversification index of balanced portfolio determined on the base of finance sector companies

K	$\overline{R}_{P,K}$	$\overline{\sigma}^2_{P,K}$	d_K [%]
1	2.97	595.940	100.00
2	2.96	343.61	57.66
3	2.97	257.27	43.17
4	2.97	218.84	36.72
5	2.97	193.93	32.54
10	2.97	142.97	23.99
15	2.97	126.02	21.15
20	2.97	117.86	19.78
25	2.97	112.45	18.86
Optimal portfolio	2.97	45.81	7.68

Source: own computations.

Table 4
Average rate of return, variance and diversification index of balanced portfolio determined on the base of service sector companies

K	$\overline{R}_{P,K}$	$\overline{\sigma}^2_{P,K}$	d_K [%]
1	1.49	266.30	100.00
2	1.49	161.14	60.51
3	1.49	126.12	47.36
4	1.49	107.95	40.54
5	1.49	97.51	36.62
10	1.49	76.45	28.71
15	1.49	69.53	26.11
20	1.49	66.01	24.79
25	1.49	64.12	24.08
Optimal portfolio	1.49	25.93	9.79

Source: own computations.

The effects of simple diversification conducted for the companies from the sectors of industry, finance and services do not differ fundamentally from the results obtained in case of the entire population. The results of Markowitz portfolio analysis in the individual sectors were as follows:

– the optimal portfolio variance for the assumed rate of return at 2.35%, achieved in the sector of industry was $12.63\%^2$ and represented 3.05% of the average variance for the individual stock. The effective portfolio consisted of stocks of 20 different industrial enterprises. In case of 12 stocks, their share in the portfolio was at least 1%. The minimum risk portfolio for the industrial sector companies was characterized by the average profitability at the level of 1.61% and variance of $10.3\%^2$. It contained stocks of 19 enterprises and 13 of them had the share of over 0.01.

– the Markowitz portfolio variance for the assumed rate of return at 2.97%, achieved in the financial sector was $45.81\%^2$ and represented 7.68% of the average variance for the individual stock. The effective portfolio consisted of stocks of 12 different financial institutions; all shares were higher than 1%. The minimum risk portfolio was characterized by the average profitability at the level of 1.75% and variance of $29.6\%^2$. It contained stocks of 10 different financial institutions. For 9 companies the shares were higher than 0.01.

– the effective portfolio variance for the assumed rate of return at 1.49%, achieved in the sector of services was $25.93\%^2$ and represented 9.79% of the average variance for the individual stock. The effective portfolio consisted of

stocks of 12 different service enterprises. Only one share was lower than 1%. The minimum risk portfolio built of service sector companies 49%, contained 12 components of which only one was lower than 0.01. The risk of that portfolio measured with the variance was 23.92%^{2} at the average rate of return at 1.11%.

Conclusions

The conducted studies indicate a significant advantage of portfolio investments over investments in individual securities. With the increase of the portfolio population the total risk expressed by the variance of the rate of return decreased, however, the largest decrease of the risk was observed in the portfolios consisting of up to 5 stocks. Further expanding the portfolio lead to much lower relative decreases of the risk.

The specific risk characterizing the individual securities is decreased by combining stocks into the larger and larger portfolios. The systematic risk, on the other hand, is the element that cannot be eliminated through diversification. It reflects the common reactions of the stocks to the external factors indifferent of the financial situation of the individual securities.

Markowitz optimization used in the studies allowed finding portfolios much safer than multi-component balanced portfolios. The results showed that portfolio diversification represents, first of all, skilful management of the set of securities available in the market, that is designing portfolios offering the possibly highest rate of return at the approved risk level as opposed to building portfolios based on the balanced expanding them by consecutive securities.

The work can be an indication for the investors, who should aim at limiting the risk by including stocks of many different companies into the portfolio. However, the best effects can be achieved by building the effective portfolios applying mathematical optimization models and appropriate software.

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DEVELOPMENT OF THE IMAGE OF TOWNS IN A TOURIST REGION BASED ON THE EXAMPLE OF WARMIŃSKO-MAZURSKIE VOIVODSHIP

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K e y w o r d s: identity, image, town image development strategies, tourist town.

A b s t r a c t

Increasingly often, authorities of towns notice the need for targeted development of the town image. As a consequence, they undertake various actions that are to lead to the situation when the town is not seen in an accidental way but in a way consistent with the intentions of the town authorities. That desirable image is to be coherent and expressive as a consequence of which it should contribute to town development as a source of its competitive advantage. This paper aims at assessment of the image development strategies of the towns from Warmińsko-Mazurskie voivodship. The research was conducted in towns of Warmińsko-Mazurskie voivodship at the turn of 2009/2010 applying the survey method. The results indicate positive verification of the formulated hypothesis that the towns from Warmińsko-Mazurskie voivodship, as a consequence of their location, aim at developing their image as that of a tourist town.

KSZTAŁTOWANIE WIZERUNKU MIAST REGIONU TURYSTYCZNEGO NA PRZYKŁADZIE WOJEWÓDZTWA WARMIŃSKO-MAZURSKIEGO

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S ł o w a k l u c z o w e: tożsamość, wizerunek, strategia kształtowania wizerunku miasta, miasto turystyczne.

A b s t r a k t

Władze miast coraz częściej zauważają potrzebę celowego kształtowania wizerunku miasta. W związku z tym podejmują różnego rodzaju działania, które mają doprowadzić do tego, że miasto nie będzie odbierane w sposób przypadkowy, ale zgodny z intencjami władz miejskich. Pożądany

wizerunek ma być spójny i wyrazisty, przez co powinien przyczynić się do rozwoju miasta, stając się źródłem jego przewagi konkurencyjnej. Celem opracowania jest ocena strategii kształtowania wizerunku miast województwa warmińsko-mazurskiego. Badanie przeprowadzono w miastach województwa warmińsko-mazurskiego na przełomie lat 2009/2010 metodą ankietową. Wyniki badania wskazują na pozytywne zweryfikowanie wysuniętej hipotezy, mówiącej o tym, że miasta województwa warmińsko-mazurskiego ze względu na swoje usytuowanie dążą do ukształtowania wizerunku miasta turystycznego.

Introduction and methodology of study

The positive image is increasingly often treated as a significant source of competitive advantage. And this applies not only to the entities focused on maximization of profits. The opportunity of that type was noticed also in case of managing an entity as complex as a town. Increasingly often it is heard that towns aim at development of a specific image expecting that the image would become their intangible asset that in a long-term time perspective will attract investments, tourists, residents and other groups of entities to the town contributing as a consequence to its development. Initially the knowledge on purposeful development of town image was shallow and practical actions undertaken were shallow and inconsistent. Nevertheless, the knowledge on the methods of effective town image management has been increasing and as a consequence the results are improving. It comes out that towns, increasingly often, start planning the identity strategy conscientiously developing its desirable image. As the effect, the activities related to the development of the desired town image are currently, in most cases, planned and consistent and at the same time, to a different extent, included in the comprehensive town, or even entire region, development strategy. Also, increasingly often, the town authorities start noticing the need for creating a clear image of the town focused on a few attributes or a selected market segment and as a consequence they aim in their activities at the development of the image of, e.g. a tourist town, a town of culture and science, a town of exhibitions, a student town, etc.

This paper aims at assessment of the town image development strategies in Warmińsko-Mazurskie voivodship with particular focus on the fact that those towns are situated in the region considered a tourist region and as a consequence many of them would probably like to be seen as tourist towns. Formulation of that hypothesis was allowed by studies of the literature, results of earlier conducted studies and in depth market observation. The survey by mail was the research method used in the here-presented project. Thirty-four towns from Warmińsko-Mazurskie voivodship participated in the survey. Actions undertaken by the town authorities for development of the town image represented the subject scope of the survey. The first stage of the survey was conducted from October 2009 through January 2010.

Town image and identity

At the beginning the key notions such as identity strategy, image and identity should be explained.

It can be said that "the identity is the original and the cause while the image is the reflection and the effect" (WOLF 1992, p. 31). The identity means the way in which a given town wants to be identified by the recipients while the image represents how it actually is seen by the people (KOTHLER 1994, p. 54). The identity is the awareness of the town while its image is the picture and the consequence (MOSZKOWICZ 1997, p. 73). There is the opinion that "not so much the elements of the image exist but rather the individual elements of the identity possess their image" (OLSZEWSKA 2000, p. 14).

The thesis can be formulated then that the identity creates the image of the town through its strategy. The identity represents creating and transmitting the information about what can differentiate the town from among the other competitor towns. The town, in building the strategy of its identity, communicates with its surroundings that see it. That perception ("seeing") results in evaluation of the decoded messages (the instruments of the identity strategy) transmitted by the town and establishment of a specific image of the town in the environment (Fig. 1).

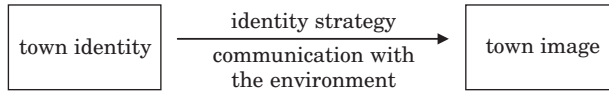

Fig. 1. Correlation between the town identity and image

Source: own work.

As a consequence, the identity strategy allows purposeful development of the town image that represents the result of decoding the messages (the instruments of the identity strategy) contained in the observations received through the stimuli (URBANIAK 2003, p. 36). The author also alternately calls the identity strategy the strategy of development of the desired image of the town (STANOWICKA-TRACZYK 2008, p. 18).

The identity of the town is determined by the (ALTKORN 1999, p. 10):

– urban attitude;
– urban behavior;
– urban communication;
– visual identification (urban design).

The identity is expressed in the individual character of the town, first of all in the visual form. In the English language literature the building of identity is

limited to just the visual presentation of the given subject. In addition to the visual components, the town identity is created by all the actions aiming at own identification such as, e.g. implementation of the town development strategy, organizational culture (way of receiving telephone calls, uniform standard of care for the clients, standards and behaviors), implemented advertising campaigns. The non-visual components of identity also include the: philosophy and mission of activity, historical roots, cultural heritage and remembered successes and failures in town management.

The identity is the set of those characteristics that the town wants to transmit to its environment through the identity strategy influencing by the same the image of the town or its market image. The identity is the set of characteristics of the town giving it the specific, stabile and consistent image (*Zarządzanie firmą...* 1995, p. 594). That image is the sum of beliefs and feelings of the people from the environment. The town can possess a number of different images differing depending on who is the recipient while there is just one identity. The image of the town is its image in public awareness (i.e. what individual groups of the public think of it) while the identity is what the town identifies itself by (ŚLIWIŃSKA 1999, p. 64). The relation between the identity and the image of a town is presented in Figure 2.

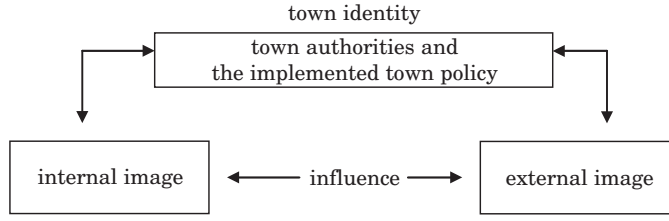

Fig. 2. Town identity versus town image

Source: ŁUCZAK (2001, p. 84).

A major role in building the town identity is played by the authorities of the town that are responsible for expressing the key ideas of activities. They are responsible for the communication policy, formulating the messages targeted at the environment and the whole set of activities related to products, internal communication and behavior in the market (ŁUCZAK 2000, p. 50). The authorities should identify the key determinants of town identity to skillfully use then in composing the instruments of the strategy determining the ultimate image of the town.

Identity strategies of towns from Warmińsko-Mazurskie voivodship

The market of the urban offer recipients is highly diversified and as a consequence the effectiveness of the identity strategy necessitates conducting market segmentation. In case of a town the point is not the selection of the target market as the town may not focus on servicing a selected group of clients, so the focused marketing is out of question. Applying not diversified (mass) marketing that is identical influencing the entire market by applying the same instruments would also be a mistake. This results from the immense diversity of needs and expectations of the final recipients of the urban product. That is why market segmentation becomes an exceptionally important stage in the process of the town identity development. It aims at identification of relatively homogenous groups of targets and in depth characterization of those groups. The majority of the covered towns from Warmińsko-Mazurskie voivodship notice the necessity of market segmentation in the process of building the desired town image. The largest target groups for which the activities in that area are diversified are the town residents, investors and tourists (Tab.1).

Table 1

Segmentation in the process of the development of the desired town image

Are separate activities undertaken aiming at development of the desired image in the individual target groups?	Number of responses	% (N=34)
Yes, in the group of tourists	25	73.53
investors	21	61.77
town residents	25	73.53
other entities	3	8.82
No, uniform activities targeted at all target groups are rather undertaken	3	8.82

Source: own work based on the studies conducted.

Over 70% of towns carry out separate activities aiming at development of the desired image in the segment of tourists. Almost all the towns covered aim at development of the image of a tourist town (Fig. 3). A tourist town is a settlement unit that as a consequence of the tourist values and transport accessibility represents a destination or intermediate point in tourist migrations. The authorities of towns of that type focus their activities on active development of the so-called tourist product that consists of the natural, civilization and cultural values, overall regional infrastructure, accessibility of the target location (destination) determined by the time and cost of reaching the tourist attraction (*Zarządzanie marketingowe*... 1999, p. 30). Those are

components of the so-called wide tourist product that is the location (area) product. The narrow (specific) tourist product is just the set of services sold in the market by tourist companies. As a consequence, all considerations concerning the tourist product and the possibility of its active development by the town authorities apply to the wide (area) tourist product.

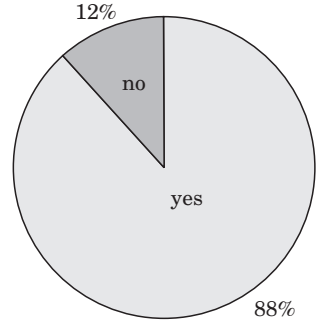

Fig. 3. Are you aiming at developing the tourist town image?
Source: own work.

Almost 90% of the towns covered aim at development of the tourist town image in the identity strategies implemented. Additionally, it is found out that tourists are an important target group for all the towns covered by the study in Warmińsko-Mazurskie voivodship, which is presented in Table 2.

Table 2

Importance of tourists in town activities

Responses	Number of responses	% (N=34)
It is a strategic target group (we are a tourist town)	16	47.06
They are a rather important target group but not the most important	17	50
In case of our town this is not a highly important target group	1	2.94

Source: own work based on the studies conducted.

For almost all the studied towns of Warmińsko-Mazurskie voivodship, tourists are an important target group, which is of strategic importance for a half of them. This is declared by 50% of the respondents confirming at the same time that aiming at being a tourist town or treating the town as a tourist one is the reason for that focus on this specific market segment. Only one of the covered towns from Warmińsko-Mazurskie voivodship does not focus its activities on the segment of tourists.

A tourist town or location is a part of the tourist area, which in turn represents a fragment of a tourist region, which is defined as the area fulfilling the tourist function ob the base of certain homogeneity of the geographic environment and the internal service links (NAUMOWICZ 1990, p. 39). In the conducted studies the hypothesis was formulated that the image of Warmia and Mazury as a tourist region influences the image of the towns situated within it at the same time turning activities of town authorities towards building the image of a tourist town. The results of studies on that issue are presented in Figure 4.

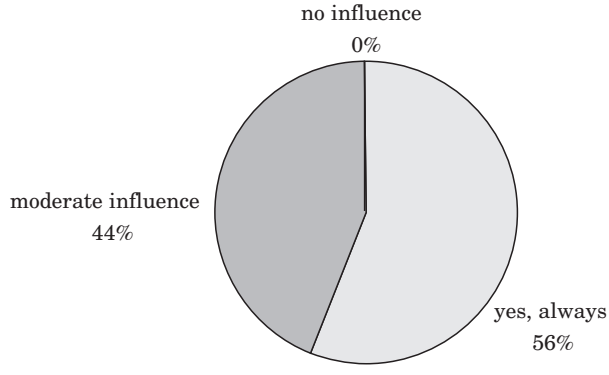

Fig. 4. Influence of the image of Warmia and Mazury as a tourist region on the image of towns situated within it

Source: own work based on the studies conducted.

It was established that all the towns covered confirm existence of that correlation, are aware of it and, as a consequence, almost all of them (as indicated earlier) aim at making use of that correlation. Additionally, a half of the respondents always recognizes the correlation between the image of the region and the image of the towns situated within it while 44% of the respondents believe that the image of the region of Warmia and Mazury has a limited influence on the image of the towns situated within it.

When developing the identity strategy targeted at tourists the specific demands of that market segment should be considered. They concentrate around factors that determine tourist attractiveness of the town. In depth analysis of those determinants allows identification of needs of the tourists and development of town identity strategy that highlights those key factors. The following factors are mentioned the most frequently in that context:

– interesting history, monuments of culture, heir condition and accessibility,
– accommodation, gastronomy and cultural-entertainment facilities available in the town,

– natural environment quality and status in the town and its surroundings,
– transport accessibility,
– attractive location of the town,
– events and attractions,
– developed facilities for organization of conferences, exhibitions, symposia, etc.

In the conducted study the attributes highlighted in the implemented identity strategies of towns from Warmińsko-Mazurskie voivodship were analyzed (Tab. 3).

Table 3

Town attributes used in town image development

Town identity attributes	Number of responses	% (N=34)
Cultural and historical heritage (history and monuments)	26	76.48
Attractive town location	32	94.12
Status of economic development of the town (high level of investments, low unemployment rate, etc.)	10	29.41
Professionalism and culture of town authorities	18	52.94
Intellectual potential	4	11.76
Business environment	7	20.59
Developed tourist accommodation facilities	18	52.94
Developed trade and service network	9	26.47
Accessibility and high quality of public services	7	20.59
Availability and affordable prices of real property	4	11.76
Other	6	17.65

Source: own work based on the studies conducted.

The attributes of towns most frequently highlighted in the implemented identity strategies are the attractive location of the town (94.12%), its cultural and historical heritage (76.48%) and developed accommodation facilities (52.94%). The identity attributes indicated by studied towns confirm their striving at development of the tourist town image. It is also worth pointing out that the authorities of towns implementing image development strategies started limiting the number of highlighted identity attributes. Towns indicated, in average, four attributes they focus on in the implemented strategies for development of the desired town image. For comparison, in 2003, the towns indicated, in average, as many as ten attributes that as important attributes of their identity were highlighted in the strategies implemented. Limitation of the attributes on the base of which the town identity strategy is designed

indicates that towns start aiming at development of the clear, strong image – in case of the region of Warmia and Mazury the image of the tourist town and as a consequence the focus on the above-mentioned attributes.

Recapitulating, it is worth highlighting that the town identity strategy may not be of mass character and that it should highlight different town attributes in different market segments. As a consequence, market segmentation, identification of the expectations of the individual market segments and next development of town identity strategy on their base are so important. It should, nevertheless, be remembered that while highlighting different attributes of town identity in the different market segments there is risk of creating contradictory images of that town in those segments. Hence it is so important to have consistent, harmonized, top-down planned and coordinated on current bases activities within the frameworks of the identity strategy so that in the future those activities result in developing a homogenous, clear and consistent image of the town. The identity strategy should consider the diversified needs of different market segments and as a consequence build the town identity based on different identified attributes in each of the market segments identified. Those actions should be subjected to a single strategic goal in the form of the desired town image.

Conclusions

1. The image is an intangible resource that increasingly often is seen as an important source of competitive advantage also in the case of towns. Increasingly often the authorities of towns start noticing the need for creating the more expressive image of the town built around a few attributes or focused at selected market segments. This happens in case of towns from Warmińsko-Mazurskie voivodship that aim at building the image of tourist towns.

2. It has been noticed that the awareness and knowledge on the methods of effective town image management are increasing. The authorities of towns notice the issue of complexity of the urban megaproduct and as a consequence, market segmentation is becoming an immensely important stage in the process of town identity strategy development. Tourists are one of the key segments of the market in the towns of Warmińsko-Mazurskie voivodship. For all towns they are one of the major target groups and for a half of the towns in the region the strategic group.

3. The hypothesis that the image of Warmia and Mazury as a tourist region influences the image of towns situated within it at the same time focusing activities of town authorities on developing the image of the tourist town was verified positively. This is confirmed by the above conclusions and the fact that

authorities of towns base their identity strategies on typical identity attributes of tourist towns. Those attributes are the cultural and historical heritage, location in the tourist region and elements of tourist products such as, e.g. the tourist accommodation facilities. The authorities of towns also start focusing on a few attributes in their identity strategies implemented, which is to create a more expressive image of the town.

Translated by JERZY GOZDEK

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SUPERVISION OF THE INSURANCE AND REASSURANCE MARKET ACCORDING TO SOLVENCY II

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K e y w o r d s: insurance and reassurance supervision, principles of supervision, solvency system Solvency II, publication of information, risk management.

A b s t r a c t

Evaluation of solutions proposed in Solvency II concerning organization and operation of insurance supervision is the objective of the paper. Analysis that involves examination of the components of proposed solutions was applied as the research method. The scope of analysis covered the current and the proposed solutions as well as so far accumulated experiences of the Polish insurance supervision (Polish Financial Supervision Authority [PFSA]) as concerns the effectiveness of organization and operation of insurance supervision.

NADZÓR NAD RYNKIEM UBEZPIECZENIOWYM I REASEKURACYJNYM WEDŁUG SOLVENCY II

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S ł o w a k l u c z o w e: nadzór ubezpieczeniowy i reasekuracyjny, zasady nadzoru, system wypłacalności Solvency II, publiczne ujawnianie informacji, zarządzanie ryzykiem.

A b s t r a k t

Celem artykułu jest ocena proponowanych w Solvency II rozwiązań dotyczących organizacji i funkcjonowania nadzoru ubezpieczeniowego. Jako metodę badawczą zastosowano analizę, która polega na badaniu części składowych proponowanych rozwiązań. Zakres analizy obejmuje dotychczasowe i proponowane rozwiązania oraz dotychczasowe doświadczenia polskiego nadzoru ubezpieczeniowego (Komisja Nadzoru Finansowego) w zakresie efektywności organizacji i funkcjonowania nadzoru ubezpieczeniowego.

Introduction

According to the Solvency II, protection of the insuring and the beneficiaries is the main goal of regulation and supervision of insurance and reassurance companies. The European Union Member States, subject to the main goal of supervision, are responsible to assure appropriate consideration of the potential influence of the decisions taken on stability of the EU financial systems, in particular in crisis situations and taking into account the information available at the time in performance of its general tasks by the supervision authority. Future-focused approach based on assessment of all the risks involved in operation of insurance and reassurance companies is the base of the supervision.

General principles of supervision

According to Solvency II, protection of the insuring and the beneficiaries is the main goal of the supervision (Directive... 2009, art. 27). The insuring and the beneficiary is, in most cases, the same person, however, generally the beneficiary is any natural person or legal entity that according to the insurance contract is eligible to specified rights. All other goals of supervision activity must take into consideration the main goal and as a consequence it is required that the Member States should assure appropriate consideration by their supervision authorities of the potential influence of their decisions on the stability of the financial systems in the European Union, in particular under crisis situations when they should consider also the potentially pro-cyclic consequences of their actions. In addition to the financial stability of the insurance and reassurance companies, the other goals of supervision activities concern stabilization of the insurance markets, observation of regulations determined by the supervision, consideration of the principle of proportionality in determining the executive means, particularly in case of very small insurance companies. The principle of proportionality also applies to the nature, scale and complexity of risks specific to operations of an insurance company or a reassurance company. The term "risks specific" deserves particular attention as it applies to all risks that occur in operations of those companies and not only the operational risk that was indicated in Solvency I. Additionally, the future orientation approach based on evaluation of those risks is the base of the supervision. This means that supervision should carry continual control of appropriate conducting of the insurance or reassurance activity. That control should be a combination of the company operations control and at the spot control (this applies to branches of companies in other

Member State of the EU). Control of company operations can be conducted on the base of adequate information necessary for supervision purposes so the Member States should impose the requirement of providing such information to the bodies of supervision. In case of reassurance activity supervision the special nature of that activity, including its global nature should be considered, which means the need for evaluating the risks present in reassurance companies from the perspective of its scattering and scope of activities encompassing all the countries. The Solvency II solvency system is to improve significantly the process of risk management at companies understood as taking decisions and actions leading to achievement of the acceptable risk level in the company (JAJUGA 2009, p. 15). Solvency II allows the insurer noticing the new dimension treating reassurance as an immensely effective method of dealing with capital requirements (HARTMANN 2010, p. 12). The design of the new solvency system within the Solvency II project is based on the structure of three mutually interrelated pillars to which separate risk categories have been allocated (GĄSIORKIEWICZ 2010, p. 102). The first pillar encompasses quantification of risk types; the second pillar encompasses the risks that are not covered by the first pillar and standard procedures of supervision by bodies of supervision, i.e. the national body of supervision and the European Union level supervisor body (CEIOPS) while the third pillar encompasses market self-regulation tools through creating conditions for its transparency and information duties of companies as well as appropriate accounting solutions.

Authorities and scope of supervision

The Directive of 2009 requires Member States to assure availability to the supervision bodies of not only adequate funds but also adequate professional knowledge to assure achievement of the main supervision goal that is the appropriate protection of the insuring and the beneficiaries. It also imposes on the states the exclusive responsibility of supervision for the activities of the insurance and reassurance companies with headquarters in a given state. Financial supervision involves verification, in relation to the entire activity of the insurance and reassurance company, of their solvency, establishment of technical-insurance provisions, quality of assets and allowed own funds according to the established principles or the practice applied in the Member State of headquarters according to the regulations enacted at the community level. If the body of supervision of the Member State where the risk is situated or the Member State where the liability occurs has the reasons to believe that operations of the insurance or reassurance company might disturb its appropriate financial standing they notify about that the supervision body in the

Member State of the registered headquarters of that company. This is an immensely important solution as it allows bodies of supervision establishing whether the company acts according to the prudential principles established in the Directive. Additionally, the bodies of supervision, in applicable cases, should be authorized – assuring performance of that requirement rests on the Member State – to develop the necessary quantitative tools for assessment of the ability of the insurance or reassurance company to meet the possible occurrences or future changes in economic conditions that could have unfavorable influence on their general financial standing. That is why bodies of supervision should also be authorized to require companies to conduct appropriate tests.

Supervision transparency is expressed in the responsibility and transparency of its operations, including the independent observation of confidential information protection. However, the Directive clearly imposes on the Member States the duty of publication of some information such as:
- texts of statutory, executive and administrative regulations and major guidelines in the field of insurance activity regulation,
- aggregated statistical data concerning the major aspects of applying the prudential supervision,
- methods of exercising the possibility of selecting the options provided in the Directive (e.g. choice of solvency computation method),
- basic criteria and methods, including tools applied in the supervision process,
- goals of supervision and its major functions and activities.

The information must be published in the uniform format with appropriate structure of information and table of contents and publication date as well as it must be updated regularly and available at one electronic address in every Member State. Additionally Member States are required to enact transparent procedures on appointment and dismissal of the management and control bodies of their supervision authorities.

Information provided for supervision purpose

The Directive imposes on the bodies of supervision the duty of establishing the possibilities of obtaining from the insurance and reinsurance companies of the information necessary for the purpose of supervision including at the minimum the information necessary to conduct the following operations during the supervision process:
- evaluation of the management system applied by the companies, activities conducted by the companies, principles of valuation applied for the purpose

of solvency determination, risk related to company operation, risk management systems as well as company capital structure, capital needs and capital management,
– taking all the adequate decisions resulting from performance of their supervision rights and duties.

Member States must also assure that the supervision body is authorized to:
– define the character, scope and format of the information providing which they require from the insurance and reassurance companies,
– obtain any information concerning contracts made by intermediaries or contracts made with third parties,
– demand information from external experts such as certified auditors and actuaries.

The information provided to the body of supervision must satisfy the following principles:
– must reflect the nature, scale and complexity of operations of a given company,
– must be available, complete in all significant aspects, compatible and consistent over time,
– must be valid, credible and understandable.

As a consequence, each company must develop the internal procedures, approved by the body of supervision, assuring continual adequacy of information transmitted. It is also required from the Member States to impose on the bodies of supervision of duties concerning conduct of reviews and evaluations of reporting strategies, processes and procedures established by insurance and reassurance companies to assure compliance with the statutory, executive and administrative regulations enacted on the base of the Directive. The review and evaluation encompass quality requirements related to the management system, that is they apply to evaluation of risk types to which the given company is or may be exposed and evaluation of the ability of the company to estimate those risks considering the conditions under which those companies operate. In particular, bodies of supervision conduct review and evaluation of compliance with the regulations concerning, among others, the management system, technical-insurance provisions, capital requirements, investment principles, quality and quantity of own funds. Additionally the supervision bodies implement adequate monitoring tools allowing detection of deteriorating financial standing of the insurance or reassurance company and monitoring of the process leading to remedying the situation, elimination of weaknesses or shortcomings found within the frameworks of the supervision process. This may also apply to the investment policy of companies that usually build their investment portfolios of debt securities and other fixed income securities but not always offering the sufficient liquidity level (CZERWIŃSKA 2009, p. 308).

The reviews and evaluations then must take place regularly with the frequency and scope considering the character, scale and complexity of the given insurance or reassurance company.

As a consequence of the review and evaluation the bodies of supervision may, in exceptional circumstances, establish the capital requirement for the insurance or reassurance company when, for instance, the body of supervision establishes that the risk profile differs significantly from the assumptions forming the base of the capital solvency requirement computed using the standard formula because some measurable risk types were not represented sufficiently. The capital requirement, however, must be adequate to the character of the risk. The consistence of capital requirements and profile of risks covered by the companies are subject to review by the bodies of supervision at least once per year and it is not eliminated by the fact of remedying the shortcomings that resulted in establishing it.

Legal forms, domestic reassurance companies, foreign companies from the EU and major branches outside the EU

The Directive divides the reassurance companies into:
- domestic,
- foreign originating from the EU Member States performing operations in the territory of an EU state within the frameworks of freedom to provide services,
- main branches of foreign reassurance companies of countries that are not EU members.

The Directive introduces the general principle applicable to reassurance (and insurance) companies operating within the territories of the European Union countries that the financial supervision over those companies, including the activities conducted through branches or on the base of free supply of services, is within the responsibility of the Member State of the registered domicile of the company. A Polish reassurance company may conduct similar activity within a EU Member State. In case the reassurance company possessing the license granted in another EU Member State conducts operations in a given country (so-called host country), that country as a Member State must assure the possibility of conducting control at site of the company by the body of supervision from the country of the domicile of that company. Bodies of supervision of the host country may participate in such control activities after being notified by the body competent for the domicile of the company. If the bodies of supervision of the host Member State establish that the insurance or reassurance company possessing a branch or conducting operations within the

frameworks of free provision of services does not observe the regulations effective in the Member State then it has the right to demand remedying such noncompliance. If the company does not undertake the necessary action, the body of supervision of the given Member State shall notify about the fact the body of supervision in the Member State of domicile of that company. In that case such bodies of supervision must, without undue delay, undertake appropriate measures to assure remedying the noncompliance by the insurance or reassurance company informing about that the supervision body of the host Member State. In the extreme situation, when despite the measures implemented by the Member State of the domicile of the company or in the situation when in that state those measures prove insufficient or are not available and the company continues violating the legal regulations effective in the host Member State, bodies of supervision of that state may implement appropriate measures to prevent further noncompliance including imposing a penalty on the company. However, the intent of taking such a decision must earlier be notified to the body of supervision in the Member State of domicile of the company. Stabilization of the financial results of its operations is one of the functions of reassurance in the insurance companies (GASTEL 2004, p. 2), which is also immensely important from the perspective of the bodies of supervision and as a consequence they must possess instruments of effective intervention in case the companies do not satisfy the applicable requirements.

Domestic reassurance companies in Poland in case of which the principles of operating their reassurance business are regulated in the newly added section III in the amended Act on the insurance activity (Act... 2003), that came into force on the 18th of June 2009 may operate only in the form of a joint stock company or mutual reassurance company or in the form of the European company. Reassurance company that takes over the risk transferred by its members on the principle of mutuality is a mutual reassurance company. The reassurance premium is set at the level that should at least assure performance of all the liabilities from the reassurance contracts made and coverage of the reassurance operations performance costs from the technical-insurance provisions. The company capital of a domestic reassurance company may not be lower than the level of the minimum guaranty capital required for the types of reassurance covered by the scope of business of the domestic reassurance company that is in the life insurance field or the field of other personal and property insurance or to the extent covering those types of insurance jointly. If the reassurance company conducts reassurance business covering the joint range of insurance the reassurance solvency margin is equal to the sum of solvency margin of reassurance company for the life insurance operations and the solvency margin of reassurance company for the other personal and property insurance. The minimum level of the guaranty capital, however, may

not be lower than the minimum level of guaranty capital of reassurance company for reassurance of life insurance or the minimum level of guaranty capital of reassurance company for reassurance of other personal and property insurances. The minimum guaranty capital level for the reassurance company may not be lower than the equivalent of EUR 3 million in Polish Zlotys.

Foreign reassurance companies from the European Union Member States may operate in the territory of Poland on the base of the principle of free provision of services or through a branch. Performance of reassurance operations in the territory of Poland by foreign reassurance companies domiciled in countries that are not Member States of the European Union may be performed by the main branch or directly from the territory of the country in which the company is domiciled it an agreement was made with that country according to article 50 of the Directive 2005/68/EC of the European Parliament and of the Council of 16 November 2005 on reinsurance (concerns agreements that in particular aim at assuring, on conditions of equivalence, the prudential regulation, effective access to the market to reassurance companies in the territory of each of the agreeing Parties as well as securing mutual acceptance of the principles and practices of reassurance supervision; additionally those agreements aim also at securing for the competent bodies of the EU Member States access to the information necessary for supervision of reassurance companies domiciled in the territory of the EU that operate in the territories of third countries). Initiation of reassurance activities by the main branch requires obtaining a license from the body of supervision of the host country. Additionally, the main branch of a foreign reassurance company is required to possess in the territory of the Republic of Poland own funds to the amount not lower than the solvency margin and not lower than the guaranty capital.

Reassurance companies operating in the Polish market are required to collect statistical data for the purpose of establishing on its base the reassurance premiums and the technical-insurance provisions. The reassurance premiums must be set at the level that should at least assure performance of all liabilities from reassurance contracts made and cover the costs of performance of reassurance activities. The assets representing coverage of the technical-insurance provisions must be invested by the reassurance company in a way assuring sufficiency, liquidity, security, quality, profitability and maturity of the assets to the level of due liabilities. Additionally, the assets covering the technical – insurance provisions should be diversified and appropriately scattered to allow appropriate reaction by the reassurance company to changes in the economic environment, in particular the development of the situation in the financial and real property markets or appearance of catastrophic events. The possibility of investing the assets in the derivative instruments on condition, however, that they would contribute to decreasing the investment

risk involved in other assets representing the coverage for the technical – insurance provisions represents an important solution for reassurance companies.

Own assessment of risk and solvency

Within the frameworks of the information provided for the purpose of supervision the insurance and reassurance companies must monitor and conduct own evaluation of the risk and solvency. That evaluation encompasses the major needs in the area of solvency considering the specific risk profile, the approved risk tolerance limit and company operational strategy. The company must possessed developed procedures that are adequate to the character, scale and complexity of risks specific for its operations allowing it appropriate determination and evaluation of the short- and long-term risks that it is or may be exposed to. The methods applied for that evaluation must be presented by the company to the supervising body for review. Continuous compliance with capital requirements and requirements concerning technical – insurance provisions is also required. Additionally, the evaluation encompasses significance of the deviation of the risk profile for a specific company from the assumptions that are the base for the capital solvency requirement computed according to the standard formula (or according to the partial or full internal model of the company). In an internal model is applied, the evaluation is conducted together with recalibration transforming the internal data on the risk into the measure of risk and calibration of the capital solvency requirement. Own risk and solvency assessment represents an integral part of the operational strategy and is continually considered in taking strategic decisions by the company. It must also be performed each time when significant changes in the insurance or reassurance company risk profile occur. It should also be highlighted that own risk and solvency evaluation does not serve computation of the capital requirement.

Publication of information, information for the CEIOPS

Member States impose on insurance and reassurance companies the requirement of yearly publication of the reports on their solvency and financial standing. Such a report shall contain, among others, the following information:
- description of company operations and results,
- description of the management system and evaluation of its adequacy to the company risk profile,

– description – separate for each risk category – of risk exposure (premium written on own share for the following year), risk concentration, risk mitigation and sensitivity to risk,
– description concerning the bases and methods applied for valuation of the assets and technical-insurance provisions and other liabilities,
– capital management description (contains at least the structure and amount of own means as well as their quality, amount of the capital solvency requirement and minimum capital requirement, etc.),
– analysis of all the important changes from the preceding reporting period and explanation of any significant differences in the value of such components in the financial statements.

Bodies of supervision allow insurance and reassurance companies withholding some information. This applies, e.g. the situation where as a result of publication of such information competitors of the company could obtain significant undue benefits or if there are commitments to the insuring or other relations with the partners requiring the company to maintain secrecy or confidentiality.

European Union Member States impose on the bodies of supervision the requirement of yearly information to the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) on, among others, the capital surcharge that as a consequence of the supervision process is established by the body of supervision finding that the insurance or reassurance company risk profile diverges significantly from the assumptions forming the base for the capital solvency requirement computed by applying the standard formula. The Directive provides for publication by CEIOPS of such information either in aggregated format for all the countries together in the form of the total distribution of capital surcharges computed as percentage of the capital solvency requirement for all insurance and reassurance companies or for each Member State separately or for each case revealed. It is the task of the CEIOPS to provide the above information to the European Parliament, Council and Commission together with the report presenting the degree of cohesion in the field of supervision among the bodies of supervision of individual Member States in relation to the capital surcharges.

Conclusion

Organizational changes will most probably be the most difficult component in Solvency II implementation. The Directive means not only a new way of computing capitals in the insurance and reassurance companies but also a change of their behavior in the decision taking process (STEFFEN 2010). The

scope of necessary changes depends on the requirements formulated by the supervision body. Satisfying the regulation requirements by the companies will be beneficial not only for the insuring and the beneficiaries but also for the companies themselves from the business perspective. Mechanisms described in Solvency II can be used for better effectiveness management of the companies, which may be a chance for gaining competitive advantage. Almost one third of the insurance companies that started implementing Solvency II requirements voluntarily without pressure from the regulators or the capital group they belong to also see it that way (Solvency II 2010). Adjustment activities also concern the issues of outsourcing in insurance and reassurance business (CZUBLUN 2010, p. 32). New regulations allow, in a long-term perspective, taking strategic decisions on the base of a model reflecting the real risks better. That is why the role of the bodies of supervision in the implementation of the Directive requirements is immensely important for all insurance and reassurance services market participants. For companies, own solvency and risk evaluation represents a tool allowing a more effective linking between the regulation requirements with own operational strategy. For the beneficiaries (the insured) it represents higher certainty of obtaining the insurance benefit; for the insurance companies a higher certainty of obtaining the reassurance benefit. As a consequence, compliance with the regulation requirements from the perspective of the body of supervision represents also an opportunity to build a tool supporting the process of taking strategic decisions by the company, while the measures (such as damages ratio, operational costs ratio, operational ratio, premium ratio) (WILLIAMS et al. 2002, pp. 422–425), which are important from the perspective of the body of supervision even over the period of twelve months may become components of a strategy built for a much longer period on the base of the internal evaluation of what is the important risk now and what might represent a risk in the future for both the companies and for their beneficiaries.

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INTERCONNECTION BETWEEN ANTI-CRISIS MANAGEMENT AND RISK MANAGEMENT

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K e y w o r d s: anti-crisis management, risk-management, bankruptcy management, enterprise.

A b s t r a c t

The article deals with the definitions of the notions: "anti-crisis management", "crisis-management", "bankruptcy management" and "risk-management". The determination of interconnection between those notions is the original point of author's view. The attention is focused on the realization of anti-crisis management and risk management. The interconnection between all those notions is presented, including the example of the Ukrainian economic situation.

WZAJEMNE POWIĄZANIA MIĘDZY ZARZĄDZANIEM ANTYKRYZYSOWYM A ZARZĄDZANIEM RYZYKIEM

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S ł o w a k l u c z o w e: zarządzanie antykryzysowe, zarządzanie ryzykiem, zarządzanie upadłością, przedsiębiorstwo.

A b s t r a k t

W artykule określono pojęcia „zarządzanie antykryzysowe", „zarządzanie kryzysowe", „zarządzanie upadłością" i „zarządzanie ryzykiem". Ustalenie wzajemnych powiązań między tymi pojęciami stanowi oryginalną interpretację autora. Uwagę skupiono na realizacji zarządzania antykryzysowego oraz zarządzania ryzykiem. Przedstawiono wzajemne powiązania między wszystkimi tymi pojęciami wraz z odniesieniem do sytuacji gospodarczej na Ukrainie.

Introduction

Anti-crisis management deals with due consideration for the probable risks that can appear during implementation of the specific enterprise management practice. From the quantitative point of view, risk is understood as the probability of losses of a part of resources, profit deficiency or appearance of additional expenses as a result of performance of a certain economic activity. Validity of this statement is based on the assumption that one can hardly find specialists in the contemporary economic practice, who can take the decision without having proper and sufficient information, on the one hand and without preliminary calculation of the unforeseen (accidental) events on the other hand.

The search for effective approaches to the risk management became one of the most important directions in the development of modern economic science. In the global practice the process of risk management is examined as the key sphere of management. So, attention is paid to learning risky spheres, searching for the effective methods of control, assessment and monitoring of the risks and creation of the appropriate systems of management. The theoretic investigations by Ukrainian scientists concerning the problems of uncertainty and risk are mostly dedicated to the analysis of the sources of origin, classification and methods of quantitative assessment of risks. Less attention is given to the search for such effective ways of management, which could be adequate to the real possibilities of Ukrainian entrepreneurs and would have the anti-crisis aspect.

It is noteworthy, that the theoretic investigation of the interconnection between anti-crisis management, bankruptcy management and risk-management can be possible by applying the methods of economics research such as the:

– composite method (examining the investigated objects as a system of determination of the deep interconnections by means of viewing the whole theoretic picture inside every mentioned category and also taking into account the adjacent scientific categories and directions: crises theory, management theory, economic analysis, economic law, enterprises restructuring, etc.);

– comparative method (allowing definition of the general and special in congruous categories as well as characterization of certain similar and distinctive features on the scientific basis).

Correlation between anti-crisis management and related categories

The latest economic theories connect the anti-crisis management with the concepts of social-ethic management and stabilizing management.

Social-ethic management foresees taking of well thought decisions only. These decisions cannot lead the negative consequences for any contractors or workers of the enterprise. However, in case of appearance of such negative aftereffects taking significant compensatory measures is required. The correlation between anti-crisis management and this kind of management manifests in the extreme importance of decision-making and taking into account the consequences for employees and owners of the enterprise. If social-ethic management is not considered, the enterprise will come to an uncontrolled state, as the interests of staff are not satisfied.

It is a weighty argument that anti-crisis management uses the concept of stabilizing management to avoid the deepening of crisis phenomena in the enterprise (PROSVETOV 2009). Given that the basic position in this direction is the duration of management cycle, that is why the faster the right stabilizing decision will be accepted the better the results will be (KOVALYOV 2008, IVANYUTA 2007).

It is quite common, however, to treat the following notions: "crisis-management", "bankruptcy management", "risk-management" and "anti-crisis management" as equivalents. These notions are not identical, however.

The author's original vision of their interdependence is shown the Figure 1.

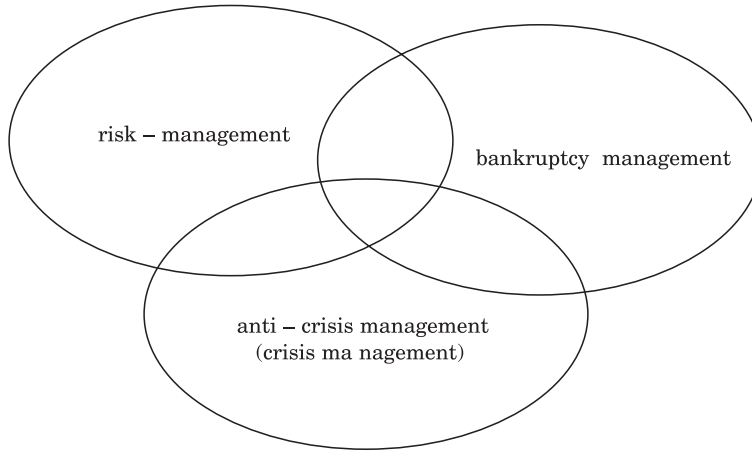

Fig. 1. Interconnection of notions related to anti-crisis management

So, crisis-management involves examining the negative and positive aspects of manifestation of a crisis. The aim of crisis-management is to manage the financial insolvency of the enterprises and the process of their financial recovery (DOVGAN, KARAKAY, ARTEMENKO 2009). However, crisis-management investigates critical moments mostly in theoretical way. Anti-crisis management combines strategic and operative measures, which have determined time frameworks (KORETSKIY, DIHTYAR, DATSIY 2007). In the authors' vision represents more practical understanding of the process by Ukrainian specialists, which can prevent, overcome or forecast the crises. But in common understanding the sense of these notions has close resemblance. We think these categories can be apprehended as close synonyms.

Bankruptcy management concentrates on the formal management of judicial and voluntary liquidation of enterprise only (MISCHENKO 2004).

Risk-management describes the issues of how to manage the risks with the goal of minimizing the losses from negative situations while conducting the business activity, as opposed to this the system of crisis management is characterized by the strained depth of crisès manifestations.

Risk management and anti-crisis management: cross-point

Let's consider in detail the notions of risk, risk management and their correlation with anti-crisis management.

In Ch. K. Webster dictionary, the risk is defined as danger, the possibility of losses or damages; but in S. Ozhegov dictionary it is the possibility of danger or act for the successful results. All these words have several notional meanings. Firstly, the possibility of a certain disagreeable event is foreseen, and secondly, the ambiguity as the essential characteristic of risk is present.

A clear definition of risk is given in Propositions of the ISO working group on the development of terminology in the sphere of risk-management: "Risk – is a combination of the probability of an event and its consequences". The logic of this definition is that it encompasses the combination of all three facets of the risk: event (the factor of the risk), its probability and consequences.

The practice of applying risk-management is barely adopted for a wide application in different Ukrainian enterprises. It is used as an active instrument of modern management. The desire to avoid or minimize the risks is natural, but solving the problem is complicated by the fact that the direct dependence between risk and profit exists. The higher level of risk gives the potential possibilities for generation of higher profit, but it does not exclude the possibilities of additional losses in case of the risk materializing. The minimization of risk level enables generating high, but stable profit. That is

why a balance between profitability and risk in search for its optimal ratio is conducted as one of the important and complex tasks of every business enterprise.

The classification of risks is given in table 1 (NOSOVA 2009).

There are several characteristics of risk-management in Ukraine:

1) in our society the risk culture formation process, particularly the entire range of fixed norms, values and actions concerning the behaviour of people and company under risks is only beginning;

2) in Ukraine it is not a popular practice to use such instruments as commodity, currency and stock markets, where entrepreneurs can hedge their risks by using various financial instruments familiar for most risk management bodies. This leads to inadequate risk and inadequate cautiousness of entrepreneurs.

It is noteworthy that domestic entrepreneurs have to deal with other types of risk than entrepreneurs in more developed countries. Accordingly, they cannot use typical patterns for development in the field of risk management, which were developed by foreign experts. Instead, they resort, for example, in the process of financial risk management services to the so-called conversion centres, which are a widely developed network, offering services on the transfer of funds in the UAH currency. This can be referred to as using a distorted form of risk management.

Table 1

The classification of risks

The criteria of classification	Types of risk
Market factor	– competitive; – price; – opportunistic; – communicative.
Substance	– economic; – organizational; – social; – psychologic; – branding.
Nature of process	– subjective; – objective; – lawful; – reasonable; – wrongful; – unjustified; – criminogenic.
Functional peculiarities of the process	– marketing; – financial; – manufacturing; – insurance; – innovative; – investing.

Anti-crisis management focuses on risk minimization on the basis of the highest risk level of anti-crisis transformations (BIRYUKOVA 2011). Uncontrollable risk factors inherent to anti-crisis management, cannot always be reduced by the available measures for risk limitation (in particular, raising expectations of crisis or the rising of economy as a whole, the movement of bank interest, war, etc.). So it is difficult to prevent them. The method of avoiding the risk is considered both the most effective way of prevention and radical. Anti-crisis management cannot use this method because the risk is always inherent in this type of management.

In global practice there are many different and highly original ways and methods of risk prevention, the most popular among them: insurance, diversification, hedging, risk transfer, limiting, collection of additional information, ensuring the quality of processed products, verification of business partners, business planning, business recruitment, and organization of the business enterprise's activity protection.

Diversification is a very common way of limiting the risk in risk management and anti-crisis management. Diversification is the process of distribution of the invested funds among different objects that are not directly linked (POPOV 2009). In case one type of activity is unprofitable because of unforeseen events, the second one will bring a profit anyway. Entrepreneurial firm will be saved from bankruptcy and it will continue operating. There are two main types of business activity diversification: industrial diversification and financial diversification (BANNOK, BAXTER, DAVIS 2003). Industrial diversification means increasing the range of products (services) that are produced. There are two basic ways related to financial diversification: buying stocks and shares or other securities of a company (simple transfer of capital into another sector), and the purchase of stocks or shares in banks or other financial institutions (pension, investment funds, etc.), and opening deposit accounts. In practice, diversification can not only reduce but also increase the risk. Increased risk occurs if the entrepreneur invests in that field of activities, in which his knowledge and management skills are limited.

Methods of limiting the risk such as diversification, insurance, transfer of risk are appropriate for the higher risk, critical financial situation and when the company may suffer large losses, i.e. during the anti-crisis management, because then the costs of these measures will be justified by obtaining additional profits.

Anti-crisis management is not focused on emergency funds and limiting the consequences (let us note that limiting concentrations of risk has a set limit, or a limit of expenses, sales, etc.) and is implemented by means of establishing the enterprises' internal standards in the policy development process and may include: a limit on the use of loan funds in working capital, the minimum

amount of current assets in highly liquid form, the maximum deposit that is placed in one bank, etc.).

Entrepreneurs in their daily activities should regularly use such methods risk limitation as the manufactured products quality assurance, verification of business partners, business planning, business recruitment, protection of all trade secrets, which are not included in the subject area of anti-crisis management.

Conclusion

Hence, crisis management operates not only with current assets (funds, securities), but also with material values (current and non-current assets), which suggests the willingness, if necessary, to use the full balance sheet assets and the willingness to accept a higher risk.

Development of methods for risk limiting, which allow reducing significantly not only the risk in a specific situation, especially in a crisis, but also minimizing the costs of their implementation should be an important step for every enterprise.

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WHAT COULD THE CRISIS CHANGE IN EMPLOYEE TRAINING MANAGEMENT PRINCIPLES?

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K e y w o r d s: training, crisis, systematic training model, changes in training programs.

A b s t r a c t

The article describes analogues of short-term thinking and the unreflective use of inaccurate indices in training management. It shows that basing on the systematic model of the training process (with some simplifications) and using ROI to evaluate trainings has now become analogous to these two phenomena. It indicates other trends in the training tradition as a potential alternative, the significance of which should grow in the post-crisis era.

CO KRYZYS MOŻE ZMIENIĆ W ZASADACH ZARZĄDZANIA SZKOLENIAMI PRACOWNICZYMI?

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S ł o w a k l u c z o w e: szkolenia, kryzys, systematyczny model szkoleń, zmiany w szkoleniach.

A b s t r a k t

Myślenie krótkoterminowe i bezrefleksyjne używanie wskaźników o niejasnej trafności często są uznawane za źródłowe przyczyny kryzysu. W artykule wskazano analogiczne fenomeny w zarządzaniu szkoleniami, pokazano również, jak prowadzą do nich niewielkie uproszczenia w systematycznym modelu procesu szkoleniowego oraz zasada oceniania szkoleń przez ROI (Return on Investment). Zaprezentowano obecne w tradycji szkoleniowej inne nurty myślenia jako alternatywę, której znaczenie w świecie pokryzysowym powinno rosnąć.

Introduction

The search for understanding the causes and mechanisms responsible for the crisis of 2008 will continue for many years to come but already now everybody knows that short-term perspective in the activities of people managing businesses was one of the factors favouring the actions that lead to the crisis. Striving towards maximising all short-term results dominated the actions taken by managers and was amplified by the mechanisms of corporate supervision and the compensation methods applicable to managers[1] (SMOCZYŃSKI 2010, p. 38). Short-term, at the most quarterly "beauty contest" that converted an important perspective that the evaluation of the company standing through the stock exchange value of its stocks or shares is into almost the only perspective for evaluation of all actions was favourable for applying various indicators without adequate care for their pertinence. Communication using numbers that are indicators representing high level of aggregation coupled with the lack of care for the source data and assumptions made in creating them loosened the requirements concerning ordinary human honesty in communication (ŻAKOWSKI 2010, p. 23).

The review of equivalents to the short-term perspective and abuse of indicators with unclear properties in the field of training management is the aim of this paper. On the base of the analysis of selected literature on training the reasons why recommendations formulated within the framework of the dominating theory of training lead to the focus on short-term evaluations based on indicators of low value will be indicated. It is not alleged that this practice has its sources in exactly the same style of thinking that was marked in the financial sector as one of the causative factors of the current crisis. Nevertheless the analogy between the styles of thinking present in those two distant fields of economies may be supportive to introducing changes in managing training programs under the influence of the critique of factors responsible for the financial crisis. The probable directions of potentially possible changes for the field of training will be indicated.

[1] K. Obłoj in the conference presentation points out at slightly different factors: focus on highly ambitious short-term targets, compensation systems linked to achievement of those targets and presidents of companies assuming the role of celebrities. Those two later factors create the motivation system that favours supporting achievement of (excessively) ambitious targets by using data without excessive care for the quality of them.

The systematic training process model and its simplifications

The so-called systematic training model represents the dominating way of thinking (SLOMAN 1997, pp. 40–43, ARMSTRONG 2000, pp. 451–468), determining the vision of goals and methods for conducting actions in the training process. It assumes separation and independent conduct of the natural training process phases: problem analysis, preparation of training matching the problems identified and delivery of training and evaluation of the outcomes. It does not contain any indications concerning the time for conducting the activities or the character of decisions that have to be taken and as a consequence it did not prevent simplifications that were easy to reconcile with the short-term perspective of the financial evaluation.

Treatment of training in the systematic model as the response to the problem encountered by employees in performance of their operational tasks simplified the categories of objectives formulated for training and the method of evaluation of training results excessively. The postulate of preceding every training with the analysis of training needs (identification of problems encountered in their work by employees, characterisation of those problem as concerns the quantity, importance and intensity to identify in them the training and the structural component) to determine the appropriate objectives is justified rationally. Thanks to that analysis it is possible to indicate what changes in knowledge and skills (as well as attitudes) of the employees should be implemented so that the problem that initiated the idea of the need to organise training could disappear. Only thanks to the analysis of the needs training adjusted accurately to the current problems found in the organisation could be prepared and the "training gap" – the shortages of knowledge and skills of the employees that represent the cause of the employees; weakness in coping with those problems can be defined precisely. However, understanding of the "training gap" as the gaps in knowledge and skills ordered defining the goals of training in the form of precisely determined educational objectives (ARMSTRONG 2000, p. 454), formulated in the form of specific tasks characterising the knowledge and skills that training participants would possess after training (e.g. the participants will know what the *procedure A* is and will be able to carry out all the steps that it requires). This meant bypassing the dimension of difficulties in work that result from inappropriate "attitudes" (KIRKPATRICK 2000, p. 62). That was natural as for changes in attitudes the theories of training possess neither simple methods for measurement of the postulated changes nor simple training methods leading to such – precisely specified – changes (WOŹNIAK 2009, pp. 196–201) because if the training objectives are defined by means of a short list of specific procedures of action

that training participants are to master than it has been known for long that instruction provides the effective method of training.

Under the influence of trends stemming from humanist psychology and andragogy the training literature decided that instruction does not exhaust the methods for delivery of employee training. Nevertheless in both thinking on defining the training needs and the tools applied for training evaluation it was forgotten frequently that training based on instruction is just one type of the employee training. The space was left for training focussed on the development of interpersonal and social skills reserving for such training even a separate name – the "soft training" – to highlight that they represent a specific type of training but it was expected that their goals would be defined precisely in the form of educational objectives and that the evaluation of their results would not require separate recommendations.

The discussion that rolled through the English training periodicals during the years 2002–2005 showed clearly (WOŹNIAK 2009, p. 203), that the expectation in case of employee training to show clearly how they change the financial results of the organisation was difficult to achieve in case of soft training. In their case it was not only difficult to define objectives that would not be banal, but also to justify that they offered outcomes that justified the funds invested. Independent of those difficulties the postulate to evaluate all training activities by means of the ROI was not rejected in that discussion[2].

Nevertheless, it had not undermined the popularity of the systematic training model. As a result of it the presentation of training as **only** the tool for reacting to problems that the management considered sufficiently cumbersome for the organisation to justify the investment in training was spread. The systematic model, dismissing the issue of time entirely, in which training is to reveal its influence, did not limit the temptation to conduct control of the training effects quickly. The focus on the necessity of the financial evaluation that was to rationalise all the investments resulted in changes in the traditional approaches to control of training effects and proliferation of the postulate to evaluate training in one way – through the ROI (KEARN 2005, p. 141). This is present clearly in the recommendations by the *American Society for Training and Development* (ASTD), the largest association of people involved in training in the world (WOŹNIAK 2009). In Poland that method of evaluating training is promoted by the Institute of Management representing the training professionals (2003).

[2] Wider analysis of that discussion can be found in the work by WOŹNIAK (2009). P. Kearn was the main supporter of the ROI model referring to J. Phillips and ASTD recommendations.

Traditional methods for controlling training effects and their practice

Theoreticians postulated two approaches to managing training as two separate methodologies for control of the effects (BRAMLEY 2001, pp. 23–39): training effectiveness evaluation understood as favourable relation of outlays to the effects and the evaluation of the efficacy understood as consistency of the results and intentions. However, the contemporary training ideology[3] postulates evaluation of training by estimation the ROI for them ROI (PHILLIPS et al. 2003).

It can be believed that multiplicity of interest groups the goals of which frequently differ in the organisation makes easy evaluation of efficacy impossible, however, training efficacy evaluation can always be conducted separately for each of the groups or – at the stage of training preparation – actions can be conducted to reconcile common goals. That model of thinking about controlling the effects of training was inconsistent with the standards of "financial thinking", it lead to using many measures designed separately and frequently not quantitative and as a consequence the evaluation results were difficult to apply for comparison with other investments. Spreading domination of "investment understanding" of the systematic training model in a natural way supported spreading of the effectiveness approach obscuring the sense of that second tradition. The ROI tests for training activities was in the natural way compatible with the focus on short-term evaluation of investment effects and matched well the needs of management based on the analysis of simple and uniform financial indicators.

In training practice it has been postulated for years to conduct evaluation of training effects as the survey of training outcomes in each of the so-called four levels of training influence described by D. KIRKPATRICK (2001). That taxonomy of training effects that is of key importance for training practitioners identifies four areas of training influence of which two concern the influence of training on the individual and two – on the organisation. The influence of training on the individual is measured at the end of training by investigating two issues: the so-called reaction, i.e. the opinion of participants concerning satisfaction with training treated multidimensionally (e.g. satisfaction of expectations, practical use of the contents learned, chances that the opportunities for practical use of them will occur) and achievement of the didactic objectives of training (i.e. the increase of knowledge and skills), which

[3] It should be pointed out clearly that this ides is clearer in popular works (e.g. L. Rae) and industry reports (e.g. ASTD reports and the periodical of that organisation – T+D) than in the scientific analysis and academic course books. Academic course books do not present, however, arguments against estimation of the ROI for training, e.g. (ARMSTRONG 2000, POCZTOWSKI 2007).

is usually referred to as the first and the second level of training outcomes. The next two areas of training influence are formed by its consequences in the field of phenomena within the organisation. Those outcomes emerge after a certain time but the theory does not define the length of it. They are measures in the two further areas: by measurement of the transfer of skills acquired during training into the daily work practice (level three) and the measures of outcomes of such transfer for the entire organisation (level four).

Research works on training conducted during the last fifty years have shown that despite the recommendation to measure all four levels of training outcomes repeated many times usually only the surveys of the first level are conducted, i.e. opinions by the participants concerning usefulness of the training completed and their satisfaction with participation in the training are surveyed. Following a long period of critique of that practice, according to the current status of knowledge of the theoreticians (based on the meta-study (ALLIGER et al. 1997)) it is considered rational – opinions of participants formulated on training completion evaluating suitability of the training in their work represent the indicator correlated with the future application of training content (i.e. the results of level three surveys). Although the discovered correlation is not high, the survey of participants' opinions provides organisations – in a cheap way – the established opinion, which in typical decision-taking processes conducted after completing training usually suffices. It can then be believed that that the method of focussing the attention of the survey of training outcomes on the survey of opinions of the participants in it (the first level of outcome) accepted in practice is closer to the approach to control of training outcomes through analysis of the efficacy than the effectiveness – the survey of reactions provides the prognosis of application (transfer), while the objectives for training are defined by groups of interests usually in the categories of the required behaviours and not the financial benefits for the organisation.

Although, then, the dominating style of thinking about managing organisations prefers simple indicators of financial projects effectiveness evaluation, the theoretical reasons could also be found for which the training practice has defended itself for years against performance of those demands. Training investment effectiveness evaluations based on identification in the changes of certain indicators of the organisation status of that part of their value which is said to be caused by the training are based on numerous premises, usually poorly justified. They assume reconstruction of the cause and effect relation between the change at the levels of knowledge and skills as well as in the attitudes of employees and their practical activities and results of that activity measured as the values of the organisation status indicators that lead to the change in profit. Allocation of a specific part of organisation profit to training

requires reliable estimation of which part of the change noticed on the Kirkpatrick's fourth level is caused by training and expressing the consequences of that change in financial categories.

Already in 1960, KIRKPATRICK (2001, p. 87) highlighted the unrealistic demands that in the studies on training outcomes the part of the organisation profit value for which training is responsible should be identified in an unquestioned way. Nevertheless, the pressure on creating indicators that could be presented to the management (and indirectly – the investors) opened the field for programs of research on the ROI of training activities. The method by J. Phillips (PHILLIPS et al. 2003, pp. 193–220) could be considered the flagship example of creating indicators based on the data of strongly doubtful value. Referring to the best practices of the qualitative methods in field studies he proposes that the evaluation of the financial value of changes implemented in the life of the organisation thanks to training should be left to the participants. Treating the participants as the "good informers" allows expecting that they would be able to assess a few issues:

– what has changed in their work as a consequence of training,

– hat financial effects for the organisation have been created by those changes,

– what is the probability of the accuracy of the estimates formulated by them.

If the estimates created by the participants had been accurate than computing the financial consequences of training on that base would have become easy. However, the accuracy of those estimates cannot be assured in the questionnaire based survey distributed by mail – which is the method for collecting the data proposed by Phillips. It is not controlled whether the respondents identified changes in their daily behaviours accurately or were they just completing the questionnaire form without taking care of the numeric values input in it. Lack of meticulous care[4] in creating the data on the base of the analysis of which the training effectiveness indicators are generated raises suspicions that the goal of the survey is not to obtain reliable estimates but to obtain estimates that are persuasively useful – numeric indicators that can be presented to the company management board[5].

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[4] Phillips proposes control of values generated by the participants only by means of surveying the consistency of those values with other data originating from the organisation (PHILLIPS et al. 2003, pp. 193–198). The total profitability indicator may be decreased if the management presents other factors – in addition to those considered in the analyses – that could influence the organisation results (PHILLIPS et al. 2003, pp. 258–259).

[5] Such status of achieved estimations is consistent with the position of J. Phillips presented straight forward that "the most important is how the ultimate recipients (i.e. the management – JW) will evaluate the value of data" (PHILLIPS et al. 2003, p. 258).

The program of surveying the ROI using the Phillips method is not just the idea of one consultant but a programme supported during the last several years by the *American Society for Training and Development*. Based on his method Jack Phillips established a global consulting company and the strict requirement for expressing benefits from training in the form of computations of the ROI is currently referred to as introduction of the fifth outcome level to the Kirkpatrick's taxonomy. Even if the postulate of evaluating the ROI for training projects is separated from that specific method of its implementation that is linked here to the name of Phillips, it should be highlighted that all the methods of evaluation of the ROI for the training projects implemented conduct identification and assessment of the financial value of the benefits that are the outcomes of training in a highly conventional way. Two types of estimations of the benefits are applied. One is based on the opinions or subjective computations of which the training participants or their superiors are the authors; the other involves separation of a certain part from the organisation status indicator that is subject to routine monitoring done by experts that usually are the superiors of training participants[6].

The focus on generating numbers as evidence of the value of conducted activities without excessive care for their reliability is illustrated well by the attitude to the costs of training that must be computed to allow computation of the ROI. Usually the direct costs (wages of trainers, hotel and logistics costs) are considered while the costs of the work time lost are considered rarely and the alternative costs of lost benefits are almost never taken into account. Although the researchers have been pointing out for a long time that the lost work time represents with no doubt a significant cost of training (although estimates of that value in subject literature are highly diversified, e.g. SLOMAN (1997, p. 270) estimates the costs of work time lost at 75% of the direct costs, ALMEIDA (2009, p. 98) at 25%), frequently it is not measured at all – for example the ASTD does not include that cost in the yearly surveys estimating the magnitude of outlays by employers in the USA on training (WOŹNIAK 2009, p. 188).

It is obvious that in case of a significant number of decision-taking processes conducted in the organisation estimation of the value of the ROI for training activities is not required. Training is sometimes necessary in the organisation that is implementing new products and only the relative estimation of costs for different methods of implementation of training activities

[6] The experimental studies postulated in the scientific literature are few (see the review of subject literature presented in the work by WOZNIAK (2009, pp. 215–222) and they never control all the variables comparing equivalent experimental and control groups (which should not be surprising as there is no established and justified list of variables that should be controlled for the stimuli that the training programs of specified type were to be).

achieving similar outcomes is necessary for taking the decision. Training is also necessary when the employees of the organisation expect that the organisation will train them (i.e. by imitating other organisations or as a consequence of the social expectation that training is necessary for development of competences). Training is also necessary when for strategic or axiological reasons we believe that certain values should be developed in our organisation. The trend for creating indicators even where they do not serve decisions is supportive to creating indicators that are seemingly precise without much care for their reliability. That lack of care can be considered justified when those creating the indicators assume that the user of the indicator will carefully follow the development of them while preparing for making use of them. Frequently, however, the existing data create the urge to apply them without analysing their actual meaning.

What can change?

In the training tradition numerous threads of discussion with the excessive demand for creating the ROI type indicators on the base of data representing doubtful value can be found. Assuming that the general conclusions from the financial crisis causes will be supportive for abandoning the short-term perspective in evaluation of activities and care in construction of numeric indicators it can be expected that in training practice the role of two – presented in short below – trends objecting estimation of the ROI for training will be increasing.

Currently, the most pronounced of them aims at substituting the postulate of general evaluation of training through financial effectiveness indicators for investment projects by diversified actions increasing the opportunities for efficient implementation of changes through training and accompanying activities. Surveying sample description of success in application of training content is postulated to increase the extent of influence of training thanks to the analysis of limitations and obstacles in implementation of training content (Brinkerhoff 2005, Mattson 2005). Assistance of training specialists in activities that serve specification of expectations from interest groups in postulated (Rus-Eft, Preskil 2005). Finally, involvement of the management in planning the business indicators and the chain of influence on those indicators through training is postulated (Spitzer 2005, Woźniak 2009).

Increasing importance is attributed to activities strengthening the effects of training and continual monitoring of changes implemented thanks to training (Woźniak 2009), which prevents isolating training activities from the rest of life of the organisation. Focus on more effective combination of training

with daily practice results in the postulate of combining training and coaching activities taking place after training that could also form the source of data allowing quite precise *ex post* measurement of costs and benefits. The training effectiveness analyses possess, however, the method of that measurement adjusted each time to the actually expected confidence level of findings – determined by the decision-taking needs and not the universal standard or method (KRAIGER et al. 2004, SPITZER 2005, WOŹNIAK 2009). That trend among theoreticians of training excludes creating indicators without analysis of the actual decision-taking needs they are to serve as lack of such linkage between the decisions and the indicators favours generating evaluation indicators at negligible cost which usually means lack of reliability control of the source data on which the estimates are based.

The second trend in training tradition refers to the postulate for enriching the Kirkpatrick's evaluation model with the fifth level describing the training consequences for a wider community. In this case the concept by A. Hamblin of comparing training effects with the quite precisely planned objectives at all levels and determining the actual "ultimate" objectives for training is referred to the most frequently (ARMSTRONG 2000, p. 467). That author postulated determining the ultimate goals (the fifth level of outcomes) and expanded the range of the Kirkpatrick's fourth level by important social objectives. So he allowed the idea that only some training programmes are to be mainly profitable. Numerous training programmes do not have to be profitable but they are to offer specific consequences for the organisation, interest group within it or in the environment or to the benefit of the society as a whole. That approach to training activity evaluation presents the decision taker as the person responsible for objectives he formulates. Aiming at attainment of objectives the decision taker considers right does not require profitability evaluation of that action as such evaluations are usually based on the limited time perspective, usually very short. Investments in training increasing sensitivity to social diversity implemented before the year 2000 all over the world at branches of Levis company under the leadership of Bob Haas the influence of which on the financial result was not the subject of expectations at all represent a good example of such thinking. The training was to increase the ability of the organisation to operate in the modern world full of diversity and existence of the company was the indirect measure of the rightness of objectives formulated in that way.

The tradition of conducting training programmes without expectation of direct and quick returns on investment represents striving to formulation of training practice not so much under the influence of current problems but rather the expectation of long-term influence of the training budget on the organisation. That way of thinking is present the most clearly in the tradition

of corporate universities. They are operated in two ways: as projects of multistage and long-term improvement of the managerial staff or as general education facilities (awarding scientific degrees) operated by corporations. Independent of their form and detailed objectives both those approaches search for tools of staff interpreter more extensively than assumed by short-term perspective of the systematic training model.

Conclusion

The text presents manifestations of two phenomena – short-term perspective in analysing benefits of activities conducted and low insight in creating and analysing indicators – in practice and theory of employee training programmes. It was assumed that while corresponding phenomena are indicated as causes of the current financial crisis, the flow of reforms induced by the crisis should strengthen the public influence of other trends in thinking also in the field of training management.

It was presented that in training management the proliferation of the postulate for evaluating training using indicators of the projects profitability financial analysis (e.g. ROI) had its theoretical support in simplifications that were introduced to the systematic training model. It was pointed out that the focus on specifically defined educational objectives formulated in the form of the sentences: "after training the participants will know/will be able to" and lack of indications concerning the timing for performance of training outcomes can be considered those simplifications in the systematic model that allowed implementation of short-term perspective and consent for use of indicators with unclear cognitive value.

The potentially possible changes in the method of managerial education management have also been presented. Much higher involvement of decision takers and other participants in the life of the organisation in the training programme in their common feature. The decision taker accepting the training project must assume personal responsibility for its rightness and objectives as through it he creates active changes in the known situation. In both described approaches representing alternatives to evaluation of the ROI for training projects, training projects become not only the standard reaction aimed at liquidating problems encountered in daily work. In the trend stressing the necessity of applying training intervention their final form is difficult to foresee. On the other hand projects equivalent to corporate universities are becoming the tool of wider influence on the organisation the objectives of which can be defined only roughly.

Determination in what way the practitioners will solve the tensions between the rightful expectation that the profitability of training could be

compared with profitability of other types of intervention with equivalent objectives and lack of premises allowing precise determination of timing when the influence of training should give effects for the organisation requires further research. It should be expected, however, that the financial crisis ended inconsiderate acceptance of freely created indicators that aimed at describing short-term influence of training program that represented a standard popularised by associations of trainers.

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