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## **Integrated development and modernisation of human capital are needed**

### INTRODUCTION

Politicians and economists perceive socioeconomic development by means of synthetic indicators, usually GDP per capita growth. Conversely, people are interested in quality of life – at a level that would give them and their successors a sense of happiness and a feeling that there is a point to their activity. The usefulness of GDP and income growth and the need for more efficient resource allocation is connected with the attainability of those objectives. Hence, there is the requirement for consistent mechanisms, institutions, economic system tools, coordination and management procedures at a micro and macro level, and the appropriate public policies oriented towards harmonised improvement of the quality of valuable life across the entire space of human existence and activity. This means that economics and politics, as well as economic systems, should be oriented towards integrated development because they are to serve people's development aspirations.

The European version of the knowledge-based economy (E-KBE) does not duly meet those expectations, and the American model of the innovation-driven economy (A-IDE) fails at this even more. This is visible in the diverse developmental threats growing on a global scale. For Poland and the majority of countries, it is manifested in the insurmountable problems bridging the technology and quality-of-life gap on a par with that of the world's leading economies.

This paper pursues the thesis that the world of science and, in particular, economics should focus on finding effective mechanisms, institutions, tools and management procedures for the harmonised improvement of the quality of valuable life across all spheres of human existence and activity. The search for conditions that would improve the quality of valuable life must extend beyond the GDP-growth orientation of economics, economic policy and economic

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systems, and beyond the bureaucratic pattern of the economically, ecologically and socially sustainable development promoted by the EU. There is need for such economic system institutions and socio-economic policy institutions that would see at all times how developmental objectives serve the quality of life from the level of the individual, and that would help to internalise and integrate effectively developmental objectives into the objectives of autonomous budgeting entities. Taking economic processes in this direction requires disseminating integrated rules of thinking about development with reference to the whole spectrum of development, and respecting the consequences of inter-spherical feedbacks arising from alternative resource allocations. The state should support this process by respecting, in its public policies, the functions of developmental objectives in all spheres of human existence, by taking entrepreneurial actions oriented towards the holistic reflective modernisation of human human capital and, in particular, the modernisation of human capital structure and quality, by reducing frustrating inequalities, which cause passive adaptations, and by eliminating institutional inconsistencies in the system that prevent inclusive development.

#### CONSEQUENCES OF ORIENTATION TOWARDS GDP GROWTH

As a result of the paradigms of mainstream economics, politicians have adopted the view – convenient for their own interests and for the world of business – that quality of life is determined by national wealth accumulated in the past and by high GDP growth rates, even if GDP is considered to reflect only quantitative and partial effects of development, namely – the growth of monetary transactions involving added value, regardless of whether they reflect benefits or suffered by the society and the natural environment from the development of material production. In economic policy, inadequate attention is paid to the fact that high GDP growth rates do not lead automatically to inclusive development of all social groups, all regions of national economies and the future generations. After all, it may turn out that the added value is mostly taken over by the business sector or is transferred by foreign capital abroad in the form of profits for tax optimisation purposes, or is absorbed by the state to reduce foreign debt or by rent seekers. Such processes are confirmed by historical facts. Where there is high economic growth, some social groups are better off while others grow poorer, whether in absolute or relative terms, for instance due to the structural and technological changes that accompany a high economic growth rate. In the modern era, this is a typical phenomenon, which intensifies to a varied degree over time and in geographic and social space.

We all feel that despite GDP growth, quality of life is deteriorating due to the external negative effects of economic growth (crowded urban agglomerations, noise, transportation difficulties, crime etc.). Many people face adverse selection in the labour market due to the creative destruction effects, where near-obsolete



branches are taken over by more efficient business entities that are better prepared to absorb modern technologies. The world of labour is turning into a new class of precarians, temporary workers employed beneath their qualifications, unfairly remunerated, fearing for their future (Standing, 2011). Social conflicts and pathological phenomena connected with difficulties in adapting to the all-too-quick transformations are exacerbating the situation.

High economic growth is pursued at the expense of the future generations, that will have to repay the loans taken out by their current beneficiaries or limit the consumption of certain goods because of the excessive exploitation of non-renewable resources. All those and other consequences of economic growth should not be left out in systemic reform and economic policy programmes. Ignoring the negative external effects of an economic system oriented towards high economic growth on prosperity is hardly conducive to quality of life improvement, unless this takes place at the expense of future generations.

Averaged thinking is now also common for income distribution, which is expressed by the Gini index. A state income policy based thereon carries the risk that the relationship between work productivity and the rules of distribution will not be properly respected. It may contribute to superficial socioeconomic cohesion because, ultimately, quality of life remains the function of work productivity and the latter is, originally and essentially, determined by the quality of human capital, which is positively correlated with productivity growth. This does not mean that the issue of inequality in income distribution should only be resolved by the business sector.

Economic growth and economic system efficiency as expressed by GDP per capita are not the direct means to achieve the developmental objectives of individuals. The final objective and the very essence of an economic system is to improve the quality of life of society as a whole, of its social groups and of individuals, and thus to ensure social prosperity. In this context, GDP per capita growth is only a condition required for the attainment of the developmental objectives of individuals and the national economy.

It must also be noted that the concept of development through the globalisation of liberalisation, by means of the standard programmes recommended by the IMF and the WB, is still oriented towards GDP per capita growth, even though the programmes themselves have been improved compared to the recommendations arising from the Washington Consensus. They still do not respect all the functions of developmental objectives across all the spheres of human existence and activity. They are alleged to foster capitalism controlled and influenced by transnational corporations and political structures generating a growing risk of diverse developmental threats at a global and local scale. The developmental concepts of the IMF and the WB are usually taken into account in assessments of creditworthiness in financial markets, though they are not mandatory.

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### THE EUROCENTRIC DEVELOPMENT MODEL IS ALSO FAILING

There are attempts to challenge the materialistic concept of prosperity based on permanent and high GDP growth with the concept of a triple sustainable development pursued within the social market policy and sanctioned at an EU level. This is also pursued in Poland by two financial perspectives of development programming (the National Strategic Reference Framework and the Europe 2020 strategy).

The strategic coordination adopted by the EU, the *acquis communautaire* and the overall rules of thinking and acting entrenched in EU decision-making centres have been challenged by economists representing Anglo-Saxon liberalism. They point to the excessive formal institutionalisation – also recorded in Poland in connection with its accession to the EU – as harmful to economic efficiency<sup>2</sup>. This criticism emphasises that institutionalisation is derived from axiological standards that are often inconsistent with the notion of an individual driven by self-responsibility. It must also be added that the objections regarding the negative consequences of excessive non-market regulations are confirmed in the benchmarking analyses carried out for real economy processes in the context of the EU regulatory mechanisms since the 1970s. It is also noted that the EU is behind the USA in terms of innovation-driven development (Lewis, 2004), even though some of its signatories are leaders in innovation rankings, while the East Asian way of combining general economy planning with market mechanism development according to the step-by-step method (Chinese model) has now become an actual threat to the European model of a knowledge-based economy oriented towards economically, socially and ecologically sustainable development (E-KBE), as well as to the Anglo-Saxon model of an innovation-driven economy (A-IDE).

The European model of an ideologised and bureaucratified mechanism for harmonising the three basic dimensions of sustainable development does not guarantee their equal treatment in practise, since national selfishness keeps rearing its head. The procedures for the disaggregation of all expense items and their meticulous distribution for priorities arising from the ratios set by the European Commission encouraged opportunistic practices on the part of the beneficiaries, oriented more towards gaining non-refundable funding rather than resolving

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<sup>2</sup> According to the Polish Ministry of Regional Development, 406 strategies, often mutually contradictory, were adopted in Poland in 2007. Modernisation of the economy was hindered by: the administrative and legislative nightmare of the endlessly increasing administration, which has almost tripled in size since the beginning of the transition (almost 1.5 million FTEs); the rocketing number of government acts and regulations (1588 in 2010 versus 489 in 1990); the neglected infrastructure in all areas (roads, power grids, ICT); the marginalisation of demographic issues in socioeconomic policy; poor economic activity of the population; and barriers to entrepreneurship (inflexible labour market, high costs of labour, complex tax system, ineffective justice system) (cf. Kleiber, 2010; *Go Global!...*, 2011).

regional development problems. As a result, the Lisbon Strategy revisions have hardly resulted in the adaptation of the procedures, instruments, institutions and regulatory mechanisms within the EU *acquis communautaire* to the development challenges of a creative and innovative economy, whereas certain reforms have made it difficult to overcome the consequences of the 2008–2011 global recession.

### WHY HARMONISE DEVELOPMENT ACROSS EIGHT SPHERES

The whole sphere of human development can be described as a set of interrelated functions of developmental objectives, along with their respective characteristics in regards to selection criteria, degree of urgency, nature of the inter-spherical feedbacks and their effects. Highlighting the economic, ecological and social criteria that underlie the development strategies in the EU is a step in the right direction but it fails to reflect duly on the complexity of the decision-making process and its axiological grounds, which are important to people in their pursuit of a valuable life.

The triple-sphere of ecologically, economically and socially sustainable development is adapted to top-down bureaucraticised selection criteria and to the ideologised standardisation of developmental processes on a transnational level. Its vulnerability to the game of bureaucratic, national and business interests and the low emphasis on self-responsibility can be overcome by looking at development from an individual level. Rather than being based on reduced aggregates, such perception relies on specific functions of developmental objectives and on the corresponding selection criteria, i.e. appropriate axiological grounds, which people, after all, do not reduce simply to economics, ecologism and social aspects.

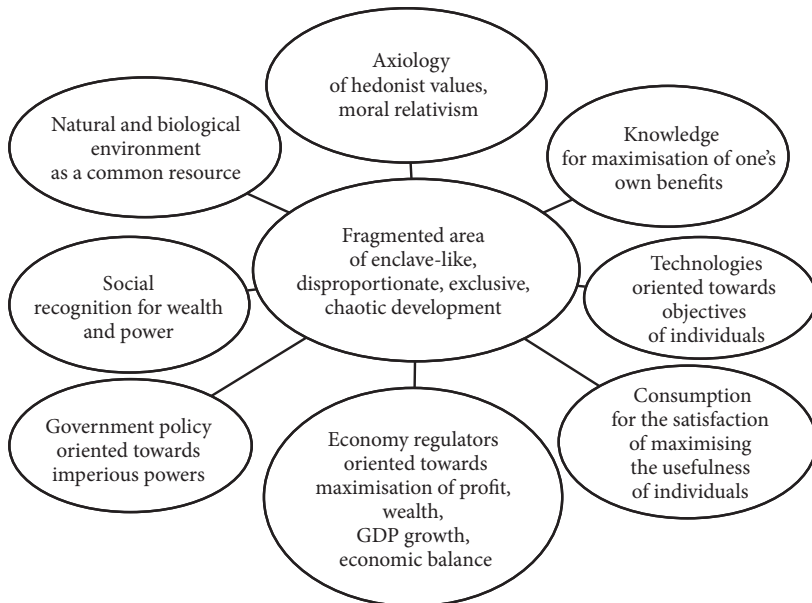
Internalisation of common objectives into autonomous ones has already been practised in centrally planned economies to no avail. Accordingly, no internalisation of ecological, social and economic objectives that has been ordered from an international level can be free of excessive transaction costs or a game of bureaucratic and political interests. This is why developmental objectives must be drawn from a development area that is closest to the evaluation criteria of people, across the whole area of human existence and activity; this is the only way for such selection to remain impartial.

A holistic perception that respects the consequences of the inter-spherical feedbacks of the alternative resource allocations across spheres is useful in the impartial diagnosis of developmental processes, since such consequences are the determinants of the synergy, entropy effects or the positive and/or negative external effects underlying the quality of life, and the effectiveness of public policies and the institutional order.

In view of modern developmental challenges and threats, individualistic thinking about the quality of life (Figure 1), reduced to searching for the benefits derived from the attainment of single-sphere objectives, is not enough. After all, such

thinking is based on excessive reductionism and on a mechanistic approach, which became popular in economics and other social sciences upon the emergence of the Newtonian dynamics theory. This is why particular spheres of human existence are still perceived as spatially isolated. There is no room for the respect of inter-spherical feedbacks with such an approach.

Individualistic thinking may entail transferring economic criteria to isolated spheres of human existence and, as such, it deserves attention, but it also vulgarises human choices and evaluation criteria. After all, it assumes that human actions are governed by selfishness, greed, the “animal instincts” of herd behaviour, the ideology of cold calculation and emotions detached from the deposit of spiritual values developed throughout the history of humanity. Such thinking and the actions based thereon result in people being seen as individuals guided by their own gain (countable in market terms), as carriers of human capital and creativity, which matter only if they can benefit the user. Rules of thinking and acting are standardised according to the economic criterion and lead to the growth of the material means of satisfying needs but also to economic imperialism and disintegration of developmental processes (Mishan, 1977; Stiglitz, Sen, Fitoussi, 2010). Ultimately, they lead to disproportionate, chaotic, enclave-like development that excludes entire social groups and other than economic selection criteria from the modernisation processes. This undermines the point of orienting the economic system and the policies of governments to the maximisation of GDP per capita.



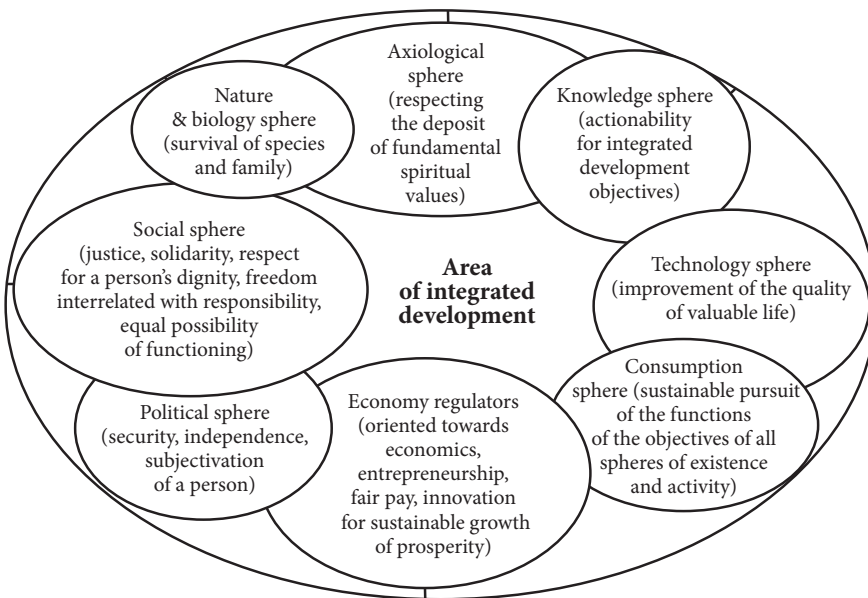
**Figure 1. Criteria of individuals' actions across the development area**

Source: own compilation.

All people share in the pursuit of values specific for all spheres of human existence, i.e. the pursuit of integrated development. The fundamental issue for the attainment of such values, however, is being aware of the consequences of the inter-spherical feedbacks. They are the determinants of the synergy effects from the access to complementary production resources (physical, financial, natural, human and social capital). This is why public policies should be primarily interested in improving the efficiency of resource allocation for increased prosperity across the spectrum of individual and social development.

The synergy and entropy effects of alternative resource allocations to various spheres of human existence are important for the functions of the developmental objectives assigned to those spheres (Figure 2). The total of these functions represents quality of life, and their value is determined by those effects.

The task of politics and economics is to respect this development area and seek such systemic solutions that would result in autonomous entities wanting to, knowing how to, and being able to easily activate endogenous resources to achieve those objectives in a harmonised way.



**Figure 2. Criteria of an individual's actions in pursuit of integrated development**

Source: own compilation.

The return to capitalism in Poland, according to the double transition shock and stabilisation scenario developed in the Government Stabilisation and System Transition Programme as early as 1989, was oriented towards uninterrupted circular movement in the economic sphere, with microeconomic efficiency and growth of

GDP per capita planned as the determinants of economic system efficiency. The functions of the objectives of the remaining spheres of human existence and activity were to be achieved as a side effect of efficient markets and high economic growth. The primary focus was on microeconomic efficiency manifested at the scale of the national economy, as a high and stable GDP per capita growth.

A doctrinaire approach to economic system efficiency based on neoclassical economy paradigms pushed business interests to the foreground and led to a belief that an economic system oriented towards securing such interests automatically fostered development and improved quality of life. Systemic imitative modernisation put economic criteria above social ones, resulting in excessive social costs in activating an individual's self-responsibility for their own success and, consequently, in dependent development.

The absence of progress in bridging the developmental and lifestyle gap until the accession to the EU may be only partially explained away with the historically lower economic development of Polish lands at the beginning of the road to an independent national and cultural entity. Its geopolitical location, the consequences of the partitions, of World War I and then World War II, and of the malfunctioning solutions of the political and socioeconomic order forced by the USSR were tremendously significant. A perspective that is thus reduced, however, leaves no room for reflection on what is of essence, namely the endogenous factors dependent on the informed decisions of economic entities. Making use of their potential is a prerequisite for accelerated modernisation in various areas and accelerated convergence with the most developed economies and societies.

#### SIGNIFICANCE OF THE QUALITY AND STRUCTURE OF HUMAN CAPITAL

The crucial direction for the entrepreneurial activities of the state aimed at better quality of life should involve appropriate integrated institutional adjustments of all education channels and in terms of funding the modernisation of human capital quality and structure. Such modernisation makes it possible not only to change fundamentally the landscape of inequalities but, first and foremost, to modernise the economy and politics and support the country's growth.

Taking place against the background of globalising liberalisation processes, and under the influence of the standard development programmes of the IMF and the WB and, in the twenty-first century, of the EU, a post-socialist transition radically changed the functioning conditions for human capital in Poland and in many other post-socialist countries. Due to their inertia, however, the education and healthcare patterns inherited from the centrally planned economy, as well as the systems of values instilled in people, are still a reason for the relatively weak utilisation of human capital in the modernisation of the economy and in the improvement of the quality of life. Human capital is still shaped by patterns

originating in the era of the second technological wave, i.e. typical of an industrial economy. Poland is now facing a great challenge in terms of its modernisation, which is necessary if the Polish economy is to shed the status of a developing country and become a developed country (Woźniak et al., 2015).

In the near future, the ongoing fourth industrial revolution, combined with advanced digital technologies, will give us an augmented, invisible reality: artificial intelligence. Its most characteristic feature is the dissipation of the barriers between people and machines, and the common use of the Internet of Things, cloud computing and fog computing, which lead to a fluid symbiosis between humans and technology, work and non-work, rest and family or social life. The digital revolution and the new technologies it offers open huge possibilities of improving the comfort of work, business and daily life. They also create an opportunity to make free use of human capital, an employee not remunerated by anyone, their competencies and creativity being those of, a procrastinator (Tussey, 2018).

Access to all information and to the procrastinator at any time, from any place, and to digital technologies of printing tangible goods, opens the road to the asymmetrical distribution of benefits from the use of human capital, and to the economically viable production of individualised goods and short manufacturing batches, thus offering hitherto unattainable flexibility in adapting to the expectations of customers and new sources of competitive advantage. New technologies and products are becoming obsolete faster and faster. A renowned futurologist Kevin Kelly, famous for the apt identification of the changes approaching in connection with the digital revolution, is convinced that the majority of the technologies that will dominate the world in 30 years have not been invented yet (Kelly, 2017, p. 75). He forecasts an era of automation and robotisation that will render 70% of the current occupations obsolete by the end of the twenty-first century. This enforces a reassessment of the characteristics of human capital that are useful in view of the challenges of the future.

Even today, one can be certain that the development of technologies that merge the physical, digital and biological worlds will substantially transform labour, human capital, lifestyles, and even the way people organise business and governments do politics. The transformation of business into digital culture and of markets into digital platforms will create a demand for compatible partners, innovators, collaborative interdisciplinary teams of people able to manage innovations and to adapt flexibly to quick changes, for incentive systems rewarding flexibility and risk-taking in management and accepting the trial-and-error method. Benefits in the form of smarter products and better efficiency, and quality and reliability of the range offered are accompanied by emerging threats, such as mass unemployment with concurrent deficit of human capital adapted to the requirements of revolution 4.0, the growing risk of *phishing* (Akerlof, Shiller, 2015), abuse of the dominant position, and blocked access to the accumulated data resources (cepStudy, 2016).

In the name of benefits from the digital transformation, life must go on according to algorithms that will limit our independence, sensitivity and sense of happiness. Whether the transformation is going to be positive depends on how well we cope with the threats and opportunities encountered during the transition. This, in turn, will depend on the new quality of human capital.

According to the authors of the report *Future Work Skills 2020*, the following qualities of human capital will be the determinants of success in the labour market in the nearest future:

1. Ability to determine the deeper meaning or significance of what is being expressed (*sense-making*).
2. Ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired interactions (*social intelligence*).
3. Proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based (*novel & adaptive thinking*).
4. Ability to operate in different cultural settings (*cross-cultural competency*).
5. Ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning, especially to draw conclusions based on Big Data (*computational thinking*).
6. Ability to assess critically and develop content that uses new media forms, and to leverage these media for persuasive communication (*new-media literacy*).
7. Literacy in and ability to understand concepts across multiple disciplines (*transdisciplinarity*).
8. Ability to represent and develop tasks and work processes for desired outcomes (*design mindset*).
9. Ability to discriminate and filter information for importance, and to understand how to maximise cognitive functioning using a variety of tools and techniques (*cognitive load management*).
10. Ability to work productively, drive engagement and demonstrate presence as a member of a virtual team (*virtual collaboration*).

The above processes, already happening and inevitable in the future, require an urgent answer to the question of whether an education system reformed according to the rules defined in Act 2.0 will be an effective tool for adapting human capital to labour market transformations and for achieving the developmental objectives across all spheres of human existence and activity. A similar question should be asked with regard to incentive systems. In addition, the growing role of human capital in the economic process requires establishing the conditions to be met by the healthcare system in order to improve the energy and vitality of people and by other types of intangible services.

In the case of healthcare, one must bear in mind that the healthcare system's contribution to increasing energy and vitality would be incommensurately greater if it concentrated on activities encouraging people to improve their diet, stop smoking and doing drugs, exercise and improve their mental health rather than



on new medications or surgical techniques. The problem is significant from an economic aspect because a society where people lead healthy lifestyles will be better adapted to take advantage of market opportunities, and will incur lower costs of economic growth than a society where funds need to be spent on fighting diseases that could have been avoided had people appreciated their prevention.

In the near future, the expansion of the fourth industrial revolution technologies will considerably increase demand for the aforementioned human capital characteristics among others. We must first learn to combine competition with cooperation and acquire the ten *Future Work Skills*. The ability to falsify cooperation and understand the function of spiritual values for personal developmental objectives, for the common good, for the functioning of the political, social, natural and biological, consumption, technological and human capital development spheres will also be of tremendous importance.

The quality of human capital is determined by an internal set of norms, values, behavioural patterns, and moral and ethical standards encoded in the organisational structure of an enterprise (Hatch, Cunliffe, 2013, pp. 165–171). Studying their functionality with reference to developmental objectives and the ways of pursuing them, especially the effectiveness and efficiency of an activity, cannot be ignored. Those issues must also be made a central component of educational programmes. There is also evidence that in the workplace people are more susceptible to psychological and sociological stimuli than to methods, scientific tools or procedures, guidelines or surveillance, and they want to have an impact on the environment around them. As a result, they seek responsibility and possibilities of becoming involved in the workplace (Arenson, Whicker, 1990, pp. 135–138).

## INSTITUTIONAL FOUNDATIONS OF INTEGRATED DEVELOPMENT

An atmosphere conducive to the release of the activity, creativity and cooperation potential of human capital is created by institutions oriented towards integrated development. There are reasons to believe that such orientation of institutions within an economic system would support thinking and acting for the benefit of consistent developmental objectives of the stakeholders and would help harmonise the employee, business, bureaucratic, political and other interests. This would also create favourable conditions for the development of human capital as a common and public good. The mechanism of feedbacks activated by re-institutionalisation oriented towards integrated development would help remove the cooperation barriers, reduce the transaction costs of cooperation, release the synergy effects from the feedbacks among knowledge, will and competencies, and orient the system towards a search for the ways to achieve the developmental objectives of all stakeholders. Activating such a mechanism is a prerequisite for new human capital quality conducive to the dissemination of innovative practices and to

building a knowledge- and innovation-based economy oriented towards integrated development. As (Bal-Woźniak, 2012) rightly notes, “in any case, the conditions fostering or inhibiting the search for/creation, adaptation, implementation and dissemination of innovations depend on a person who: has a developed awareness of the meaning of innovation and innovativeness or does not assign adequate significance to them; is ready to become involved in future-oriented activities, such as innovation activities, or is engaged in activities addressing primarily current issues; has the knowledge and the ability to make use of it; is able to identify and make use of opportunities and create new ones as needed” (Bal-Woźniak, 2012, p. 98). This notion underlies the subjectivity-based innovation model proposed by the author cited, a new approach to understanding, controlling and managing human capital that is oriented towards the dissemination of innovative behaviours and towards the development of awareness as regards the need to be innovative and to overcome a low innovation culture. Subjectivity-based institutional orientation requires something to tie sectoral policies together into a coherent cooperative whole that would guarantee quality-of-life and technological convergence. Orientation towards GDP per capita growth has failed to adequately fulfil this role. In practice, this has meant a diffuse and polarised growth. Photocopier modernisation of the European model of the knowledge-based economy (E-KBE) or even the American innovation-driven model (A-IDE) does not guarantee competitive advantage if the growth is pursued according to the rules postulated by mainstream economy and recommended by the IMF and the WB, although economic growth theories mention the possibility of using the rent of backwardness. Development in line with such rules has led to the most recent global financial crisis and has proven ineffective in solving the problems of diffuse and polarised development and other development threats, whether at a regional or global scale.

Technological development, investing in creative human capital and a competitive regulatory environment need to be clearly prioritised in public policy. That priority should rely on a knowledge- and innovation-based economy oriented towards a harmonised improvement of the quality of life across all spheres of a person’s existence, i.e. on a new economy of knowledge and innovation, acronymised as KIBE. As the practice of the vast majority of developing countries shows, imitative modernisation did not bring the expected results. This is also confirmed by the last century of Poland’s economic development.

EU membership was supposed to be the medicine for Poland’s backwardness and a way to achieve a high quality of life and sustainable development. Accession to the EU entails not only a better, competition-oriented institutional order and the subsidiary principles of a solidarity-based state consistent with such order, but also an opportunity to align the development strategies with the European standards of ecologically, economically and socially sustainable development, pursued within an institutional order of social market economy. In practice, this means continuing to align the developmental and social policy to standards derived from

the era of Keynesian interventionism and the social democratic welfare state. With all the flaws of that order and the imperfections of the adopted strategies, that area of free trade, populated by over half a billion of people, opens huge possibilities of capitalising on varied historical experience, traditions, religions, economies of scale, absorption of the savings of others in the form of FDIs transferring modern technologies, as well as allocation of domestic capitals of business entities and development of creativity with tolerance for multiculturalism.

However, such a bureaucratically created convergent model of socio-economic cohesion entails excessive transaction costs. In the case of Poland, it shows the signs of the “tragedy of the commons”, such as channelling entrepreneurship in the fight for access to the common resources, the division of the political sphere into two Polands and the entanglement of its officers into a violent struggle for the role of a shepherd who does not have to worry about their own strategy and may hide behind the requirements arising from EU standards. At an ideological level, one can notice here the logic of the holistic perception of developmental processes. In practice, it is a process of confrontation between bureaucratic, political and business interests and as such it must yield poor results in terms of spatial cohesion. Imitative modernisation was another contributing factor – in the case of Poland, brought down to external transfer of technologies and external sources of funding. The external funding process may be weakened as a result of reforms attempting to overcome the problems connected with efficient management of sustainable development from a supranational level and to create integrated financial and budget frameworks. This may also intensify the problems with pursuing a coherent socioeconomic policy. Another question that must not to be avoided is what is going to happen to sustainable development once the subsidiary funding from the EU dries out. This may happen after 2020 due to Poland catching up with the average GDP per capita for all EU signatories, the financial crisis in the euro area and the exacerbation of problems that foster disintegration trends.

We must be ready for this inevitable moment, which is bound to come considering the progressing actual convergence of the economy and the potential system reforms in the EU. Preventing the negative consequences of dependent development and the globalisation threats, and effectively responding to the development challenges and the anticipated system transformations in the EU that limit funding for the programmes comprising the national development strategy requires a transition from the convergent, diffuse and polarised model of building socioeconomic cohesion to a model that is based on internal endogenous factors and that would properly respect participatory decision-making procedures and a subjectivity-based approach. This entails appropriate institutional adjustments.

An institutional system consistent with a KIBE is one that would ensure certain leeway in economic policy towards the integration of particular spheres of human existence, and first and foremost would encourage self-responsibility, ac-

tivity, innovativeness, entrepreneurship, and cooperation in resolution of common problems. Every legal standard, decision-making procedure and economic instrument must be reviewed for its functionality in the development of particular spheres of human existence and for its impact on the synergy effects and their distribution. So it must be verified if the change:

1. In the axiological sphere – supports the dynamic balance of the economic, social, ethical, spiritual and emotional values rooted in the organised hierarchy of universal values.
2. When it comes to the sphere of economics, the outcomes of the change must be diagnosed in the context of complex assessment criteria for the efficiency and change of the economic system, i.e. economic efficiency standards, economic growth, macroeconomic balance and stabilisation, fair socioeconomic inequalities, innovativeness and progress in achieving socioeconomic cohesion and efficiency of markets.
3. In the political sphere – helps limit the dominance, strengthen the rule of law, cooperation, partnership, and rational rather than minimum welfare state, undertake and implement consistent and realistic integrated development programmes within a holistic strategy oriented towards the release of a tendency to invest, develop human capital, activity, entrepreneurship, reinforce subjectivity and self-responsibility as well as social responsibility.
4. In the social sphere – supports the transition from tendency to dominance, from accumulation of goods for the few to cooperation and partnership for the quality of valuable life. This entails transition from allocation rules based on Pareto efficiency to intra- and intergenerational fairness and to consistent systematic respect for Rawls's distribution rules. They must be integrated with a modern social policy that has been adopted through democratic negotiations and consultations and that respects the conclusions from Amartya Sen's theory of functioning and capabilities (2000) and the spatiotemporal coincidences of development.
5. In the technological sphere – helps strengthen the atomised, objectivity-oriented innovation management systems using multi-level management based on objectivity-based approach to innovation (Bal-Woźniak, 2012, pp. 404–423).
6. In the human capital sphere – helps build and implement educational programmes oriented towards the creation of actionable knowledge serving integrated development of all spheres of human existence through the development of not only external but also internal reflectiveness, oriented towards understanding the sources of one's cognitive, information-related and emotional limitations and how they work, oriented towards the ability to combine individualistic and holistic thinking, interdisciplinary thinking, to develop creativity, to continuously acquire and revise knowledge, the orientation towards the future, the reflective and cooperative competencies, the ability to understand cultural differences and the functioning in a global environment of diversity and changeability (Woźniak, 2012a).

7. In the consumption sphere – supports transition from the infantile maximisation of consumption to focus on improvement of the quality of valuable life, disease prevention and sovereignty of a consumer aware of the multi-sphere consequences of increasing the current quality of life at the expense of future periods.
8. In the nature and biology sphere – helps respect the limits of tolerance of the ecosystem and respect the non-transferable qualities of human nature, including family.

The initial prerequisite for effective elimination of simulated institutional adjustments to the challenges of integrated development is to reject pretend participation in favour of actual subjectivity of a person, which is integrally connected with will, knowledge, competencies and the ability to make free and responsible choices in pursuit of integrated development. If this problem is not addressed first, the negative trend of the imitative, enclave-like and disproportionate development cannot be reversed. The actual subjectivation of an individual is connected with achieving self-fulfilment by actualising what is good in the pursuit of the functions of developmental objectives in all spheres of human existence and activity, both separately and altogether. However, this requires the individual to know what is not only useful, rational and economic but also good and what makes a person good. From this perspective, subjectivation requires modernisation of human capital and concern about the development of human capital as a common good<sup>3</sup>; without it, economic, political or social systems may fail to create the possibility of subjectivation. What is common and derives from human nature is self-fulfilment, and it is achieved through harmonised attainment of the functions of developmental objectives specific for all spheres of human existence.

The inherited institutions that have emerged from models based on Newtonian physics create constraints and stimuli that can be easily controlled, or even manipulated, by the authorities. Thinking in the categories of system balance is good for the authorities but not for people characterised by free will and creativity. All knowledge cannot be kept by only one centre as it is created in dispersed human minds and as such it needs to draw on those minds and be dispersed as well<sup>4</sup>. It must also be remembered that in the era of informationism we are forced to process huge quantities of data multiplied at an incredible rate<sup>5</sup> in order to find the correlations and notice certain phenomena and the variables that affect them.

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<sup>3</sup> Its definition and the explanation of its significance for the increase of real income of the society (in a narrower sense than adopted in this paper) was first addressed by (Olson, 2000, p. 52 et seq.). In his opinion, the significance of this resource is revealed wherever an adequate number of constituents gain more knowledge about the actual consequences of various public policies because the public policies are then improved. Cf. (Woźniak et al., 2015, pp. 225–233).

<sup>4</sup> For more about this subject, see (Gilder, 2013).

<sup>5</sup> Every two days our civilisation produces a quantity of data generated by the humanity from the beginning of its existence to 2001. The volume of all the information recorded worldwide dou-

Which is why good communication is the foundation of development in every dimension. Unfortunately, information is acquired in a world of marketing noise. There are hardly any developed frameworks in the form of value structures or standards or appropriate connections with legal regulations which could influence network resources according to the needs of integrated development.

Within the rules of mainstream economic logic, the elimination of institutional maladjustments is reduced to the perspective of competitive order. In the rules of democratic order that rely on this logic, the road to that goal is supposed to entail overcoming the political rent-seeking, the pathology of corruption, the recreation of social trust and the development of cooperation that would strengthen competition and cooperation for maximisation of the advantages of network structures. As much as such actions are appreciated from the perspective of integrated development, it must also be noted that this logic values primarily rational individuals as it departs from the consequences of the decision-making problems of the people populating the markets who are characterised by will and by information-related, cognitive and emotional limitations. For those reasons, the governments, monopolies or elite institutions (e.g. the European Commission) and other regulators strive to limit diversity and impose an order. This is not conducive to the creativity that is to characterise the new knowledge-based economy, that is an economy oriented towards integrated development. There is also a question of how to overcome the problems connected with the fact that political power is based on vertical relations and emerges in top-down processes. So it is important to focus on searching for inclusive institutional solutions, i.e. ones that include the broadest possible groups of the society in the modernisation processes, allowing them to benefit from the outcomes of the modernisation and eliminating the exclusivity of the already existing institutions. The need for such institutions is confirmed by the historical experience of the countries that are current global economy leaders (Acemoglu, Robinson, 2012).

Another significant prerequisite for the removal of the institutional maladaptations hindering integrated development is to no longer see institutional changes as secondary to the interests of political parties, i.e. to end party-dominated politics<sup>6</sup>. Overcoming this problem of modern democracy requires constitutional regulation of the information responsibility and obligations of public natural and legal persons, including the social media, and requires the governments to take

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bles approximately every 18 months ([www.pcworld.pl](http://www.pcworld.pl), October 2015). Modern information technologies exist without properly developed frameworks in the form of value structures or models that would have an impact on network resources. Such frameworks fail to have appropriate connections with legal regulations and with institutional structures.

<sup>6</sup> Party-dominated politics is not the same as politics implemented through political parties. Political parties may either pursue their particularistic interests by manipulating the developmental objectives of all the citizens whom they represent or they may make their political power legitimate by orienting the politics towards the developmental objectives. Only the former way represents party-dominated politics.

care of the development of human capital seen as a public good. Without the ability to efficiently enforce this responsibility, the promotion of active forms of social dialogue leads towards a fight of all against all, and especially to manipulation with ideas, values, information noise, which makes it easier for those netocracy structures that are the best prepared to engage in political and business marketing and have the required tools to pursue their particularistic interests.

Political choices must be shaped by the values of an order based on freedom interrelated with responsibility in order to maximise the subjectivity of the citizens within the limits that make this freedom lasting and mutually respectable. This is a fundamental prerequisite for general learning of effective ways to improve the environment of human life through cooperative means and using the already existing creativity potential.

In the market economy, the country's development potential is the outcome of the possibilities that emerge from the stimuli and limitations created by a network of coherent institutions oriented towards the release of unrestrained entrepreneurship, creativity and proactivity in search for conditions that permit achieving synergy from the engagement of diverse resources to pursue one's own developmental objectives. And those conditions emerge not only from market institutions but also from a wise government policy that strengthens their efficiency and creates an institutional environment that fosters entrepreneurship and the development of a culture of innovation.

#### FOUNDATIONS FOR THE IMPROVEMENT OF PUBLIC POLICY

Improving the social prosperity of a developing country requires more than just strong economic growth. This growth must be accompanied by general acceptance for the rules of its distribution. Such acceptance arises from actual rather than pretend participation of all citizens in the shaping of the integrated development strategies, from high participation of all social groups in the resulting benefits, and from the ability of particular entities to multiply those benefits. Participation in the outcomes of economy modernisation, allowing one to become a subject in this process, is related to a perspective of activating, as broadly as possible, the creative potential of human resources in various applications across all spheres of human activity. The possibility of making use of subjectivity is determined by a number of factors. The initial one is fair pay as a part of the socioeconomic cohesion policy.

Economics must help politicians in resolving income distribution issues that are vulnerable to manipulations, and especially in answering two questions. Does thinking and acting in line with the socioeconomic cohesion principle have to harm economic efficiency and make it hard for the area of business to quickly and flexibly adapt to the requirements of global competition? Are there any pro-growth strategies limiting the income distribution inequalities? The four years of experience in

the implementation of the Strategy for Responsible Development confirm that it is possible in Poland, at least mid-term. Theoretical substantiations showing that such pro-growth strategies can be designed are already present in Polish literature (Malinowski, 2016, pp. 134–164). In countries representing a lower development level, they are substantiated by the unified growth theory (Galor, Moav, 2004). In developed countries, they are confirmed by the practice of social market economy, and especially by its Nordic (Albert, 1993) and Rhine model. According to the studies by Berg and Ostry (2011), the growth remains high longer wherever the inequality is lower. There are also claims that lower inequality is positively correlated with quicker and more lasting economic growth (Berg et al., 2014).

In our approach, solutions are sought in identification of frustrating inequalities, i.e. inequalities that cause passive adaptations and push people into learned helplessness, and activating inequalities, i.e. ones that motivate people to proactive adaptations. The governmental income distribution policy and all the instruments for its implementation should focus on limiting, and ultimately eliminating, the frustrating inequalities (Woźniak, 2012b).

Considering governmental efforts made in Poland to repair the state since 2016 from that perspective, they should be assessed as a step in the right direction towards integration of developmental processes, yet not free from questions and doubts regarding the tools of its implementation and the level of the multiple external and internal risks. A matter-of-fact answer to those questions requires a general and continuous public debate that is free from biased assessments made from the perspective of business, party, bureaucratic or even employee interests. The debate should take place with the participation of representatives of the world of business, politics and labour and their experts and media relations, but also representatives of the academia, local governments, civic society and single citizens.

The primary prerequisite for such a debate is to look at developmental processes from the new perspective of the functions of objectives and the selection criteria specific for each of the eight spheres of human existence identified within the postulated matrix of integrated development, and from the perspective of the entropy and synergy effects arising from the inter-spherical feedbacks, generated by the tasks provided for in the postulated visions and development programmes (currently in the Strategy for Responsible Development). Thus organised public debate may help free its participants from the overly reduced and simplified mechanistic thinking and from certain ignorance of the politicians, expressed in the primacy of the dominating interests of large corporations, political interests or even party interests in the implementation of institutional reforms. The postulated way of holding a public debate would make it possible to discover the stimuli and constraints that politicians encounter on the part of inconsistent political and economic institutions and identify effective ways of repairing the mistakes of the markets and of governmental policies. One may also hope that open social dialogue struc-



tured this way could help abandon the established institution models that foster imitative modernisation devoid of any deeper thought, end the “post-colonial syndrome of peripherality” and the elusive chase after the vanishing point of *Frontier Area Technology*, and with a socially accepted consistent institutional change, it could activate the stimuli for better future of Poland, all social groups and their individual citizens.

It must also be noted that the rule of law is based on an axionormative social order, which is nowadays especially influenced by the areas of economics and politics, and the culture of individualism. This is why the centre of moral life, traditionally situated in the family and supported by religion and education, has been taken over by the state. With that process, the deficit of horizontal trust is increasing and it cannot be compensated by activities building vertical trust (to government institutions) or trust to market institutions, which reward the activity of an individual without considering its impact on the condition of the family. This reduces the quality of the integration of the whole social system<sup>7</sup>, contributes to the demographic crisis, problems of the labour market and of the welfare state, and even to a relative drop in work productivity and the creativity of the society. The conclusion is that the value of the family as a social good must be recognised if the institutional changes are to support the sustainability and cohesion of developmental processes in a broad sense.

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The economic efficiency and the stability of properly strong economic growth cannot be the only criteria for assessing the functioning of an economic system as the system is to help all budgeting entities achieve their developmental objectives.

Quality of life depends on harmonised achievement of the functions of developmental objectives across the whole area of human existence and activity. Next to the objectives specific for the economic, technological, political, social and consumption sphere, the area also covers objectives related to the nature and biology sphere, including family, and the knowledge-related spiritual objectives that underlie the development of an individual, communities and the whole human race. Economic activities may be the fundamental prerequisite (means) for the achievement of developmental objectives but not the only one. Those objectives also have a non-economic dimension, and in particular they shaped by certain inherited rules of thinking and acting that are inertial since human experiences from the past, and even circumstances that may not be of significance any more, influence current decision-making. Ignoring the specificity of ‘path dependence’, i.e. the attachment to the pathway of the historical decision-making process, has negative side effects. This happens in the case of revolutionary changes, shock

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<sup>7</sup> Cf. (Rotengruber, 2011, p. 249; Michalski, 2014, pp. 208–211).

therapies or even velvet revolutions as they entail problems with adaptation to too quick changes and they exclude whole social groups from active adaptations and benefits from the transformation.

The state is responsible for such institutionalisation of the area of the economy that serves people and their developmental objectives and not only business objectives. It is true that personal advantage is the strongest development driver but not the only one as people seek the point of the development and wish to arrange developmental objectives by urgency. Many of them cannot be subject to market evaluation criteria by their very nature or are immeasurable and incommensurate. This does not mean that they should be ignored because they cannot be captured in economic calculations of alternative costs. Development is a multifaceted process. After all, it pertains to economic and social objectives, objectives connected with the subjectivity and dignity of a person, with consumption of tangible and intangible goods, including spiritual goods and natural environment resources, modernisation of the environment of human existence, the conditions of human labour, family life and knowledge actionable towards harmonised achievement of all developmental objectives.

The institutionalisation of the economic system and the modernisation of the real economy area should serve the harmonisation of development across all spheres of human existence and activity if we want to minimise its non-economic external effects. If this is not the case and we only rely on minimising the regulatory functions of the state so that spontaneous market mechanisms can function without limitations, we are creating room for freedom without intergenerational – or even intragenerational – responsibility. Development is then disproportionate, unstable, excluding those who fail to catch up, who are yet to learn how to take advantage of market opportunities. It takes place through trial and error, through creative destruction and imitation of the best models of actions, even if the marketisation process is initiated and imposed top-down, as it happened in the transition sanctioned in Poland by the government programme in the late 1980s. This does not mean that spontaneous adaptations should be ignored. After all, they are a lesson to be learnt in search of effective objective implementation methods.

It is true that the complexity and diversity of the processes happening at a macroscale, in national economy, are incomparably greater than at the micro-economic level. As a result, macroeconomic control, or even public management, carries a high risk of mistakes and negative impact on its effectiveness, with the costs thereof paid by the whole national economy and its entities, without the possibility of holding the decision-makers economically liable. The resulting cognitive constraints give rise to dilemmas regarding the economic interventionism of the state. Furthermore, governmental decision-making procedures entail time lags if the procedures are to be executed democratically<sup>8</sup>. There is also a problem with reaching a consensus, and whenever it is reached, the compromise still tends to be

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<sup>8</sup> They include delays in data gathering (information collection, transmission and processing, establishment of objectives and tasks, development of a plan), legislative work and implementation.

contested. Moreover, there is no guarantee that government experts will not make bigger mistakes than experts of the business entities. The high transaction costs of government regulations, consisting of the costs of negotiation, implementation, monitoring, error correction etc., are a major problem.

Despite that, the question about combining management with spontaneity, also in the macroeconomic dimension, is not unfounded. After all, this is not about replacing management inefficiency with market inefficiency but about maximally limiting both. This may be achieved through systemic regulatory adjustments if they are construed as a consistent institutionalisation process aimed at harmonised improvement of the quality of life across all spheres of human existence and activity. A democratic state can be an appropriate initiator, creator and guarantor of the proper monitoring and control of thus oriented institutionalisation, provided that it operates in a society adequately equipped in human capital seen as a common good, i.e. actionable knowledge serving integrated development. This means that efficient markets, a democratic state and a society having such human capital are complementary prerequisites for transition towards a better future. Such human capital is concurrently a fundamental common good.

It would be absurd to assume that people are not interested in harmonised achievement of objectives across the whole area of their existence and activity, even if the development taking place in practice is disproportionate and chaotic and excludes whole groups from participation in modernisation processes and the resulting advantages. If a sufficient number of constituents has thus construed human capital that represents a common good, then it is in the best interest of politicians not to refrain from offering and pursuing economy and state development programmes oriented towards integrated development.

In search of the model of a society of the future, J.K. Galbraith (1996, pp. 73–77) addressed the notion of a good society, understanding it as a society where all citizens must have guaranteed personal freedom, basic financial means, racial and ethnic equality and chances at a decent life. The economic conditions for that are created by a system that supplies the desired consumer goods and services and prevents adverse effects of production, its distribution and consumption on the prosperity of the present society and that of future generations. The state cannot waive its role as the guardian of a good society. In this role, it must inspire relevant actions, create attitudes and behaviours, and bear legal responsibility for proper monitoring and control of integrated development.

No planned institutional changes may centre only around government failures. The estimated costs of market failures must also be taken into account so that a solution with a lower level and scale of risk and with lower alternative costs can be chosen, provided that such costs can be assessed with appropriate reliability.

It must be borne in mind that even if politicians notice other problems piling up, they are forced, under the pressure of lobbies and in an institutional space affected by unpunished rent-seeking, to leave their resolution to their successors,

hoping that in the meantime they would be mitigated by autonomous adaptation processes and advantageous coincidences. Too soft legal norms foster late political decisions and *ex post* reforms. With the time lags that govern the decision-making processes of a democratic state, those norms become ineffective. As a result, fundamental institutional changes happen when real economy processes initiate a new wave of economy modernisation.

One must not rely solely on the logic on individualism, reductionism – so convenient for the world of science, or on the mechanistic approach. Development is a multifaceted process. After all, it pertains to economic and social objectives, objectives connected with the subjectivity and dignity of a person, with consumption of tangible and intangible goods, including spiritual goods and natural environmental resources, modernisation of the environment of human existence, the conditions of human labour, family life and knowledge actionable towards harmonised achievement of all developmental objectives.

This analytical perspective suggests that such an institutional order is needed where development is designed to serve not only economic efficiency but also other values. Economic efficiency becomes pointless if it is not related to search for values improving the quality of life and making it valuable. Economic efficiency is to be a means to the fulfilment of human desires and notions about valuable life in the individual and social dimensions.

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*Summary*

The author of the article discusses the need to search for effective mechanisms, institutions, tools and management procedures for a harmonised increase of the quality of valuable life across all spheres of human existence and activity. To that end, he proposes abandoning the orientation of economics, economic policy and economic systems towards GDP growth and departing from the bureaucratic model of economically, ecologically and socially sustainable development promoted in the EU in favour of reflection regarding the consequences of the feedbacks arising from alternative resource allocations to various spheres of human existence. This reflection is to rely on the eight-sphere integrated development matrix presented by the author. In order to maximise the synergy effects of the inter-spherical feedbacks and minimise the negative external effects, he postulates: popularisation of integrated thinking about development in respect of the whole development area, entrepreneurial activities of the state oriented towards holistic reflective modernisation of human capital, especially modernisation of human capital quality and structure, reduction of frustrating inequalities, which bring about passive adaptation, and elimination of systemic institutional inconsistencies that prevent inclusive development.

*Keywords:* economic growth, sustainable development, development strategies, Polish economy, institutional reforms, human capital.

**Potrzebny jest rozwój zintegrowany i modernizacja kapitału ludzkiego***Streszczenie*

Autor artykułu wskazuje na potrzebę poszukiwania skutecznych mechanizmów, instytucji, narzędzi i procedur zarządczych umożliwiających zharmonizowane podnoszenie jakości wartościowego życia we wszystkich sferach bytu i działania człowieka. W tym celu proponuje odejście od orientacji ekonomii, polityki ekonomicznej i systemów ekonomicznych na wzrost PKB, jak również biurokratycznego schematu rozwoju zrównoważonego ekonomicznie, ekologicznie i społecznie lansowanego w UE i upowszechnianie refleksji wokół konsekwencji sprzężeń wynikających z alternatywnych alokacji zasobów do różnych sfer bytu ludzkiego. Tę refleksję ma ułatwić proponowana przez autora ośmiosferyczna matryca rozwoju zintegrowanego. W celu maksymalizacji efektów synergicznych wynikających ze sprzężeń międzysferycznych oraz minimalizacji ujemnych efektów zewnętrznych postuluje: upowszechnianie zintegrowanych reguł myślenia o rozwoju w odniesieniu do całej jego przestrzeni, działania przedsiębiorcze państwa zorientowane na holistyczną modernizację refleksyjną kapitału ludzkiego, w szczególności zaś modernizację struktury i jakości kapitału ludzkiego, redukowanie nierówności frustrujących, wywołujących dostosowania pasywne, eliminowanie systemowych niespójności instytucjonalnych uniemożliwiających rozwój inkluzyjny

*Słowa kluczowe:* wzrost gospodarczy, rozwój zrównoważony, strategie rozwoju, gospodarka Polski, reformy instytucjonalne, kapitał ludzki.

JEL: H00, O10, O15, O20, P00.

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## **Quality of life in the countryside after Poland's accession to the European Union**

### INTRODUCTION

Quality of life is defined as the degree of satisfaction of both financial and non-financial needs, i.e. the fulfilment of standards or values, whether biological, psychological, social, political, cultural, economic and ecological, of individuals, families and communities. It is a term from many fields of science, including but not limited to economy, psychology, medicine and sociology, so its interpretations vary. Quality of life is characterised primarily by the income situation of households and by how their needs are satisfied (expenses), as well as by the level and quality of nutrition, housing conditions, household equipment, access to modern transportation technologies, education of children, participation in culture, leisure and the labour market, and use of welfare benefits, services and the healthcare system. The degree of poverty and social exclusion is also taken into account. Each of the aforesaid factors has its objective dimension but is also described in subjective categories. In the recent years, there has been a tendency to ascribe a greater significance to subjective factors. The structure of needs and how they are satisfied may differ for the same income. After all, needs are

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influenced by the environment and they depend on subjective preferences of the consumer. This explains for instance the differences between the quality of life in the countryside and in the city (Borys, 2015; Czapiński, Panek, 2015; Golinowska, 2011; Bendowska, Bieńkuńska, Luty, Sobiestjański, Wójcik, 2015; Panek, 2015; Szukiełojć-Bieńkuńska, 2015). Rural areas have poorer technical, transport and housing infrastructure than cities, and worse access to services and modern technologies. On the other hand, the countryside has unique natural environment and landscapes. They represent resources *per se* and are of significance for the comfort of life in the countryside and as such for social well-being. Those values of rural areas are not always appreciated (Zegar, 2015).

The purpose of this paper is to assess the changes in the quality of life of people in the countryside after Poland's accession to the European Union. The research was based on the results of the European Union Statistics on Income and Living Conditions (EU-SILC) study and on a household budgets study by CSO (Polish Central Statistical Office). The choice of the component factors characterising the quality of life in the Polish countryside was based on the subject areas adopted by CSO and depended on the availability of data. The quality of life of the rural population was evaluated based on indicators characterising objective living conditions (income, expenses, infrastructure, housing conditions and household equipment) and on a subjective assessment. The basic factors are related to either people or households. The assessment of the quality of life did not take into account the environment and the climate-related values of rural areas.

### INCOME LEVEL AND STRUCTURE

Income is the basic factor determining the quality of life of household members. It is an economic guarantee that needs will be satisfied. An average inhabitant of the countryside has income higher than the income of farming families but lower than the income of an average inhabitant of a city or town. In the post-accession period (2006<sup>3</sup>–2016), the advantage of the income of the rural population over that of the farming population dropped from 34% to 28%. The income relationship between the countryside and urban areas improved. At the beginning of the period studied, the income of the rural population constituted 64% of the income of the inhabitants of cities and towns, while at the end of that period the figure was 72%. The income-related disproportions differed depending on the size of the city or town, with the greatest disproportions recorded in the most populous cities and the smallest – in those with the fewest inhabitants (Table 1).

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<sup>3</sup> The first year of full results of studies regarding the income and living conditions of the population, developed according to the EU-SILC (*European Union Statistics on Income and Living Conditions*, 2008).

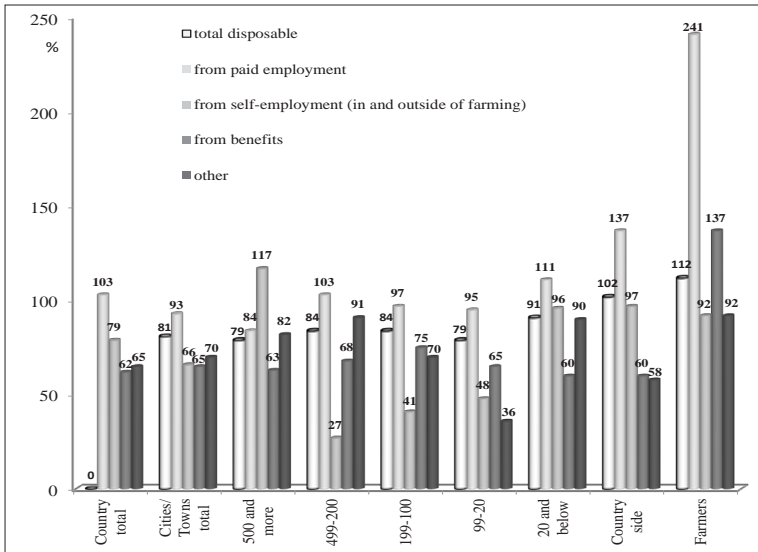


**Table 1. Mean annual nominal household disposable income per capita in PLN**

Year	Country Total	City/Town					Countryside	Farmers	
		Total	with a population of (in thousand)						
			500 and more	499–200	199–100	99–20			below 20
2006	9764	11335	15078	11315	11117	10618	9186	7247	5402
2007	10576	12204	16465	12508	11327	11415	9867	8007	6255
2008	12164	13975	18879	14760	13576	12721	11231	9306	8008
2009	13681	15795	21939	16549	15601	13956	12912	10375	8134
2010	14442	16626	22220	16600	16828	15346	13753	11063	8871
2011	15110	18279	23914	19398	17507	17075	15203	12284	9283
2012	15875	18279	23914	19398	17507	17075	15203	12284	9804
2013	16349	18698	24103	19579	19247	17425	15555	12908	10147
2014	16922	19447	25126	20241	19569	18186	16288	13227	10193
2015	17402	19867	26234	20456	19979	18599	16637	13805	10471
2016	18126	20464	27056	20786	20408	19056	17534	14650	11440

Source: own compilation based on: (*Dochody i warunki życia ...*, consecutive years).

The post-accession improvement of income in the countryside versus the urban population resulted primarily from the higher dynamic of the nominal increase of disposable income in the countryside by 102%, with 112% for families living mainly off farming, while the mean increase in the cities/towns was lower – 81% (Figure 1).

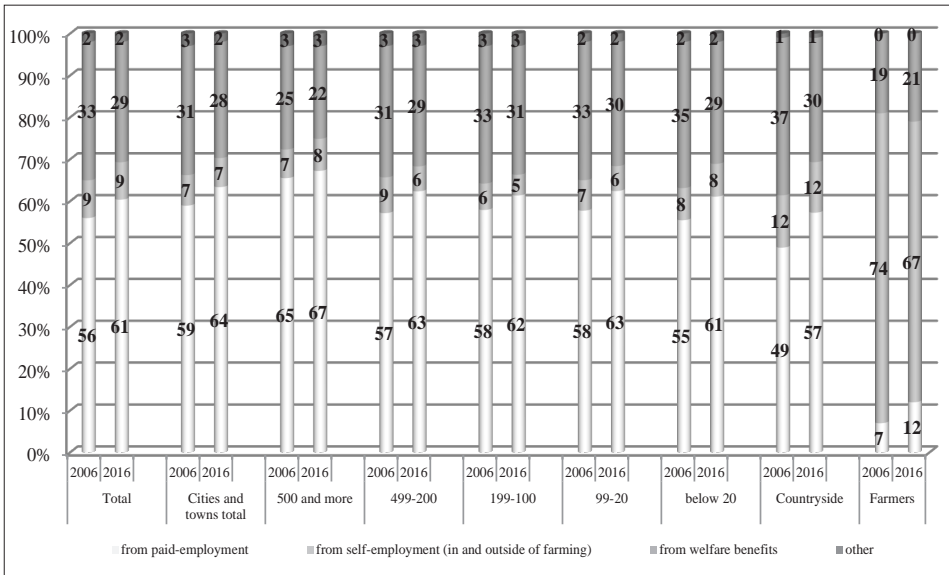


**Figure 1. Disposable income increase by income sources in 2016 versus 2006 in percentage (2006 = 100)**

Source: own compilation based on: as in Table 1.

The high growth dynamic for farming families resulted mostly from the financial support granted to farms under the Common Agricultural Policy (CAP). On the other hand, the lower growth dynamic in cities and towns was most likely caused by labour migration. Those who come to big cities in search of work usually find poorly paid menial jobs.

The basic source of income in the countryside is paid employment. In the income structure of households in the countryside, the share of income from paid employment is the highest, increasing from 48.7 to 57.0% between 2006 and 2016. The share of the income from self-employment (in and outside of farming) remained similar (12.4 and 12.1%), while the share of income from welfare dropped considerably – from 37.4 to 29.6% (Figure 2).



**Figure 2. Structure of household disposable income by source of income in 2006 and 2016 in percentage**

Source: own compilation based on: as in Table 1.

In the families of farmers, on the other hand, where work in agriculture is the primary source of income, the share of income from farming dropped from 74.0 to 67.3%, while income from paid employment grew from 7.3 to 11.8% and from welfare benefits from 18.4 to 20.6%.

The income structure of an average urban household is dominated by income from paid employment. Its share grew from 59.3 to 63.5%, while income from self-employment (in and outside of farming) dropped from 7.3 to 6.7% and from welfare benefits from 30.9 to 28.2%.

The growth trend regarding income from paid employment in the structure of income of the rural population is permanent. It is also reinforced by migration from cities to the countryside<sup>4</sup> – not only of retired people but increasingly often of representatives of liberal professions and managers – people employed in cities, often having high income.

Permanent employment, which depends on the situation in the labour market, is an important factor determining the quality of life not only of an individual but of a whole family. Despite the post-accession improvement in the labour market, the countryside still notes high unemployment. “According to LFS (Labour Force Survey), unemployment in the fourth quarter of 2016 was 958,000 people, with 422,000 countryside inhabitants and 536,000 people from cities and towns. The unemployed from rural areas represented 44% of the unemployed, which means that their share was higher than that of professionally active or inactive. This resulted in a higher unemployment rate in the countryside. The unemployment rate in the fourth quarter of 2016 was 6.1% in the countryside and 5.1% in urban areas. Even though the trends in the labour market are usually similar for the unemployed in the countryside and in cities and towns, inhabitants of rural areas are at a greater risk of unemployment – due to the lower rate of changes in the countryside. The less flexible rural labour market makes unemployment in the countryside more lasting than in cities and towns” (*Stan i struktura....*, 2017).

#### LEVEL AND STRUCTURE OF HOUSEHOLD EXPENSES

Between 2006 and 2016, the general level of nominal expenses increased: in the countryside by 54.5%, in farming families by 42.0% and in cities and towns by 51.2%, which means that the differences between the countryside and cities/towns as to the quality of life persist (Table 2).

In the period studied, the total expenses of an average person in the countryside were lower than in cities and towns, and they constituted 72–74% of the expenses of an average inhabitant of an urban area. The expense disproportions depended on the size of the city/town. The relationship slightly improved when compared to the largest cities and dropped just a little when compared to the smallest towns: the expenses of the rural population represented 55–59% of the expenses in cities with a population of 500,000 and bigger and 86–83% in towns below 20,000 people. In 2006, the expenses of an average inhabitant of the countryside were higher than expenses of farming families by 5%, and by 2016 that difference grew to 14%.

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<sup>4</sup> Between 2005 and 2016, rural population increased by 566,800; in 2016, the positive migration balance in the countryside was 25,000 (*Rocznik Statystyczny....*, 2017).

**Table 2. Average monthly household expenses per capita in PLN depending on the place of living between 2006 and 2016**

Year	Country Total	Cities/Towns					Countryside	Farmers	
		Total	with a population of (in thousand)						
			500 and more	499–200	199–100	99–20			below 20
Average monthly household expenses per capita in PLN									
2006	745	834	1102	897	772	750	701	602	574
2007	810	908	1205	964	866	817	747	653	615
2008	904	1010	1365	1034	984	891	855	735	694
2009	957	1070	1488	1083	1042	963	869	775	712
2010	991	1107	1528	1124	1050	1007	916	806	757
2011	1015	1133	1518	1162	1081	1028	959	825	736
2012	1051	1174	1581	1205	1117	1058	988	859	785
2013	1062	1183	1582	1210	1112	1087	992	873	785
2014	1079	1211	1615	1244	1172	1110	992	874	799
2015	1091	1225	1624	1265	1194	1100	1030	883	779
2016	1132	1261	1588	1306	1228	1141	1114	930	815

Source: developed based on (*Budżety...*, consecutive years).

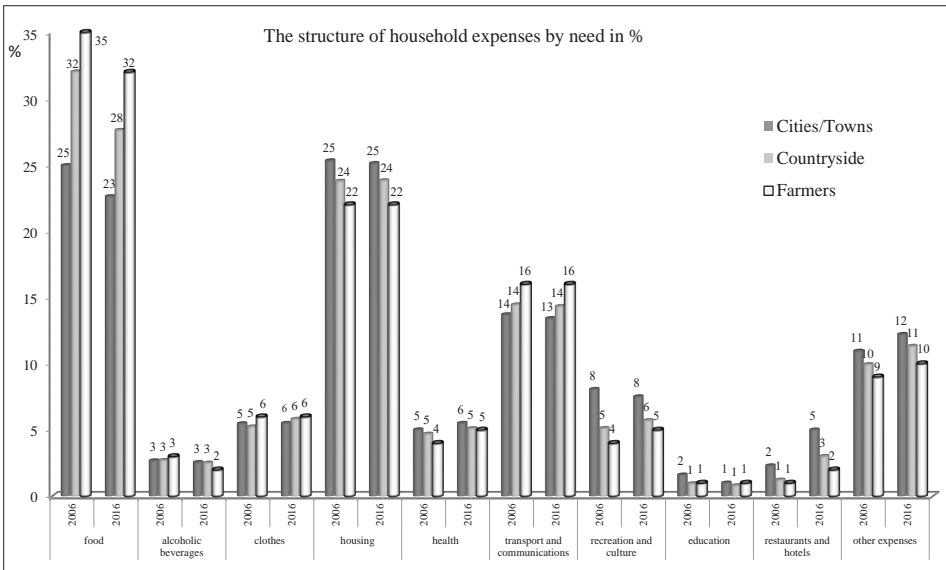
To assess how much the household members satisfied their needs, their average disposable income<sup>5</sup> was compared to the average total monthly expenses, and their food expenses were compared to their total expenses. The percentage of food expenses is treated as one of the most important determinants of prosperity as it tells us about the satisfaction of the basic needs and about the quality of life. The biggest part of the disposable income was spent on the satisfaction of needs by the inhabitants of rural areas, and the smallest – by people from the biggest cities and by farmers.

The total expenses of the rural population in 2006 represented 94.8% of disposable income, dropping to 78.7% by 2016. The expenses of urban citizens represented 92.0 and 79.7% respectively, with the lowest expenses recorded for farmers: 85.7 and 72.6%. Food expenses had the biggest share in the total expenses in farming families (35.2 and 31.5%), a smaller share in rural families (32.0 and 28.6%), and the smallest in urban families (24.9 and 22.6%).

<sup>5</sup> The benchmarking data regarding disposable income and expenses are sourced from *Household budget survey* because the level of disposable income published in *Incomes and living conditions of the population of Poland (report from the EU-SILC survey)* slightly differs from the disposable income published in *Household budget survey*. EU-SILC, on the other hand, does not publish expenses, which is why the same source of data, i.e. *Household budget survey*, was used to compare disposable income and expenses.

The high share of expenses in income and share of food expenses in the total money allocated for the satisfaction of needs shows that households are left with little funds for savings and major investment planning. The higher share of total expenses in income and share of food expenses in total expenses in the countryside than in cities/towns points to a lower quality of life of the rural population when compared with urban areas.

In the post-accession period, the expense relationship between the countryside and urban areas was found to differ depending on specific needs (Figure 3). The rural population and farming families spent more of their total expenses on food, clothes, shoes, transport and communications – the basic needs. A smaller share of their expenses was devoted to higher-level needs, especially education, recreation and culture. The disproportions between the countryside and cities/towns as to expenses on clothes, housing (equipment and upkeep), transport and communications, recreation and culture, and restaurants and hotels reduced between 2006 and 2016.



**Figure 3. Diversification of and changes in the structure of household expenses for specific needs in the countryside, cities and towns in 2006 and 2016**

Source: as in the Table 2.

The changes in the income to expenses relationship suggest that between 2006 and 2016 the quality of life in the countryside versus urban areas improved. In spite of this, inequalities to the disadvantage of the rural population are still substantial in many areas of life – as visible for instance in the expenses on education, recreation and culture, and restaurants and hotels.

As far as families living off farming are concerned, it is hard to draw any satisfactory conclusions about the greater prosperity of that group despite its lowest share of expenses in income since in farming families the consumption-related goals of the household compete with the production-related objectives of the farm and so such families may limit the expenses intended for the needs of the household (Chmielewska, 2013).

## HOUSING

The housing situation (the use and equipment of dwellings) of rural and urban populations is an important contributing factor to the quality of life. If dwellings are in a poor condition and poorly equipped, this lowers the quality of life. And the other way round – good housing conditions that meet the criteria of their users are usually a source of satisfaction and positive assessment of the quality of life.

In Poland, the majority of farming families (over 90%) and rural families (over 80%) live in detached houses that have running water (cold and hot), a bathroom with a bathtub or a shower, a toilet with a flush and a gas system (more often from gas cylinders than from the grid). About 5% of the rural population live in terraced houses, while the remaining 11–13% lives in buildings with several flats<sup>6</sup> (Table 3).

In the countryside, in the period analysed, the percentage of families living in one-family detached or terraced houses increased, though slightly, while the percentage of those living in multi-flat houses dropped. The growing interest in moving out of the city to a detached or terraced house is connected with the scale of urbanisation in rural areas. Such housing is connected with the fact that new buildings in housing estates are provided with water sewage, gas and road infrastructure. Subsequently, the rest of the village often connects to such infrastructure. As a result, the urbanisation of rural areas has helped improve the quality of life of the rural population in terms of the housing comfort. Still, the percentage of dwellings with “full” water, sewage and gas infrastructure is lower in the countryside than in cities and towns, especially in terms of connections to the grid. More households use local systems and gas cylinders in the countryside.

Another generally recognised quality of life indicator is the presence of durable goods in households, such as a phone, colour TV, dishwasher, automatic washing machine, microwave oven and car (Table 3).

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<sup>6</sup> In the EU-SILC study results, the Polish Central Statistical Office specifies only a one-family detached house as the place of living of farmers. In 2006, 95.7% of farming families lived in such houses, while in 2016 – 95.3%.

**Table 3. Selected data about the housing situation and durable goods in households in urban areas and in the countryside**

Item	Percentage of households			
	City/town		Countryside	
	2006	2016	2006	2016
Housing situation				
Single-family detached house	18.6	23.1	81.2	83.8
Single-family terraced house	4.5	5.2	4.8	5.1
Multi-flat buildings	76.7	71.5	13.5	11.0
Tap with running cold water	99.2	99.7	93.1	98.0
Toilet with a flush	95.8	98.1	81.8	94.2
Bathroom with a bathtub or shower	94.0	97.3	81.8	93.7
Hot running water from the grid	40.0	41.5	3.4	2.3
Hot running water heated locally	54.8	56.6	77.9	92.0
Gas from the grid	74.8	70.9	19.2	21.7
Gas from cylinders	19.3	19.6	72.6	71.5
Durable goods in households				
Landline phone	77.7	90.1 <sup>b</sup>	66.6	90.3 <sup>b</sup>
Mobile phone	72.8		66.5	
Colour TV	97.2	96.3	96.1	98.4
Satellite or cable TV <sup>a</sup>	58.6	77.4 <sup>c</sup>	29.1	66.1 <sup>c</sup>
Computer	49.3	76.6	34.3	72.5
Internet connection	35.0	73.5	15.1	66.2 <sup>c</sup>
Dishwasher	9.3	35.3	5.4	32.3
Fridge	97.1	98.6 <sup>c</sup>	96.5	98.9 <sup>c</sup>
Automatic washing machine	86.7	98.4	68.3	97.6
Car	47.4	63.1	57.4	75.3

<sup>a</sup>. A device to receive satellite or cable TV. <sup>b</sup>. Landline and mobile phone jointly. <sup>c</sup>. In 2014.

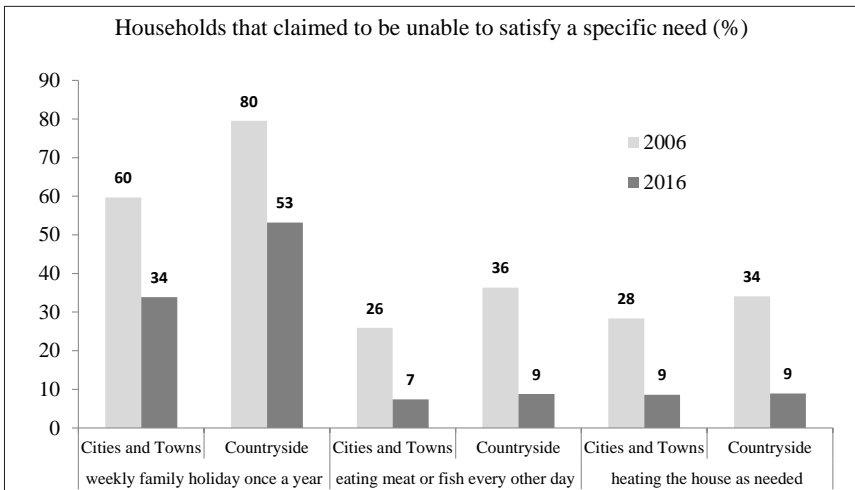
Source: own compilation based on (*Dochody i warunki życia ...*, 2008; *Dochody i warunki życia ...*, 2017).

The highest presence of durable goods, especially those more modern or prestigious (home cinema system, a DVD player) is noted in urban households. On the other hand, farming and rural families have more traditional equipment (landline phone, refrigerator) or equipment highly useful for the household, such as a car, which is the basic means of transport in the countryside. Some amenities, such as a device to receive satellite TV or cable TV signal or an Internet connection, have a higher presence in cities and towns than in the countryside mostly as a result of the different population density in those areas. The diversity in the presence of durable goods may also depend on the financial situation. For example, 4.9% of rural households in 2016 stated that they did not have a computer because they could not afford it (versus 4.1% in urban areas).

The quality of life in the countryside as measured by changes in the presence of durable goods in households improved after the accession. The percentage of rural and farming households with Internet access, satellite and cable TV and new-generation durable goods increased.

#### SUBJECTIVE ASSESSMENT OF THE ECONOMIC AND SOCIAL SITUATION OF HOUSEHOLDS

Subjective factors substantially contribute to the overall assessment of the quality of life. After the accession, people in the countryside were less optimistic about their financial standing than inhabitants of urban areas. Difficulties with the financing of the basic needs were more frequent in the countryside than in cities or towns. In 2006, as many as 85.6% of rural households (versus 70.4% in 2016), 81.9% of farmers (versus 64.7% in 2016) and 76.0% of urban inhabitants (versus 59.3% in 2016) declared that they found it hard<sup>7</sup> to “make ends meet” with their current income. Despite the improvement, the percentage of households, both in rural and urban areas, whose income was insufficient to satisfy their basic needs was high. Only 14.2% of rural households (versus 29.5% in 2016), 17.6% of farmers (versus 33.3% in 2016) and 24.2% urban inhabitants (versus 40.7% in 2016) found it easy<sup>8</sup> to “make ends meet”. Despite the growth, both in the countryside and in cities and towns, the percentage of households that “made ends meet” easily was low (Figure 4).



**Figure 4. Households that had trouble satisfying selected needs**

Source: own compilation based on: (*Dochody i warunki życia...*, 2008; *Dochody i warunki życia...*, 2017).

<sup>7</sup> The total of three levels of difficulty: “very hard,” “hard” and “somewhat hard.”

<sup>8</sup> The total of three levels: “quite easy,” “easy” and “very easy.”



Rural inhabitants found it harder than people in cities/towns to be able to satisfy selected needs. A subjective assessment of the satisfaction of other selected needs is presented in Figure 4. For example, in 2006, as many as 80% (versus 53% in 2016) of households in the countryside could not afford an one week family holiday once a year, with only 60% such households in cities and towns (versus 34% in 2016). An analysis of the level of satisfaction of needs shows that the rural population had a worse subjective perception of its quality of life than urban population.

### THE PRESENCE OF TECHNICAL INFRASTRUCTURE IN RURAL AREAS

Technical infrastructure in rural areas is a crucial contributing factor to the quality of life of people in the countryside. Roads, waterworks, sewage system and gas infrastructure in the countryside not only make the daily lives of local people easier but also contribute to the creation of many new jobs, mainly in services, trade and small and medium-sized enterprises. According to ARiMR (Polish Agency for Restructuring and Modernisation of Agriculture), about 53,000 new non-agricultural jobs have been created in the countryside over the past 10 years (*Efekty...*, (http)).

The length of the waterworks system in rural areas increased from 2006 to 2016 by 19%, of the sewage system – by 125%, and of the gas distribution and transmission network – by 21%. The share of people using the systems in the overall population increased as follows: from 86 to 92% for the waterworks, from 20 to 40% for the sewage system, from 18 to 23% for gas and from 22 to 41% for the wastewater treatment plant (*Obszary wiejskie...*, 2017). The number of electricity customers grew by 6.3% (*Rocznik Statystyczny...*, 2017).

The significant progress in the development of the infrastructure in rural areas helps not only reduce the disproportions in the housing conditions and the comfort of life in the countryside versus cities and towns but first and foremost improve the quality of life of the rural community.

### SUMMARY AND CONCLUSIONS

The quality of life in rural areas is worse than in cities and towns, which results primarily from the lower income of people in the countryside. The post-accession period (2006–2016) marked an improvement of the income relationship between the countryside and the urban areas, resulting from the higher dynamic of the nominal growth of disposable income in the countryside (by 102%) and in farming families (Farmers) (by 112%) versus cities and towns (an 81% increase). The higher growth dynamic for rural and farming families was mainly the outcome of the growth of income from paid employment and of the financial support granted to farms under the Common Agricultural Policy (CAP).

The significance of paid employment in the structure of household income grew, both in the countryside and in cities and towns, while the significance of income from farming and welfare benefits dropped. Farming is losing its dominant position as the absorber of labour and source of income in a growing number of villages but it remains crucial for the preservation of natural environment in rural areas. The growth trend regarding income from paid employment in the structure of income of the rural population is permanent. It is also reinforced by migration from cities to the countryside – not only of retired people but increasingly often of representatives of liberal professions and managers – people employed in cities, often having high income.

Rural households spend a similar portion of their income as urban households to satisfy their needs (about 80% in 2016). Greater disproportions can be observed in the share of food expenses in total expenses (29% versus 23%), which is one of the major determinants of prosperity. The rural population and farming families spent a higher share of their total expenses to satisfy the basic needs (food, clothes, shoes, transport and communications), and lower to satisfy higher-level needs. In the 2006–2016 period, the disproportions in the level of expenses between the countryside and cities/towns dropped.

Household dwellings in rural areas have a lower presence of basic technical systems (mainly sewage and gas systems) and durable goods, especially modern ones (Internet, satellite TV, cable TV). Rural areas have poorer technical, transport and housing infrastructure than cities, and as a result their inhabitants have worse access to services and modern technologies. On the other hand, the countryside has a unique natural environment and landscape, which contributes to greater comfort of life in rural areas.

If we treat the level and the changes of income, expenses, living conditions and technical infrastructure in rural areas as the basic indicators of the quality of life of household members, we may conclude that the decade following Poland's accession to the European Union was a time when the quality of life improved much more for the rural and farming population than for people in urban areas. Despite that, significant disproportions can be still observed to the disadvantage of the countryside. They are the largest if we compare the rural population to inhabitants of the biggest cities.

People in the countryside have a worse subjective perception of the quality of their life than people in urban areas; they also see themselves as less capable of satisfying their needs. The assessment of the quality of life did not take into account the environment and the climate-related values of rural areas.

Roads, waterworks, the sewage system and gas infrastructure in the countryside must be improved, not only to make the daily lives of local people easier but also to contribute to the creation of new jobs, mainly in services, trade and small and medium-sized enterprises. Reducing the quality of life gap between the countryside and urban areas requires sustainable development of rural areas – in a broad sense of the term. After all, quality of life is the primary objective of sustainability.

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## Summary

The purpose of the study is to assess changes in the quality of life of the rural population in the period after Polish accession to the European Union (years 2006–2016). The study was conducted on the basis of the results of the European Survey on Income and Living Conditions (EU-SILC) and household budgets survey by CSO. The assessment of the quality of life of the rural population was based on indicators characterizing the objective living conditions (income, expenses, infrastructure, environment, housing and furnishings) and on a subjective assessment. In the assessment of the quality of life, the environmental and climate advantages of rural areas were not taken into account.

Basic indicators relate to individuals or households. Quality of life in rural areas is worse than in the cities, which is primarily due to the lower income of rural residents. Also, the level of expenditure is lower, mainly with respect to higher needs. The equipment of households with basic technical installations and durable goods, especially modern, is also worse in rural areas than in urban areas. The rural population subjectively evaluates their quality of life as worse than the urban population and they also believe that the ability to satisfy their needs is worse than in the cities.

*Keywords:* quality of life, rural areas, cities, housing situation, infrastructure.

## **Jakość życia mieszkańców wsi po akcesji Polski do Unii Europejskiej**

### *Streszczenie*

Celem opracowania jest ocena zmian jakości życia ludności zamieszkałej na wsi w okresie po akcesji Polski do Unii Europejskiej (lata 2006–2016). Badanie zostało przeprowadzone na podstawie wyników europejskiego badania dochodów i warunków życia (EU-SILC) oraz budżetów gospodarstw domowych GUS. Ocenę jakości życia ludności wiejskiej dokonano w oparciu o wskaźniki charakteryzujące obiektywne warunki bytowania (dochody, wydatki, infrastruktura, warunki mieszkaniowe i wyposażenie mieszkań) oraz ocenę subiektywną. W ocenie jakości życia nie były uwzględniane środowiskowe i klimatyczne walory obszarów wiejskich. Podstawowe wskaźniki odnoszą się do osób lub gospodarstw domowych. Jakość życia na obszarach wiejskich jest gorsza niż w miastach, co wynika przede wszystkim z niższych dochodów mieszkańców wsi. Także niższy jest poziom wydatków, głównie na potrzeby wyższego rzędu. Na wsi gorsze jest wyposażenie gospodarstw domowych w podstawowe instalacje techniczne oraz dobra trwałego użytkowania, zwłaszcza nowoczesne. Mieszkańcy wsi oceniają subiektywnie jakość swojego życia gorzej niż ludność miejska; jako gorszą oceniają też możliwość realizacji potrzeb.

*Słowa kluczowe:* jakość życia, wieś, miasto, sytuacja mieszkaniowa, infrastruktura techniczna.

JEL: D19, J19.

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## **The structure of income inequality with particular emphasis on the economic middle class**

### INTRODUCTION

The economic stratification of society in developed countries has become an area of special interest as a result of the growing inequalities observed over the past two decades. In a vast majority of papers, authors focus on analysing the situation of the extreme income groups. This seems fully justified. The need to reduce poverty is indisputable; on the other hand, social groups that accumulate disproportionately high income also attract attention and require multifaceted analysis. However, in view of such a difference of emphasis, there is a gap in research regarding economic inequalities. It fails to adequately address the group that lies between the extremes, i.e. the middle-income group (class). The gap has been gradually bridged by researchers in recent years, mainly because of the changes observed in the middle class which, in many developed countries, lead to the erosion of this social group.

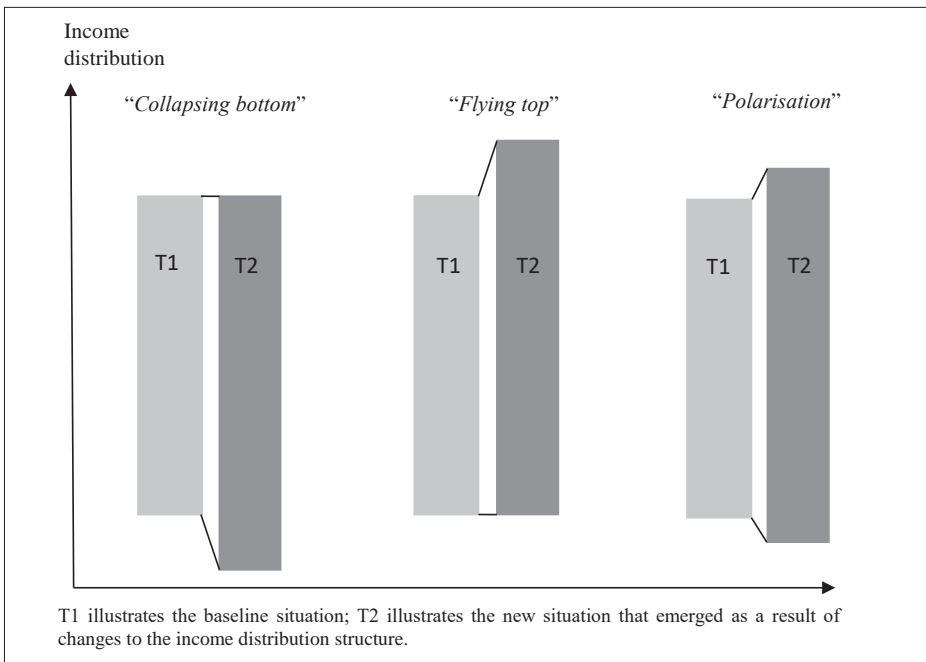
The purpose of the paper is to explore the significance of the middle class for the development of a modern economy and to estimate its size in selected OECD countries. The most important aspect of the analysis is to verify the hypotheses that high inequalities are accompanied by a shrinking of the middle class. Additionally, the article presents the trend determinants that are usually identified in literature and the recommended socioeconomic policy activities that could strengthen the position of the group in question.

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## DESCRIPTION OF INCOME DISPARITIES

Rising income inequality has been addressed by a number of economic analyses, which usually explore changes in the income distribution structure that expand the income disparities. Such changes can go in various directions (Figure 1). Income may increase in the groups on the top of the “income ladder” (the “flying top”) or may fall in the groups at the bottom (the “collapsing bottom”). The share of a particular social group in income distribution may rise or fall because of the rise or fall of the total income of the population. This happens when the consequences of changes are not borne by all groups in equal measure (e.g. the rich grow their income at a greater rate than the rest of the society). The changes can also result from income shifts between social groups without changes to the size of the total income.

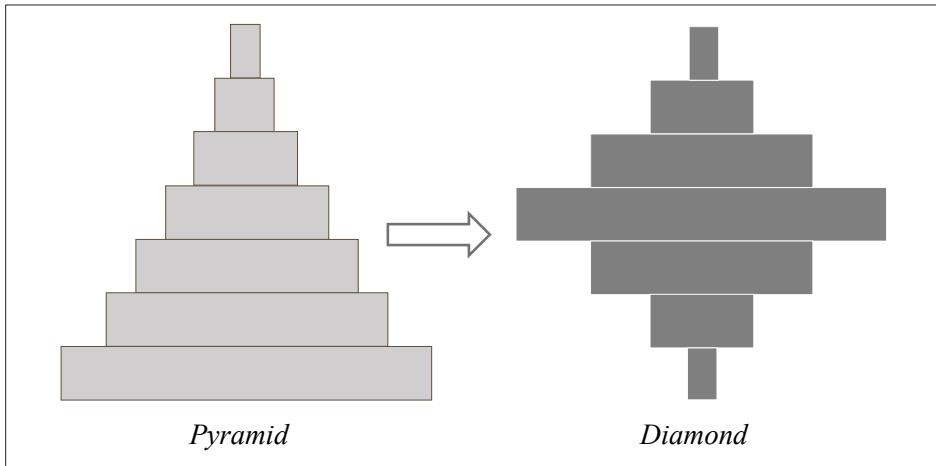


**Figure 1. Models of income inequality changes**

Source: own compilation based on (ILO, 2008, p. 25).

Economic polarisation is a situation particularly harmful to social structure. It should be understood as a process where the number of individuals from the middle-income class is falling, while the number of individuals from the higher- and lower-income class is increasing (Panek, 2017, pp. 41–42). In such a case, some middle class individuals move to the higher class (increase their income), and some to the lower class (become poorer).

The changes in income distribution re-shape the social structure dependent on the size of particular income groups (classes). Figure 2 presents two extremely different income structures.



**Figure 2. Different types of income inequalities**

Source: own compilation based on (Kelley, Evans, 2017, p. 56; Vaughan-Whitehead, Vazquez-Alvarez, Maitre, 2016, p. 28).

In the case of the “pyramid” variant, society has a narrow elite of wealthy people, a slightly bigger middle-income group and the biggest group of people with low income. Such a structure is usually connected with the presence of poverty at a considerable scale. In the other case, referred to as the “diamond” structure, the proportions of particular income groups differ. Both the richest and the poorest represent a relatively small part of the society, while the middle-income group dominates. In the context of reducing of inequalities, the desired direction is to transform the society towards a diamond-shaped structure, which is the most beneficial from the perspective of economic development and social cohesion.

#### THE ROLE OF THE MIDDLE CLASS FOR THE DEVELOPMENT OF THE ECONOMY

The social structure dominated by the middle class is emphasised as a desired from both a social and an economic perspective. A considerable share and the proper importance of that group in society are essential for economic development and political stability. The middle class is a buffer for potential social conflicts between the extreme income groups. Furthermore, for the majority of individuals

in the society, achieving the middle class status entails a sense of success and personal satisfaction. What usually matters to people is their financial status in relation to their environment as this is the perspective from which they evaluate their prosperity (Pressman, 2007, p. 181).

The economic middle class gains the vast majority of its income from work, while poorer social strata are usually supported by various welfare transfers, and the affluent profit from their financial investments (Vaughan-Whitehead, Vazquez-Alvarez, Maitre, 2016, p. 1). Since work as the main source of income is high in the hierarchy of values for the middle class, individuals from that group represent the most important source of labour supply.

Factors significant for economic development include: a high tendency of the group in question to invest in education, health and housing; the enforcement of high-quality public services; intolerance for corruption; and trust in democratic institutions. What seems of particular essence is that they invest in their own education and that of their children, which contributes to the growth of human capital, both current and future. And human capital accumulation is an essential contributing factor to economic growth and development (cf. Brueckner et al., 2017; OECD, 2003). In addition, economists emphasise the substantial entrepreneurial activity of the middle class, especially in the area of small and medium-sized enterprises. The middle class is ultimately found to have a significant positive impact on economic growth (Brueckner et al., 2017; Easterly, 2001, pp. 317–335).

#### IDENTIFICATION OF THE ECONOMIC MIDDLE CLASS

Analyses of the economic differentiation structure usually identify three basic social classes: lower, middle and upper class, with an additional division into lower middle class, middle middle class (main, basic, central) and upper middle class within the middle class. The criteria for identifying particular classes are to a certain degree set arbitrarily by individual researchers but income remains the primary indicator used in economic analyses. On the one hand, this is a practical analysis solution since data about the population's income are relatively widely collected and shared by various public institutions. On the other hand, the population's income is largely determined by factors included in middle class analyses conducted within other fields of science, such as sociology, philosophy or anthropology (Reeves, Guyot, Krause, 2018; Atkinson, Brandolini, 2011, pp. 3–11). Where the income criterion is the only one for identifying social classes, the term 'middle-income class' seems more precise than the term 'middle class'; still, economists tend to use those two interchangeably.

Economic literature offers four concepts for identifying the middle class based on the income criterion (Reeves, Guyot, Krause, 2018). According to the most popular one, the middle class consists of those individuals whose income falls



within the percentage range defined in relation to the income median for the whole population. For instance, Thurow (1984) assumed that middle class consisted of individuals with income representing 75–125% of the income median for the whole population, while Blackburn and Bloom (1985) expanded that range to 60–225% of the median. Other authors have suggested other values of the ranges, usually adopting 75% of the median as the lower threshold and 125–250% as the upper threshold (see Gornick, Jantti, 2013, p. 10). In the OECD 2019 report *Under Pressure: The Squeezed Middle Class*, the authors use the range of 75–200% of the median, additionally identifying a lower middle class for 75–100% of the median, a central middle class for 100–150% of the median, and a higher upper class for 150–200% of the median. On the other hand, those with income below 75% of the median are classified into the lower income class, 50% of the median being the poverty threshold (OECD, 2019a).

According to the other concept, the middle class consists of people between the 2nd and 8th decile of the income spread, i.e. the central 60% of the population with middle-level income. A ratio defining what part of the total income is achieved by that part of the society would be useful in that case (Levy, 1987, pp. 17–21).

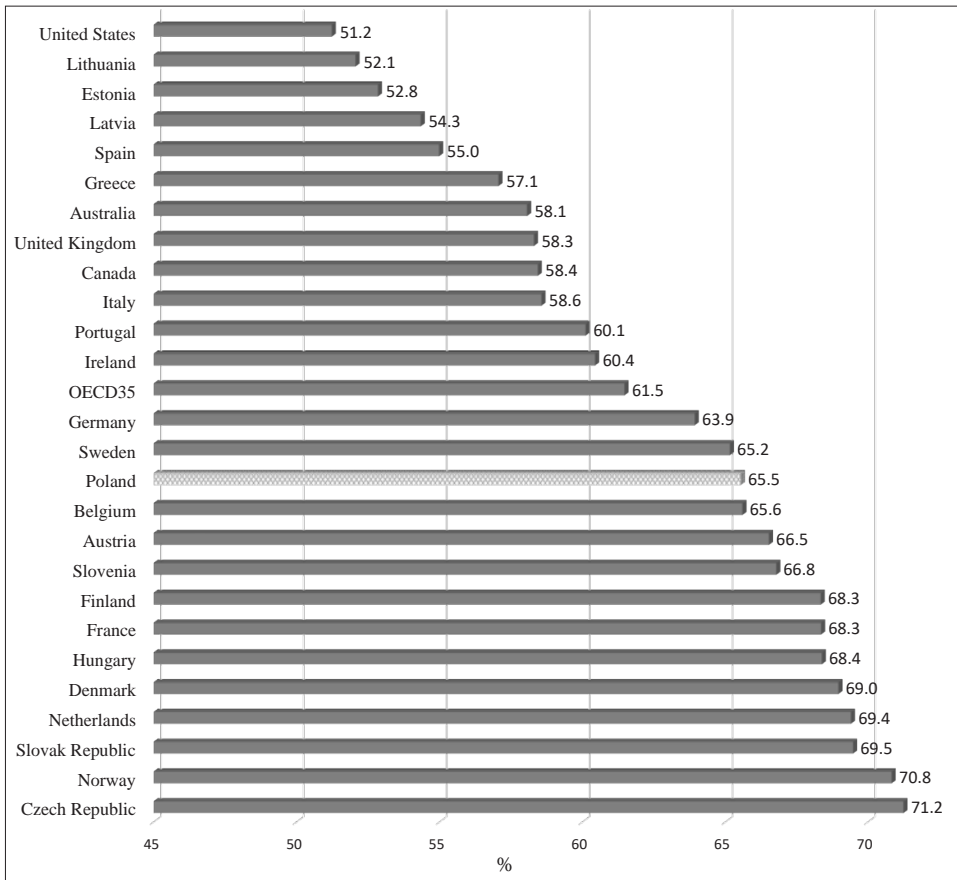
The two remaining concepts are much less common. They utilise the distance from the poverty threshold (the middle class consists of people whose income is above e.g. 150% of the poverty threshold) and an income measure based on purchasing power parity (e.g. from USD 10 to USD 100 a day).

## MIDDLE CLASS BENCHMARKING IN OECD COUNTRIES

Assuming that the middle class consists of individuals whose income falls within the range of 75–200% of the income median for the whole population, the middle class represents the majority of the society in OECD countries, with considerable middle class ratio differences between particular countries (Figure 3) – from over 51% in the USA to over 71% in the Czech Republic<sup>2</sup>.

<sup>2</sup> Quantitative analysis of the distribution of the income in a society (population) uses data regarding **mean annual equivalent disposable income per capita** according to the equivalence scale. The income is calculated based on the total annual income of a household as divided by the number of equivalent units assigned to particular people in that household. According to the original OECD scale, 1 is the weight assigned to the first person in the household at the age of 14 and more; 0.7 – to every subsequent person at the age of 14 and more; 0.5 – to every child up to 14 years of age; in the modified EU scale, 1 is the weight given to the first person in the household, 0.5 – to every subsequent person at the age of 14 and more; 0.3 – to every child below the age of 14. For instance, when a household has an annual income of 25,000 euros and it consists of four people, i.e. the parents, one child over the age of 14 and one child under the age of 14, the income per capita in that household is:  $25000/(1+0.5+0.5+0.3) \cong 10,870$  euros (Polish Central Statistical Office, <https://stat.gov.pl/metainformacje/slownik-pojec/pojecia-stosowane-w-statystyce-publicznej/3218,pojecie.html>; Poland's population income..., 2018, p. 19. OECD, <https://stats.oecd.org/>; The World Bank, <https://databank.worldbank.org/source/poverty-and-equity>).

Above the mean value for OECD countries were those countries where the redistribution range is traditionally quite significant, which directly reduces income inequality, especially in the extreme income groups. Below the mean value were Anglo-Saxon countries, where the acceptance for substantial income inequality is quite high. It should be noted that countries where the middle class size ratio is relatively high include such countries of Central and Eastern Europe as: Poland, the Czech Republic, Slovakia, Hungary and Slovenia. This does not apply to Estonia, Latvia and Lithuania, which were situated at the opposite end of the scale.

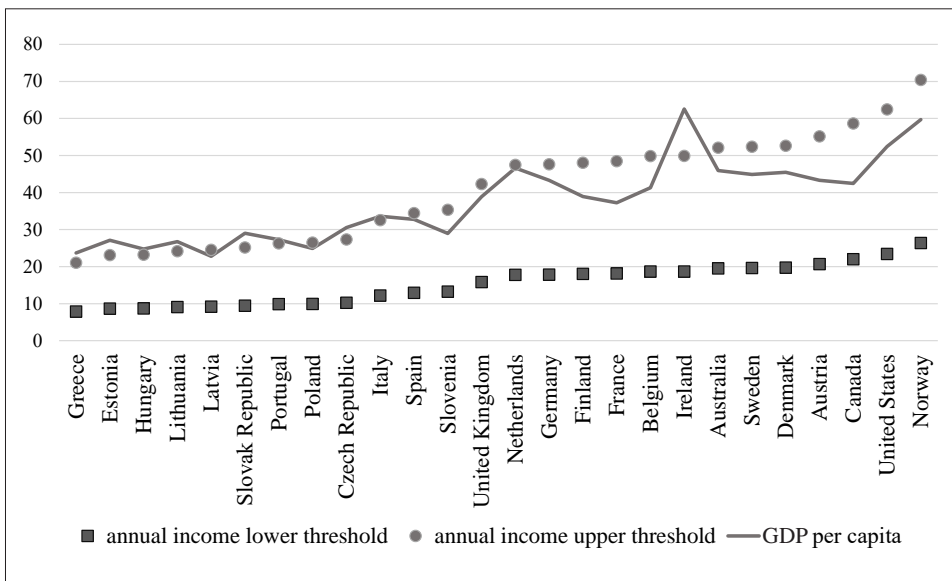


**Figure 3. Percentage of populations with disposable income representing 75–200% of the median in OECD countries in 2016**

Source: own compilation based on OECD data, <https://doi.org/10.1787/888933955121>.

The level of annual income per capita in middle class households differs considerably between the analysed countries (Figure 4). The 2016 lower threshold

for annual income defined as 75% of the median for the population was from USD 7,900 in Greece to USD 26,400 in Norway. For the upper threshold, the range was from USD 21,100 in Greece to USD 70,400 in Norway. It should be noted that the upper income threshold in Greece was lower than the lower income threshold in Norway, which means that those representing the middle class in Greece would be a part of the lower income class in Norway. The standard of living of the middle class in particular countries is highly diverse depending on the income median in the country. GDP per capita is clearly a contributing factor to the standard of living for the middle class as the value thereof in all the studied countries is very similar to the upper threshold for the middle class income.

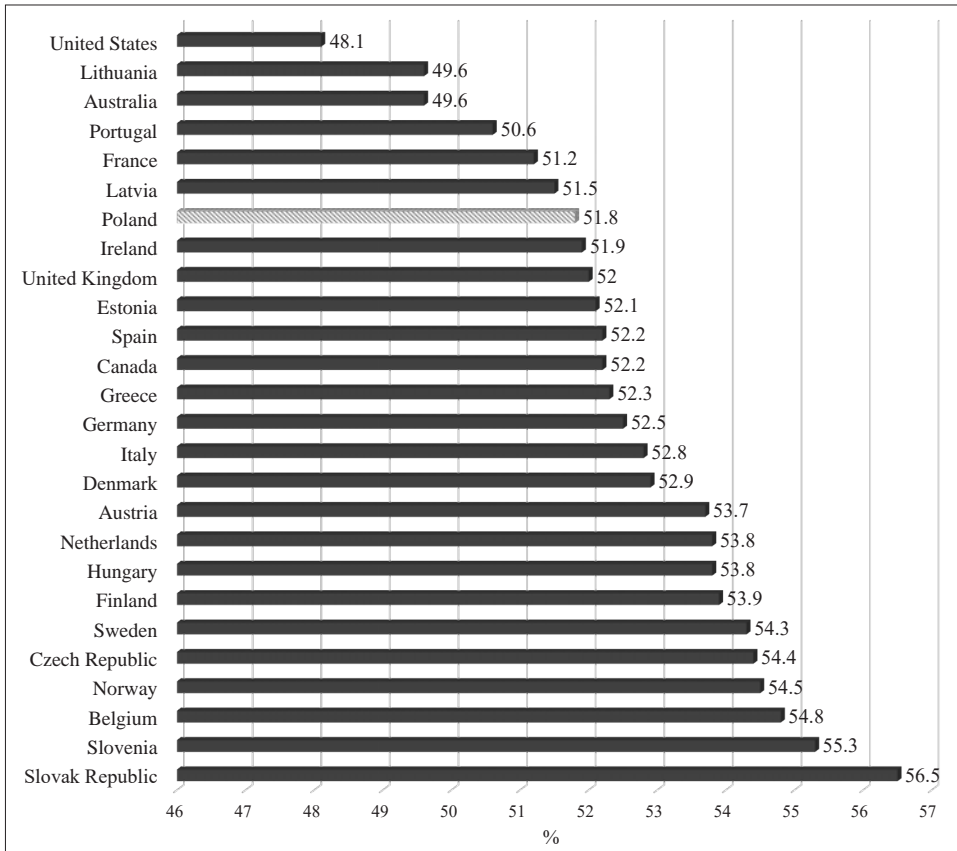


**Figure 4. The upper and lower threshold of annual disposable income per capita in the middle class group and the GDP per capita in USD by purchasing power parity [in thousands] in OECD countries in 2016**

Source: own compilation based on OECD data, <https://doi.org/10.1787/888933955463>; <https://stats.oecd.org/>.

Middle class measurement according to the concept assuming that the group consists of people between the 2nd and 8th decile of the income distribution enables assessing the affluence of the middle class (Figure 5). The size of that class remains unchanged because in any case it represents the central 60% of society; what changes is the income level of that group, defined as a percentage of the income of the whole population of the country. In the case of that ratio, the values differ considerably between particular countries (8.4 percentage points). The middle class can be called relatively (when compared to the whole society)

affluent in Scandinavian countries and Central and Eastern European countries (Slovakia, Slovenia, Czech Republic, Hungary), while for the remaining countries of the region, Poland included, the analysed ratio is relatively low.



**Figure 5. Percentage of the total income of the population that is between the 2nd and 8th decile of the income distribution in OECD countries in 2016**

Source: own compilation based on data of The World Bank, <https://databank.worldbank.org/source/poverty-and-equity>.

At this point it should be mentioned the concept proposed by Jose Gabriel Palma from Cambridge University, which has gained popularity in the recent years, and the measurement proposed by that scientist has been regularly used in the statistical database provided by the OECD (the Palma ratio). J.G. Palma shows in his research that the middle class and the upper middle class are characterised by a “noteworthy” degree of homogeneity between regions/countries in terms of the share of that group in the income of the whole population. That share is about 50% and it is relatively stable. That finding led the author to

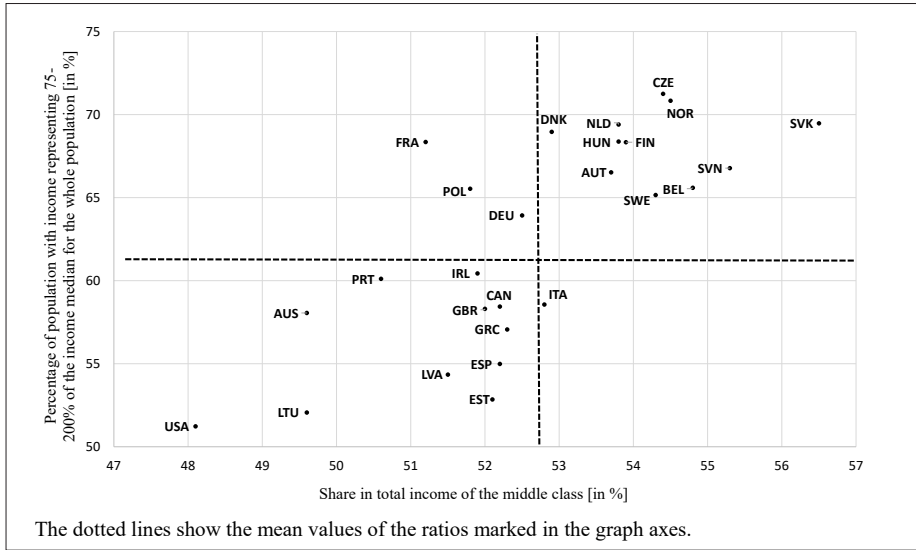
conclude that the most important changes in terms of income inequalities result from the changes taking place in the upper and bottom decile groups so he proposed a measurement reflecting those changes, calculated as the ratio of the income share of the richest 10% to that of the poorest 40% (Palma, 2011; 2016). The proposed ratio (as the author himself emphasised) is simple in its structure and as such easy to apply.

The concept by J.G. Palma became popular but the conclusions from the works of that scientist may seem to deny the statement that the middle class is eroding. A closer analysis shows that the differing conclusions actually result from adopting different research methods and objectives. First of all, J.G. Palma assumed in his study that middle class represented 50% of the population between the 5th and 9th decile of the income range (Palma, 2011, p. 99). Furthermore, the majority of the countries analysed by the researcher were grouped according to the regional criterion (e.g. East Asia, Latin America, Sub-Saharan Africa, Mediterranean EU etc.) which considerably limited the possibility of identifying the differences between particular countries; besides the majority of those countries were at a low and medium development level (Palma, 2011, p. 89)<sup>3</sup>. The adoption of different criteria for identifying the middle class (the author himself also notes that perhaps this group should not be termed 'the middle class' but rather 'the median class' (Palma, 2011, p. 102) than those generally used in OECD countries may result from the fact that the research focused mainly on developing societies, with a relatively large stratum of poor people, which moves the middle class up to higher deciles than in developed countries. Still, what seems of the greatest significance is that the term 'homogeneous middle class' used by J.G. Palma is relative, which means that changes within this group are much less dynamic than those taking place in the remaining groups (Palma, 2016). The statement that the middle group (middle class) is relatively stable is not very precise and is quite arbitrary. In this context, the measurement of inequalities proposed by J.G. Palma, which addressed the extreme income groups only (leaving out the middle groups), seems justified mainly in relation to countries at a low and medium development level (Stiglitz, 2018, p. 61).

Detailed benchmarking analysis of the middle class focusing on highly developed countries reveals certain differences between those countries.

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<sup>3</sup> The conclusions from the studies of J.G. Palma were verified for instance by T. Hazledin, who used data from the database of the World Bank (just like J.G. Palma did) to analyse 107–155 countries, depending on the availability of data. The results led T. Hazledin to conclude that even if any mean income of the studied group in the analysed countries indeed represented 50% of the income of the whole population, the differences between particular countries and the changes taking place over time were significant (from 30% to 66% between the countries in the studied group and from –19.8 to 14.9 percentage points for particular countries in respect of the changes in the studied period) (Hazledin, 2014, p. 1412).



**Figure 6. Summary of the middle-income class measurement ratios for OECD countries in 2016**

Source: own compilation based on data for Figures 3 and 5.

Comparing the two analysed ratios (Figure 6) of the economies of particular countries makes it possible to assign them into one of the three groups:<sup>4</sup>

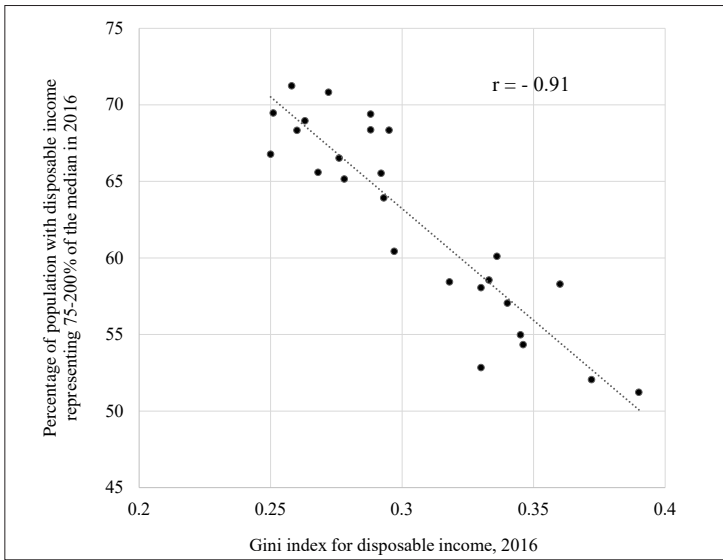
- Group one consists of countries with a relatively large and affluent middle class: Slovakia, Slovenia, Norway, Czech Republic, Netherlands, Denmark, Hungary, Finland, Belgium, Sweden and Austria;
- Group two includes countries where the middle class is large but not too affluent: France, Poland, Germany;
- Group three represents countries where the middle class is relatively small and quite affluent: the lowest values of the analysed parameters characterise the middle class in the USA.

#### HYPOTHESIS VERIFICATION AND CAUSES OF THE CHANGES OBSERVED

The empirical research results have confirmed the initial hypothesis that there is a negative relationship between the extent of income inequality in the society and the size of the middle class.

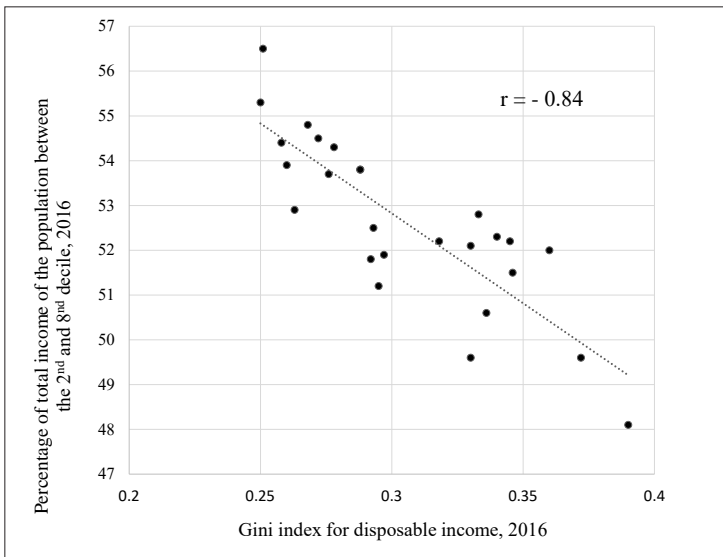
Both the ratio defining the size of the middle class (-0.91) and the ratio defining the wealth of the middle class (-0.84) were inversely correlated with the basic income inequality ratio, i.e. the Gini index for disposable income. Those interrelations were presented in Figures 7 and 8.

<sup>4</sup> Except for Italy but it is very close to the group three.



**Figure 7. Summary of the Gini index values and the ratios representing the share of the population with disposable income of 75–200% median in the whole population in OECD countries in 2016**

Source: own compilation based on data for Figure 3 and based on OECD data, <https://stats.oecd.org/>.



**Figure 8. Summary of the Gini index values and the ratios representing the share of the population between the 2nd and the 8th decile in the income of the whole population in OECD countries in 2016**

Source: own compilation based on data for Figure 5 and based on OECD data, <https://stats.oecd.org/>.

As income inequalities intensify, the middle class shrinks. In the majority of countries, some people move up from the middle class to the richest group as a result of their growing income, while in other cases the stratum of poverty expands. There are several significant phenomena underlying the observed trends.

The most important factors include changes in the work demand structure. The demand for work requiring average, routine skills has been observed to be falling for a few decades now. Jobs are polarising, since the demand for high-skill workers and for simple manual work is increasing (Vaughan-Whitehead, 2016, p. 20). The process directly limits the size of the middle class because of the shortage in the jobs traditionally done by people from that group and (to a smaller extent) due to the relative decline of salaries in that labour market segment (Salvatori, Manfredi, 2019, pp. 14–17). According to estimations for the OECD countries, one out of six middle-income employees does a job threatened by automation, while in the group of low-income workers that proportion is one out of five, and in the group of high-income jobs – only one out of nine. In such countries as Greece, Poland, Slovakia and Spain, at least one out of five employees does a job threatened by automation, while in Finland or the USA the ratio is one out of ten (OECD, 2019a, pp. 79, 96). As a result of those processes, some jobs traditionally done by the middle class disappear or salaries in that labour market segment stagnate. One of the main causes of the observed processes is the rapid development of information and communication technologies (ICT). The increasingly cheaper access to those technologies reduces the demand for employees performing routine tasks (substitution effect), while the demand for employees capable of performing non-routine tasks that require flexibility, creativity, problem-solving skills and communication skills increases (complementarity effect) (Autor, Levy, Murnane, 2003, p. 1322). The latest research additionally points to other highly advanced phenomena connected with work digitalisation, especially: new digital technologies, artificial intelligence, the Internet of Things, learning machines etc., which intensify job polarisation (see OECD, 2019b).

Another factor that has a significant impact on the position of the middle class, whose income comes primarily from work, is the growing gap between work productivity (counted as the GDP per employee) and the increase of real wages. The gap emerges where work productivity grows faster than wages (ILO, 2018, p. 13). As a result, the share of income from work in the total income of the society is falling in favour of income from capital. Consequently, income-related inequalities exacerbate since the income growth rate for the richest groups, whose income come primarily from capital, is greater than the income growth rate for the middle class. The participation of work in the creation of the GDP declines mainly due to rapid technological progress, relative decline in the prices of investment goods, and processes related to globalisation (IMF, 2017, pp. 121–125).

Observed simultaneously with the described phenomena is the decreasing significance of labour market institutions, such as trade unions or collective bargaining, or the prevalence of atypical employment forms, which additionally weakens the leverage of employees with average, routine qualifications.



## CONCLUSIONS

The analysis has made it possible to phrase the following final conclusions:

- As income inequalities intensify, the middle class shrinks, mostly due to changes in the work demand structure.
- Globalisation, technological progress, new digital technologies, artificial intelligence, the Internet of Things, machine learning – all this results in the polarisation of jobs, which directly reduces the size of the middle class.
- The decreasing share of income from work in the total income of the society reflects the expanding gap between productivity growth and the wage increase. This leads to a higher growth rate for income from capital than income from work.
- Weakening labour market institutions, such as trade unions, collective bargaining or minimum wage, as well as non-traditional jobs are unable to counteract the described mechanism.
- The growing polarisation and the shrinking of the middle class hamper social mobility, especially between generations, while income inequalities result in unequal chances of economic promotion.

Socioeconomic policy plays an important role in preventing the erosion of the middle class. The crucial issue is to provide easy access to education to allow young people to align their qualifications and skills with the labour market and allow adults to continue to gain new qualifications throughout their whole professional life. Soft skills should also be mentioned as they are important for employers and they are shaped starting from early childhood. Another matter is related to the instruments boosting professional activity, especially of women and older people, which may help increase the share of households with income at a middle-class level. The recommendations that the tax system should be restructured to limit the processes of capital accumulation from generation to generation are also worth considering. Such processes contribute to limitation of the intergenerational economic mobility (it is hard for children from less affluent families to compete with children from rich families). The progressing changes show that without appropriate actions to support the social cohesion policy, the income polarisation will continue to exacerbate.

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### Summary

This study presents the main facts related to the development of income inequalities in OECD countries in recent years. In particular, the focus was on analysing the economic position of the middle class (middle income class), which is often neglected in analyses, in favour of the two extreme income groups, i.e. the poverty sphere and the group of the richest. It is worth filling this gap because the middle class is the backbone of modern society and decisively determines the possibilities of economic development. The analysis of the coefficients allowing the estimation of the size and affluence of the middle class indicates that this class is highly diversified among OECD countries. In countries such as: Slovakia, Slovenia, Norway, the Czech Republic, the Netherlands, Denmark, Hungary, Finland, Belgium, Sweden and Austria, there is a relatively large and affluent middle class. In contrast, in Anglo-Saxon countries, the middle class is relatively small and moderately affluent. The article empirically confirms the hypothesis that higher income inequalities are accompanied by middle-class erosion. Using the basic income ratio, in the form of the Gini coefficient for disposable income, a very strong negative correlation was identified both between this coefficient and the coefficient determining the size of the middle class (-0.91) and between the Gini coefficient and the coefficient determining the affluence of the middle class (-0, 84). Attention is paid to possible causes of the occurrence of the phenomenon of economic polarization. Proposals for solutions in the field of socio-economic policy aimed at limiting the scale of observed phenomena were also presented.

*Keywords:* income inequalities, middle class, polarization.

## Struktura zróżnicowania dochodów ze szczególnym uwzględnieniem ekonomicznej klasy średniej

### Streszczenie

W opracowaniu przedstawiono główne fakty związane z kształtowaniem się w ostatnich latach nierówności dochodowych w krajach OECD. W szczególności skoncentrowano się na analizie położenia ekonomicznej klasy średniej (klasy średniego dochodu), która często jest pomijana w ana-

lizach, na rzecz dwóch skrajnych grup dochodowych, tzn. sfery ubóstwa oraz grupy osób najbogatszych. Warto uzupełniać tą lukę gdyż klasa średnia stanowi trzon nowoczesnego społeczeństwa i w decydującym stopniu rozstrzyga o możliwościach rozwoju gospodarki. Analiza współczynników pozwalających na oszacowanie rozmiarów oraz zamożności klasy średniej wskazuje, iż wśród krajów OECD klasa ta jest mocno zróżnicowana. W krajach takich jak: Słowacja, Słowenia, Norwegia, Czechy, Holandia, Dania, Węgry, Finlandia, Belgia, Szwecja i Austria występuje relatywnie duża i zamożna klasa średnia. Natomiast w krajach anglosaskich klasa średnia jest relatywnie mała i umiarkowanie zamożna. W artykule empirycznie potwierdzono hipotezę, iż większym nierównościom dochodowym towarzyszy erozja klasy średniej. Wykorzystując podstawowy wskaźnik zróżnicowania dochodów, w postaci współczynnika Giniego dla dochodów rozporządzalnych, zidentyfikowano bardzo silną korelację ujemną zarówno pomiędzy tym współczynnikiem i współczynnikiem określającym wielkość klasy średniej (-0,91), jak i pomiędzy współczynnikiem Giniego i współczynnikiem określającym zamożność klasy średniej (-0,84). Zwrócono uwagę na możliwe przyczyny występowania zjawiska polaryzacji ekonomicznej. Przedstawiono również propozycje rozwiązań w zakresie polityki społeczno-gospodarczej mającej na celu ograniczenie skali obserwowanych zjawisk.

*Słowa kluczowe:* nierówności dochodowe, klasa średnia, polaryzacja.

JEL: D31, D33, D63, E24, E25.

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## Expansionary monetary policy and its side effects

### INTRODUCTION

While assessing the effectiveness of anti-crisis macroeconomic policy from the point of view of the length and depth of the recession induced by a crisis, it can be concluded that governments and central banks have fulfilled their role correctly (Mishkin, 2009) – the recession measured by a decrease in the GDP was relatively shallow and short, obviously with some exceptions, such as Greece, where the symptoms of recovery in the real sphere are still not visible today. On the other hand, however, there are many doubts about the future effectiveness of monetary policy instruments – nominal rates of a central bank cannot be further reduced; the policy pertaining to the establishment of the level of minimum reserves of banks has practically ceased to be of any importance in view of the enormous funds amassed by banks. These are dilemmas pertaining to the required reaction of the central banks upon the appearance of speculative bubbles (Mishkin, 2011). Many controversies arise in connection with the side effects of the expansive monetary policy implemented by the main central banks in the world (BIS, 2012). An exceptionally loose monetary policy constitutes a serious hazard for the appearance of speculative bubbles in some markets, and emerging economies must face challenges connected with investors' actions who, within the so-called 'carry trade', destabilise the exchange rates and increase the inflation pressure in countries such as Brazil and India.

The aim of this paper is to indicate that the monetary policy conducted since 2008 by the most important central banks in the world is significantly contributing to the deepening of the level of income inequality in contemporary economies. In the first part of the text, apart from preliminary remarks, the structural reasons for macroeconomic inequities, which have accumulated since 2007, will be presented. Next, the channels of influence of this monetary policy on the income structure in the current situation of the global economy will be analysed.

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MONETARY POLICY AND INCOME DISTRIBUTION  
– PRELIMINARY REMARKS

A traditional analysis of the relationships between the policy of a central bank and the division of income in the economy does not include a set of so-called ‘non-standard monetary policy tools’ implemented as a result of the 2008 financial crisis (Coibion, Gorodnichenko, Kueng, Silvia, 2012). The main channels of impact of monetary instruments on the income structure are mostly a central bank’s attitude to inflation and the influence of the interest rate level on the returns obtained by owners of savings. Consent to increased inflation usually leads to increasing income inequality (Bulir, 1998; Sieron, 2017). This happens because, due to higher prices, employers’ and high-ranking managers’ income increases and their salaries depend on their companies’ financial results, which improve quickly as a result of increasing revenues. At the same time, the salaries of ordinary employees remain at the same level or at best are increased, but with a considerable delay. One should also mention social transfers here, which are usually indexed by the inflation rate but always by using the *ex post* approach. In summary, the redistribution effects of increased inflation work in favour of increasing income inequality – the income of ordinary employees and those who receive social benefits grow more slowly than the income of ‘better-off’ social groups, i.e. entrepreneurs and managers.

What is interesting is that the disinflation policy also has a negative influence on the level of social cohesion. The cost of a restrictive monetary policy aimed at limiting the inflation level is usually a decrease in the GDP dynamics and even recession. For example, this happened in the United States at the beginning of the 1980s when Paul Volcker, the FED head at that time, announced that inflation was “Public Enemy Number One”. Over a few years, it was possible to reduce the scale of inflation fundamentally (from 13.5% in 1980 to 3.2% in 1983 – further data for the same period), but it happened at the expense of the recession and an increase in unemployment, which increased from 7.2% to 9.7%. A deterioration of the situation on the labour market always leads to income inequality (Gini increased in the US from 34.7 to 36.8), as persons with low qualifications are the first to lose their jobs and, as a consequence, their income.

The central bank’s focus on controlling inflation not only decreases the total level of outcome (GDP) on the economy but also determines its structure. A higher interest rate, by increasing the cost of production, transfers income from the industrial to the financial market. In this situation, corporations try to deal with the higher cost of capital by reducing wages or increasing the prices of produced goods. Both channels (higher prices and reduced wages) lead to income distribution – a share of the wage income in the economy declines in the nominal or real term (Argitis, Pitelis, 2001).

In summary, monetary policy influences the distribution of income mostly during so-called ‘monetary shocks’, i.e. periods of loose monetary policy when inflation is accelerated and at a time when the central bank conducts a restrictive policy aimed at reducing the inflation rate. Both situations usually translate into an increase in income inequality, despite the fact that economic mechanisms are quite different. Thus, from the point of view of social cohesion, a monetary policy, which stabilises the price dynamics without unnecessary costs in the form of weakening the real sphere, is measured here mostly by the unemployment rate. There are some suggestions to include social cohesion issues into the central bank’s mandate of what can be done via supporting non-profit financial institutions (Dow, 2017), but it would mean that the central bank is allowed to conduct a structural policy that is quite controversial.

#### GLOBALIZATION, FINANCIALISATION, INCOME DISTRIBUTION AND CRISIS

Serious arguments can be listed that show that increasing income inequality is responsible for a growing macroeconomic imbalance (Rajan, 2010; Stiglitz, 2012; Kumhof, Lebarz, Ranciere, Richter, Throckmorton, 2012).

The past three decades in the world’s economic history is a period of accelerated globalisation of the economy understood as the progressive integration of the goods markets, capital and work. A dominant China and the entire area of the world previously belonging to socialist countries are included in the global economy. Thus, we have a combination of demographic factors (a large increase in the labour force in developing countries), technological factors (a decrease in costs of transport, development of telecommunications techniques), cultural factors (common knowledge of English, standardisation of work tools) and political tools (inclusion of further previously “closed” economies in the global economy), owing to which the bargaining power of the majority of employees decreases, which narrow social groups then have a very quick increase in income (IMF, 2007; OECD, 2011; ILO, 2008). As a result, the share of salaries in GDP decreases (work efficiency grows more quickly than salaries) at the expense of the growing role of capital income (Piketty, 2014; Tridico, 2018); on the other hand, income inequity grows fast both among employees (salary inequity) and the entire economy, as measured at the household level.

If production grows faster than pay, the demand barrier is created – households cannot afford to buy the goods and services which are produced in the economy. Thus, there are two ways out – the consumption can grow faster than their income, but it is connected with an increase in private and/or public debt, or an export surplus must be achieved. The US, UK and Greece are examples of the first model, while China and Germany have been following the other route.

The situation of the German economy requires an additional comment because this economy has an image of a crisis-proof one. In Germany, the difference between an increase in work efficiency and an increase in salaries is exceptionally high – in the 2000s, the level of remuneration increased nominally at a rate of 1.1% annually, which meant a real decrease. The fact that the traditional German thriftiness did not lead to an increase in household debt does not mean that no negative processes, which are a threat to macroeconomic stability, occur there:

- pay stagnation and the resulting deficiency of domestic demand, which means the necessity of keeping a surplus in the current account, which makes the economy dependent on foreign demand – thus, it is not an accident that the recession in Germany in 2009 (-5.1%) was deeper than in the US (-2.8%), which was the “centre” of the financial crisis;
- income inequity measured at the household level remains at a stable level (Gini in 2000s is stable at the level of about 30), but during this time, a growing share of the national income is taken over by companies’ profits; this, on the scale of the entire economy, the income structure is changing quickly to the disadvantage of households gaining income from labour – share of salaries in GDP declined from 75% in 2000 to 65% in 2007 (OECD data);
- a high level and positive dynamic of GDP does not translate into affluence of households – despite the highest GDP per capita level among the countries listed below, the median of the household effects is three times lower than in Spain and Italy, household assets that were more than twice as high were collected by households in France and Greece<sup>2</sup> (ECB data);
- it is difficult to say that the financial surpluses of companies invested on the global financial market increased the affluence of the German economy – in view of the collapse of financial markets, losses on foreign financial investments were 20% of GDP (estimates by the DIW institute), which required support from the financial sector in the form of public funds at an amount of 12.8% of GDP, i.e. on a scale larger than in the US or UK, where taxpayers had to pay 4.8 and 6.7% of the GDP, respectively to rescue financial institutions (IMF data).

In summary, it is impossible not to combine the accumulated macroeconomic imbalance, which led to the financial collapse in 2007, with trends in income division. Low household income dynamics make it necessary to finance growing consumption by contracting debt, and at the same time, quickly growing profits of companies reach the financial market, leading to the formation of speculative bubbles and shaping so-called ‘global imbalances’. Even if households avoided an increase in debt, as happened in Germany, such a situation also contributes to a growing imbalance; this time, it is an external imbalance by the necessity of maintaining an export surplus and the transfer of capital abroad.

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<sup>2</sup> The most important component of household effects that results in Germans’ low ranking in the statistics is real property, as real property ownership is relatively uncommon in Germany.



It can be clearly seen that the crisis did not change the trend involving an increase in income and wealth inequality, mostly in highly-developed countries. Despite the decrease in the inequality scale from 2007–2010, which resulted from a deep decrease in capital profits caused by a collapse of financial markets, the latest data show that the income stratification began to grow again (ILO, 2013; Piketty, Saez, 2013; OECD, 2014; Lavery, 2017). A rebound in inequalities after the crisis is even bigger in the case of wealth distribution – in the US, the wealth share of the top one per cent shot up by 2.9 percentage points in the period 2010–2016 (Wolff, 2017).

#### SIDE EFFECTS OF A LOOSE MONETARY POLICY

Looking at the current picture of the status of the economy in the most important countries of the world, one might get the impression that the reaction of central banks to the financial crisis in 2008 was appropriate, as the following facts can be pinpointed:

- the recession in the most important economies was relatively shallow and short-lived,
- no deflationary pressure was observed, except for the exceptional situation in eurozone economies: for example, in Greece prices were declining from 2013–2015,
- after a temporary panic attack on the financial markets in September 2008 (just after the bankruptcy of Lehmann Brothers), the situation calmed down and a non-conventional monetary policy was quite effective in easing financial conditions (Rogers, Scotti, Wright, 2014),
- there was no run on the banks, the loss of depositaries' funds did take place in Cyprus and Iceland, but certainly it cannot be regarded as a lack of social trust in the banking sector,
- a low level of interest rates allowed a loose fiscal policy to be conducted, which allowed for the operation of automatic stabilisers, which made the recession shallower and shortened it.

On the other hand, however, it can be seen more and more clearly (BIS, 2012; Hamilton, Wu, 2011) that a loose monetary policy, and mostly the so-called 'non-standard instruments of the central bank' are connected with a whole range of risks:

- the level of interest rates at an amount of '0' means that we have practically lost this most important instrument of the central bank – in the case of another slowdown, it will be very difficult to reduce the interest rate. It is possible to set a negative interest rate that takes place in Switzerland and the eurozone, but the efficiency of this kind of policy option is still *terra incognita* (Rogoff, 2017);
- liquidity provided by central banks does not go to the real economy, as the majority of funds are invested in the capital market thereby putting pressure on the rise of financial assets prices;

- an increase in the balance sheet of central banks as a result of monetary expansion does not translate into an increase in lending action – a large amount of funds provided by the central bank is “settled” in commercial banks’ reserves, as these banks have collected reserves considerably exceeding the required levels. As a result, another instrument of the central bank – the minimum reserve – becomes useless;
- collected reserves of commercial banks are a potential threat for future inflation: the lending action may begin to grow very quickly, which will be translated into a growing demand and inflation pressure;
- financial markets depend more and more on quantitative loosening policy – markets respond to the announcements made by central bankers of the forthcoming limitations of liquidity provided by falling indexes,
- the low cost of capital makes it necessary to conduct so-called ‘carry trade’ (search for yield), i.e. taking a short position in a currency with a low percentage rate and investing borrowed funds in assets with a higher return rate, which leads to the formation of speculative bubbles.

#### POST-CRISIS MONETARY POLICY AND INCOME INEQUALITIES

An important consequence of the monetary policy implemented by central banks as a result of the crisis is the deepening of income inequity. The Bank of England (2012) says that supporting the economic recovery expansionary policy affects social cohesion in a positive manner by decreasing unemployment. First, a review of the data does not support this approach. Expansionary monetary policy, first of all, affects asset prices and their impact on the labour market in a positive manner, which is quite limited (Watkins, 2014). At the same time, a few issues must be taken into consideration.

First of all, the loose policy of the central bank means access to cheap capital, but only for entities from the financial sector. Only financial institutions make direct transactions with the central bank, while other economic entities must use financial intermediation. As a result of such a situation, the financial sector may attain high profits practically without taking any risks. ECB actions are a good example of this situation. For example, in December 2011 and February 2012 within the LTRO operation, the ECB granted a “long” (i.e. three-year long) loan with an interest rate of 1% to banks. The funds obtained were invested in bonds of eurozone countries and, as a reminder, the yields of Spanish and Italian bonds at that time was at the level of 5.11% and 5.55% (Eurostat data).

A policy outlining clear preferences for the financial sector, compared to other sectors, does not take into consideration recent research (Arcand, Berkes, Panizza, 2012), which shows that as long as an efficient financial sector is necessary for the development of economy, its excessively large size may contribute to the formation of speculative bubbles, which destabilise the economy if they burst and require rescue actions on the part of the State.

**Table 1. Selected data on income distribution in the USA and UK**

USA					
Year	Top 1% income share-including capital gains	Return on SP 500 shares in 2009–2014 (in %)*		Nominal wage dynamics in 2009–2014 (in %)	
2007	19.9	Total return	Annual average return	Total growth	Annual average growth
2008	19.5	137.3	15.7	12.2	1.02
2009	18.5				
2010	19.8				
2011	19.6				
2012	20.8				
2013	19.6				
2014	20.2				
UK					
Year	Top 1% income share-including capital gains	Return on FTSE 100 shares in 2009–2014 (in %)*		Nominal wage dynamics in 2009–2014 (in %)	
2007	15.4	Total return	Annual average return	Total growth	Annual average growth
2008	n.d.	48.3	6.8	10.8	1.01
2009	15.4				
2010	12.6				
2011	12.9				
2012	12.7				
2013	14.5				
2014	13.9				

\* Return on change price; dividends are not included.

Source: Author's own preparation based on data from The Top World Incomes Database and USA, UK national data.

The aforementioned pressure on the increase of prices of financial assets allows for obtaining a high capital income, which is the speciality of financial institutions and owners of large savings. At the same time, owners of modest savings who do not have the possibility of managing their portfolio in an active manner, practically do not have any income from their capital. The interest rate on bank deposits and current accounts is now practically at the level of 0, which, considering the inflation and fees to financial institutions, gives a negative return on small amounts of savings. Income inequity is thus increased in two ways – income from capital grows faster than remuneration and, at the same time, the diversification of

income from capital increases for larger rates of return for those who have capital that is large enough to be managed actively. The data presented from the USA and UK (Table 1) show that the process of growing income inequalities has been taking place. Returns on the financial markets are much bigger than wage dynamics, so wealthier households that, to a greater extent, rely on capital income, benefit much more than those who live on salaries.

Similar results to the data presented above have been noted in Japan. The expansionary monetary policy conducted by the Bank of Japan led to an increase in income inequalities due to the portfolio channel. Wealthier households that hold equities benefit more from capital market increases than poorer ones that rely on wages (Saiki, Frost, 2014).

One of the reasons for the financial crisis, i.e. a careless lending policy of banks, which granted subprime loans on a mass scale, i.e. the ones where the borrower's creditworthiness was doubtful, had a fundamental influence on the bank's approach to lending action. Today, this situation looks quite different. Despite the loose monetary policy of central banks, access to loans by entities outside the financial sector is very difficult. In addition, today it can be seen much more clearly than before the crisis as to how the financial market differentiates capital cost according to the borrower's economic power. Before the crisis (in mid-2007), the difference in the interest of 5-year corporate bonds between an issuer with an AAA rating and a BBB rating was approx. 1.2 percentage points, while at the beginning of 2016, it was as much as 3 percentage points. A similar conclusion results from the research conducted by the ECB, which regularly analyses access to the capital of small and medium enterprises – compared to 2007, despite a reduction in the interest rates of the central bank, the cost of capital acquired by small entities on the financial market increased, and at the same time, its availability decreased as a result of collateral required by banks.

The differentiation of capital costs from the point of view of economic power can also be seen in financing the public sector. It is here too that the advantages of low interest rates are used by the largest and strongest economies enjoying the trust of the financial markets.

**Table 2. Yields (in %) of treasury (10-year) bonds of selected Euro-zone countries**

Country/time	XII 2007	XII 2017
Italy	4.54	1.80
Spain	4.35	1.44
Greece	4.53	4.44
Germany	4.21	0.30
France	4.35	0.67

Source: Author's compilation based on Eurostat data.

The changes observed above largely result from a specific return to normality – such a small difference between the profitability of German and Greek bonds certainly did not take into account a much worse fiscal policy conducted in Greece for years. Quantitative easing operations conducted by the ECB have their own specifics. In purchasing government bonds on the secondary market, the ECB needed to adopt a strategy concerning structure treasuries that are being bought. To avoid the accusation of national sentiments and direct involvement in the member state's national fiscal policy, the ECB buys government bonds according to the structure of Euro-zone GDP, which has its obvious consequences. The biggest ECB demand (almost direct support for national fiscal policy) goes to the German bonds, so the strongest economy benefits the most.

The privileged position on the debt market of the richest countries is also connected in other ways with the monetary policy conducted by central banks. Apart from the obvious influence of increased money supply on the profitability of treasury securities, it is worth paying attention to other regularities as well, which can clearly be seen in the world's financial system.

Large-scale integration of the global financial sector reduces the effectiveness of monetary policy with regard to the regulation of the money supply on the domestic market. As there are no limitations in capital movements, increased liquidity in the financial sector, which is provided by the central bank within the quantitative loosening policy or by granting loans directly to commercial banks, as happened in the case of the LTRO operation, can be used very quickly for the purchase of foreign assets. It is particularly visible in the eurozone, where no foreign exchange risk occurs between its individual members (Turner, 2014). International transmission of monetary expansion has also been observed in the case of the Fed. The American quantitative easing policy affected both equities and treasury bonds issued in the UK and Germany (Lutz, 2014) in a positive way, so again, the strongest benefit the most.

Another factor that facilitates the fiscal policy in the most financially reliable countries involves the behaviour of the central banks of other countries, which must respond to actions by the Fed, the ECB or the Bank of England. On the one hand, increased money supply in the USA or Europe leads to involvement in carry trade transactions, which increases the inflow of capital to emerging markets. On the other hand, it can be seen that safe deposits are being sought, i.e. currencies that are connected with a low risk of depreciation and increased inflation. The Swiss franc is an example of such a currency. It began to appreciate very quickly against EUR and USD, which forced the Bank of Switzerland first to block the exchange rate at the level of 1.2 francs for EUR 1 and then move to a negative interest rate. It should be noted that in both cases (capital inflow to emerging markets and to Switzerland), the balance amount of the central bank increases by means of an increase in foreign exchange reserves. Foreign exchange reserves of the central bank are invested in liquid secure assets, which, as a result, leads to an

increased demand for the bonds of countries offering securities nominated in the world's reserve currency so the ministers of finance in Germany, the USA or UK do not have any problems with financing their borrowing needs.

The differentiation of the costs of financing the borrowing needs of the public sector clearly increases income inequality at the international level. The richest countries have lower costs of public debt serving and, as a result, they are able to conduct a loose fiscal policy that accelerates economic growth. In Spain or Greece, the cost of debt financing imposed by the market imposes quick fiscal adaptations which, under the current conditions, must be of the post-recession type (Perotti, 2011), so the income gap between individual countries is growing.

### CONCLUSIONS

The outbreak of the financial crisis showed that the global economy was far from equilibrium. If salaries are lagging behind labour productivity, it must lead to economic imbalances, e.g. growing household debts such as those in the USA or an unsustainable trade surplus, which occurs in China and Germany.

Unfortunately, it is hard to say that the financial crisis made it clear to politicians that growing income inequalities are unsustainable, so radical changes in economic policy must be implemented to balance the global economy. A more likely scenario is the continuation of the above-mentioned trends and a long period of wage stagnation that could endanger the social and political stability of the world economy.

One of the most important dilemmas for policymakers is the role of contemporary monetary policy. On the one hand, a set of non-standard monetary instruments brought short-term stabilisation for the global economy. On the other hand, structural causes of macroeconomic instability are still there. There is more and more evidence that the income distribution structure is an important source of economic and social instability. Contemporary monetary policy conducted by the most important central banks contributes to the growing income inequalities by giving preference to the financial sector and capital holders over the working class.

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### Summary

The goal of this paper is to show that, although a non-standard monetary policy conducted by the major central banks is quite efficient in stabilising the post-crisis economy, there are a few important side effects of such policy. One of the most important side effects of a super-expansionary monetary policy is creating an economic environment that favours the financial sector and capital owners over the working class, leading to higher income inequalities. The low level of the central bank's interest rate does not mean that every economic unit has access to cheap capital. The ultra-low cost of capital can be experienced by only the few selected players – financial institutions and strong corporations. The same can be said about the financing borrowing needs of the state – only a few governments are able to borrow very cheaply and others have to face the huge power of the financial market, which leads to a growing income gap between societies. The text has a mainly descriptive character but a few statistics are provided to support main paper's thesis.

*Keywords:* financial crisis, macroeconomic policy, social cohesion.

## Ekspansywna polityka pieniężna i jej skutki uboczne

### Streszczenie

Celem tekstu jest wskazanie, że polityka pieniężna wdrożona przez banki centralne w następstwie kryzysu finansowego osiągnęła swoje zasadnicze cele głównie w zakresie stabilizacji makroekonomicznej, ale coraz wyraźniej widać skutki uboczne tej polityki. Jednym z najważniejszych skutków ubocznych ekspansywnej polityki pieniężnej jest stworzenie warunków, które sprzyjają sektorowi finansowemu i właścicielom kapitału osłabiając pozycję przetargową pracowników, co w sumie pogłębia nierówności dochodowe.

Ekspansja monetarna w dużej mierze ogranicza się do zwiększania płynności w sektorze finansowym, a tylko w małym stopniu w sferze realnej. Taka sytuacja oznacza zwiększenie popytu na instrumenty finansowe, co prowadzi do szybkiego wzrostu ich cen, na czym zyskują przede wszystkim właściciele kapitału.



Niskie stopy procentowe banku centralnego nie oznaczają równego dostępu do taniego kapitału, na który mogą liczyć tylko najsilniejsze ekonomicznie podmioty, więc w sumie nierówności (zarówno między firmami, gospodarstwami domowymi, jak i państwami) rosną. Różnice w koszcie kapitału dla poszczególnych podmiotów się powiększyły w porównaniu do sytuacji przed kryzysem. Dotyczy to zarówno sektora prywatnego jak i publicznego, co można zmierzyć różnicami w rentowności papierów dłużnych emitowanych przez poszczególne podmioty. Tekst ma głównie charakter opisowy, ale podstawowe dane statyczne są przytaczane w celu zobrazowania opisywanych mechanizmów.

*Słowa kluczowe:* kryzys finansowy, polityka makroekonomiczna, spójność społeczna.

JEL: E63, E64, F2.

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## **The institutional order of the welfare state and its decomposition. A perspective from the Regulation Approach**

### INTRODUCTION

From the mid-1940s to the early 1970s, highly developed countries enjoyed dynamic economic growth. That period of unprecedented prosperity, referred to as the golden age of capitalism, was the outcome of several factors. The most crucial was the specific economic policy pursued at national level according to the welfare state concept. The expansion of the economic and welfare functions of the state was revealed in greater intervention, increased social redistribution and the development of social security programmes (Golinowska, 2005, p. 4; Rutkowski, 2009, pp. 17, 89 et seq.). The strengthening of state institutions resulted in the dynamic growth of industrial manufacturing, a higher employment rate, better demographic indicators, a changed job structure and higher salaries. Industrialised societies experienced rapid changes in living conditions.

The oil crises in the 1970s, with rocketing oil prices and inflation pressure, acted as a brake on this dynamic economic growth. The economic recession was not the only reason for the erosion of the welfare state model. The globalisation-induced transformations in the global economy, the emergence of new global economic powers, the new social challenges connected with e.g. unemployment, social exclusion, income disproportions or demographic changes, and new emerging needs brought the traditional welfare state model to an end. The new global economy limited the expansive tax and monetary policy and forced greater flexibility in the compensation and employment system. The ageing process

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in society and the changes in the family structure (fertility rate decline, more single-person households, greater significance of women in the labour market etc.) became a serious threat to public finance, social security systems and public healthcare systems (Esping-Andersen, 2010, pp. 13–14).

According to the Regulation Approach, developing since the 1970s within heterodox economics, the birth, expansion and crisis of the welfare state system can be explained by changes in the institutional order. Transformations of that order led to a transition from the synergies of the Fordist system, with its wide range of redistributions, to chronic budgetary deficits, a crisis of the social security system and the undermining of the welfare state.

The purpose of this article is to explain the conditions that allowed the welfare state to develop and the reasons for its crisis from a Regulation Approach perspective. In light of the research hypothesis, the traditional welfare state was built on the foundation of a conducive institutional system, where wage relations played the most important part, while the changes that took place starting from the end of the late 1960s made it impossible to pursue the principles of the welfare state and, as such, created a state promoting innovation and competition.

#### THE INSTITUTIONAL SYSTEM OF THE WELFARE STATE

Narrowly defined, the welfare state means social protection consisting of social security and welfare services. In a broader sense, it refers to the actions of the state addressed to individuals and social groups. Thus construed, the welfare state includes, but is not limited to, employment, education, health and housing policies. This welfare state interpretation is consistent with the one adopted by the Regulation Approach.

The Regulation Approach focuses on institutional forms understood as the codification of one or more fundamental social relations. Institutional forms arise as a result of the contradictions existing in society. As the effect of an institutionalised compromise, they are a social construct. They exist in a dynamic and ever-changing environment, determining a historically rooted system that evolves over time. Surrounded by other forms, they interact with them. In this way, the functioning of institutional forms creates a specific institutional system. Regulationists identify five basic institutional forms, i.e. wage relations, competition, the role of the state, the monetary regime and integration with the international system. The development of the conditions for economic growth depends on the hierarchy between these five forms (Boyer, 2003, p. 86). According to Regulationists, the institutional order that developed in the golden age of capitalism made it possible to build lasting conditions for the long-term growth and expansion of the welfare state.

The post-war socioeconomic system in highly developed countries was based on a specific triad that connected the concepts of Frederick W. Taylor, Henry Ford and John Maynard Keynes. Taylor's work organisation rules were initially tied to the

Fordist production system, which resulted in synchronising mass production with mass consumption. Mass production, accompanied by growing productivity, generated high economic dynamics. Redistribution of the outcomes of the fast-growing productivity led to the systematic growth of income and, consequently, to the growth of purchasing power and of aggregate demand.

Out of the five institutional forms, Regulationists put wage relations, understood as a set of institutions determining the relations between employers and employees, at the centre of the Fordist dynamics. The traditional Fordist compromise between capital and labour relied on the employees' acceptance of the modern production methods in return for sharing in the profit generated by this improved productivity. The wage compromise was complemented by a compromise regarding social risks which was institutionalised between workers and the state (Boyer, 2007, p. 891). Thus, Fordism assumed the contractualism of employee relations, rigid lay-off rules, high participation of trade unions, collective bargaining regarding salaries, collective agreements, minimum wages, price indexation and welfare legislation. Wage relations shaped in this way dominated the institutional hierarchy and ensured convergence in the employee–employer relations, the stability of the economic system and the implementation of welfare state principles (Boyer, 1995, p. 109 et seq.; Pećiak, 2019, p. 104 et seq.).

In order to succeed, the Fordist system needed a state that would guarantee institutional integration and social cohesion. A strong interventionist state disseminated mass production, pursued a full employment policy, guaranteed social compromises, expanded collective social protection and implemented support programmes for the unemployed (Jessop, 1991, p. 86 et seq.).

With progressive taxation, budgetary expenses and a specific income and compensation policy, the Keynesian economic policy implemented welfare principles. Private consumption and investments generated an economic dynamic that permitted redistributing the income to employees without increasing budget deficits. The Beveridge model of social security systems ensured the financing of goods and services of public interest as required for intergenerational reproduction of paid workers, unemployment benefits and retirement and health benefits, and at the same time it guaranteed democratisation of the educational system (Boyer, 2001, p. 65). The expansive credit policy also supported aggregate demand and full employment, strengthening the welfare state.

Regulationists believed that, in addition to the specific wage relations and a highly interventionist state, the success of post-war growth model was connected with the development of the international Bretton Woods currency system. Relying on gold standard, the system supported the financing of accumulations, made it possible to implement national growth strategies and at the same time guaranteed a stable situation in the global financial system. The relative autonomy of the national economy, stable international economic relations, especially in terms of trade, as well as free access to raw materials generated economic growth dynamics. An

international order based on the political, economic and military hegemony of the United States, the so called Pax Americana, guaranteed a balance of powers that fostered economic growth and capital accumulation (Boyer, 1999, pp. 16 et seq.).

Company-level competition reflected the power of the enterprise in a particular industry. Competition involved product characteristics rather than prices, which were mostly rigid (Jessop, Sum, 2006, p. 61).

So the success of the welfare state was an outcome of an institutional order determined by:

- wage relations, which guaranteed the stability of the capital-labour compromise,
- strong intervention of the state in the area of the economy with wide social redistribution,
- an expansive monetary policy, the growing significance of fiat money and abolition of monetary constraints,
- competition pursued within the economy, essentially on a microeconomic level,
- the growing domestic consumption in a stable international (and financial) environment but with not very open economies.

Regulationists saw the cohesion of such an institutional system as a guarantee of good economic results and the persistence of economic growth. The late 1960s were the time when institutional forms started to change. The stability of Fordist system conditions, and as such of the welfare state model, eroded.

#### INSTITUTIONAL DECOMPOSITION OF THE WELFARE STATE

The hierarchy of institutional forms had a special role both in the period of the dynamic growth of the golden age of capitalism and during recession of the 1970s. The welfare state was in crisis not because various social security systems were challenged but because institutional forms were maladjusted (Boyer, 2007, p. 891 et seq.). According to Regulationists, every institutional system undergoes modifications sooner or later.

In the late 1960s, the productivity growth rate in high developed economies declined, which slowed down economic growth. The production paradigm change was an important element in the deconstruction of the welfare state system. The rapid productivity increase came to a halt mostly due to the dissemination of production methods, the exhaustion of technological and technical possibilities, gradual market saturation and problems with the absorption of production. Lack of social acceptance for working conditions and the growing significance of trade unions built up social pressure and challenged the current work organisation system. The social patterns regulating the functioning of the welfare state were gradually replaced with neoliberal solutions. The basic Fordist mechanism that guaranteed dynamic growth and the participation of employees in the distribution of production profits was questioned (Boyer, 1999, s. 35 et seq.).

However, the hampering of work productivity did not stop the growth of wages. Full employment, which benefited employees, fostered inflation pressure. Growth based on full employment gradually changed to an economic situation with persistent mass unemployment. The growth in unemployment weakened the leverage of workers, which in turn undermined the compromise on which the Fordist system and the welfare state was based. Wage relations were transformed and they came under pressure with the remaining institutional forms.

In the era of Fordism and of welfare state expansion, state policy was favourable for employees, and mass production of standardised products guaranteed the homogeneity of social relations. In the 1980s, the state started to redirect its attention, more or less, to businesses. The internationalisation process deepened the international division of labour. Competition became the key element shaping the strategies of companies, employment and income distribution. The deepening competition, both at a microeconomic scale (between employees) and in a broader dimension (between economies), oriented the activities towards the reduction of costs and unemployment, the flexibility of the organisational and employment system, and the differentiation of working conditions. Determined by the rapid development of financial markets, the investment and production-related decisions of companies brought about modifications in the area of wage relations, preventing their standardisation. Growing competition, whether quality- or innovation-related, deepening division of work and increasing specialisation gradually led to heterogeneity of employees and a greater diversity of wages and employment conditions (Boyer, 1999, p. 37 et seq.). The increasing significance of international integration strengthened the position of mobile and competent employees and prompted the diffusion of financial innovations but also deepened social inequalities (Boyer, 1999, p. 35 et seq.).

The quick internationalisation process and competition growth resulted in a situation where the instruments of Keynesian welfare state policy were no longer effective. Because of internationalisation, wages were treated as an essential production cost and an important element of competitiveness. The crucial principle of the welfare state was challenged.

Until the 1970s, the financial system was characterised by strong autonomy and small capital flows. In the welfare state period, expansive monetary policy fostered economic growth and the stability of the wage compromise. Internationalisation of demand dynamically boosted foreign direct investments, short-term capital flows and internationalisation of finances. The expansion of international financial markets modified monetary systems. Inflation pressure redirected the objectives of monetary policy, with a stable price level becoming the primary goal of the central bank (Boyer, 1999, p. 38).

The breakdown of the Bretton Woods system, the transition to floating exchange rates, and the disruption of the Pax Americana as a result of the growing position of Japan and the European countries weakened the stability of interna-

tional relations and changed the institutional order of national economies (Boyer, 2010, pp. 34–25; Jessop, 1991, p. 91).

The hierarchy of institutional forms was reversed from the dominance of wage relations to the dominance of competition, and in the 1990s – to the dominance of the financial system (Boyer, 1999, p. 35 et seq.).

**Table 1. Characteristics of the institutional forms during welfare state expansion and its decomposition**

Institutional form	Welfare state and Fordism from 1945 to early 1970s	Welfare state decomposition 1970s and 1980s
Monetary system	national-level management; stable international system; low capital mobility	gradual loss of autonomy of the monetary policy; breakdown of the Bretton Woods system; increasing international flows; deregulation and deterritorialisation of finance
Wage relations	national-level management; institutionalisation of social security measures; strong ties between enterprise and employees; homogeneity of work	hampering productivity growth; transformation of wage relations in response to international competitiveness growth; growing budget deficits as a consequence of financing social security systems; heterogeneity of work
Competition	mostly at national and enterprise level; oligopolistic competition	strong impact of competition-oriented European policy; growing international competitiveness
Inclusion in the international system	low openness to the national system; Pax Americana-based international order	increased international exchange when compared to production; growing significance of European countries and Japan, and then of rapidly developing Asian economies
Relations between the state and the economy	expansion of the social security system, wide redistribution and regulation; economic policy pursuing the welfare state principles	recurring budget deficits; inefficiency of public policies; rationalisation of the social security system; transition to Schumpeterian state based on innovations

Source: compilation based on: (Boyer, 1999, p. 17 et seq.; 2010, p. 34; 2015, p. 268; Jessop, 1991, p. 91).

The relations between the state and the economy transformed. Intensifying globalisation and the threats connected with the global environment, internationalisation and introduction of flexible production system changed the autonomy of economies and, consequently, undermined the significance of the nation state (Jessop, 1994, p. 25). The transformations in the international system reoriented the objectives of economic policy. Monetary policy gained independence. Tax policy assumptions were modified: the tax base was expanded, taxes for the most mobile production factors increased, and budget deficits and the public debt were reduced. The problems connected with financing budget deficits forced social security system reforms.

The Keynesian macroeconomic policy supported by Beveridge's system for financing social security measures – the foundation of the welfare state – transformed into a policy that promoted savings, work, investment, innovation and a creative entrepreneur. This triggered the transition from the welfare state to a Schumpeterian state.

In his theory of endogenous economic growth, Joseph Schumpeter, an advocate of innovation and competition, assumed that long-term economic growth was an outcome of innovation, while investments resulted from innovative actions of entrepreneurs motivated by the monopoly rent, and the creative destruction mechanism replaced old innovations with new ones (Aghion, Akcigit, Howitt, 2015, p. 558; Schumpeter, 1960; 1995). The process of industrial changes revolutionised the economic structure on the inside, with old structures ousting new ones (Schumpeter, 1995). Creative destruction fostered economic transformations and progress in the economy. Schumpeter, a theoretician of the driving force behind innovation, indicated innovation as a key element of the capitalist state (Schumpeter, 1995) and the market as the main stimulus for the activity of entrepreneurs, due to the power of competition, which triggered innovation. A special part in the creation of innovations was played by institutions which – if properly shaped – encouraged entrepreneurs to take action. Schumpeter believed that institutional change results from creative destruction. The theory of endogenous growth implied a specific role of a state promoting product, process, organisational and market innovations in open and competitive economies by influencing the supply side.

Facing growing pressure from newly industrialised economies (e.g. the Asian tigers, then China and India), which manufactured not technologically advanced goods at a low cost, sustainable economic growth and full employment in highly developed economies required implementing new technological solutions. An innovation-oriented strategy with information and communication technologies as its special tools made it possible to make national economies more competitive (Jessop, 1994, p. 25). According to Schumpeter's theory, highly developed countries implemented fundamental innovations which expanded technological boundaries, while less-developed countries used imitative innovations.

The openness of economies and the pressure of national budgets forced the state to shift its intervention from failing industry branches to the promotion of new sectors, new technologies, and to their expansion for increasing competitiveness.

Workfare policy became an important element of the new state as it promoted and encouraged work and supported the professional activity of the society. Social policy was re-oriented from redistribution-based to more productive and efficient solutions. It was modified to support the needs of a flexible production process and a flexible labour market and to face the challenges of international competition (Jessop, 1993, p. 9; 1994, p. 24).



## CONCLUSIONS

According to Regulationists, the welfare state was based on the institutionalised Fordist compromise between capital and labour. The welfare state concept could only be pursued due to the dissemination of Fordist wage relations, national-level oligopolistic competition, intervention of the state within an expansive tax and monetary policy supporting social redistribution, a stable international environment and low openness of economies. The Keynesian state regulated collective agreements within the limits corresponding to full employment and promoted mass consumption strengthening effective domestic demand and socioeconomic development.

The specific capital-labour compromise combined with an expansive macro-economic policy and an expanded social security system was consistent with welfare state principles. The stability of institutionalised compromises and a specific system of institutional forms guaranteed its durability.

In the 1970s, the traditional welfare state model decomposed as a result of changes in the hierarchy of institutional forms. Wage relations, which ensured the Fordist compromise and the relatively stable economic growth conditions, came under pressure from other institutional forms, especially competition and transformations in the international system.

The challenges of the welfare model were connected with the transition from an industrial to a post-industrial society or, as explained by Regulationists, from a Fordist to a post-Fordist society. The Fordist system emphasised demand management and support of mass consumption. The post-Fordist system focused on the supply side, on international competitiveness and on rationalisation of the social policy, which limited the scope of redistribution. The expansion of new technologies, the dynamic internationalisation, the changes in production systems, and regionalisation of economies at a national and global level – all these factors were particularly important in the evolution of the socioeconomic system.

Changes in the institutional system made the welfare state to evolve into a state promoting technologies and innovations in open competitive economies mainly through intervention on the supply side and through dependence of the social policy to the requirements of a flexible labour market and to the need to rise to the challenge of competitiveness of the economies.

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### Summary

This paper adopts the perspective of the French Regulation School. Regulationists assign a special role to the institutional forms in shaping the conditions of sustainable socio-economic development. The basic institutional forms refer to wage relations, competition, the role of the state, the monetary system and integration with the international system.

The aim of the paper is to explain from the perspective of The Regulation Approach the conditions that made the welfare state possible, as well as the causes of its crisis. The research thesis assumes that the traditional welfare state was based on a favourable institutional order. Within this order wage relations played the most important role; the changes that occurred since the end of the 1960s made it impossible to implement the welfare state and led to the formation of a state which promotes innovation and competitiveness.

The paper explains that in terms of Regulationists, the welfare state was a result of a favourable institutional system determined by wage relations. This system guaranteed the stabilization of wage compromise, strong state intervention with broad social redistribution, expansive monetary policy, competition at the national level in a stable international environment, however in conditions of low opening toward global economy. Transformations related to the process of globalization, internationalization and deepening competitiveness had undermined the Fordist mechanism which guaranteed dynamic growth and the participation of employees in the results of production. Wage relations were under the pressure of other institutional forms, especially competition, and the financial system in the 1990s.

The changes in the order of institutional forms induced the evolution of the welfare state to the state which promotes innovations, new technologies and an entrepreneurial innovator.

*Keywords:* welfare state, regulation school, institution, Fordism.

## **Porządek instytucjonalny *welfare state* i jego dekompozycja. Perspektywa podejścia regulacyjnego**

### *Streszczenie*

W artykule przyjęto perspektywę francuskiej szkoły regulacji, która szczególną rolę w kształtowaniu warunków trwałego rozwoju społeczno-gospodarczego przypisuje formom instytucjonalnym. Podstawowe formy instytucjonalne odnoszą się do stosunków płacowych, konkurencji, roli państwa, systemu monetarnego oraz integracji z systemem międzynarodowym.

Celem artykułu jest wyjaśnienie warunków, które pozwoliły na ukształtowanie *welfare state*, a także przyczyn jego kryzysu z perspektywy podejścia regulacyjnego. Przyjęta w artykule teza badawcza zakłada, że fundamentem tradycyjnego *welfare state* był sprzyjający układ instytucjonalny, w którym najważniejszą rolę odgrywały stosunki płacowe; zmiany, jakie się dokonały od końca lat 60. XX w. w formach instytucjonalnych uniemożliwiły realizację zasad państwa dobrobytu i doprowadziły do ukształtowania się państwa promującego innowacyjność i konkurencyjność.

W artykule wykazano, iż w ujęciu regulacjonistów sukces *welfare state* był efektem korzystnego układu instytucjonalnego zdeterminowanego przez stosunki płacowe gwarantujące stabilność kompromisu płacowego, silną interwencję państwa z szeroką redystrybucją społeczną, ekspansywną politykę pieniężną, konkurencję realizowaną na poziomie narodowym, w stabilnym otoczeniu międzynarodowym, ale w warunkach słabego otwarcia gospodarek.

Przeobrażenia związane z procesem globalizacji, umiędzynarodowienia i pogłębiania konkurencyjności podważyły mechanizm fordowski gwarantujący dynamiczny wzrost i partycypację pracowników w podziale zysków produkcyjnych. Stosunki płacowe znalazły się pod presją pozostałych form instytucjonalnych, zwłaszcza konkurencji, a w latach 90. systemu finansowego.

Pod wpływem zmian w porządku instytucjonalnym państwo ewoluowało od *welfare state* do państwa promującego innowacje, nowe technologie i przedsiębiorczego innowatora.

*Słowa kluczowe:* *welfare state*, szkoła regulacji, instytucje, fordyzm.

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## **Social inequalities and the development of society from a sociological perspective**

### INTRODUCTION

Numerous researchers have approached the issue of equality and inequality in society over the past centuries. Before sociology as a science emerged, the area was addressed by philosophers. Traditional philosophy revolved around the notion of freedom, which was linked to the notion of justice. The arguments were that formal justice obligated people to treat those from the same social category equally (Zachorowska-Mazurkiewicz, 2011, p. 13). In the context of current concepts on human rights, every individual is believed to be equal, which has resulted in the principle of equality before the law. In the contemporary world, the issue of inequalities lies at the centre of public debate. Society's awareness of the inequalities is also greater than it used to be, which is connected with the intensification of inequalities. The most common manifestation of inequality is the situation where individuals cannot fully enjoy certain privileges available to others. The modern world setting differs from that of a few decades ago. After World War II, the level of social inequalities decreased. However, with the omniscient transformations, much has since changed. Inequalities began to multiply and their limitation has become a challenge. While it is obviously impossible to eliminate all inequalities, it is important to reduce them since their current high level may lead to serious conflicts.

The objective of the article is to analyse the issues related to social inequalities from a sociological perspective. It presents the sociological notions, categories and concepts regarding the issue in question. It draws attention to those transformations in the development of society that took place in the phase referred to as industrial

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society, which made it possible to change one's pre-assigned status and base it instead on one's own achievements and thus minimise social inequalities. Social inequalities have been classified as one of the major social problems, and it has been emphasised that inequalities change over time, as society develops. Social inequalities and economic growth have been observed to be mutually intertwined. The inequalities related to social stratification have been highlighted, and it has been shown that education and one's occupation have gained significance in modern society, and that education has become one of the basic values that differentiates whole social groups. The article also presents a number of factors contributing to the reduction in social inequalities and discusses the negative consequences arising from social divisions. This has led to areas being suggested that could be addressed by social policy.

#### SOCIAL INEQUALITIES – THEORETICAL ASPECT

Communities differ from one another biologically, psychologically and socially. However, not all the differences are the subject of sociological analyses. Sociologists take a look at social differentiations and focus on those that form the underlying causes of social inequalities in respect of individuals. Sociology, as a science, deals with social inequalities implicitly, primarily by analysing such issues as: social stratification, social structure, change and social development. Since modern industrial society and postmodern society are focal points for sociology, researchers analyse the social inequalities present in formations of this type. Sociologists analyse only the social as opposed to the individual characteristics that underlie social inequalities. An individual's most important social characteristics are: the nature of the group to which they belong and the nature of their position and roles.

As contemplated from a sociological perspective, the issue of social inequalities is addressed primarily at a macrosocial level. Social divisions at a macrosocial level may be considered from two perspectives: of a society construed as a whole consisting of inter-related parts, and of a society understood as a set of diverse individuals who may be assigned to categories; such categories representing points on a scale of the specific characteristic that the individuals possesses. The former approach is referred to as structural, while the latter as gradation-based (Szacka, 2003, p. 279). The basic categories for the description of social divisions in sociology are social classes and social strata. However, various researchers representing opposing perspectives understand these terms differently. It must be added that in modern societies, the category of occupation is also of great significance in the description of social divisions and inequalities. Sociology identifies three classic types of social division, which are: Marxian class theory, the Weberian three-class system and the stratification concepts. According to Karl Marx, the basic inequalities and the related social divisions are connected with the individuals' different relations to the

means of production. Unlike Marx, Max Weber claimed that it was not possible to organise all social inequalities into one hierarchy. Social inequalities result from the fight for the division of various resources of divisible goods. According to him, these are: property, social status and power. The third concept, i.e. that of stratification, is connected with the tradition of American sociology (such as the local community research of William Lloyd Warner and the papers by Kingsley Davis and Wilbert E. Moore). Warner noticed that the position of individuals in a society was determined not only by economic factors but also by respect and moral values. Davis and Moore, on the other hand, are the creators of the functional stratification theory. They saw stratification as unequal participation in resources, primarily property and prestige. They tried to demonstrate the functional need for and usefulness of such inequalities. They claimed that they guaranteed that the most important positions were held by those who were the most qualified.

The term 'stratification' as meaning 'differentiation' differs from the term 'social division.' "Stratification is the differentiation of society as a whole in terms of income, education, profession, social status and prestige. Social division means differences between classes and strata, differences between large communities, differences within a society in terms of access to power, privileges and offices, differences causing tensions and social conflicts" (Dyoniziak, 1992, p. 12). In a broad sense of the term, social stratification should be understood as "all vertical aspects of social culture, which means that the term may cover all types of inequality." Stratification may be represented by various forms of hierarchy, divisions, distances and barriers construed as objective phenomena, such as the inequalities arising from the distribution of income. Stratification is also any behaviour and attitude manifesting superiority or resulting from inferiority... "(...) Of course, it must be borne in mind that only one current of thought equates all the inequality aspects with stratification" (Domański, 2007, pp. 51–52). Domański claims that stratification is a form of inequality. However, there are inequalities that cannot be called social stratification. This depends on how broad the perspective is. In the broadest sense, definitions of stratification equate it with a system of inequalities. If we call stratification a form of inequality, we are referring to a narrower definition (Domański, 2007, p. 39). A narrower understanding of stratification equates it with one of inequality aspects. This is an axiom derived from the class division views of Marx and Weber. All forms of the hierarchy of divisions, distances and barriers understood as objective phenomena represent stratification. Stratification means structured inequalities between various categories of people. It may be compared to the geological layering of rock in the earth's surface (Giddens, 2010, p. 305). In the history of humanity, we can identify four basic stratification systems: slavery, caste, estate and class. The class system was characteristic of sociological analyses in the industrial society era. As the social, economic and political transformations in modern society progressed, the traditional social stratification concept was no longer sufficient. In the 1990s, Terry N. Clark and Seymour Martin Lipset triggered a discussion about the death of classes as construed by Marx. This should be understood as

class losing its previous role in defining social inequalities. After all, modern societies are characterised by blurred boundaries between the classes of capitalists and workers, where in postmodern societies the ‘status groups’, as construed by Weber, gain significance. They are divisions in the cultural dimension that are based on differences in terms of the systems of values, lifestyle and consumption. Sociologists note that it is culture rather than economy that is becoming a driving force in class divisions. Social differentiation is becoming increasingly visible through education and qualifications. Social marginalisation, on the other hand, is not about lacking the rights, as in the past, but being unable to exercise them. Unemployment and poverty are the greatest marginalisation-related threats.

As a generalisation, sociology has assumed that the values that lead to social inequalities are: property, power and prestige. Nowadays, in a society described as postmodern, education is becoming increasingly a differentiating factor. From a sociological perspective, Sztompka defines social inequalities as those that “are related not to individual characteristics but to those indirect characteristics that are shared only by certain communities – social groups, or only by certain locations in the social structure – social positions, statuses. (...) Being a member of a specific group or having a specific position must entail either easier or more difficult access, or at least an unequal – smaller or larger – chance of access, to certain valued resources” (Sztompka, 2002, p. 332). Goodman, on the other hand, defines social inequalities as differences between individuals that arise from the unequal distribution of societal resources and from the fact that some individuals choose an occupation that grants more power than another (Goodman, 1988, p. 125). In Goodman’s works, the term ‘social inequalities’ is also accompanied by ‘social differentiation’ and ‘social stratification.’ According to him, social differentiation means the differences between whole social categories rather than just individuals. Social stratification, on the other hand, is such social layering where people in those social categories are placed in a certain hierarchic order that gives them varied access to societal resources (Goodman, 1988, p. 125). Generally speaking, “from a sociological point of view, social inequality means, first and foremost, the unequal distribution of income and social prestige” (Jarosz, Kozak, 2015, p. 23). For the purpose of this article, social inequalities have been assumed to mean unequal access by certain social categories to valued resources: power, wealth, prestige, education and the practice of an occupation.

#### CAUSES OF SOCIAL INEQUALITIES IN IDEOLOGIES AND THEORIES – DEVELOPMENT OF INEQUALITIES OVER THE AGES

The roots of social inequalities may be sought in either ideologies or theories. We can identify three types of inequality ideologies (Sztompka, 2002, pp. 356–357):

1. elitist ideologies, according to which there are groups that are by nature “supreme” and as such are above all other;

2. egalitarian theories developed by or on behalf of those impaired groups that most radically oppose all social privileges and inequalities and demand identical living conditions for all;
3. meritocratic views, where inequalities are justified insofar as they result from one's own achievements. This is about one's own effort, work, costs and sacrifices as well as the special talent that the group contributes to society as a whole.

The justification of social inequalities is not limited to an ideological level. It also enters the areas of philosophy and social sciences. According to sociology as a science, social inequalities are primarily (Sztompka, 2002, pp. 358–359) the necessary imperatives that organise life in a community – which is the position of the functional theory of stratification. Secondly, sociologists refer to the historical origin of inequalities, seeing inequalities in dominance and power – which is the theory of cumulative advantage. Both theories differ in terms of ideological message and vision of the future. The functional theory treats social inequalities as a phenomenon that has always been present and is not only ineliminable but even required for the functioning of society. As such, it carries a conservative and apologetic message. The cumulative theory, as an origin-based one, considers social inequalities an outcome of specific historical conditions which may change in the future. According to this theory, it is not only possible but even desired to overcome inequality as it is a source of conflict, a factor disrupting the harmonious coexistence of individuals. This concept indicates what happens when an individual already gains an advantage, it describes how inequalities grow and social distances increase, but it fails to answer the question of how inequalities start and from where they originate.

These limitations are overcome by evolutionist theories. The above question is in a way answered by Friedrich Engels' technological determinism. According to Engels, technological progress is accompanied by growing efficiency of work, which in turn leads to greater productivity. People are able to make more and more products, more and more economic goods. Those individuals who have been able to accumulate production surplus can exchange it for what others have and thus gain power, respect and prestige. The conditions described by Engels did not pertain only to individuals but to whole communities, such as due to geographical location, natural resources etc. Various communities have different resources. In every community, the progressing division of work leads to the emergence of more efficient occupations, which generate greater surplus, as well as occupations where the surplus is lower. The group or personal advantages lead to the accumulation and deepening of social inequalities and to social stratification.

In a traditional, pre-industrial society, an individual had a pre-assigned position. The place in society was inherited and depended on sex, family status, race or other distinguishing features of the individual. The opportunity for change was limited. It emerged with age and experience, in recognition of substantial achievements. Still, these were not common channels of social mobility. The fact of being born



in a specific family usually determined the individual's status for life. These inequalities were reinforced by the authorities, the law, the Church, economic institutions, the educational system, as well as by cultural norms, values, notions and patterns. The history of inequalities in Europe shows that the French Revolution was the first event to show that the future of a society may be programmable and as such depend on the ideas for that future and the will to make them come true. From this a whole system of beliefs and collective emotions, expectations, fears and hopes, other than religion, emerged – an ideology looking towards an earthly, historical and political future (Pomian, 2015, p. 47). A society where all people were equal became a goal that the humanity should pursue. “Criticism of the estate-based society challenged the determination of the individuals' social status from the outside, without any consideration given to their achievements, and protested against its dependence (...) on their ancestors, and thus on the past (...); an opposing view was advocated, according to which everybody was in a way a child of their own deeds, and the individuals' social status was determined by the capital they had accumulated or the knowledge or skill they had gained” (Pomian, 2015, p. 47).

As well as the French Revolution, the Industrial Revolution also directly contributed to the transformations taking place in the social relations in Europe at that time. It increased the wealth and power of entrepreneurs, as well as the gap between them and their workers – the proletariat. The previous estate-based society was not replaced by a society where all people were equal but one with different inequalities – those between the owners of the means of production and the proletariat. In the industrial society, appropriate conditions arose for the workers to feel the burden of the exploitation and a chance to change the status that they had been assigned – the chance to have a social status based on their own achievements through education or spatial mobility. In terms of the 19th century social structure, the sociopolitical transformations taking place in Western Europe, Mikhail Bakunin claimed that the society of the future would be based on the category of qualified specialists in the area of the economy, organisation and management. The growing demand for highly qualified staff would give rise to a new middle class (Dolgoff, 1972). As can be seen, public life in the 19th century revolved around the fight against inequalities.

World War I shifted the balance of power in Europe. Many countries introduced an eight-hour working day and a social security system. Such measures resulted from the growing influence of social democratic parties in Western and Northern Europe. The objective of World War II was to exterminate Jews and create a new enslaved society based on forced labour in the conquered Central and Eastern Europe. Once it ended, the USSR forced its own political model on Central and Eastern Europe. The development of those countries was substantially impaired, both economically and as civilisations. For the countries of the Western Europe, the post-war years were marked by quick economic growth and policies aimed at reducing social inequalities. The range of social security was expanded, cheap flats were built, weekly and annual working times were shortened,

and higher education was opened to those social groups for which it was formerly unattainable. The post-war changes in the economy were accompanied by social and cultural transformations. In the mid-1970s, the economy of Western European countries faced recession and unemployment appeared. At that time, the gap between the privileged individuals and physical workers was relatively small. The social hierarchy did not vanish but it was flattened. From that point onwards, the situation of the lower classes stopped improving, and in time it even started to deteriorate. Holders of capital, on the other hand, discovered a new way to become rich. This came with the technological revolution, the development of the Internet and innovation-related activities.

Along with the system transformation, post-socialist countries entered the path of the market economy. The phenomenon of unemployment appeared. The adaptation of the industry to the new IT solutions in the second half of the 20th century in the countries of both the Western Europe and the Central Europe increased the levels of unemployment. The emergence of unemployment resulted in unequal access to work and thus to means of support. As long as few were unemployed, the benefits could be relatively high. However, when unemployment started to grow, the benefits dropped considerably. The free flow of capital above national borders helped employees connected with the financial sector (e.g. bankers, IT specialists) to become rich. In this way, a new social category emerged whose income was incomparably higher than that made by employees in the public sector, services or industry. Since the contribution of the financial sector to the Gross Domestic Product also grew, the newly formed social group started to apply pressure on the authorities to further their interests. In this way an economic crisis where the financial sphere dominates over manufacturing has become one of the threats for new inequalities. As Castells says, contemporary capitalism “is global, and it is structured to a large extent around a network of financial flows” (Castells, 2007, p. 269). According to Touraine, the transformations of the modern world lead to a growing dissonance between the economic system and the cultural and political life (Touraine, 2013, p. 146).

Along with the transformations taking place in society (including the transition from the industrial phase to the post-industrial phase), the increase in inequalities relates to the following trends: deterioration of the situation of blue-collar, least educated workers and poorly remunerated white-collar workers, and the accumulation of wealth by already privileged groups, individuals who have access to capital and individuals who have specific intellectual or physical qualities (e.g. beauty) which they can trade for money due to the media (Touraine, 2013, p. 69). Over the years, transformations in the economy have also accompanied changes in social conventions. Here, however, the trend is opposite to that in the economy. It is an area where inequalities are gradually eliminated. Women start to find their place in public life, the patriarchal family model is replaced by a partnership-based model and authorities start to lose their significance.

## SOCIAL DEVELOPMENT VERSUS SOCIAL INEQUALITIES

The term 'social development' is quite common in sociology literature. It may lack a clear definition (Turnowiecki, 2008, p. 35), but it is usually brought up in connection with improvements to the living conditions of the population, cultural and scientific development and any changes in social structures. Development covers system transformations in the area of the economy, politics, culture and technology as well as in the social dimension. The concept of social development provides a general framework for various theories created by numerous thinkers (Miczynska-Kowalska, 2017). In general, we can agree that social development means increasing the scientific and cultural achievements of society, creating better living conditions for people and polishing the forms of cooperation and social co-existence (Turnowiecki, 2008, p. 35). The above approach to social development draws attention to the fact that improvement in the living conditions of individuals should be based on versatile social progress and equal access to social amenities. The term 'social development' is connected with the concept of 'economic growth.' However, development is something more than 'growth' or 'change.' For the purpose of this article, economic growth is understood as "the process of increasing the production of goods and services of a particular economy as measured by GDP, NNP or GNI. The adopted ratio records only the quantitative, measurable changes. The growth rate is a percentage increase (or drop) in GDP over a specific timespan" (Gardawski, Gilejko, Siewierski, 2006, p. 57). From a sociological point of view, economic growth should be secondary to social development objectives, which means that economic growth should not be autotelic. Economic growth should serve the whole society and its purpose should be to improve the standard of living of all individuals. Due to the accumulation of wealth and supply of consumer goods, economic growth forms a physical basis for social development. Economic growth therefore contains the physical elements that permit social development. For that reason, an analysis of the social development processes requires taking into consideration the economic growth elements. "There are numerous inter-relations between economic growth and social development. These inter-relations are usually defined as follows: economic growth provides the physical foundations for social development, while social development creates new stimuli to accelerate economic growth. This increases the chances of obtaining additional funds to boost the social development rate. In this context, we can say that social development contributes to economic growth, while accelerated economic growth provides the resources for better social development. It is a development spiral and a feedback loop" (Turnowiecki, 2008, p. 36). There are also inter-relations between social development and inequalities. In the context of the sociological tradition, inequalities have always been and will always remain a significant problem to be analysed, as is the issue of social stratification. The relevant literature notes that socioeconomic development

accompanies the development of technologies (Laver, 1989, p. 4 cf. Clague, 1997, p. 24). Other sources of change include: ideologies and the motivations of individuals and organisations (Andrain, 1974, p. 26). The importance of human capital is also emphasised in the modern world (Wassink, 1996, p. 5). The development of inequalities in a society is largely aligned with the polarisation of technical education among individuals and social groups, and with globalisation (Romero, Margolis, 2005, p. 27).

Social inequalities currently represent one of major practical problems for society. Poverty as a factor inhibiting social development is one such inequality. Generally speaking, the sociology of social inequalities is sociology in its essence. A social problem in sociology means “conditions defined by important groups within the population as a deviation from or violation of certain social standards which the group believes must be preserved if human life – or the order of actions and events that determines and sustains the essence of life – is to continue” (Frysztacki, 2009, p. 17). Social inequalities and poverty, in the context of the quoted definition, threaten the interests of the whole society (its social development), both for functional reasons connected with the protection of the interests of the system, and for axiological reasons related to economic and social justice. Privation and poverty have always existed and have always been a challenge for governments. In practice, there are certain discrepancies in the results of poverty-related studies which imply the existence of discrepancies as to the concepts of fighting poverty. This is because there is not a generally acceptable definition of the phenomenon. The category is highly variable over time and differs across territories. In the definitions provided in the literature, poverty is “connected with a failure to satisfy certain needs at the desired level (...) Reports on global social development prepared at the request of the United Nations Development Programme recommend going beyond the basic needs approach in poverty analyses” (Panek, 2011, pp. 12, 14). Poverty should also be associated with the inability to make various choices that are of fundamental significance for the development of the individual – as regards good health, a high-standard active lifestyle, respect from other individuals, and freedom. In contemporary society with its advanced technologies and a high level of consumption, which promotes a democratic and fair model of the economy, the concurrent problem of work and poverty is a contradiction that needs to be resolved. It is a completely new challenge for the governments of modern societies. Many young people, women, people with worse education, disabled and migrants either struggle with unemployment or work for a low pay that does not allow them to live with dignity. A new term ‘precariat’ has appeared in the modern world. It is a new social class that has emerged as a result of mega trends in the trends of dematerialisation and minimisation of labour costs. It is connected with flexible forms of employment and with globalisation – in a sense that large-industry labour is exported from the richest countries to the poorest ones and that education improves worldwide (Wierzbicki, 2015, pp. 54–55). The precariat is

a class-in-the-making, not yet a class-for-itself, in the Marxian sense of that term. Precariat means “people who lack the seven forms of labour-related security, that social democrats, labour parties and trades unions pursued as their “industrial citizenship” agenda after the Second World War, for the working class or industrial proletariat” (Standing, 2014, p. 49). These forms of security are: labour market security, employment security, job security, work security, skill reproduction security, income security, and representation security. Precariat is not just “poor working people” or working people uncertain of their jobs (even though these phenomena are mutually related). After all, employees with low incomes may create their own careers. Precariat also entails a lack of a lasting job-based identity. It is the essence of precariat that “the stratifying character of the globalising labour process has produced a decline in upward social mobility” (Standing, 2014, p. 134). As the range of the new class expands, its dysfunctional aspects grow as well. Arising in contemporary society are also inequalities within the same employee sector or similar education. The traditional sociological ‘working class’ category is losing its useful function (Romero, Margolis, 2005, p. 33). As a result, inequalities are now captured by sociologists in new categories. The traditional, structural categories (connected for instance with the hierarchy of income) are expanded, thus triggering the emergence of new inequalities – which are dynamic and result from consideration given to the differences within groups that were until recently treated as homogeneous. They are the outcome of the evolution and dynamics of the system (Fitoussi, Rosanvallon, 2000, pp. 53, 55). As a result, rather than losing its old inequalities through social development, post-industrial society has gained new ones. They are numerous and they keep changing. Some disappear while others emerge. They are considerably related to education level and place of living. However, they cannot be analysed traditionally, from a static perspective. After all, dynamic and variable, modernity demands the analysis of social inequalities as “a social process rather than a phenomenon existing today” (Jarosz, Kozak, 2015, p. 11). So it is a completely new challenge for modern sociologists.

#### SOCIAL INEQUALITIES AND THEIR CONSEQUENCES: PREVENTION ATTEMPTS – FURTHER IMPLICATIONS

An egalitarian society with perfect equality in terms of access to wealth, power, prestige and education obviously does not exist. Some differences as to economic gratification may be justified (Atkinson, 2017, p. 23). A certain level of social inequality is a continual element of social order. Inequalities in various areas are inevitable. They are also stimuli for social development and for the pursuit of prosperity. Still, the situation when the inequalities are too great is undesirable because they may inhibit development. Nowadays, societies face new threats connected with the negative consequences of social inequalities. The development

of modern societies encounters a number of restrictions connected with the end of work as such (a term introduced by Jeremy Rifkin in *The End of Work*, 1995), and thus with an excessive growth in inequalities. To put it simply, the growth in inequalities and the end of work in post-industrial society is caused by technical development (informatisation and automation) and by globalisation.

Considering the increasing polarisation of society and the dynamic changes taking place in the world, finding an answer to a future threatened by divisions into poor and rich, likely to result in severe international conflicts, is becoming an urgent matter. In view of the foregoing, attempts are made to limit inequalities, both within specific societies and within society understood globally. In the area of equal opportunities, a special role is played by activities on a macro scale – to ensure equal chances at survival, such as appropriate law and an appropriate economic, educational and cultural policy (at the meso level – at the level of institutions, and at a micro level – at the level of family and the local environment). At this point, we should mention the subject of equality (which often accompanies discussions about inequalities). The term ‘equality’ appears in concepts of the natural equality of people, ideals and moral postulates. It is also present in the concepts of social programmes and applies to the status of people, to the operation of the law or to economic standards of living of individuals. Equality is understood as identicalness or fairness (Bylok, Sikora, Sztumska, 2001, pp. 61–62). The liberal and neoliberal economic model encompasses the notions of equality, fairness, responsibility and freedom. In the social market economic model, the state should guard the non-transferable human rights. A significant characteristic of a prosperous state is that it takes care of social security and guarantees social equality. The equality principle requires the authorities to provide equal life opportunities for particular social categories. Social equality and justice are consistent with the ethical standards of the adopted system of values. Universal values, rooted in natural law, have their tradition in democratic Europe. In the modern era, the EU countries adopt a development strategy that is based on the principle of equal development opportunities for specific regions and whole countries. In the 21st century, Europe is an area of growing social, educational, financial, political and ethnic inequalities. The dangers connected with the growing social and financial inequalities are indicated in the latest European programme against poverty and social exclusion. Currently, having metropolitan areas is a crucial determinant of the position of specific areas. After all, those are the most competitive places. They have the characteristics sought after by investors: a high level of education, qualifications, saturation with institutions, including the institutions of science and culture. In the modern world, the issue of education remains one of the most important elements in analysing the continuity and variation of the scale of inequalities. For a postmodern society, knowledge and education growth is one of the major factors limiting inequalities (as has already been pointed out by Bakunin, and later by Drucker, by referring to the privileged position of knowledge workers). However,

not everyone has the same opportunities to access education. Even in Poland the chances of going to prestigious universities and pursuing specialities that offer job opportunities and good incomes are reserved primarily for the youths of the best families. The chances of university education increase not so much by skills but by the level of cultural and social preparation that can be provided by an educated family. Belonging to a specific professional category determines the financial and social status of both individuals and whole social groups. Unfortunately, as stated by Domański, the example of Poland shows that despite the growth in the number of students, the “mechanisms of inheriting educational inequalities are a lasting link in the social structure” (Domański, 2009, p. 60). The lack of education, poverty, impoverishment, region of living, having many children, access to modern technologies – all these are factors of a structural nature. The current trends in the progressing stratification show that these will be mostly the conditions for social exclusion (Wierzbicki, 2015, p. 64). Many inequality measures have been developed, the majority of them pertaining to the inequalities arising from the distribution of resources. The Gini coefficient is one of the most popular measures, as a synthetic description of inequality in access to resources.

The article is based on the assumption that social policy may, and should, represent a specific type of response to the social problems of modern society and be a way of providing equal opportunities. “Social policy is connected with the instrumental use of power in a country in order to achieve versatile prosperity for all citizens, also addressing the socioeconomic inequalities and the power-related inequalities between particular groups of citizens. The areas covered by social policy include the issues of jobs and employment, social security, health, education and upbringing, housing and culture. Welfare policy is a type of social policy that focuses on social security and welfare transfer payments” (Panek, 2011, p. 183). Social policy is not limited to financial benefits; it also includes services, such as healthcare, training etc. Relevant literature lists numerous arguments in favour of the hypothesis that social inequalities, or one of their types, have negative effects on society (for example they exacerbate the phenomena considered to be problems) and that social policy may effectively reduce social inequalities (Szarfenberg, 2014, p. 57). There is scientific evidence that social policy in developed capitalist countries reduces poverty and income inequalities, even though research encounters various methodology-related problems (Szarfenberg, 2014, p. 70). Scandinavian countries are the most successful in limiting such phenomena. They combine contribution-based social policy solutions (high social security contributions) with the development of high-quality social services – healthcare, education, housing services and childcare. Economists claim that “the descriptions of frustrating inequalities and of activating inequalities should serve as determinants of the tasks of the state in the shaping of income distribution and of the tax and social policy” (Woźniak, 2014, p. 23). In economics, income transfer from the rich to the poor is often assumed to contribute to modernisation of the economy

and foster the accumulation of capital. In the above situation, the difference between individuals as to income and the standard of living are justified from the perspective of the economy. However, what fails to be considered is the exclusion of whole social groups from the modernisation process, which may adversely affect long-term GDP growth. When social inequalities continue to accumulate, the government should strive to eliminate the 'frustrating' inequalities and activate the positive ones. After all, social inequalities motivate people to upskill and take entrepreneurial actions, and they contribute to the accumulation of capital. But if the inequalities are too large, they are discouraging and make it difficult for the lower social strata to improve their financial status and professional qualifications, and as such they prevent optimum accumulation of capital. The growth of inequalities also leads to social conflicts and increased political instability (Malinowski, 2016, p. 166).

A contemporary factor that limits social inequalities is innovation of the economy, which should become a developmental priority. Innovation in a broad sense of the term means the ability to create new products and services. This goal requires institutional solutions and the development of a social policy that would support the responsibility of individuals for themselves and their professional activity. Innovation is inseparably connected with the use of modern IT and communication technologies, in both professional and private life. In modern times, social inequalities may be caused by globalisation. This considered, major developmental goals should include competitiveness and minimisation of developmental differences.

The discussed issues also require addressing the problem of a fair wage and a minimum wage, the development of human capital and the related programmes of adapting universities and education in general to the need of the market and to the development processes. Nowadays, having an education that is desired in the labour market makes it easier to find a job. Education and investing in human capital helps reduce social inequalities. Then there is social capital, suggesting the presence of interpersonal skills and cooperative skills, which are definitely positive for social development. Another challenge for social policy is the growing distance between the small group whose income is increasing and the expanding sphere of poverty. This results in the modernisation of some social groups and the exclusion of members from the sphere of poverty. Another task of modern social policy should be to help families, because large families are at the greatest risk of poverty.

The next major problem is unemployment, which means, from the perspective of a sociologist, the failure to utilise the potential of employees for social development. Due to its importance, social inequalities also represent a central issue for the field of ethics and for deliberations on morality and justice. New inequalities, the deepening divisions in a globalised world, privation and poverty of increasing numbers of social groups may lead to the manifestation of dissatisfaction by their members and to social conflicts.



## CONCLUSION

Modern society requires profound examination. After all, much has changed since the industrial society development phase. The changes are accelerating and multiplying. Just a few decades ago, social classes, social groups and occupations were still clear points of reference for social analyses. No longer. Inequalities still exist and they are still substantial, even if not as glaring as they used to be. Contemporary times are facing “an unprecedented transformation of differentiation and hierarchisation methods. The methods are no longer solely collective, but are becoming more individualised and variable instead” (Fitoussi, Rosanvallon, 2000, p. 19). The socio-occupational categories that used to serve as traditional points of reference for sociologists no longer apply to any rigid hierarchies. There are no stable differences in the modern world. Everything becomes non-transparent and dispersed. The growing difficulties in understanding the social structure have many consequences. Inequalities can only be counteracted if the problems are precisely defined. Otherwise, society and its problems become elusive. This unstable situation endangers the function of social sciences, which involves specifying remedies.

In the modern era, the past has a greater impact on social differentiation that it had until recently. The starting conditions have a decisive influence on the fate of individuals (Fitoussi, Rosanvallon, 2000, p. 23). Today, if someone wants to climb the social ladder, they must already have the capital at the start. Social respect is based on possessions. Contemporary society has both structural and “dynamic” inequalities (Fitoussi, Rosanvallon, 2000, p. 55). The latter means that employees from the same occupation category may have different job and employment situations. Such inequalities result from social evolution and the dynamics of society. The economy keeps changing. For those changes to be accepted, everyone must ultimately be able to find a job. There are plenty of inequalities in the modern world. They are actually connected with the description of social changes (Fitoussi, Rosanvallon, 2000, p. 55). They are related to the blurring of lines in the paid employment model, women’s labour, geographic inequalities, inter-generation inequalities, unequal access to welfare benefits, the complexity of tax systems, local benefits, unequal access to the financial system, and inequalities in daily life (e.g. regarding healthcare).

The presented analysis of social inequalities in the development of society is of sociological nature. It does not take into account the economic or psychological aspects. Nor is it comprehensive, as the addressed problem is extremely broad and complex. The article presents the terms, categories and sociological concepts regarding social inequalities and social development. Attempts were made to answer the questions: what are the reasons for inequalities throughout history, what are the reasons for inequalities in the modern post-industrial society, and can the growing inequalities be prevented? The conclusion arising from the work is that

social inequalities are generated by resources, and in particular by: power, money and prestige (which are too scarce to be distributed between individuals). Various types of inequalities have functioned in the development of society. In European society, inequalities have been changing over time. In this context, it must be emphasised that social inequalities and social development have always been intertwined. Social inequalities are currently one of major social problems. The analysis of the issues in question shows that the role of education and occupation in the modern world is increasing and that education is currently one of the basic resources that differentiates whole social groups and is a factor reducing the extreme inequalities. In modern society in the 21<sup>st</sup> century, unemployment and precariat are major social problems. Inequalities still exist and new ones keep emerging. From the perspective of sociological theory, they lead to difficulties in the development of society.

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### Summary

The aim of the article is to attempt to answer the questions: what are the causes of inequality throughout history, what are the causes of inequality in today's post-industrial society and how can the growing inequalities be counteracted. The analysis of the social inequalities in the development of society employs a sociological approach. The values that lead to the social inequalities: power, money and prestige, can be demonstrated as being part of the history of the inequalities taking place in European society and its development since the 19th century. The article focuses on the concept of social stratification becoming one with progressive social development. It introduces theories explaining social inequalities. Social inequality is classified as one of the most important

social problems. It stresses that inequality in life time is changing. It is noted that social inequality and economic development are reciprocal. It is pointed out that today's post-industrial society has increased the role of education and profession, and that education is today one of the essential goods that diversifies whole social groups; it is also a factor in the reduction of marginal inequality. It was considered that unemployment and precariat constitute an important social problem of the 21st century. It is shown that inequality continues to grow, leading to difficulties in the development of society. It presents a number of factors (in practice) which cause the reduction in social inequalities, as well as the negative consequences of social divisions.

*Keywords:* social inequalities, social stratification, society, social development, economic development, work, education, precaria, social policy.

### **Nierówności społeczne a rozwój społeczeństwa w perspektywie socjologicznej**

#### *Streszczenie*

Celem podjętego w artykule tematu jest próba odpowiedzi na pytanie: jakie są przyczyny powstawania nierówności na przestrzeni dziejów i jakie są przyczyny nierówności w współczesnym społeczeństwie postindustrialnym oraz jak przeciwdziałać narastającym nierównościom. Przedstawiona analiza nierówności społecznych w rozwoju społeczeństwa ma charakter socjologiczny. W artykule wskazano dobra generujące nierówności społeczne: władzę, pieniądze, prestiż; przedstawiono historię nierówności zachodzących w społeczeństwie europejskim wraz z jego rozwojem od XIX wieku. Zaprezentowano ideę stratyfikacji społecznej wraz z postępującym rozwojem społecznym. Ukazano teorie wyjaśniające nierówności społeczne. Nierówności społeczne zakwalifikowano jako jeden z najważniejszych problemów społecznych. Podkreślono, że nierówności w czasie ulegają zmianom. Zwrócono uwagę, że nierówności społeczne i rozwój ekonomiczny są wzajemnie sprzężone. Wskazano, że we współczesnym społeczeństwie postindustrialnym wzrosła rola wykształcenia i wykonywanego zawodu oraz, że to właśnie wykształcenie jest współcześnie jednym z podstawowych dóbr, które różnicuje całe grupy społeczne; jest także czynnikiem redukcji krańcowych nierówności. Uznano, że bezrobocie i prekariat stanowią ważny problem społeczny XXI wieku. Uwypuklono, że nierówności wciąż rosną prowadząc do pojawienia się trudności w rozwoju społeczeństwa. Zaprezentowano szereg czynników (w praktyce) wpływających na zmniejszenie nierówności społecznych, jak i negatywne konsekwencje wynikające z podziałów społecznych.

*Słowa kluczowe:* nierówności społeczne, stratyfikacja społeczna, społeczeństwo, rozwój społeczny, rozwój gospodarczy, praca, wykształcenie, prekaria, polityka społeczna.

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## Income redistribution and the state's fiscal system

### INTRODUCTION

As a result of the global financial crisis and the subsequent recession, income inequality has increased in most countries around the world. According to H. Immervoll and L. Richardson, the recent crisis, in contrast to previous global crises, was characterized by a higher impact on income distribution in OECD countries (Immervoll, Richardson, 2011, p. 4). In addition to changes in the labour market caused by recession, current global trends, such as demographic changes and changes in the size and composition of households, also impacted the level of inequality. The problem of income inequalities has not only affected the Anglo-Saxon model countries in their conduct of a liberal economic policy, but also countries classified as egalitarian, such as Germany or Sweden. Governments of many countries have attempted to hinder this process by using fiscal policy tools. Counteracting the increase in income inequality is one of the priorities of the state, according to the concept of maximin wellbeing (the level of overall wellbeing determines the wellbeing of the poorest social groups), or A. Sen's account of wellbeing (inequalities reduce the level of overall wellbeing).

The aim of this article is to classify OECD countries into fiscal models based on the criterion of the structure of tax revenues and public expenditure and to compare them in terms of the scope of redistribution by means of taxation and social transfers and the level of income inequalities. Based on a comparative analysis of the structure of tax revenues and public expenditure in 30 countries classified into six fiscal models and the Redistribution Index, Progression Index and Gini Index before tax and social transfers, the following hypotheses were verified: there is a relationship between the structure of tax revenues and public expenditure and the scope of redistribution; there is a relationship between the structure of tax revenues and public expenditure and the level of income inequalities; and countries with high levels of income inequality are characterized by a higher scope of re-

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distribution implemented through taxation and social transfers. The analysis uses data from the OECD database from 2004–2017. Classification of fiscal models was made by means of a cluster analysis using the Ward method.

#### THE IMPACT OF SELECTED FISCAL POLICY INSTRUMENTS ON THE REDISTRIBUTION SCOPE – LITERATURE REVIEW

Reducing inequality and the scope of poverty is the goal of the redistributive function of fiscal policy. Direct redistribution is carried out by the state taking over part of the revenues of individuals and legal entities, and then distributing them in the form of transfers to specific social groups (Zembura, 2006, p. 220). Public services such as health care or the education system also play an important redistributive role (indirect redistribution). The tool of redistribution by taxes is tax progression in personal income tax, tax exemptions and tax relief pursuing a similar purpose as expenditure on social purposes, tax-free amount. Public transfers that significantly affect the scope of redistribution include pensions, annuities, benefits for the disabled, and benefits for the unemployed.

The results of previous studies indicate that expenditure on social purposes has a greater impact on the scope of redistribution in comparison with taxation. H. Immervoll and L. Richardson (2011) state that the effect of expenditure on social goals exceeds the scope of impact of PIT and social security contributions (SSC) despite a much higher relative amount of these taxes in GDP in relation to social benefits. According to Ch. Wang and K. Caminada (2011) social transfers account for an average of 85% of the redistributive effect, while taxes only for 15%. Pensions have the highest impact on the scope of redistribution, however, the scale of their impact varies depending on the economic model of a given country. Also M. Hanni, R. Martner, A. Podesta (2015), based on the analysis of the impact of income tax and public transfers on distribution in 17 Latin American countries in 2011, found that on average 61% of redistribution was the result of public transfers, especially pensions and annuities. In their opinion, this is the result of low revenue from PIT in developing countries. Also the results of the research of J. Martinez-Vazquez, B. Moreno-Dodson and V. Vulovic (2012), carried out using the multiple linear regression method on a set of panel data from 150 countries from the period from 1970 to 2006, showed a higher impact of SSC on reducing income inequalities than that of PIT. Expenditure on health care also had a positive effect on income distribution. In contrast, consumption taxes, SSC, and expenditure on education led to an increase in inequality. According to E. Guillaud, M. Olckers and M. Zemmour (2017), various combinations of taxes and SSC achieve the same effect of reducing inequalities. Researchers did not observe in any of the analyzed 22 OECD countries a combination of high tax progression and high SSC in the period between 1999 and 2013. The research results quoted, apart from demonstrating a higher impact on the redistribution of SSC, also point to another important issue: the impact of individual

fiscal instruments varies across groups of countries. The goal of eliminating income inequalities can therefore be achieved by a combination of different measures. The effect of using individual redistribution tools depends on several factors.

Firstly, the factor determining the degree of impact of fiscal instruments on the scope of redistribution is the level of income differentiation resulting from the market mechanism. The more egalitarian the society, the weaker the impact of fiscal policy instruments. The second factor is the nature of individual taxes. The effect of the functioning of tax progression depends on the distribution of not the nominal but the average tax burden of individual income groups. The use of tax incentives, the beneficiaries of which are most often the most affluent, weakens tax progression. The third important factor is the structure of tax revenues and public expenditure, showing the scale of their impact. Tax progression with a low level of income from PIT will not play a significant redistributive role. This problem is especially true for developing countries that base their budget on indirect taxes. The regressive nature of indirect taxes and the high cost of administering the PIT system translating into low economic efficiency (PIT solutions were usually copied from highly developed countries, inadequate to the needs and situation of a developing economy) means that the progression introduced not only has no effect in the form of redistribution, but also raises costs for taxpayers (settlement costs and future costs in the form of taxation financing current administrative costs). In contrast, the structure of public expenditure shows the degree of use of direct and indirect redistribution. While the scope of redistribution measured using the Reynolds-Smolenski index shows the effect of expenditure on social purposes (direct redistribution tools), the impact of other categories of expenditure does not have a direct impact on the change in the distribution of income. However, it is possible to show the relationship between volume and share in the structure of these expenses, and the level of income inequality in society. Public expenditure related to the provision of services and the provision of public goods (e.g. education, health care, security) are an instrument to reduce income inequalities by also providing development opportunities for the poorest social groups.

#### PUBLIC FINANCE AS A COUNTRY CLASSIFICATION CRITERION — LITERATURE REVIEW

The scale of state interference in shaping the well-being of citizens and the set of means used to achieve this goal depends on the economic model developed over the years. In the academic literature one can find many classifications of economic models, separated on the basis of various criteria from the political, economic and social sphere. Due to the impact of public finances on almost every sphere of activity of economic entities, they are treated as one of the classification criteria. An important factor taken into account by the creators of the most popular classifications is the extent of the impact of fiscal instruments on the distribution of income in society.

The author of the classification of economic models most frequently cited in academic literature is G. Esping-Andersen (1990). He distinguished three main types of welfare state functioning in Western countries: the liberal (Anglo-Saxon, residual), conservative and social-democratic models. The classification was created based on the criteria of de commodification, social stratification and the public-private combination. According to Esping-Andersen, de commodification is “the degree to which individuals or families can uphold a socially acceptable standard of living independently of market participation” (Esping-Andersen, 1990, p. 37). The result in the de commodification category is shaped on the basis of the index of eligibility conditions for pensions, sickness benefits and unemployment benefits. Stratification is considered from the perspective of corporatism, statism, private health expenditure, eligibility for government assistance, universalism and equality of benefits (Powell, Barrientos, 2004, pp. 84–85). The liberal welfare regime (Great Britain, Ireland, the USA, Australia, Canada) is based on the lowest scope of state intervention. Small shifts are made in the level of social security established by market forces. The recipients of social benefits are people with the lowest income. The conservative or conservative-corporationist regime (Germany, the Netherlands, France and Belgium) offers a higher level of social benefits compared to the liberal one. Redistribution is based on social security as risk hedging instruments. In the social-democratic model (Sweden, Norway, Finland, Denmark) access to benefits is universal. The importance of combining family care functions with work is emphasized. The Mediterranean model (Italy, Spain, Portugal, Greece) was distinguished in subsequent years. It is also referred to as clientelistic because it is oriented towards satisfying the needs of the electorate and is based on the social security network (Golinowska, 2018, pp. 19–24 and 79–80). East Asian welfare states represent a separate unique regime. C. Aspalter (2006) and A. Walker and C.K. Wong (2005) as the characteristics of the Confucian welfare state model of Japan, South Korea, Taiwan and Singapore defined: a relatively low level of state intervention and social care, a high level of investment in education and emphasis on work ethics. In contrast, B. Farkas (2011; 2016) divided the post-socialist countries into three groups: Baltic, Visegrad and Southeastern Europe. Her research shows that the Baltic States, the Czech Republic, Slovakia, Romania and Bulgaria form a unique cluster, characterized by low social and education expenditure. On the other hand, Poland and Hungary are similar to the continental countries of Western Europe with relatively high social spending, especially on pensions (with low family benefits). D. Bohle and B. Greskovits (2012) also conducted a classification study on a group of post-socialist countries. Based on the criteria: government, corporatism, welfare state, macroeconomic coordination, market efficiency and democracy, they distinguished four types of capitalism of post-socialist economies: neoliberal (Estonia, Lithuania, Latvia), embedded neoliberal (Czech Republic, Poland, Slovakia, Hungary, Croatia), neocorporatist (Slovenia), countries with an unspecified profile of capitalism (countries of Southeastern Europe). These countries differ in the degree of acceptable state interference in providing social protection and compensation of the costs of systemic transformation (Bohle, Greskovits, 2012). Post-communist countries, like most de-



veloping countries, struggle with the problem of a high level of informal economy, inefficient tax administration, the lack of appropriate tools for monitoring and analyzing data, and the existence of politically strong groups of people with the highest incomes that prevent the construction of a tax system detrimental to their interests. This results in the creation of a specific tax structure, based mainly on indirect taxes and social security contributions, and a small contribution of company tax (Clements, Gupta, Inchauste, 2004, p. 12). Social transfers perform the redistributive function to the greatest extent. The impact of income taxation on the scope of redistribution is low due to the low progressive taxation (in most of these countries there is a linear tax on the income of individuals) and low budget income from PIT, CIT or property taxes.

### RESEARCH METHODOLOGY

The aim of the study was to identify fiscal models with a similar structure of tax revenues and public expenditure and to compare them in terms of the scope of redistribution through taxation and public transfers. The study was conducted on a group of 30 OECD countries. Data from the OECD database from 2004–2017 were used. The cluster analysis method was employed.

The analysis uses variables that are averaged results of the OECD indicators from 2004–2017:

- $X_1$  – average share of consumption taxes in the structure of tax revenues,
- $X_2$  – average share of property taxes in the structure of tax revenues,
- $X_3$  – average share of social security contributions in the structure of tax revenues (according to the OECD methodology),
- $X_4$  – average share of CIT in the structure of tax revenues,
- $X_5$  – average share of PIT in the structure of tax revenues,
- $X_6$  – average share of administrative expenditure in the structure of public expenditure,
- $X_7$  – average share of allocation expenditure in the structure of public expenditure,
- $X_8$  – average share of social expenditure in the structure of public expenditure,
- $X_9$  – average share of economic affairs in the structure of public expenditure.

Variable  $X_7$  was built based on the share index of educational expenditure, expenditure on health care, housing, environmental protection, recreation, national defense as well as security and public order. The isolation of variables  $X_6$ ,  $X_7$ ,  $X_8$  and  $X_9$  is associated with a typology of public expenditure: related to ensuring public authority the ability to perform tasks (administrative), related to the performance of social tasks of the state, related to the economic activity of the state and related to the provision of public goods and services. Variables  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$  refer to the classification of tax revenues developed by the OECD<sup>2</sup>.

<sup>2</sup> In the OECD classification, the term “taxes” is confined to compulsory, unrequited payments to general government. Taxes are unrequited in the sense that benefits provided by government to

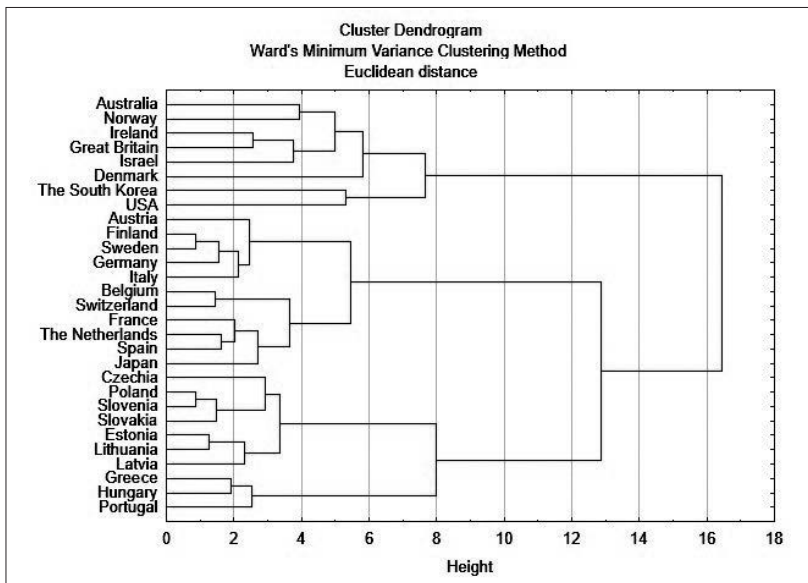
The cluster analysis was carried out using the Ward method. It involves combining clusters that ensure a minimum sum of squares of distance from the focus of the newly created cluster. This method is considered very effective (Stec, Janas, Kuliński, 2005, pp. 136–137). When forming clusters, Euclidean distance was used as a measure of the distance between objects. To eliminate the effect on the distance of differences between units between dimensions, data was standardized, as a result the variable obtained an average of 0 and a standard deviation of 1. The research results were presented using a dendrogram (Figure 1).

The choice of the number of classes into which the examined set of objects should be divided was made using the Hubert and Levine index:

$$G(u) = \frac{D(u) - I_w * D_{min}}{I_w * D_{max} - I_w * D_{min}}$$

Where:

- $D_{(u)}$  – the sum of all  $n_d$  within cluster distances,
- $D_{min}$  – is the sum of the  $n_d$  smallest pairwise distances in the data set,
- $D_{max}$  – is the sum of the  $n_d$  biggest pairwise distances.
- $I_w$  – number of pairwise distances in the data set.



**Figure 1. Classification of countries based on the structure of tax revenues and public expenditure**

Source: own study based on Statistica.

tax payers are not normally in proportion to their payments. For this reason, social security contributions are included in tax revenues.

**Table 1. Hubert and Levine index values for the number of classes examined**

Numer of classes	Index value	Numer of classes	Index value
2	0.5	6	0.238261
3	0.621673	6*	0.415975
4	0.538678	7	0.358741
5	0.283479	8	0.453821

Source: own study.

The  $G_{(n)}$  index assumes values in the range [0; 1]. The criterion for choosing the number of classes is the lowest level of the index. The study included from 2 to 8 classes. The index value was the lowest in the case of 6 classes, therefore it was decided to isolate 6 fiscal models. Six classes were obtained in two variants. The first variant was obtained by dividing Central and Eastern European countries into two clusters: the Czech Republic, Poland, Slovenia and Slovakia as well as Lithuania, Latvia and Estonia, leaving as a single cluster the group of Anglo-Saxon countries together with Denmark, South Korea and Israel. In the second variant, a group of Central and Eastern European countries was left as one cluster, and the following division was made: South Korea, the USA and Australia, Norway, Ireland, Great Britain, Israel and Denmark. The index value was determined in both variants. The first variant (6) obtained a lower result, therefore it was decided to classify fiscal models based on the division of countries used in it. The clusters isolated during the study are presented in Table 2. The statistical characteristics of the models obtained were based on the average of individual diagnostic features and the coefficient of variation. A comparative analysis of fiscal models in terms of the scope of redistribution by means of taxation and social transfers was made on the basis of the Redistribution Index, based on the Reynolds-Smolenski Index. It was calculated as the ratio of the difference between the Gini index of the distribution of income before and after tax and social transfers to the Gini index before tax. To determine the degree of PIT progression, the Progression Index was used, calculated as the ratio of the average income taxation of 167% and 67% of the average remuneration of a taxpayer with the status of a childless single.

Grouping countries on the basis of cluster analysis using the Ward method allowed us to distinguish fiscal models with a similar structure of tax revenues and public expenditure. The criterion differentiating models to the greatest extent was the share of social security contributions, consumption taxes and PIT in the structure of tax revenues and the share of social and allocation expenses in the structure of public expenditure. The fiscal models identified coincide with the classifications cited of economic models. Countries classified as G. Esping-Andersen's liberal market economies have been grouped into two fiscal models characterized by a high share of direct taxes and allocation expenditure. In contrast, the countries with a conservative model or coordinated market economy create two fiscal models with a high share of social expenditure in the structure of public expenditure. Contrary to the results of C. Aspalter (2006), A. Walker and C.K. Wong (2005), Asian countries

did not create a separate model: Japan showed a similar structure of tax revenues and public expenditure to the countries of continental Western Europe, and South Korea – similar to Australia, Denmark, Israel and the USA. The Mediterranean countries also were not classified into one model. Spain was put with Western Continental Europe, and Italy was classified with Austria, Germany, Finland and Sweden. Greece and Portugal together with Hungary have created a separate fiscal model, characterized by a lower share of expenditure on social purposes and a higher share of consumption taxes and administrative expenditure, compared to the other two models. In the case of post-socialist countries, fiscal models coincide the closest with the classification of D. Bohle and B. Greskovits (2012), which recognizes the Baltic republics as a type of neoliberal market economy, and the Czech Republic, Poland and Slovakia as a type of embedded neoliberal economy. Both fiscal models differ in the level of the share of social security contributions and social expenses. In terms of the structure of public revenues and public expenditure, the Czech Republic, Poland, Slovakia and Slovenia show similarity to countries considered in the abovementioned classifications as a coordinated / conservative market economy.

**Table 2. Fiscal models and their statistical characteristics – average share of individual categories of tax revenues and public expenditure (*m*) and coefficient of variation (*V*)**

Countries	I		II		III		IV		V		VI	
	<i>m</i>	<i>V</i>	<i>m</i>	<i>V</i>	<i>m</i>	<i>V</i>	<i>m</i>	<i>V</i>	<i>m</i>	<i>V</i>	<i>m</i>	<i>V</i>
	Australia, Denmark, Israel, South Korea, the USA, Great Britain, Ireland, Norway		Austria, Germany, Finland, Sweden, Italy		Belgium, Switzerland, France, the Netherlands, Spain, Japan		Czechia, Poland, Slovakia, Slovenia		Estonia, Lithuania, Latvia		Greece, Hungary, Portugal	
consumption	30.2	19.9	28.62	7.20	24.76	15.71	35.79	6.55	<b>40.13</b>	3.31	39.8	5.0
property	<b>8.62</b>	42.67	2.98	54.38	7.37	23.68	2.15	64.75	1.76	73.54	4.3	46.9
contributions	15.36	64.75	31.08	16.92	34.17	16.58	<b>40.21</b>	7.88	33.66	11.71	30.6	10.9
CIT	12.19	44.43	5.79	13.18	8.68	30.72	8.06	33.53	5.70	11.63	7.0	30.9
PIT	<b>31.1</b>	38.8	26.69	11.72	22.82	24.76	12.48	18.84	18.13	11.45	16.7	10.4
administrative	13.42	17.45	14.95	10.11	13.37	14.45	12.24	7.20	11.21	12.78	<b>18.8</b>	13.3
allocation	<b>46.53</b>	14.64	34.68	5.67	36.94	7.06	40.06	4.47	45.08	3.44	34.7	11.0
social	30.5	31.1	<b>41.39</b>	3.63	37.91	6.94	34.88	9.99	30.47	2.69	34.7	3.8
economy affairs	10.2	42.7	9.25	21.24	10.91	13.38	12.55	14.33	<b>12.82</b>	21.43	11.4	15.8
Gini before tax and transfers	0.47	13.39	0.48	6.12	0.46	10.60	0.45	5.38	0.49	3.38	<b>0.5</b>	5.4
R index	30.16	37.02	<b>41.38</b>	9.41	33.98	24.94	40.60	11.05	29.74	6.16	37.5	9.1
Progression Index	2.45	61.90	1.98	11.68	2.39	55.51	1.89	22.13	1.25	12.41	<b>3.2</b>	51.3

Source: own study.

Model I is characterized by the highest, among other models, share of property taxes, CIT and PIT in the structure of tax revenues and allocation expenditure in the structure of public expenditure. This model is also characterized by one of the lowest shares of expenses for social purposes and expenses supporting the economy, and, when considering tax revenues, the lowest share of social security contributions. In terms of the level of the progression index, this model ranks second. It should be noted, however, that the group is highly diversified in this area: Ireland, Israel and South Korea have a strong tax progression (progression index above 2.5), while in other countries the tax progressivity is low (progression index below 1.73). The analysis of the scope of redistribution with the use of the Redistribution Index showed that public authorities in the countries of this model use the fiscal policy instruments to change the market distribution of income to the lowest extent. However, it should be noted that this model also has a low average Gini index before tax and transfers. Therefore, the progressive taxation of income and property and the prioritization of allocation expenditure may affect the market distribution of income. Tax progression may discourage increasing workload to avoid an increase in the fiscal burden (Gerber, Klemm, Liu, Mylonas, 2018). In contrast, allocation expenditure is classified as productive expenditure that stimulates economic growth through, for example, impact on the quality of human capital. They also facilitate the improvement of the quality of life of the poorest social groups.

Model II is characterized by a high share of social expenditure in the structure of public expenditure, as well as the lowest share of allocation and economic affairs expenditure from the other models. The structure of tax revenues is balanced (however share of CIT and property taxes are low). Both in terms of the share of PIT, as well as social security contributions or consumption taxes, this model obtains the middle values for the examined group. Taking into account the structure of income, it can be stated that benefits for families related to raising children and benefits for the unemployed, which are usually financed from the central budget and not from special purpose funds, have a high redistributive significance in these countries. Countries of this model are also characterized by a moderate level of tax progression. The level of income inequality before tax and transfers takes the average values in the group. The countries of this model have the highest level of redistribution index among the countries surveyed. Thus, the combination of moderately progressive taxation with a broad catalog of social expenditure allows for a significant change in the market distribution of income, even despite the relatively low level of inequality before state interference.

Model III is characterized by the lowest share of consumption taxes in the structure of tax revenues among the other models, a relatively high share of property taxes and social security contributions, as well as a high share of social expenditure. It can therefore be concluded that the redistribution in this model takes place mainly through the system of social transfers and social security

contributions financing them, which may indicate the priority of pensions and annuities in the state's redistributive activity. However, the progression index is also at a high level, and the PIT share is average for the group. In this model, the level of income inequality before tax and transfers is low, which also confirms the results of studies by C. Gerber *et al.* (2018), regarding the impact of high progression on market income distribution. The extent of state redistribution is moderate, however, with such a low level of income inequality before fiscal interference, it can be concluded that the combination of social expenditure with progressive taxation has resulted in a relatively high scale of redistribution.

Model IV stands out from the other models with the highest share of social security contributions and the lowest share of PIT in the structure of tax revenues. Property taxes also have a low share in the structure of tax revenues. The PIT tax progression rate is at a low level. Given the structure of expenditure, this model has a relatively high share, compared to other models, of social, allocation and economic support expenditure. Thus, redistribution in this model takes place mainly through public expenditure in the form of social transfers and public services, and tax progression is of marginal importance. The high share of social security contributions demonstrates the high redistributive importance of retirement, disability, sickness benefits etc. This model achieved a high Redistribution Index at the lowest pre-tax and public transfer Gini index rates among the other models, so a high share of social spending despite the marginal importance of progressive taxation can contribute to high scope of redistribution even with low levels of inequality. The low level of income inequality as a result of market distribution may be affected by a high level of allocation and economy supporting expenditure.

Model V has the highest share of consumption taxes in the structure of tax revenues among all fiscal models. Income from property taxes, PIT and CIT have marginal significance. The PIT progression rate is at the lowest level among the models. Given the structure of public expenditure, this model stands out from the other models with the highest share of expenditure economic affairs and a high share of allocation expenditure. At the same time, it is characterized by high efficiency of the administrative system, as evidenced by low administrative expenses. Thus, this model focuses on indirect redistribution, ensuring wide access to public services financed mainly from consumption taxes. Based on the structure of tax revenues and public expenditure, it can be stated that the priority of the countries in this model is to stimulate economic growth, not to level income inequalities. This is reflected in the low level of Redistribution Index. Despite the high share of allocation expenditure and expenditure supporting the economy, the level of income inequality as a result of market distribution is at a high level. The reason may be the low share of income taxes in the structure of tax revenues and linear taxation of income.

Model VI stands out from the other models with the highest share of administrative expenses and almost the lowest allocation expenses. Consumption taxes predominate

in the structure of tax revenues. The share of income from PIT and CIT is relatively low compared to other models, and the share of property taxes and social security contributions take average values. The Progression index is the highest among all models. The countries of this model redistribute income mainly through social transfers financed by social security contributions and regressive taxes. The use of highly progressive taxation with a low share of PIT in the structure of income and the extensive use of regressive levies gives the impression that the instruments of fiscal policy are used in a chaotic manner without focusing on a specific goal. Despite the similar structure of tax revenues to that of model V, this model is marked by low efficiency of the administrative apparatus. Almost 1/5 of the funds are used to finance administrative purposes (including debt management). This model is distinguished by the highest level of the Gini index before tax and transfers with an average level of Redistribution Index. The reasons for the high level of inequality can be seen in the weak impact of tax progression due to the low share of PIT in the structure of income and the low share of allocation expenditure.

## CONCLUSION

The research results confirmed the hypothesis that there is a relationship between the structure of tax revenues and public expenditure, and the scope of redistribution. The results of the analysis of the scope of income redistribution by means of taxation and social transfers in the isolated fiscal models are consistent with the conclusions of previous studies, stating the high impact of social expenditure on the scope of income redistribution (Immervoll, Richardson, 2011; Wang, Caminada, 2011; Hanni, Martner, Podesta, 2015). Fiscal models with a high share in the structure of public expenditure were characterized by a high level of Redistribution Index, showing the ratio of the difference between the level of income inequality before and after tax and social transfers to the level of primary income inequality. In particular, benefits financed from social security contributions, such as pensions, annuities, etc. are important. They play the highest role in post-socialist countries (except the Baltic Republics) and in Austria, Germany, Finland, Sweden, Italy (model II). In contrast to post-socialist countries, in states of model II the share of income from PIT was at a relatively high level, and it played a moderate redistributive role. Thus model achieved the highest Redistribution Index. Thus, the combination of progressive taxation with social expenditure such as family benefits (child upbringing) or unemployment, also allows for a high degree of income redistribution. It should be noted, however, that fiscal models characterized by the highest share of consumption taxes in the structure of tax revenues with a relatively low share of social security contributions and PIT obtained a low Redistribution Index. The reasons can be found in the regressive nature of consumption taxes as well

as the insufficient impact of PIT and social transfers due to their low level in relation to other sources of public income and expenditure.

Comparative analysis also showed a relationship between the structure of tax revenues and public expenditure and the level of income inequalities. The models with a high share of allocation expenditure in the structure of public expenditure obtained the lowest average Gini index before tax and social transfers. The exception was the Baltic countries, where allocation expenditure had a high share in the structure of public expenditure, and which are characterized by a relatively high level of income inequality. Unlike other models with a low income inequality index, they were characterized by a high share of consumption taxes and a lack of progressive taxation of individuals' income. The results of studies by C. Gerber, A. Klemm, Li Liu, V. Mylonas (2018), conducted on a group of OECD countries between 1981 and 2015 showed that tax progression leads to a reduction in inequalities resulting from the operation of the market mechanism, even before redistributive activities of the state, distorting taxpayers' decisions regarding labour inputs. High progression may, in fact, discourage from increasing labour input if it results in a higher tax burden (Gerber, Klemm, Liu, Mylonas, 2018).

Based on the analysis of the level of inequalities arising as a result of the market mechanism and the scope of redistribution by means of taxation and social transfers as measured by the Redistribution Index, the hypothesis assuming the lower scope of redistribution in egalitarian countries was negatively verified. Two models characterized by a low level of income inequality achieved a high level of Redistribution Index. In contrast, in two models characterized by the highest income inequalities, the Redistribution Index was at a relatively low level. It should be noted, however, that in previous studies the extent of redistribution was measured as the difference of the Gini index before and after taxation, while in this article the scope of redistribution was expressed as the ratio of this difference to the level of inequality before tax and transfers.

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### Summary

The aim of the article was to classify the OECD countries in fiscal models, based on the criterion of the structure of tax revenues and public spending, and to compare them in terms of the scope of redistribution created by means of taxation and social transfers and the level of income inequality. The analysis was conducted on a group of 30 OECD countries using data from the OECD database from 2004–2017. The classification was made using a cluster analysis using the Ward method. In the course of the study, seven fiscal models were distinguished, in which countries were characterized by a similar share of individual categories of tax revenues and public expenditure. Comparative analysis of fiscal models showed the occurrence of a relationship between the structure of tax revenues and public expenditure, and the level of income inequalities and the scope of redistribution, measured using the Redistribution Index. Compared to other models, models with a high share of social expenditure in the structure of public spending obtained a higher Redistributive Index. The use of various types of social transfers, financed not only by social security contributions, but also by taxes, has significant redistributive significance. The study also revealed the impact of the structure public expenditure on the level of income inequality. Fiscal models with a high share of allocation

expenditures were characterized by a low level of income inequalities. The analysis did not confirm the assumption of a higher scale of redistribution in countries with a high level of income inequality.

*Keywords:* income redistribution, structure of tax revenues, structure of public expenditure, fiscal model, income inequalities.

## **Redystrybucja dochodów a system fiskalny państwa**

### *Streszczenie*

Celem artykułu było dokonanie klasyfikacji modeli fiskalnych państw OECD na podstawie kryterium struktury dochodów podatkowych i wydatków publicznych oraz porównanie ich pod względem skali redystrybucji dokonywanej przy pomocy opodatkowania i transferów socjalnych oraz poziomu nierówności dochodowych. Analiza została przeprowadzona na grupie 30 państw OECD z wykorzystaniem danych z bazy OECD z lat 2004–2017. Klasyfikacji dokonano przy pomocy analizy skupień z wykorzystaniem metody Warda. W toku badania wyodrębniono sześć modeli fiskalnych, w ramach których państwa charakteryzowały się zbliżonym udziałem poszczególnych kategorii dochodów podatkowych i wydatków publicznych. Analiza porównawcza modeli fiskalnych wykazała istnienie zależności między strukturą dochodów podatkowych i wydatków publicznych, a poziomem nierówności dochodowych oraz skalą redystrybucji dokonywaną przy pomocy opodatkowania i transferów socjalnych, mierzoną przy pomocy Indeksu Redystrybucji. Modele cechujące się wysokim udziałem wydatków na cele socjalne w strukturze wydatków publicznych uzyskały wyższy Indeks Redystrybucji na tle pozostałych modeli. Istotne znaczenie redystrybucyjne posiada stosowanie zróżnicowanych rodzajów transferów socjalnych, finansowanych nie tylko składkami na ubezpieczenia społeczne, ale i z podatków. Badanie ujawniło również wpływ struktury wydatków publicznych na poziom nierówności dochodowych. Modele fiskalne o wysokim udziale wydatków alokacyjnych cechowały się niskim poziomem nierówności dochodowych. Analiza nie potwierdziła założenia o wyższej skali redystrybucji w krajach o wysokim poziomie nierówności dochodowych.

*Słowa kluczowe:* redystrybucja dochodów, struktura dochodów podatkowych, struktura wydatków publicznych, model fiskalny, nierówności dochodowe.

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## Labour market flexibility in Japan: 1960–2018

### INTRODUCTION

The legal and institutional design of the labour market is a hot topic of political discussion in every country. This is because this framework is associated with a specific trade-off between the flexibility of economic adjustment and the security of employment. The flexibility of a labour market in this paper means the ability of a private sector to adjust the endowment of labour responding to any domestic and/or external shocks. As such, this flexibility is a necessary condition for market mechanisms to operate properly, allowing for a rebalancing of the national economy. However, depending only on this “invisible hand” mechanism generates a substantial risk of severe social costs, including increased inequality. Social issues are raised because of the often substantial unemployment experienced, as a response to economic contraction. There are numerous socio-economic problems in such a situation for the whole nation. Being aware of real threats to social life, most developed economies introduced diverse, and country-specific institutional and legal frameworks for their labour markets that aim at granting a different scope of employment security. In each case, however, it has always been achieved at the cost of compromising the abovementioned flexibility of the private sector in adjusting the endowment of labour. Democratic systems believe they can achieve social cohesion in this manner. Peaceful

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coexistence of all social groups should not be denied as a feature of high value, thus justifying some severe measures to achieve it.

Many developed countries, including Japan, have reached a nation-wide consensus of preventing unemployment at the cost of wage-adjustment flexibility and labour endowment adjustment flexibility. Restricting the private sector in the free management of what is still the most important factor of production (i.e. labour) has also potentially severe consequences for the national economy. Competing in global markets with countries offering full flexibility to their respective private sectors, especially in times of economic downturns, results in losing previously held positions, and share in global markets. This, in turn, leads to outright bankruptcies, and an unconditional reduction in employment, which imposes additional costs on governments and societies alike. On top of that, the rigidity of the domestic labour market can also cause another problem for governments in the form of reduced efficiency of traditional instruments used to stimulate the national economy. Those countries that experienced such situations as those described above after the 2008 crisis had no other choice but to directly support failing companies with public funds, or to nationalize them. Only these kinds of policy actions were there to prevent mass unemployment and further deterioration of economic conditions. Such contemporary unemployment prevention measures, however, came at a cost of future generations, which must be able to repay debts created today.

One goal of this paper is to present an extreme case of restricting private sector flexibility in managing labour endowment. The focus in this paper is on Japan, and its labour market, which is considered to be the most rigid among developed economies, as of 2019. These are the legal frameworks of this market, and its institutions that have been created by the government to achieve the ultimate goal of employment stability. It has been achieved effectively. In the course of this government's quest for socially desirable employment and working conditions, the Japanese private sector came up with a wide variety of adjustments in business management concerning labour endowment. As a consequence, corporations have maintained a certain scope of flexibility in responding to business cycles, and have continued to maintain a competitive position in some industries globally.

Research methods for the purpose of presenting developments in labour market flexibility in Japan include the analysis of the actual impact of crucial legal acts. Historical analysis of economic growth in post-war Japan resulted in a proposition to divide the whole period into distinctive sub-periods, using the real GDP rate as a criterion. The validity and applicability of the research method has been demonstrated by the approach based on the division of the post-war period. This way we achieved compliance with crucial changes to the underlying economic system, and the domestic labour market, its legal and institutional framework. Research effort was invested in matching macroeconomic developments with their impact on the domestic labour market. The impact presented consists of two dimensions: (1) the government response to the macroeconomic situation, and (2) the private sector response to government

policy in regard to labour market participants and institutions. A systematic analysis of exogenous events (like oil shocks) and processes (like demographic changes), and their influence on the domestic economy was cast against results of similar studies found in the literature. A literature review seems to validate observations and interpretation of the current analysis in all exclusive sub-periods.

Diligent readers will find in this paper a systematic review of Japanese labour market developments in regard to its legal framework and institutions from 1957 to 2018. One could offer an alternative interpretation of the situation in Japan since 1957, which would be most suitable for presentation in the Journal *Social Inequalities and Economic Growth*. This is because a reversed causality when interpreting the Japanese case also makes much sense. According to anonymous insiders, this was the government that continued with quite inefficient and unsuccessful attempts to protect Japanese workers against corporations. Exploited and depreciated by supervisors, overworked beyond all limits, reaching workload of 100 hours per week in the office are considered together as a very common situation for ‘salarymen’ (and ‘salary women’) in big corporations. Such ‘reversed-causality’ interpretation allows us to explain, among some other phenomena, the high suicide rate in Japan. If this is the correct interpretation, then Japan becomes a very interesting case for studying social inequality from the perspective of a labour market framework designed with the purpose of protecting a vulnerable workforce against cruel corporations, which do not respect individuals, and seek ways to maximize their profits at the cost of the society, environment, and its own employees. One could find more on this matter among conclusions, where results are cast against literature on exploitation of workers globally.

This paper presents an attempt to explain the labour market developments in Japan over the period from 1960–2018. Statistical data utilized in the analysis of the labour market situation comes from the database provided by the Cabinet Office of Japanese Government.

The paper is organized as follows. The next section presents a detailed history of labour law and labour market institutions in Japan (1957–2018) in five sub-periods, along with a systematic discussion on cause-consequence relationships between corporate employment practices and government (regulatory) response aimed at protecting the labour force in Japan. The following section offers an analysis of labour market behaviour in Japan at the beginning of 21<sup>st</sup> century. The last section provides conclusions.

## A HISTORY OF LABOUR LAW AND LABOUR MARKET INSTITUTIONS IN JAPAN

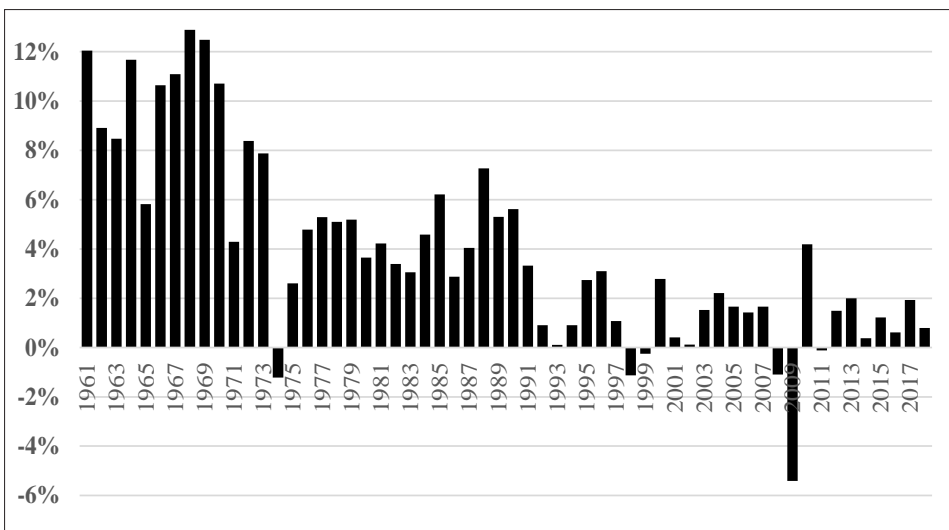
The enactment and revision of Labour Law in Japan since the 1960s was a response to changes in the social and macroeconomic situation. According to changes in the economic situation and associated legal and institutional framework adjustments, the period in focus is divided into five sub-periods:

- Circa 1960–1969: The unbelievable miracle;
- 1970–1979: The unfolding mystery;
- 1980–Circa 1991: Bubble trouble;
- Circa 1991–1996: The lost half-decade;
- 1997–2018: Ushinawareta-ni-ju-nen (two more decades of lost growth).

The division of the post-war period in Japan into five sub-periods is an original contribution of this paper. The real GDP growth rate used as a criterion for this division is different from that found in the literature. Other authors focusing on legal framework of the Japanese labour market suggest just three stages of its development (Kume, 1998, p. 15): I. 1945–1960, II. 1961–1975, III. 1975 – present. As the focus of the current study is on macroeconomic situation and its influence on labour market flexibility, the legal and institutional framework are considered endogenous. Then, the interpretation of the efficiency of the state in protecting the labour force against aggressive private sector management practices is the original contribution that this paper offers. Causality is therefore different from other studies available in the literature. This justifies the abovementioned sub-periods to organize the analysis.

#### CIRCA 1960–1969: THE UNBELIEVABLE MIRACLE

Japan experienced high real economic growth from the end of the 1950s to the beginning of the 1970s (Figure 1). In the early 1970s, significant changes in the international financial system took place, which negatively influenced the domestic economy.



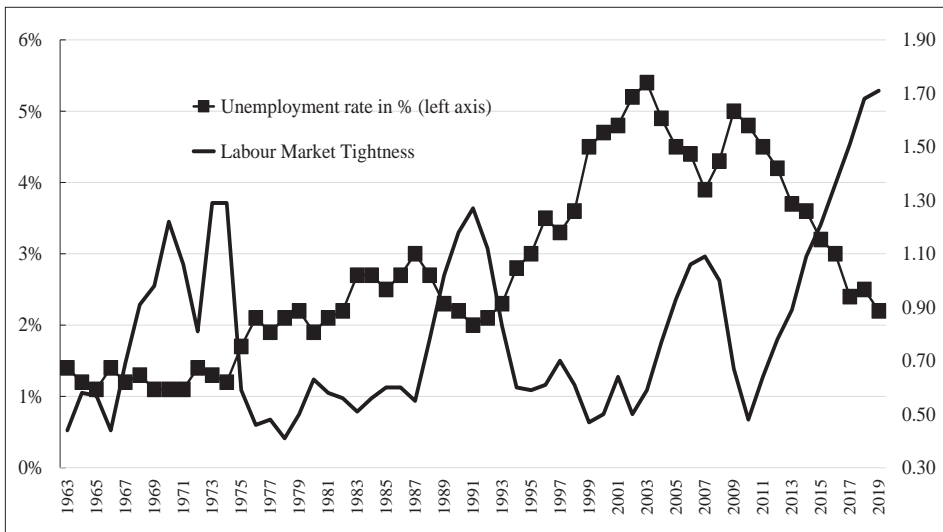
**Figure 1. The annual growth rate of the real GDP in Japan, 1960–2018**

Source: Author, based on World Development Indicators, World Bank, September 2019.

Although the growth rate of real GDP temporarily fell, it started to reach high levels after the 1960s. The effective ratio of job-offers-to-job-seekers rose year by year and reached 1.0 in 1967. The unemployment rate showed a tendency toward stabilization at the lowest level in post-war history (Figure 2).

The Japanese government only implemented active labour market policies for the first time in its post-war history after 1960. According to Kume (1998), in the preceding period (i.e. 1945–1960) labour movement was more militant, and the relations between labour, management and the government were chaotic and turbulent with long and large strikes. It was only from 1960s when labour-management relations became institutionalized.

The government had to deal with a serious structural change in the economy and the society that underwent industrialization and intensive migration from the primary sector to two the other sectors. The ultimate goal of government policies was to facilitate the acquisition of desired skills and knowledge by current and potential employees. A shortage of appropriate skills was the actual cause of the initial imbalance in the labour market in that period. The mismatch of skills offered and demanded resulted from the fact that workers were moving from agriculture and mining to the manufacturing industry and service sector (Figure 5). Due to a well-suited central government policy, it was possible to effectively improve the matching of skills between those required by employers and those offered by job seekers.



**Figure 2. Unemployment rate and labour market tightness (effective ratio of job offers-to-job seekers) in Japan, 1963–2019**

Source: Author, based on Labour Force Survey by Ministry of Internal Affairs and Communications; and Ministry of Health, Labour and Welfare.

The policy response included the introduction of two acts, the “Employment Measures Law” (1966) and the “Vocational Training Law” (1969). In the next period this problem was addressed by the enactment of the “Law concerning Special Measures for the Promotion of Employment of Middle-Aged and Older Persons” (1971), which provided support to middle-aged and older workers in finding work. This was one affirmative policy action aimed at developing the skills of workers rather than compensating jobless people. These actions strengthened and facilitated the adjustment mechanism of the labour market. In the Japanese institutional framework these legal acts introduced public employment agencies.

At the beginning of the first sub-period covered by this study, the “Minimum Wage Law” in Japan was enacted in 1959. This legal act was aimed at improving the situation of workers with the poorest skills. This fraction of the domestic labour force was suffering unequal treatment by employers. This situation created conditions for social unrest. Therefore, the government was aiming at achieving harmony in the society meant as decent existence of each and every household. Japan was heading towards an egalitarian system with rigid wage rules supporting citizens prone to failure in market economy. After an extensive amendment of this law in 1968, the minimum wage system was maintained until the beginning of the 2000s without any significant changes. Protection of the workers with the poorest skills was inefficient. Tachibanaki (1987) claims that the “Minimum Wage Law” in Japan did not have any serious impact on the labour market. There were two main reasons. First, the penalty for violating this law by employers was not even explicitly prescribed. Second, any violations in the form of underpaying employees in Japan, or the common sin of not paying for overtime worked, were never executed by attorneys and courts. This situation started to change only after 2016, but serious inertia in court rulings has continued, and courts persistently support corporations rather than complaining employees. Violating the minimum wage law was a marginal issue because most firms paid higher wages than the minimum wage level in that period. Originally, that law was enacted in 1947 when Japan was suffering from the serious damage of World War II. In this way, the government tried to prevent hiring workers at an extremely low wage. As such, government initiative should be appreciated, as aimed at the protection of the work force against aggressive management culture. After that initial difficult period, the Japanese economy experienced high real economic growth and the income earned by workers systematically grew, remaining above the minimum level.

#### 1970–1979: THE UNFOLDING MYSTERY

From the middle of the 1970s, the Japanese economy started to suffer from the systematic appreciation of the Yen due to the end of the Bretton Woods Era of fixed exchange rates. The growth rate of real GDP experienced a sharp decline and the economy entered a recession (1974–1976 in Figure 1) caused by the oil shocks. The unemployment rate was maintained at a relatively lower level in com-



parison with other industrialized countries until 1974. Later, it exceeded two per cent in the late 1970s (Figure 2). The effective ratio of job-offers-to-job-seekers decreased sharply and remained below unity (Figure 2). This meant that there were fewer job offers than the number of job seekers, which represents a situation prone to increase the unemployment rate. The explanation of this decrease is associated with the increase in production costs due to a sharp rise in the price of crude oil. Enterprises tried to counteract this negative factor at that time by reducing labour costs by means of decreasing employment. The rise in unemployment and the decline in the effective ratio of job-offers-to-job-seekers reflect these adjustments.

Several other important laws were established and developed in that period. The government, facing serious pressures on the private sector resulting from the first oil shock, decided to take action. It can, again, be perceived as facilitating social harmony, and reducing negative effects of unemployment by restricting companies in their adjustments of the labour they maintain. The “Unemployment Insurance Law”, established in 1947, was extensively amended and became the “Employment Insurance Law” in 1974. According to Sugeno (2002), the main points of this law may be summarized as follows. First, the system was reinforced to compensate low-wage earners, and middle-aged, and older people for losing their jobs. Harmony and peace in society was granted by means of public transfers. Jobless citizens still had a stable source of income to support their household. Second, employers were provided with subsidies to retain workers through short-time work schedules. Government support in this form restricted real adjustments necessary to solve the underlying problem by, for example moving the workforce to a different sector (or a company). The aim of harmony was achieved. One can clearly see that these measures were of a short-term nature to help companies survive hostile conditions, and return to the previous employment level after a crisis.

When analyzing the employment insurance system (and the law) in Japan it is necessary to understand how a seniority-based system operates. First, older workers receive high wages simply because of age, not skills, productivity, or achievements. Second, they retire at an age between 60 and 70, which is their individual choice. However, retiring at 60 results in receiving a lower monthly pension than in the case of those who retire between 65 and 70. The retirement age is in fact agreed on with employers, and is included in the employment contract. The employer may then rehire these workers (after they officially retire) as part-time workers (using short-time work schedules). In Japan there are two reasons for that. On one hand, old employees often possess desired firm-specific skills and experience that is of value for managers. On the other hand, the young generation is far less numerous to fill the openings. On top of that one should remember the relatively much better health and agility of the Japanese, even in their 60s and 70s, and in some cases even 80s, which makes even full-time work quite possible.

The abovementioned system was consistent with the purpose of the employment stabilization policy. Hashimoto (1993), by using the interrelated factor

demand model, showed that the “Employment Insurance Law” played a crucial role in stabilizing employment in Japan. He concluded that this “Law” of 1974, decreased the volatility of employment and increased the volatility of hours worked over a business cycle. The Introduction of the “Case Law Establishing The Doctrine of Abuse of The Right of Dismissal” in the late 1970s strengthened this adjustment in the behaviour of employers. This “Case Law” was put into statutory form as a provision of the “Labour Standard Law” in 2003.

Stabilization policies by the government and social responsibility-motivated efforts by firms have been recognized as effective in minimizing the consequences of the second oil crisis. Government response to support industries and the areas which suffered from the effects of the debacles in the 1970s took the form of two acts: (1) The “Law Concerning Temporary Measures for Workers Displaced from Specified Depressed Industries” (1977) and (2) the “Law Concerning Temporary Measures for Workers Displaced from Specified Depressed Areas” (1978). After historically low levels of job offers-to-job seekers, one may observe a recovery from 1979 to 1981 during which time the unemployment rate decreased (Figure 2).

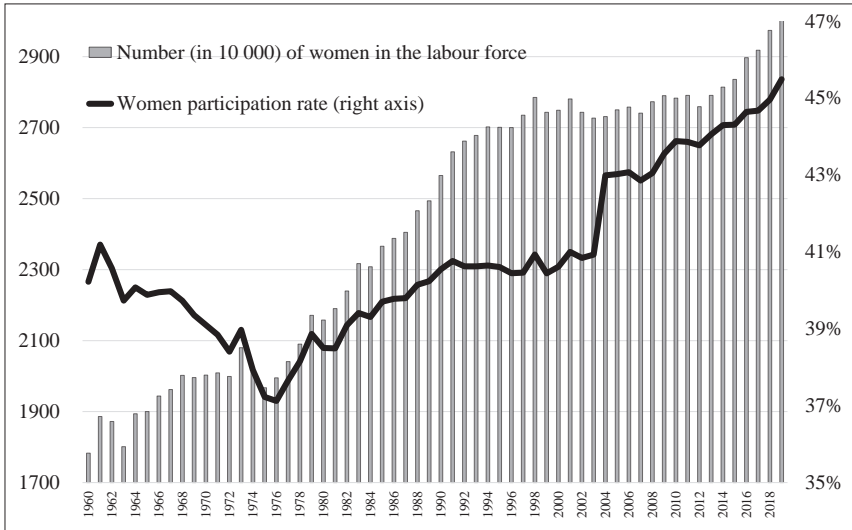
#### 1980–CIRCA 1991: BUBBLE TROUBLE

Due to a well-suited policy response, the second oil crisis did not seem to have a significant impact on the Japanese economy. However, the GDP growth rate remained at low levels at the beginning of the 1980s. This was a result of the fact that economic growth in Japan mostly depended on exports. Since the world-wide depression initiated by the oil crisis, Japan’s export sector suffered as a result of stagnation in its major overseas markets. The unemployment rate, which had been below two per cent until 1975, increased and reached three per cent at the end of 1987 (Figure 2).

As described by Tachibanaki (1987), in the early 1980s discouraged women lost the will to seek jobs and left the labour market. The first oil crisis resulted in an increase in the unemployment rate and caused the job-offers-to-job-seekers index to remain below unity. The labour force changed its composition due to changes in preferences and behaviour in Japanese society. Thus official statistics should not be directly compared over time, as they do not seem to be comparable, describing different a labour force.

In addition, the first oil crisis in 1970s led to a lower rate of participation of women (Figure 3). Such an effect prevented the official unemployment rate from rising drastically (Tachibanaki, 1987), which was the case in all other industrialized countries back then. Discouraged women who left the labour market were not counted as part of the labour force in Japan. According to the definition of the unemployment rate, workers who become part of the non-labour force reduce the unemployment rate because this rate ( $u$ ) is calculated by  $u = \frac{\text{the number of unemployed workers}}{\text{the number of employed workers} + \text{the number of unemployed}}$

workers). These discouraged women reduced both the numerator and the denominator of the ratio, and the unemployment rate responded accordingly.

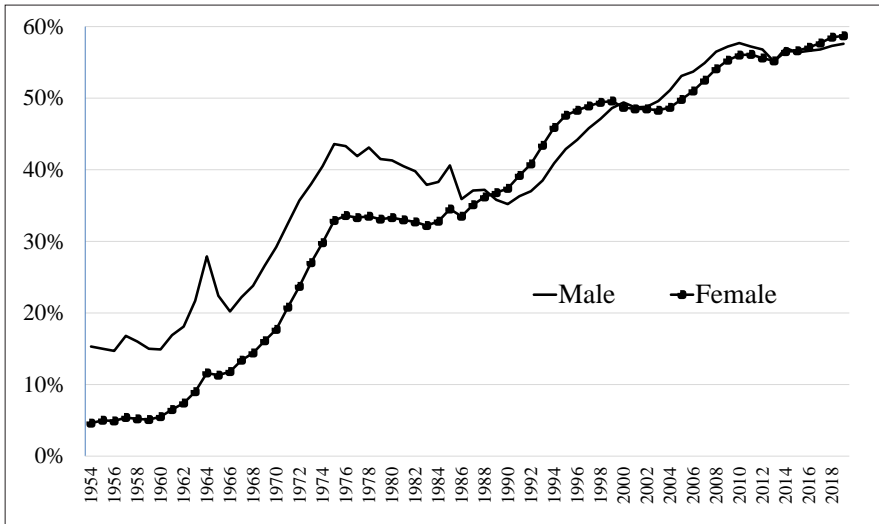


**Figure 3. The number of women in the labour force in Japan, and their participation rate, 1960–2019**

Source: Author, based on Labour Force Survey by the Ministry of Internal Affairs and Communications.

During the period from the late 1970s to the beginning of the 1990s, the share of women in the labour force steadily increased and their participation rate reached 50 per cent in 1990. This tendency did not seem to be affected by the business cycle or economic policy. One reason for the decrease in the number of discouraged female workers was cultural and institutional change. As Tachibana-ki (1987) observed, women had a strong will to be employed and part-time jobs became popular in Japan. However, there may be two other explanations for this change in work incentives for women. First, the number of women who enrolled in institutions of higher education increased. It had already reached a high level in 1976 (see Figure 4). Second, labour market policies aimed at stable employment created incentives for family budgets to be supported by income earned by women. Since work time could be flexibly reduced by firms during a recession, the income of male workers was decreasing. This resulted in a deterioration of family budgets and generated demand for income from an additional source. An increase in the female workforce made it difficult to balance demand and supply in the domestic labour market. Raymo and Lim (2011) offer an insight into decisions by Japanese women in this regard. They find a strong effect of educational differences. It may be interesting to note that university graduates are more likely to remain in the labour force (no matter the family situation), and at the same time

less likely to reenter the labour force, if they leave the labour force due to a family situation (for example, to deliver a child). Raymo and Lim (2011) explain this difference by the fact that university graduates in Japan have regular full-time jobs that are relatively highly attractive (a reason for not leaving the labour force), and difficult to obtain back after leaving her position (a reason for not reentering the labour force).



**Figure 4. The advancement rate (in per cent) to university and junior college in Japan, 1954–2018**

Source: Author, based on data provided by The Ministry of Education, Culture, Sports, Science and Technology.

On the other hand, there were some economic developments as of 1985. The Plaza Agreement, signed in 1985, aimed at resolving the US trade deficit by joint central bank interventions in foreign exchange markets. As a consequence, the Japanese Yen appreciated by 51 per cent over the two years that followed. As pointed out by Kurosaka (1988), Japanese firms survived in this hostile environment by decreasing production costs exhaustively. Although the purpose of this agreement was to reduce the trade deficit between the United States and Japan, it did not work to eliminate that problem because of import restrictions in Japan and the cost cuts conducted by Japanese firms to maintain their competitive position. Another domestic consequence of monetary policy resulting from the Plaza Agreement was the asset price bubble that followed. From the mid-1980s to the beginning of the 1990s, Japan experienced record-breaking boom times. The Nikkei Stock Average (TSE 225 Issues) reached 38,915 Yen, the highest level in history. The indices of the labour market also performed well from 1988 onward. According to Figure 2, the effective ratio of job offers-to-job seekers rose steeply

and reached 1.4 (annual average) in 1990. Although the unemployment rate continued to rise until 1987, it reversed direction and decreased by almost two percentage points over the following five years. In such circumstances, Sugeno (2002) notes that small and medium-sized enterprises faced a shortage of labour and the “Law to Improve Employment Management to Secure the Work Force in Small and Medium Enterprises” was enacted to assist these firms. At that time, the labour market experienced great demand (see Figure 2). People were willing to work for large enterprises because they were receiving high earnings from such firms along with high social status. At the same time, small and medium-sized firms suffered from a serious labour shortage. This situation buffered, to some extent, the initial shock after the collapse of the bubble economy.

Regarding the structure of the economy, the share of the tertiary sector (services) was steadily growing, while that of the primary sector (agriculture) in 1990 became almost one-fifth of that in 1960 (Figure 5). In general, when workers moved from one industry to another, seeking jobs, skills possessed did not coincide with skills required. This was a structural unemployment case of a rather long-term nature. The existence of this structural unemployment was one of the most severe problems to be resolved. Some of the labour laws enacted in that period promoted diversification of jobs, and the other ones promoted the equal treatment of workers. The “Law to Secure Reasonable Operation of Worker Dispatching Enterprises and Proper Employment Conditions of Dispatched Workers” (1985) dealt with problems of the service sector, which is a major category of the tertiary sector.

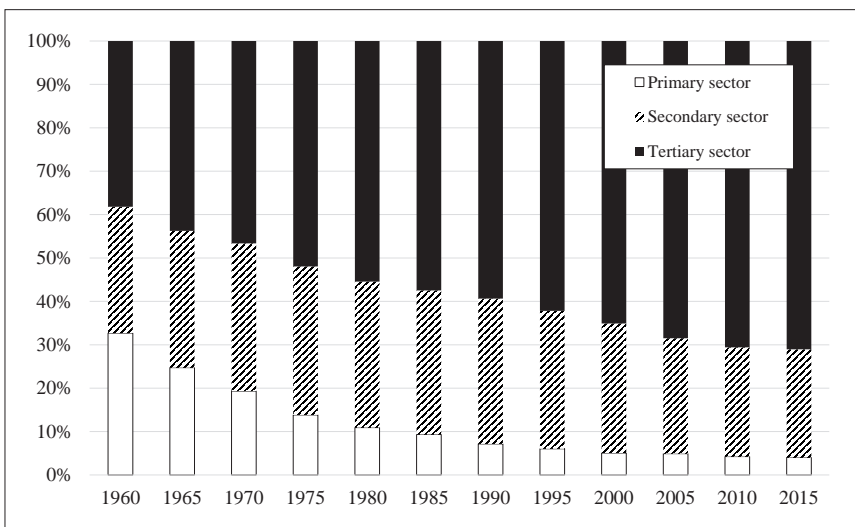


Figure 5. Employment structure in Japan by sector, 1960–2000

Source: Author, based on Labour Force Survey by the Ministry of Internal Affairs and Communications.

Figure 5 presents a period in Japanese economic history when a seminal change in employment by sector took place. Since the turn of the millennium this structure remains unchanged.

The expansion of the services sector also generated jobs that did not require high professional skills and knowledge. For example, in the chain restaurant industry, each restaurant's staff may be composed of one regular full-time worker and several temporary workers. The latter workers make food and serve meals or perform simple tasks that do not require professional skills typical for the tertiary sector. If there is only one regular worker (who is in charge and manages the restaurant), he (or she) must work long hours and many of these people consequently suffer health issues. This is one of many serious management problems in Japan.

At that time, the Japanese government had been prohibiting private manpower businesses (Sugeno, 2002). Manpower business means "job referral services". According to Sugeno (2002), manpower business by private enterprises was prohibited by the "Employment Stabilization Law" enacted in 1947 due to the fear that private firms would provide workers with "crude labour relations" and exploit workers. The Japanese government decided that workers should be protected from having disadvantageous labour conditions. This is because it would have been difficult for workers to get information about jobs and negotiate with employers about employment conditions right after World War II (information technology was not widespread and there was an excess supply of workers compared to the number of jobs offers in those days). Private agencies then had a strong bargaining position, which created the risk of exploiting workers. The Japanese government seemed to be aware of this potential problem for a long time. With the enactment of the law, another important element of the institutional framework was introduced. These private job referral agencies were allowed to levy registration fees on enterprises that were seeking workers. Some predetermined organizations, such as farmers' cooperatives and fishery cooperatives, were from the very beginning permitted to engage in job referral services without levying registration fees on firms. Such preferential treatment for agriculture and fisherman was a result of insufficient food production in Japan (64% of domestic demand in the 1960s and only 38% in 2019). In general, the lack of costs for job seekers was associated with the services provided by job referral agencies. There was an exception for people who wanted to get predetermined jobs. For example, these agencies could charge referral fees from job seekers who wanted to work as on-screen (or TV) talents, or fashion models. Furthermore, agencies could levy fees on workers who were seeking jobs as managerial executives or engineers, as long as the annual income of these jobs was higher than 7,000,000 yen. In addition, there were two kinds of job referral agencies. Some of them offered full-time jobs and others specialized

only in part-time jobs. There were also private manpower business entities that offered intermediation for both kinds of employment. This law opened the door for workers that were hired as dispatched workers, distinguished from full-time regular workers and part-time workers. However, under the “Law to Secure The Reasonable Operation of Worker Dispatching Enterprises and Proper Employment Conditions For Dispatched Workers” (1985) workers could only be dispatched to a narrowly-defined set of occupations. This restriction did not have any significant impact on the labour market (the restriction was relaxed by the revision of this law in 1999 and 2003). One should note that these non-regular workers were not covered by the traditional Japanese employment system, such as the seniority-based wage system, lifetime employment, and organizing enterprise unions. An “enterprise union” is a union organized in every company. It is different from unions such as industrial unions and occupational unions. The enterprise union is composed of representative workers who are employed in “the enterprise” and its role is to negotiate work conditions with this enterprise. This is one element of the traditional Japanese employment system. Improving work conditions for non-regular workers has been recognized as an important issue, but it still has not been fundamentally resolved. Precise descriptions of worker-dispatching businesses are provided by Sugeno (2006). Motivation to enact the “Worker Dispatching Law” was a need for cheap labour because of the appreciation of the Japanese yen in that period and the expansion of the tertiary sector.

In the same year, the “Equal Employment Opportunity Law between Men and Women” (the Equal Employment Opportunity Law) was established. Male and female roles in Japanese society and their activities in the workplace were conventionally separated. This traditional approach disturbed the realization of equal wages and equal treatment. As pointed out by Sugeno (2006), there were clear differences between genders in:

- a. occupational categories,
- b. opportunities for job training and promotion
- c. length of service

The above resulted in lower wages for women. It was therefore difficult for women to achieve high social status. At the global level, in 1979, the United Nations had already adopted the “Convention Concerning the Elimination of All Forms of Discrimination against Women”. The world trend toward equal treatment of both genders was supposed to drive the Japanese government to establish an “Equal Employment Opportunity Law”. Shorter service by women was a result of the protection offered by the “Labour Standard Law” of household responsibilities. That is, the rules prescribed in the “Labour Standard Law” were incompatible with the objective of the “Equal Employment Opportunity Law”. What is important is that this law only imposed a “duty to endeavor” on firms. Sugeno

(2006) claims that the purpose of the law was not “prohibiting discrimination against both men and women”, but “seeking to advance women workers’ job awareness and abilities” and “incorporating measures to assist women’s employment in light of their childcare and household burdens” (Sugeno, 2006). On the other hand, as shown in Figure 4, the advancement rate of women to university and junior college started to increase in 1985. The trend toward equal treatment of both sexes gave female workers motivation to study in order to obtain better employment, higher wages, and to develop a professional career. The “Equal Employment Opportunity Law” established only fundamental rules of equal treatment of both genders (the revised “Equal Employment Opportunity Law” was enacted in 1997). Another attempt to address some social problems in this area took the form of the “Law Concerning the Welfare of Workers Who Take Care of Children or Other Family Members Including Child Care and Family Care Leave,” enacted in 1991. It was aimed at assisting the division of household responsibilities between the sexes. This was an additional step towards the goal of equal treatment.

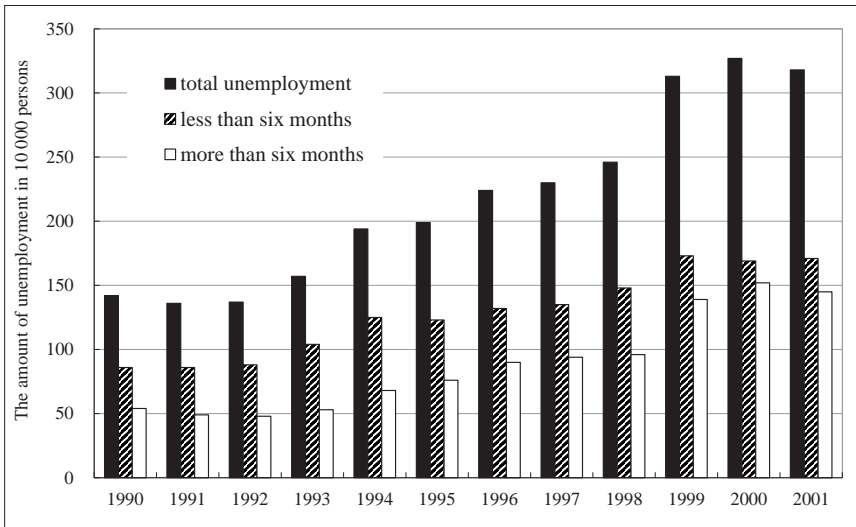
The laws established before 1985 had goals of resolving contemporary unemployment problems. They aimed at providing adequate compensation to unemployed citizens and constructing a rigid employment system, both of which did not easily generate unemployment. On the other hand, laws enacted around 1985 (except the “Law concerning Stabilization of Employment of Older Persons” (1986)) were a result of policies focused on working conditions and altering working conditions in line with equal treatment between the genders, a society with an aging population due to a low birth rate, and a diversified employment status.

#### CIRCA 1991–1996: THE LOST HALF-DECADE

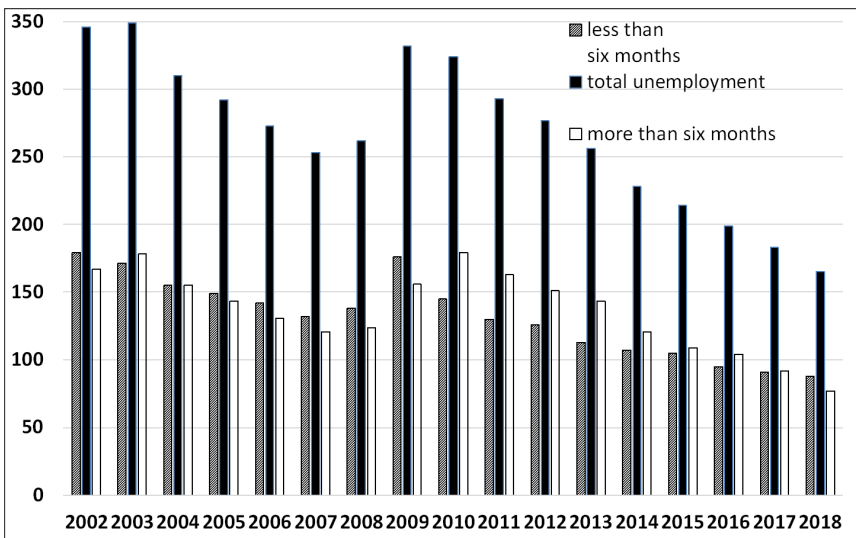
After peaking in 1989, the Nikkei Stock Average plunged sharply at the beginning of the 1990s and stayed at the level of 20,000 Yen. The Japanese economy entered a long recession, the so-called “Lost Decade” (or “Three Decades” as we might say today in 2019). As pointed out by Genda (2004), the situation in the labour market was not severe until 1997 because the construction industry, the service sector and medium and small enterprises extensively contributed to job creation at that period. Following this, from 1997 the unemployment started gradually increasing. Firms tried to overcome the recession by reducing the number of newly employed workers (mainly graduates) and decreasing the number of hours worked. Figure 6 focuses on this particular period, allowing for an understanding of the nature of the situation experienced by workforce in Japan after the speculation bubble burst.

In 1993, the “Law for the Improvement of Employment Management of Short-Time Workers” was established. This law focused on part-time workers whose prescribed weekly workload was relatively lower than those of employees with full-time contracts at the same enterprise.





(a)



(b)

**Figure 6. Time structure of unemployment (in 10 000 persons) in Japan, 1990–2001 (a) and 2002–2018 (b)**

Source: Author, based on the Labour Force Survey, The Ministry of Internal Affairs and Communications.

The major problem of managing part-time jobs was due to a lack of clearly specified working conditions for part-time workers. This law required employers to deliver only a “hiring notice document.” This document states the working con-

ditions of part-time work. Employers were from then on supposed to undertake “a duty to endeavor” to seek the opinion of the majority representatives of part-time workers. The need for preparing such a legal solution was recognized because of an increase in the share of part-time workers in the total work force. A rise in the importance (both economic and social) of part-time work resulted.

As stated in Sugeno (2006), the aging of Japanese society required extensive reform of the public pension system in the form of increased age at which one acquired the right to receive pensions. In 1994, it was agreed that that this age should be raised from 60 to 65 in several stages. At the same time, firms were supposed to make efforts to employ workers until the age of 65. This was prescribed by the revision of the “Older Persons’ Employment Stabilization Law” in 1994.

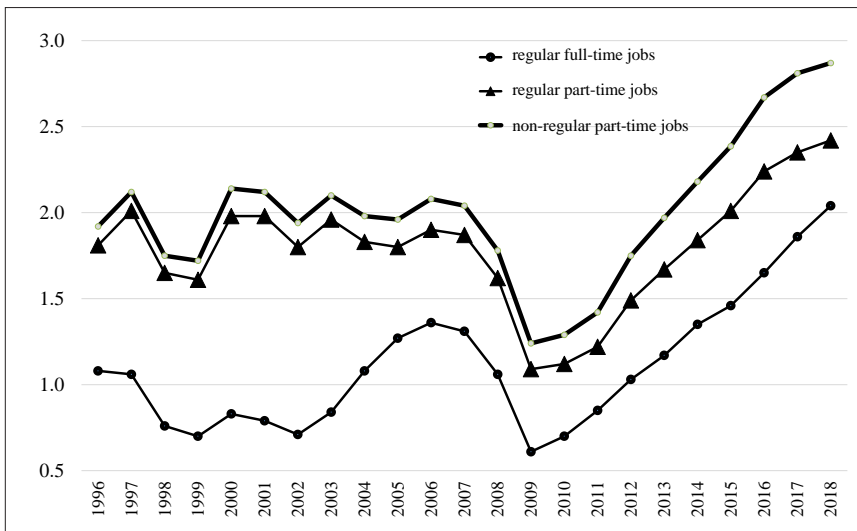
In addition, the “Special Measures Law Concerning Employment Stabilization of Workers in Specified Depressed Industries”, established in 1995, aimed at mitigating the impact of the collapse of the bubble economy and the introduction of ICT (Information and Communication Technology) both of which decreased the demand for labour. The former reduced domestic absorption and thus the need for workforce, while the latter substituted labour with capital due to new methods of production. These phenomena had an asymmetric impact on industries in the domestic economy. Therefore, the government had to take action in order to aid workers in industries that suffered relatively more. However, one can observe in Figure 6 that both the total amount of unemployment and long-term unemployment (defined as remaining unemployed for longer than six months) increased sharply from 1998 to 1999. Evaluating labour market policy in this period is difficult because the year 1997 has been recognized by Genda (2004, p. 5) as a turning point. One should also note that the unemployment rate had continuously risen since 1992 (see Figure 2 and Figure 6), but the effective ratio of job offers-to-job seekers exhibited a tendency to increase and, as a consequence, the rise in unemployment was relatively small in 1996 and in 1997. It may be said that these latter facts indicated a recovery of the economy at that time.

1997–CIRCA 2018: USHINAWARETA-NI-JU-NEN  
(TWO MORE DECADES OF LOST GROWTH)

In 1997, the Japanese economy was in a period of transition. There was a sign of recovery from the economic downturn resulting from the collapse of the bubble economy until that moment. Fiscal policy conducted by the Japanese government and the financial crisis are recognized as key factors in the recession in subsequent periods (Młodkowski, 2010). The government raised the consumption tax from 3 per cent to 5 per cent, and then afterwards in April 2014 to 8 per cent and to 10 per cent from October 2019 (while food and a few other special categories of goods and services have remained taxed at 8%). Public spending was first reduced because it was necessary to improve fiscal balance, but the current (2015–2019) era of Abenomics returned to aggressive public spending aimed at stimulating domestic economy.

According to Ihuri, Nakazato, and Kawade this initial balanced-budget policy aimed at fiscal tightening had little impact on economic activity (Ihuri, Nakazato, and Kawade, 2003). Despite the following information, negative developments should be attributed to the 1997–1998 Asian financial crisis and not the fiscal contraction practiced before Abenomics. Using *Financial and Economic Statistics Monthly*, published by the Bank of Japan, one may recognize that the rate of increase in the number of corporate bankruptcies rose rapidly in 1997 to 11.0 per cent and to 15.3 per cent in 1998. This deterioration was a result of financial institution bankruptcies. There was no doubt that the Japanese economy had moved into a prolonged recession in the late 1990s. This was in sharp contrast to the previously observed short recovery period.

The Japanese labour market responded directly to this economic slump. Genda (2004, p. 6) and Abe (2005) claim that the increase in the unemployment rate at that time was caused by financing problems in the construction industry and service sector at medium and small-sized enterprises. Effort exerted by firms to maintain employment reached its limit and Japanese enterprises had no other choice but to extensively dismiss employees. In particular, enterprises terminated employment of middle-aged and senior workers.



**Figure 7. The effective ratio of job offers-to-new job seekers for three categories of jobs in Japan, 1996–2018**

Source: Author, based on Labour Force Survey, The Ministry of Internal Affairs and Communications.

Furthermore, the effective ratio for new job offers and new job seekers for any type of employment (Figure 7) decreased from 1997 to 1998. Although the situation in the job market for part-time jobs improved in 1999 and 2000, the market for regular full-time workers had to wait for positive developments until 2002.

Labour laws established from 1997 to 2008 shifted their purpose from maintaining employment and providing assistance for unemployed workers to encouraging job creation and developing the vocational ability of workers. The government relaxed regulations for paid-for job-search services and permitted the existence of private employment agencies. In 1997, the International Labour Organization Treaty C181 was approved and came into force in 2000. It regarded private employment agencies as role models for intermediaries and proxies in the labour market. Since then, policies toward relaxation of regulations for dispatching workers were embodied as an enactment of laws. In Japan, this trend began by revision of the “Employment Security Law” in 1999. In the same year, the “Law to Secure the Reasonable Operation of Worker Dispatching Enterprises and Proper Employment Conditions for Dispatched Workers” was revised. These revisions expanded the range of occupations for which workers could be dispatched (a change from a positive listing to a negative listing). This range of occupations was further revised in 2003 (“the Employment Security Law” was revised in conjunction with the revision of this law). In 2009 the proportion of dispatched workers to non-regular workers was about 11 per cent, which should not be regarded as high. This ratio has steadily increased.

The number of part-time jobs available has also increased. Firms have preferred part-time workers to full-time employees because of the greater flexibility in managing labour costs. As Takazawa (2008) and Sugeno (2006) detail, revisions of the “Labour Standard Law” included a description of an employment contract, the specification of a contract period for a fixed-term labour contract, and the duties in a clear statement of work rules. These revisions contributed to improved working conditions for non-regular workers through an increased number of items in the hiring notice document. In addition, the “Labour Contract Law” (enacted in 2007) and the revised version of the “Part-Time Work Law” (amended in 2008) were enforced to secure non-regular workers who were in vulnerable positions.

Finally, the government introduced instruments aimed at adjusting demand and supply in the external labour market. This was associated with a change of purpose in the former labour market policy that focused on employment stabilization. In 1998, the “Employment Insurance Law” was revised and an “educational training payment” system was established (Sugeno, 2006). The objective of this latter system was to compensate for part of the costs borne by workers when obtaining education or vocational training. A special “Employment Measures Law” was effective for a limited period of time. During this prolonged period of time state payments were received by workers older than 45 who were getting vocational training for reemployment. In the same year, the “Employment Measures Law” was amended to strengthen the ability of public employment agencies to handle the resulting situation of mass dismissals. This revised law imposed on enterprises an obligation to offer workers at different age equal opportunity to recruitment. In addition, the “Law Concerning Stabilization of Employment of

Older Persons” was amended in 2000 and 2004. These revisions made the recruitment of workers up to the age of 65 a reality. The law required firms to construct a system for maintaining older workers, such as by raising the age of mandatory retirement. Enterprises in Japan are allowed to design their own retirement systems. The mandatory retirement age is not legally prescribed. A legal system will be necessary because the seniority-based wage system is more or less maintained in the current Japanese corporate culture.

The first period of serious economic downturn in the Japanese economy ended in 2002. Many people believed that Japan had entered into a long period of economic boom once again. This interpretation proved invalid in the second half of 2008 and at the beginning of 2009 when the Japanese economy collapsed again due to a world-wide crisis. In these months the labour market experienced economic disparity between regular workers and non-regular workers. Many non-regular workers were in a relatively insecure employment situation and received relatively low wages compared with regular workers. How to deal with this disparity is a problem that still needs to be resolved via appropriate changes in the legal framework.

#### LABOUR MARKET FLEXIBILITY IN JAPAN AT THE BEGINNING OF THE 21<sup>ST</sup> CENTURY

Due to the legal framework reforms (presented above), the Japanese labour market became more flexible at the beginning of the 21<sup>st</sup> century in response to internal and external shocks. What were the most important factors that resulted in a situation that called for more real and effective flexibility? First, one needs to understand the significant changes in the employment practices and legal framework of the Japanese labour market between the 1970s and the 1980s: These changes covered: (1) a change of employment adjustment practices by employers; (2) a change of industrial structures; (3) active participation of female workers in the labour market.

A similar interpretation of crucial legal and institutional changes in the aforementioned period was offered by Hashimoto (1993). He claimed that the “Employment Insurance Law” (1974) made employment in Japan less volatile over the business cycle. As a response to this particular legal act, Japanese firms started to adjust the endowment of labour by adjusting working hours and not by the standard dismissing of workers during a recession. This was nothing but a rational response of the private sector to the “Employment Insurance Law” that degraded the propagation mechanism of economic policy. The weakening of monetary policy influence in the bubble economy period was a result of the establishment of the “Case Law Establishing Doctrine of Abuse of Right of Dismissal” in the late 1970s. It also contributed to stable low unemployment after the second oil crisis. This means that those who desire to study the response of the labour market to

the economic situation using the job offers-to-job seekers ratio, empirical results will be blurred from the 1980s onward. This is due to the systemic change in legal framework and the permanent change in adjustment form in the private sector.

Second, concerning the economy's structure, the share of tertiary industries rose, while that of the primary sector rapidly declined (Figure 5). Since tertiary industries include services with a variety of jobs, employers need diversified employment patterns in order to perform efficient job allocation within the internal labour market. The enactment of the "Law to Secure the Reasonable Operation of Worker Dispatching Enterprises and Proper Employment Conditions for Dispatched Workers" (1985) reflected this change in the structure of the Japanese economy. It is debatable whether this legal act was an adjustment to those deep changes in Japan or an attempt to cope with problems resulting from these changes in the structure of the economy. It seems that this law did not have any significant impact on the creation of jobs for dispatched workers. Part-time work was already back then the major form of nonstandard employment. This was because the scope of occupations to which workers could be dispatched was highly restricted. This restriction was gradually relaxed in 1999 and later in 2003.

When one compares the effects of the legal framework and institutions of the labour market in Japan with other countries, benchmarking against the USA may bring interesting insights. Historical analysis in the current paper suggests the systematic decline of flexibility of the private sector in managing labour endowment. This forced stability of employment came at a cost to certain fractions in the domestic labour force. According to results reported by Genda, Kondo and Ohta (2008), there were persistent negative effects of the unemployment rate at graduation for less-educated Japanese men, while Americans did not suffer anything like that. Trouble in finding the first contract after graduation was associated with dismissal regulations in Japan that discouraged private sector when it came to employing less educated members of the society. As such, one can see a strong effect for social inequality. This is a vivid cost of otherwise positive stability of employment for those better educated, but achieved at the cost of handicapped and weaker.

The appreciation of the Japanese yen and severe competition resulting from dynamic globalization in the 1980s created incentives for intensive cuts in labour costs. To interpret the results obtained for the bubble-trouble period, one can also refer to Houseman and Osawa (2003). These authors point out that part-timers, temporary workers, and dispatched workers were receiving lower wages, fewer fringe benefits, and less job security than the regular full-time workers. The phrase "job security" as used by Housman and Osawa means stability of jobs for employed workers, or, how long workers are expected to be retained in their current job (having strong job security is equivalent to being assured of lifetime employment). Nagase (2003) adds that there was a significant wage gap between regular and part-time workers, even when factors such as education and tenure were controlled. Thus, workers having nonstandard employment terms were preferred by

firms. Houseman and Osawa (2003) observed a steady increase in the number of vacancies for part-time jobs since the late 1970s. A reduction in labour costs was a priority for Japanese corporations in order to survive in global markets. The use of nonstandard employment forms, particularly part-time, has been very popular in Japan since then.

According to the Labour Force Survey conducted by the Ministry of Internal Affairs and Communications, the proportion of workers having nonstandard employment terms over the total labour force in 1984 was 15.4 per cent. This does not seem high compared with 34.1 per cent in 2008 and around 40 per cent in 2019. This share grew steadily in the 1980s and reached 20 per cent in 1990. Non-standard employment terms were useful for employers because employment could be flexibly adjusted by changing the number of workers over a business cycle. In the 1980s, the share of the flexibly adjustable labour force was still too low to allow for efficient adjustments. However, it reached a sufficient level in the 1991–1996 period. The ease of adjusting endowment of labour was generally perceived as one reason why legal acts allowing nonstandard employment terms facilitated Japanese employers in maintaining competitiveness.

As observed by Sasajima (1993), the labour market in Japan was not as flexible as labour markets in other industrialized countries. This was because the flexibility of the labour market and awareness of its importance were not sufficiently discussed due to the low level of official unemployment in Japan.

Lack of flexibility is not only a result of the legal framework, but originates from the everyday practice of Japanese corporations. According to Itoh (1994), accumulated human capital is perceived as firm-specific and workers tend to engage in a wider range of closely related jobs at Japanese firms. Another important factor relates to the period during which people have been working for the same firm. This is one of the most important factors considered in promotions and wage increases. Japanese firms generally tend not to value any work experience gained at other firms, which is in contrast to practices in the U.S. and Europe. In addition, legal and institutional settings established in the 1970s encouraged firms to retain their employees for as long as possible, and to adjust labour endowment by changing the number of hours worked. Thus, firms and workers have been able to make a long-term employment relationship and the “internal” labour market rather than the “external” labour market played a critical role in achieving a low unemployment rate in Japan. The internal labour market is the market “inside” or “within” a firm. The main objective of the firm in this market is to allocate the right employees to the right jobs. The external labour market is the market outside firms where job seekers and firms with vacant jobs meet.

Third, female workers actively participated in the labour market from the mid-1970s to the beginning of the 1990s. During that period, from the late 1970s to the beginning of the 1990s, the share of women in the labour force steadily increased and their participation rate reached 50 per cent in 1990. This tendency

did not seem to be affected by the business cycle or economic policy. One of the reasons, notes Tachibanaki (1987), is that the number of discouraged female workers had decreased since the late 1970s, due to a strong will to be employed coupled with the widespread availability of convenient part-time jobs in the economy. There are two other explanations for this change in work incentives for women. First, the number of women enrolled in institutions of higher education increased, reaching highs during the 1980s (see Figure 4). This high advancement rate in education provided women with incentives to obtain employment. Second, labour market policies aimed at stable employment also gave married females incentives to work in order to support family budgets. Since the number of working hours was flexibly adjusted during the recession, the incomes of male workers decreased due to a reduction in overtime. This, likely, suppressed the budgets of average families and generated demand for extra income from side-jobs. This social change reduced the number of discouraged female workers who were leaving the labour market during economic slowdowns (Tachibanaki, 1987). The meaning of “discouraged” differs between the 1970s and the 1980s. In the latter period, discouraged female workers tended to favor becoming involuntarily part-timers or being unemployed when it was hard to find full-time or regular jobs.

This tendency is due in part to the prevalence of part-time (or other temporary) jobs that were making the labour market more flexible. In addition, since the income growth of male workers in Japan slowed down after the mid-1970s, particularly married females continued to participate in the labour market. This means that in the 1980s the Japanese economy could no longer expect the gap between labour supply and labour demand to disappear simply due to a decline in the number of females suffering from the discouragement effect.

Macroeconomic fundamentals together with the rigid legal and institutional framework in the 1980s led to the creation of more flexible forms of employment. Since the beginning of the 1990s, this has enabled workers to find jobs more easily, regardless of gender, and strengthened the job reallocation function of the labour market.

## CONCLUSIONS

The focus of this study has been developments in the Japanese labour market over most of the post-war period. The objective was to illuminate any potential influence of legal and institutional framework changes on labour market flexibility. The situation that emerged, due to numerous legal initiatives by the government and reforms to institutions of the labour market, places Japan in a very different position from all other developed countries. Not only underlying demographic process of imploding society, but also unique labour relations make this case very special, and thus attractive for investigations. One would be mistaken thinking that Japan is



homogenous in terms of the labour market and its society. As a recent study by Abe (2013) shows, there are significant regional variations in behaviour in the labour market, when it comes to women's participation. These regional differences indicate that government policy should have generated asymmetric shocks in the domestic labour market over the period analyzed in Northern and Southern Japan.

There is more government failure in the labour market in Japan. The state did not seem to be efficient in protecting the working class against capitalists. As such, the concept of *parasite state*, developed by Hobson and Lenin at the beginning of 20<sup>th</sup> century (Lauesen, 2018) may not be an appropriate way of describing the nature of class struggle in Japan over the period studied here.

It is believed that there is a trade-off between the flexibility of the labour market and the stability of employment. Due to certain political decisions, developments within legal and institutional frameworks in Japan during the 1970s resulted in a rigid labour market that threatened the competitive position of domestic enterprises. However, since the beginning of the 1980s, the legal framework changed and everyday practices in Japanese firms led to a new, fully-operational setup in the 1990s. It was based on non-standard terms of employment. An international comparative study of Japanese and Korean labour market developments from 1990 to 2010, by Song (2012) revealed the consolidation of labour market dualism (i.e. standard jobs versus non-standard jobs) and growing inequality in both countries. This is a straight confirmation of the interpretation offered in the current paper, based on different data, and extended period. Looking for others, the most recent confirmations for results and interpretations offered, one can refer to Gordon (2017). He claims that the rise of the non-standard employment forms in Japan since the 1980s is the most important change generating significant social consequences. His comments address potential reforms that are needed to protect vulnerable groups of workers (i.e. non-standard workers), who represent above 40% of the labour force in Japan in 2019.

Non-standard forms of employment started to grow as a fraction of total jobs at the beginning of the 1980s. The reason was in the share of a flexibly adjustable endowment of labour in total labour that was still not enough to buffer shocks. However, the end of the bubble economy in 1991 witnessed a substantial (and still growing) share of workers employed on non-standard employment terms. This allowed the private sector a much more flexible response to any kind of shocks. Since then, this share has been growing, bringing more and more flexibility to the Japanese labour market.

Japanese firms intended to retain their employees. Avoiding the dismissal of workers was made possible through a reduction of overtime hours during times of negative economic shock. This was outlined in the “Case Law Establishing the Doctrine of Abuse of the Right of Dismissal” and the “Employment Insurance Law”. Therefore, the labour market did not become more flexible. These legal acts made the Japanese labour market play a minor role in adjusting labour demand and supply. Japanese firms became more flexible in adjusting endowment of labour without

entering the labour market for additional workers (demand) or creating job seekers when they dismissed workers (labour supply). To put it in other words, these legal acts introduced a new framework that allowed for the omission of the labour market. This demonstrates why, when one tries to capture the response of the labour market to economic policy (when there are theoretical reasons for observing responses to negative and positive policy shocks), one observes no statistically significant responses. However, in reality there was a response (by corporations), which was based on mechanisms imposed by those legal acts. The response of Japanese firms avoided the labour market because the legal framework allowed for such a solution. Any negative response was not present. Everything one could potentially observe in the 1970s and 1980s, when there was a policy stimulus leading to increased demand for labour, was most probably only the positive impact of monetary policy on the labour market. However, there are recent studies for OECD countries, that present some evidence for Japan as responding to fiscal stimulus (Bruckner and Pappa, 2012). Another similar result for fiscal policy reducing unemployment in Japan is reported by Kato and Miyamoto (2013). These authors do not distinguish, however, between forms of employment, while growing importance of non-standard workers in the domestic economy justifies such focus.

In the 1990s the share of employees with non-standard employment terms became high enough to enable the achievement of a statistically significant result and one could observe the response of the labour market in two directions. This is because “non-standard workers” played a significant role and all agents (firms and workers) responded to policy actions.

One may call this change in flexibility from the 1970s “downward rigidity” because firms were discouraged from dismissing workers, and when they needed to employ full-time workers, there were no barriers due to labour availability, in contrast to the situation over the most recent period 2014–2018 (Figure 2). There was still a continuous move toward a more rigid legal and institutional framework from the post-war period up to the 1980s. Suffering from the shortcomings of flexible labour endowment adjustments in global markets, Japanese firms implemented an original solution. This involved the creation of a new category of workers that could be flexibly managed. These workers were not subject to any standard labour market laws of motion. This solution allowed Japanese enterprises to maintain their competitive position a little longer. The question remains as to whether this will be enough to maintain competitiveness, in light of the current global situation, after 2019. Therefore, results of the analysis conducted may be useful for the private sector in Japan, and the government. The former struggles with maintaining competitiveness in the global markets. While capacity of non-standard forms of employment might have been depleted already, there is a need for another kind of organizing production (and services). Robotics appears to be a solution tested for this purpose. In case of the Japanese government, our results deliver yet another signal of failure in protecting the domestic labour force. The

most recent changes to immigration policy by Prime Minister Abe seem to confirm a new strategy: if protection of workers is so difficult, the Japanese economy should use imported labour. However, as shocking reports about outrageous abuse of foreign workers in Japan appear in headline news (Osumi, 2019), this may cause an international response to unethical market capitalism practiced in Japan.

This paper represents an eclectic interpretation of the labour market and labour force situation in Japan. In the literature one can see a clear asymmetry in the way Japanese and foreign researchers evaluate government policy and business management practices. Domestic commentators and researchers tend to appreciate government policy achievements in protecting workers, while foreign studies focused on Japan offer much criticism. The current analysis, and evaluation, of the situation in each period seems to be well-balanced, with justified criticism, where necessary. Representing a holistic approach to socio-economic subject of this research, we understand that the performance of Japanese labour has changed over time. As explained by Kume (1998), it is necessary to go beyond the strong/weak dichotomy of the class politics approach and propose a more dynamic understanding of labour politics. This may be an idea for further studies of the labour market flexibility and employment security in Japan and other advanced economies. In particular, a systematic review of the labour market legal framework, institutions and contemporary situation in 2018 suggests clearly directions for further investigations. First, Japan remains the most prominent example of non-standard forms of employment, and this particular fraction of the labour force should be studied for the sake of efficient policy response. Second, the Japanese government is aware of the causes of the rise of this new form of employment that must be blamed on employment stabilization policy, since 1960s. Therefore, for the purpose of managing this new situation, policy-oriented research, both theoretical, and empirical, should make inquiries into the nature of non-standard forms of work and their socio-economic impact in a society that grows old. It seems that there are other, severe consequences for the national pension system, and future pensioners, who work today as non-standard workers. While such forms of employment remain marginal in other countries, for Japanese economists this may be one of the hottest topics to focus on.

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#### LIST OF LEGAL ACTS

- “Unemployment Insurance Law” (1947)
- “Minimum Wage Law” (1959)
- “Employment Measures Law” (1966)
- “Vocational Training Law” (1969) (enacted in 1958 and amended in 1969)
- “Law concerning Special Measures for the Promotion of Employment of Middle-Aged and Older Persons” (1971)
- “Employment Insurance Law” (1974)
- “Law Concerning Temporary Measures for Workers Displaced from Specified Depressed Industries” (1977)
- “Law Concerning Temporary Measures for Workers Displaced from Specified Depressed Areas” (1978)
- “Case Law Establishing Doctrine of Abuse of Right of Dismissal” (in the late 1970s)
- “Convention Concerning the Elimination of All Forms of Discrimination Against Women” (1979)
- “Equal Employment Opportunity Law between Men and Women” (1985)
- “Equal Employment Opportunity Law” (1985)
- “Worker Dispatching Law” (1985)
- “Law to Secure Reasonable Operation of Worker Dispatching Enterprises and Proper Employment Conditions of Dispatched Workers” (1985)
- “Law concerning Stabilization of Employment of Older Persons” (1986) (amended in 2000 and 2004)
- “Law Concerning the Welfare of Workers Who Take Care of Children or Other Family Members Including Child Care and Family Care Leave” (1991)

- “Law to Improve Employment Management to Secure the Work Force in Small and Medium Enterprises” (1991)  
“Part-Time Work Law” (1993) (amended in 2008)  
“Law for the Improvement of Employment Management of Short-Time Workers” (1993)  
“Special Measures Law Concerning Employment Stabilization of Workers in Specified Depressed Industries” (1995)  
International Labor Organization Treaty C181 (1997)  
“Employment Security Law” (1999)  
Amendment of “Law to Secure Reasonable Operation of Worker Dispatching Enterprises and Proper Employment Conditions of Dispatched Workers” (1999)  
Amendment of “Labor Standard Law” (2003) (enacted in 1947 and amended several times)  
“Labor Contract Law” (2007)

### *Summary*

This paper offers an analysis of labour market developments in Japan in the post-war period. There is an original periodization based on macroeconomic performance. A systematic review of legislative initiatives as responses to questionable private sector practices delivers an image of the national economy torn by a struggle for decent working conditions. Striving for harmony in the society through increasing employment stability resulted in the creation of unique managerial solutions that allow for the circumventing of more and more rigid regulations governing the Japanese labour market. The flexibility of the labour market was reduced by consecutive legal acts aimed at protecting employees. Unfortunately, the private sector responded to these policy actions by introducing most undesirable solutions. Several decades of awkward attempts by the government to protect the labour force resulted in a situation when more than 40% of all employees work in non-standard working conditions. This, in turn means that full-time jobs are a luxury of a declining cohort. This is a good reason for concern, as this is about social inequality, also due to the lack of traditional forms of labour protection (i.e. labour unions among non-standard workers) This is what differentiates Japan from all other advanced economies. Together with the underlying society that is growing older, a declining group of full-timers creates a serious threat to the stability of the national economy, and the pension system in particular.

*Keywords:* labour market, unemployment, Japan, economic policy, labour endowment adjustment.

## **Elastyczność japońskiego rynku pracy: 1960–2018**

### *Streszczenie*

Artykuł podejmuje analizę japońskiego rynku pracy w okresie powojennym. Autorzy oferują nowatorski podział na podokresy w oparciu o sytuację makroekonomiczną. Systematyczny przegląd inicjatyw legislacyjnych ze strony rządu w reakcji na wątpliwe etycznie praktyki sektora prywatnego przynosi obraz gospodarki rozdzieranej walką o godne warunki pracy. Dążenie do osiągnięcia harmonii w społeczeństwie poprzez zwiększanie stabilności zatrudnienia doprowadziło do wytworzenia unikalnych praktyk zarządczych umożliwiających omijanie coraz sztywniejszych reguł japońskiego rynku pracy. Elastyczność rynku pracy redukowana była kolejnymi

ustawami chroniącymi pracowników. W odpowiedzi na usztywnianie reguł zarządzania nakładem pracy, sektor prywatny wprowadził rozwiązania omijające niewygodne regulacje. Kilka dekad nieudolnych prób ochrony pracowników przez centrum rządowe przyniosło sytuację, w której ponad 40% wszystkich zatrudnionych pracuje w oparciu o niestandardowe kontrakty. Oznacza to, że pracę pełnoetatową wykonuje w Japonii coraz mniejsza grupa pracowników. Wywołuje to duże kontrowersje ze względu na brak tradycyjnych form ochrony pracowników (takich jak związki zawodowe) w przypadku tej frakcji na rynku pracy. Sytuacja ta odróżnia Japonię od pozostałych krajów wysokorozwiniętych. Wraz ze starzejącym się szybko społeczeństwem malejąca grupa pracowników pełnoetatowych tworzy zagrożenie dla stabilności systemu gospodarczego, w tym systemu emerytalnego.

*Słowa kluczowe:* rynek pracy, bezrobocie, Japonia, polityka gospodarcza, dopasowanie nakładu pracy.

JEL: J20, J21, E58.

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## **Disparities in wage flexibility in the Polish economy**

### INTRODUCTION

The pace in wage growth is one of the latest trends to be observed not only in the labour market but throughout the entire Polish economy. An increase in wages by over 7% and the rising level of the minimum wage in Poland are referred to as wage pressure. Numerous companies have raised the wages of their employees. Those in which productivity is either not increasing or not increasing at a sufficient pace have been forced to raise wages too. Wage pressure is additionally intensified by the increasingly limited workforce availability in Poland. The new reality on the labour market raises questions concerning the relationship between wages and labour productivity in different sectors of the Polish economy.

The paper aims to examine wage flexibility in the Polish economy. It focuses on researching wage flexibility using a sectoral approach to show the differentiation amongst them. It was assumed that an efficiency factor would be the most important determinant influencing wages. Therefore, wage flexibility was defined traditionally as a wage response to changes in labour productivity. This study consisted of verifying that a relationship exists between the average wage amounts and labour productivity in different sectors of the Polish economy. The study focused on explaining to what extent wages depend on labour productivity. At the same time, the study identified those sections where labour productivity had the strongest influence on wages, and therefore where wage flexibility was the highest.

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## CHARACTERISTICS OF WAGE FLEXIBILITY

Wage flexibility is the central element of a flexible labour market. A flexible labour market is characterized by the ability to adapt to changing economic conditions in a way that maintains a high employment rate and low inflation, and ensures continued growth in real income (EMU and Labour Market Flexibility, 2003, p. 10).

Wage flexibility is called financial flexibility on the labour market. It is associated with adjusting the wage amounts to meet several factors occurring in the micro and macro environments. Wage flexibility is defined as the extent to which wages react to changes in the factors determining them. In other words, wage flexibility reflects the degree/speed with which wages adjust to changes in the economy, in particular to changes in labour productivity.

Apart from wage flexibility, a flexible labour market consists of (Kryńska, 2007, p. 1; Wiśniewski, 1999, pp. 42–43; Kwiatkowski, 2003, pp. 18–19):

- employment flexibility, which represents the ability of employers to adapt the number of employees to changing economic conditions and structural changes caused by technical progress;
- working time flexibility, which means the possibility to adjust (within established standards and reference periods) the length and organization of working times to the needs of enterprises;
- functional flexibility, which is described as an economic entity's ability to effectively adapt labour supply to the changing structure of labour demand, which results from technological changes.

Wages in the economy should be flexible, i.e. be sensitive to changes in the factors determining them. In addition to labour productivity, the following determinants of the level of wages are most often listed: current trends in the labour market, profitability of a given sector and tendencies occurring in the business environment of a particular sector. The level of wages and, as a consequence, their flexibility also depend on non-efficiency factors, among which institutional issues play an important role. Wages depend on such institutional factors as trade union density, the minimum wage, labour law, the tax wedge, centralization and coordination of wage negotiations and contract length, as well as indexation (Boni, 2004, p. 11). Although the above-listed institutional determinants are not related to the effects achieved by the labour force, their role in shaping wages is indisputable. Some of them, such as the tax wedge, trade union density or the minimum wage, stifle wages from the bottom up, making it impossible to reduce them regardless of achieved labour productivity.

According to the neoclassical theory of marginal productivity of production factors, labour should not be rewarded either significantly below or above its marginal productivity. The amount of wages should change in line with changes in labour productivity, while the dynamics of wages should not exceed the dynamics

of labour productivity. Transitorily, both dynamics may differ, which results from the existence of real and nominal frictions. The frictions reflect the long-term adjustment of wages to new levels of balance as a result of macroeconomic disorders, such as productivity shocks or monetary and fiscal shocks (Magda, Szydłowski, 2008, p. 76).

### THE EFFICIENCY WAGE THEORY

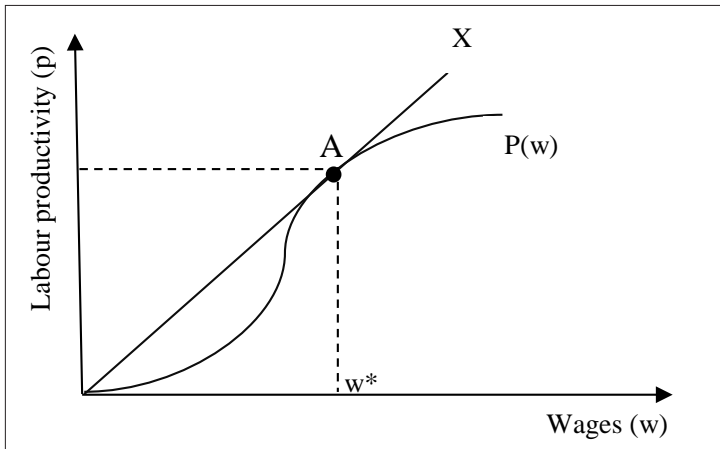
The efficiency wage theory arose in the 1970s, when Keynes's theory based on rigid real wages lost its credibility. On the other hand, the neoclassical theory of a perfectly competitive labour market, including wage flexibility, did not reflect the reality on the labour markets of developed market economies either. The neoclassical theory was unable to explain the lack of reaction by employers (unwillingness to reduce the amount of wages) in a situation where involuntarily unemployed people would be willing to work for lower than the applicable wage rates (Golnau, 2012a, pp. 151–152).

Marshall is considered to be the precursor of the efficiency wage theory, as in 1920 he noticed a relationship between wages and labour productivity. Marshall saw that a well-paid labour force is much more efficient and therefore not very expensive (Nyk, 2016a, pp. 42–45). The foundations of the efficiency wage theory date back to the second half of the 1950s, when Leibenstein presented the so-called model of nutrition. He argued that better-paid employees are better nourished, which translates into their higher work efficiency. The relation between labour productivity and the amount of the wages was proved based on the example of developing countries (Leibenstein, 1957, pp. 94–98).

In the model of nutrition, Leibenstein hypothesized the existence of a wage-productivity curve. The hypothesis was then examined by other economists, with the largest contribution made by Joseph E. Stiglitz (1976, pp. 185–207; 1987, pp. 1–49). Figure 1 presents the shape of the wage-productivity curve. Initially, an increase in wages causes more than a proportional increase in the employee's involvement, which shows the initial section of this curve. Then, after exceeding a certain point, the increase in employees' effort progressively reduces. This means that further increases in wages result in less than proportional increases in labour productivity. The employer offers the wage amount which ensures the lowest costs per effective unit of labour productivity. This is called the efficiency wage, and is denoted by  $w^*$  in Figure 1. The efficiency wage is drawn as the point of contact on the efficiency curve  $P(w)$  with the straightest line derived from the beginning of the coordinate system.

The labour cost per efficiency unit (cost per effective unit of labour) is given by the inverse of the slope of the wage-productivity curve from the coordinate system origin to a given point on that curve. For wages included in the range (0;

$w^*$ ) the slope of the wage-productivity curve increases in line with wage increases, which means that costs per effective unit of labour decrease. The situation is different when wages are higher than the efficiency wage. For  $w > w^*$ , the slope of the wage productivity curve steadily decreases. This means an increase in costs per effective unit of labour (Stiglitz, 1987, p. 5).



**Figure 1. The wage-productivity curve**

Source: (Stiglitz, 1976, p. 187).

The wage-productivity curve is a graphical representation of the efficiency wage theory, whose key element is the positive relationship between wage rates and labour productivity. According to this theory, employers offer wages higher than the equilibrium wage. Employers set the amount of wages at the level of the efficiency wage as it guarantees the lowest costs per effective unit of labour productivity. Employers do not reduce wage rates even when there is an excess supply of workers. They are afraid of a decrease in labour productivity which exceeds the benefits of lowering the wages. This would lead to a situation in which real labour costs per effective unit of labour would increase (Golnau, 2012a, pp. 151–152). The efficiency wage theory emphasizes that entrepreneurs desire wage rigidity, as a reduction in real wages result in a productivity decrease and an increase in costs.

Solow is the author of the formal foundations of the efficiency wage theory, included in the paper “Another Possible Source of Wage Stickiness”, published in 1979. Solow argued that employers set the wage at the level of the efficiency wage, for which the elasticity of effort relative to wages is 1 (Golnau, 2012a, p. 156). This is called the Solow condition, under which the company maximizes its profit. The second condition for maximizing profit refers to the employment of the labour force until the marginal product equals the efficiency wage. This second

condition determines the size of employment in the economy. When the efficiency wage is higher than the equilibrium wage, involuntary unemployment appears. Employers are unwilling to employ employees at a lower price than the efficiency wage, as they will not meet the conditions that allow them to maximize profits (Nyk, 2016a, pp. 45–46).

Solow emphasized the positive relationship between wages and labour productivity, but explained it only by the fact that higher wages lead to an improvement in the well-being of employees. This directly affects labour productivity, as employees are more involved in doing their job. However, this explanation was insufficient, especially concerning highly developed economies. As Golnau noted, “until almost the end of the 1970s, there was no convincing explanation for the relationship between labour productivity and employee wages, which would be adequate to the situation in a developed market economy” (Golnau, 2012a, p. 158). After that time, more modern theories began to emerge that are considered microeconomically reliable bases for the efficiency wage theory. These are the labour turnover model, the adverse selection model, sociological models and the shrinking model (Golnau, 2012b, pp. 282–296).

## RESEARCH METHODOLOGY

In this paper, wage flexibility is defined as the wage response to changes in labour productivity. The starting point in the study was to analyse the trends in wages and labour productivity in the entire economy, and then in sections of the Polish economy using the Polish Classification of Activities – PKD 2007. The analysis of the relationship between average wages and average labour productivity on a macro scale and in sections of the Polish economy was carried out assuming that the relationship was linear. In the study, wages were the dependent variable (Y), while labour productivity was the independent variable (X).

The research began with verification of the order of integration of both time series and checking for cointegration. First, both variables were tested in all sections to see if the time series was integrated of order 0, denoted  $\sim I(0)$ , using the Dickey-Fuller unit root test (ADF). When the results of the test did not confirm the stationarity of the time series, calculations were performed to check whether the time series was integrated of order 1, which was denoted as  $\sim I(1)$ . Testing was repeated until the non-stationary time series was transformed to become stationary. After the variables were integrated, according to the Engle-Granger test, cointegration did not exist so further testing was performed until the cointegration condition was met. The results of the study on the order of integration of time series are presented in Table 1. Researching the order of integration of the time series, a null hypothesis about the non-stationarity of the time series, was tested against the alternative hypothesis assuming the stationarity of the time series.

Table 1. A study of integration order of time series and cointegration

Specification	The order of integration		Cointegration function/regression function	Cointegration
	X	Y		
Total	$\sim I(2)^*$	$\sim I(2)^*$	$Y=0.514448X+21.0890$ ; $R^2=0.966463$ ; $p=6.08e-08$	$DF=-4.58257$ ; $p=0.02333$
Industry	$\sim I(1)$	$\sim I(1)$	$Y=0.523932X-210.813$ ; $R^2=0.865277$ ; $p=1.16e-05$	$DF=-4.59671$ ; $p=0.01982$
Manufacturing	$\sim I(1)$	$\sim I(1)$	$Y=0.630078X-139.562$ ; $R^2=0.697988$ ; $p=0.0007$	$DF=-3.08766$ ; $p=0.09085$
Electricity, gas, steam and air conditioning supply	$\sim I(2)$	$\sim I(2)$	$Y=0.474381X+288.363$ ; $R^2=0.635236$ ; $p=0.0033$	$DF=-4.32881$ ; $p=0.0327$
Agriculture	$\sim I(2)$	$\sim I(2)$	$Y=0.06474X-8.31352$ ; $R^2=0.205658$ ; $p=0.1612$	$DF=-4.03109$ ; $p=0.0488$
Construction	$\sim I(1)$	$\sim I(1)$	$Y=0.247594X+189.573$ ; $R^2=0.59999$ ; $p=0.0031$	$DF=-4.49499$ ; $p=0.02295$
Wholesale and retail trade; repair of motor vehicles and motorcycles	$\sim I(2)^*$	$\sim I(2)^*$	$Y=0.296843X+34.3428$ ; $R^2=0.793233$ ; $p=0.0002$	$DF=-4.46047$ ; $p=0.02745$
Transportation and storage	$\sim I(1)$	$\sim I(1)$	$Y=0.378599X-33.6259$ ; $R^2=0.549180$ ; $p=0.0058$	$DF=-3.69867$ ; $p=0.07086$
Accommodation and food service activities	$\sim I(2)^*$	$\sim I(2)^*$	$Y=0.491393X+2.65838$ ; $R^2=0.850534$ ; $p=5.33e-05$	$DF=-5.6271$ ; $p=0.005844$
Information and communication	$\sim I(1)$	$\sim I(1)$	$Y=0.438989X+694.542$ ; $R^2=0.877865$ ; $p=7.06e-06$	$DF=-3.43255$ ; $p=0.1031$
Financial and insurance activities	$\sim I(1)$	$\sim I(1)$	$Y=0.203008X-6.77385$ ; $R^2=0.398876$ ; $p=0.0276$	$DF=-9.04219$ ; $p=7.502e-00$
Real estate activities	$\sim I(1)$	$\sim I(1)$	$Y=0.0880173X+174.378$ ; $R^2=0.527549$ ; $p=0.0075$	$DF=-4.09769$ ; $p=0.04035$
Professional, scientific and technical activities	$\sim I(1)$	$\sim I(1)$	$Y=0.284038X+139.646$ ; $R^2=0.667738$ ; $p=0.0012$	$DF=-4.59132$ ; $p=0.01998$
Administrative and support service activities	$\sim I(2)^*$	$\sim I(2)^*$	$Y=0.622974X-23.4139$ ; $R^2=0.933536$ ; $p=5.48e-06$	$DF=-3.26696$ ; $p=0.135$
Public administration and defence; compulsory social security	$\sim I(0)$	$\sim I(0)$	$Y=0.814X+493.64$ ; $R^2=0.9303$ ; $p=1.05e-07$	Not applicable
Education	$\sim I(0)$	$\sim I(0)$	$Y=0.649522X+3294.16$ ; $R^2=0.780065$ ; $p=6.29e-05$	Not applicable
Human health and social work activities	$\sim I(3)^*$	$\sim I(3)^*$	$Y=0.623079X-14.8052$ ; $R^2=0.984868$ ; $p=1.44e-08$	$DF=-3.08898$ ; $p=0.09058$
Arts, entertainment and recreation	$\sim I(2)^*$	$\sim I(2)^*$	$Y=0.570903X+141.608$ ; $R^2=0.850095$ ; $p=5.40e-05$	$DF=-3.70549$ ; $p=0.07551$
Other service activities	$\sim I(1)$	$\sim I(1)$	$Y=0.351583X-325.454$ ; $R^2=0.662669$ ; $p=0.0013$	$DF=-4.39154$ ; $p=0.02661$

\* A time series with an integration of order 1, but lack of cointegration; DF – Dickey–Fuller test statistics in the Engle–Granger cointegration test.

Source: own work using GRETLL software.

Cointegration was tested using the Engle-Granger test and the null hypothesis, according to which the variables are not integrated against the alternative hypothesis to which the variables are co-integrated (Maddala, 2006, pp. 612–634).  $p=0.05$  was assumed in the case of stationarity of the time series, and  $p=0.1$  for cointegration, which was accepted due to the relatively short time series. In order to examine the extent to which wage growth was stimulated by changes in labour productivity, a Pearson correlation coefficient was calculated between labour productivity and the average annual amount of wages for 2005–2017, both at the macro level and then in sections respectively. Linear regression and a coefficient of determination  $R^2$  were also used.

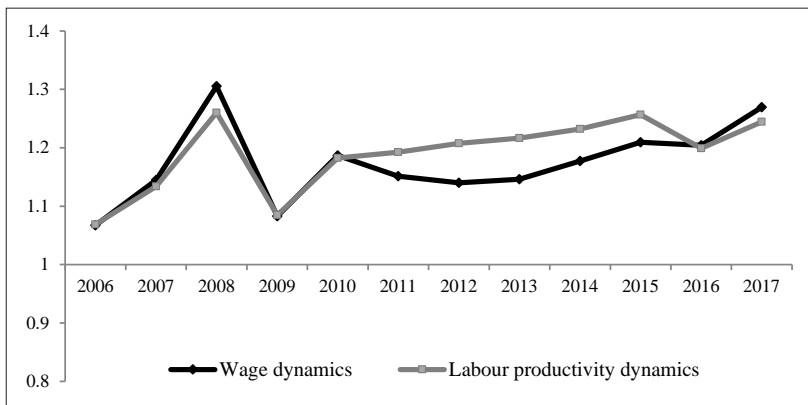
The statistical data used in the research came from the Eurostat statistical database (gross value added and wages) and the Polish Central Statistical Office (CSO), which provide data on the number of employed people by sections. The research period covered 2005–2017 and its selection was limited to the availability of data by sectors according to the PKD 2007 classification. In the study, labour productivity was described as gross value added per employee, while average wages refer to total gross wages. The time series of both variables were built using annual data in euro. Calculations were carried out at constant prices from 2017.

#### WAGES AND LABOUR PRODUCTIVITY IN POLAND – MACROECONOMIC SCALE

In the long term, there is a strong relationship between labour productivity and wages at the macroeconomic level. The relation is described not only in economic theory, but empirical data also confirms it. An analysis of statistical data from 1960–2006 concerning developed countries (mainly OECD) showed that the differences in average labour productivity were responsible for approximately 70% of the variance in average wage dynamics in the group of these countries and the relationship between these indicators is slightly less than one. In the short and medium-term, the dynamics of labour productivity and wages may differ significantly due to the occurrence of rigidity in wage adjustment (Kawa, 2010, p. 73).

The analysis of statistical data describing changes in labour productivity and wages in the Polish economy shows that, after 1992, higher dynamics in labour productivity rather than the dynamics of real wages made Poland stand out from other countries of Central and Eastern Europe. On the other hand, the opposite tendency has been observed since 2005, and wages have increased faster than labour productivity, which has resulted in increasing unit labour costs. In 2005–2007 the demand for labour increased, driven by a strong trend towards the economic migration of Polish workers. Therefore it can be concluded that wages responded more to the situation on the labour market in terms of labour supply and demand than to labour productivity. The increasing wage growth was also a consequence of the growing negotiating power of employees, which led to filling the gap between the level of real wages and productivity seen in 2001–2005 (Kawa, 2010, pp. 73–88).

An analysis of labour productivity and wages at the macroeconomic level in 2005–2017 preceded the sectoral research of these categories. In 2005–2017, both labour productivity and wages in Poland recorded an increase, as shown in Figure 2. In 2006–2010, the lines describing wages and labour productivity in the Polish economy were very close to each other, which confirmed that both variables were changing at a similar pace. In 2011–2015, labour productivity grew dynamically, while wages slowed slightly and grew more slowly than labour productivity. However, in 2016 the trend reversed and the wage dynamics accelerated. As a result, wages increased by less than 27% throughout the entire period, which gives an average annual increase of 2%, while labour productivity in 2005–2017 increased slightly less, by 24.4%, i.e. by an average of 1.84% per year.



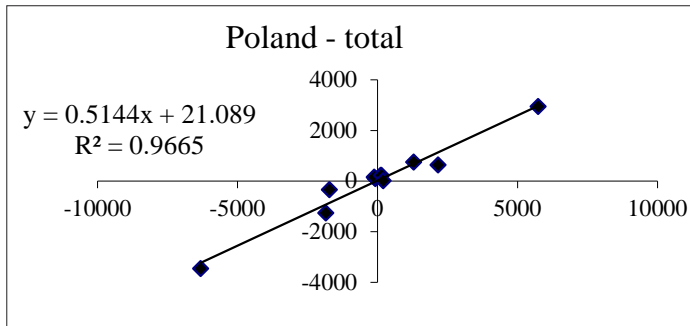
**Figure 2. Wage and labour productivity dynamics in Poland in 2005–2017 (constant prices 2017, 2005 = 100)**

Source: own study based on Eurostat and CSO statistics.

The high dynamics in both categories in 2008 requires a short commentary. The period of 2007–2008 was called an employee market to emphasize the bargaining power of employees. After a period of prosperity in 2007 and its continuation in 2008, the unemployment rate, which was one of the main economic problems in Poland, fell to 9.5% at the end of 2008 (*Mały Rocznik Statystyczny Polski*, 2009). Wages were rising dynamically, while growing demand for employees in almost all professional groups was considered to be the main driver of wage growth (Morawski, 2016). Whilst wages were in line with productivity gains, labour productivity, however, increased at a slightly slower pace than wages. The global financial crisis, initiated in 2007 on the subprime mortgage market in the United States, caused a deep recession in Western Europe in the autumn of 2008. In spite of the fact that Poland was not directly affected by the crisis, it initiated a weakening economic growth in 2009 as well (Bukowski, Lewandowski, 2010, p. 14). This translated into trends on the Polish labour market, with a significant slowdown in wage dynamics and labour productivity being observed.

The stationarity of the time series, both wages and labour productivity and their cointegration were verified before researching the relationship between the variables. The time series of labour productivity and wages were integrated of order 1, but they were not co-integrated. As a result, the conclusions were based on time series with integration of order 2.

A linear relationship between labour productivity and wages in Poland can be seen by looking at the scatter diagram of both variables (see Figure 3). A Pearson correlation coefficient between wages and labour productivity was applied to examine the extent to which labour productivity stimulated wage growth in 2005–2017. This amounted to 0.98, which indicated a very similar tendency in the development of wage dynamics and labour productivity during the analysed period. The average wage in the Polish economy increased along with the average increase in labour productivity. The Pearson correlation coefficient was significantly different from zero<sup>2</sup> while the coefficient of determination  $R^2$  was over 96.6%, which suggests a very strong relationship between wages and labour productivity in Poland.



**Figure 3. Labour productivity and average wages in the Polish economy in 2005–2017 (constant prices 2017, 2005 = 100)**

Source: own study based on Eurostat and CSO statistics.

When interpreting the results, it should be underlined that a wage is a compound economic category with numerous different factors, economic, social and institutional, which influence it. This might be why that the application of other research tools shows that the impact of labour productivity is not as high as the coefficient of determination  $R^2$  that this study indicated.

Nevertheless, the results obtained are in line with the efficiency wage theory and its core statement of a positive relationship between the wage amount and labour productivity. Based on the assumptions of the theory, Nyk conducted a study verifying the relationship between labour productivity and wages in regional

<sup>2</sup> The statistical significance of the Pearson correlation coefficient was tested using the Student's *t*-test. The *t*-value was 16.105, while the critical value  $t^*$  was 2.2622 ( $p=0.05$  and nine degrees of freedom).



terms. The author studied how the average wage reacted to changes in labour productivity in Polish regions in 1999–2013. The study showed that the efficiency wage theory was true in most regions. A significant linear relationship was identified in the Mazowieckie voivodeship and such voivodeships as Dolnośląskie, Kujawsko-Pomorskie, Lubelskie, Łódzkie, Opolskie, Podlaskie, Wielkopolskie and Warmińsko-Mazurskie. Some voivodeships (Lubuskie, Małopolskie, Pomorskie and Zachodniopomorskie) experienced a moderate relationship between wages and labour productivity, while in the other three voivodeships (Podkarpackie, Śląskie and Świętokrzyskie) the relationship was absent or weak. The author also examined the wage reaction to labour productivity changes on the macroeconomic scale in 1999–2013, obtaining the coefficient of determination  $R^2$  of about 80% (Nyk, 2016b, pp. 45–46).

#### WAGES AND LABOUR PRODUCTIVITY – SECTOR APPROACH

When analysing wage flexibility by the three traditional sectors: agriculture, industry and services, it should be noted that wage responses to changes in labour productivity in industrial sections is more noticeable than in service sections. Such a conclusion comes from the analysis of the Pearson correlation coefficient, the coefficient of determination  $R^2$  and wage and labour productivity dynamics in particular sections of the Polish economy. Scatter diagrams representing labour productivity and average wages by sections were also helpful<sup>3</sup> (Figure 4).

Agriculture is a peculiar sector for the examination of wage flexibility as it contributes a small share of gross value added whilst utilizing a significant percentage of employees. In 2017, the share of agriculture in the total gross value added was only 3.15%, while agriculture was responsible for over 15% of total employment in the economy (Eurostat). Both wages and labour productivity increased in agriculture, by 1.7% and 2.2% on average per year respectively, but showed significant fluctuations. In agriculture, wages responded poorly to changes in labour productivity and depended on many other factors. A coefficient of determination  $R^2$  of only around 20% confirms this. What should be noted is that the value of the p-parameter in the co-integrating equation, which referred to variable X, indicated an inference with a large error (Table 1).

In 2005–2017, industry recorded results similar to the entire economy, achieving a Pearson correlation coefficient of 0.93 and a coefficient of determination  $R^2$  of 86.5% against similar indicators of 0.98 and around 96.6% in the total economy. Such results indicate a very similar tendency in wage and labour productivity

<sup>3</sup> Selected sections were presented guided by their share in the total gross value added in the economy.

developments, and suggest that wage flexibility in industry was high over the researched period. Such performance in industry primarily came from the results achieved by manufacturing, as the largest section in the sector.

Manufacturing noted a slightly lower Pearson correlation coefficient and coefficient of determination  $R^2$  than industry as a whole, and simultaneously higher indicators than agriculture, energy production and supply as well as several service sections. The last in particular included: transportation and storage, financial and insurance activities and real estate activities. In manufacturing, labour productivity had been growing faster than wages since 2009. In the last years of the research period, labour productivity slowed slightly while wage growth accelerated, revealing wage pressure in this section. Nevertheless, throughout the entire period, wages increased by 2.7% annually on average, while labour productivity by about 3%. The coefficient of determination  $R^2$  was about 70%, which means that wage flexibility in manufacturing was relatively high. Wages responded quite strongly to changes in labour productivity over the study period. However, it is worth emphasizing that apart from labour productivity, there are many other factors affecting wages in manufacturing, such as technological capabilities, availability of a qualified workforce, involvement in export activities and many others.

In construction, wage flexibility is more complicated to identify than in the industrial sections due to the significant fluctuations in gross value added and employment. The fluctuations come from the specificity of construction, strongly dependent on the economic situation, and above all the implementation of expensive infrastructure projects, including those financed by the European Union. Wages and labour productivity strongly fluctuated, for example in 2012–2013 when both variables significantly decreased after intense growth in previous years, stimulated by infrastructure preparation to organize the European Championships in 2012 in Poland. Since 2012, the dynamics of labour productivity has slowed significantly, while the increase in average wages has remained at a two-figure level. Construction is one of those sections where wage pressure is the most pronounced. In the review period, the coefficient of determination  $R^2$  stood at just under 60%, suggesting many determinants other than labour productivity were influencing wages in construction. However, the Pearson correlation coefficient does not allow them to be identified. It also does not allow several potential factors to be examined (both measurable and non-measurable) that affect wages at the same time. Therefore, it can only be assumed that such determinants include the already mentioned infrastructure projects or the business environment around the construction sector. The shortage of labour influenced wages in construction in the last years of the research period. According to data from the Ministry of Family, Labour and Social Policy, construction was the dominant section in terms of employing foreign nationals. Almost 20% of all work permits issued to foreign nationals in 2015–2017 concerned construction (*Cudzoziemcy pracujący w Polsce.....*, [http](http://)).

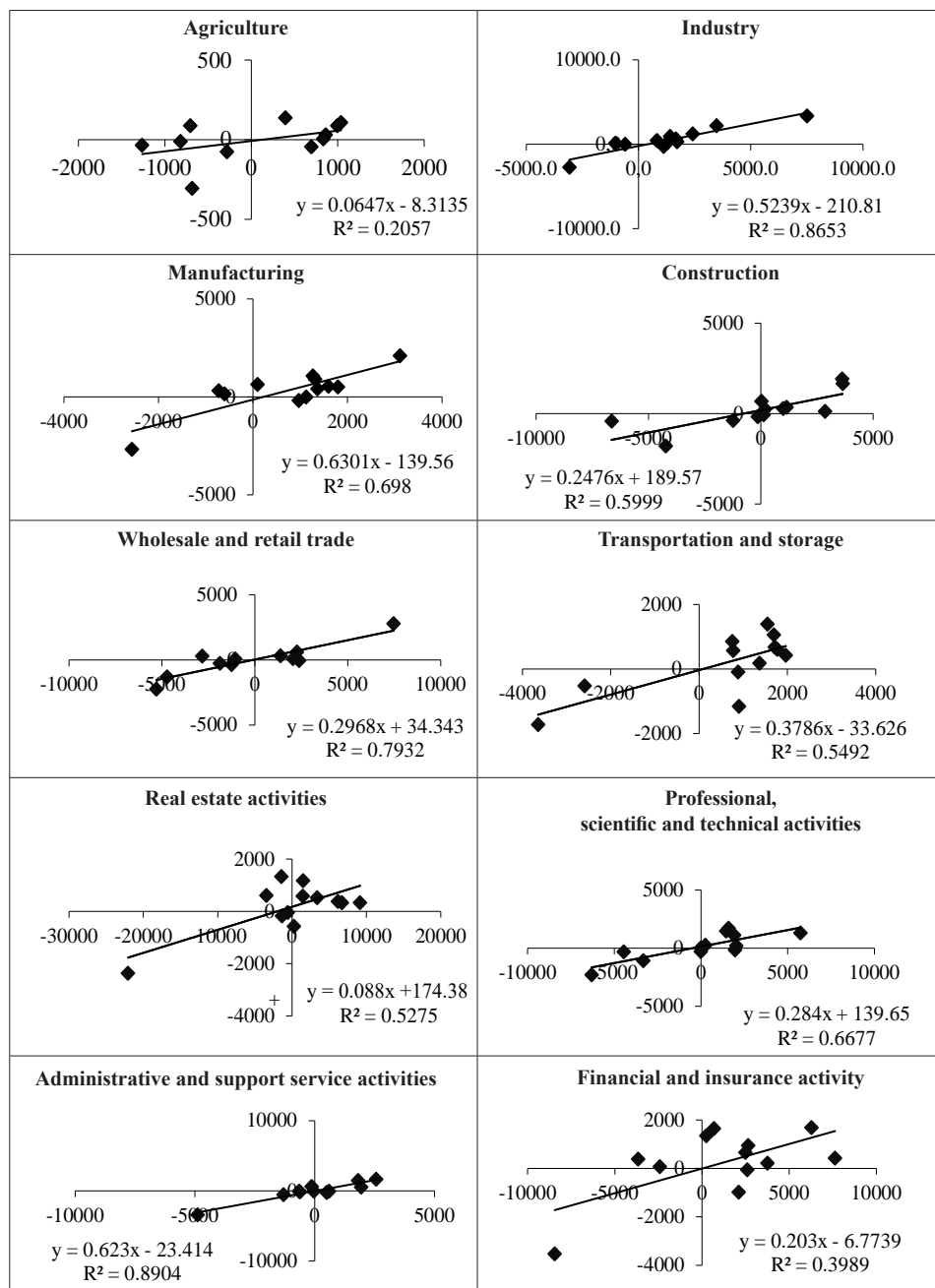
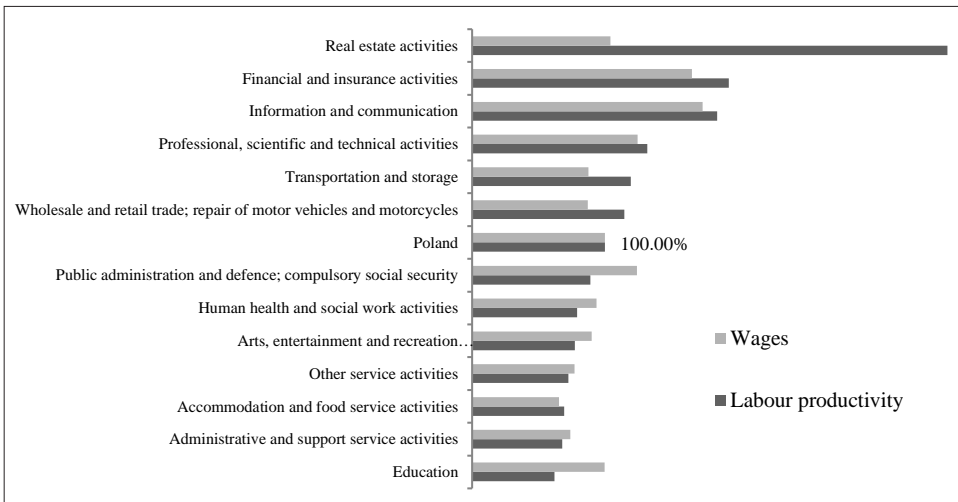


Figure 4. Labour productivity and average wages in selected sections of the Polish economy in 2005–2017 (constant prices 2017)

Source: own study based on Eurostat and CSO statistics.

Labour productivity varies across sectors. The level of labour productivity by sectors depends on the intensity of competition or sectoral market regulations. The increase in market regulations harms labour productivity. The negative impact is greater the more distant the sector is from technological capabilities, because the regulations limit the scale of the knowledge diffusion effect. Sectoral labour productivity also depends on the institutional environment of the labour market, information and communication technologies and innovations. Innovations are particularly important in sectors with a high level of concentration (Batóg J., Batóg B., 2009, p. 18).



**Figure 5. Labour productivity and wages in services in 2017 as a percentage of the average in the economy (Poland = 100)**

Source: own study based on Eurostat and CSO statistics.

Labour productivity in the service sector differs from the manufacturing sector. In the service sector there are numerous factors on which the employees have no influence and which significantly affect the results of their work. It can even be said that each section in services has specific, characteristic factors affecting its labour productivity. For instance, labour productivity in the wholesale and retail trade depends on consumers and their purchasing decisions. The level of technological advancement in the retail trade is less important than in the manufacturing activity as the purchasing power of consumers plays a decisive role in trade. In the financial and insurance sector, banking services, which means the amount of use of these services, as well as the development of financial markets determine sectoral labour productivity.

Real estate activities, financial and insurance activities and information and communication are the sections of services which met the highest level of labour productivity in 2017. In turn, the lowest levels of productivity were recorded in

such sections as education, administrative and support service activities, as well as accommodation and food service activities, in which labour productivity did not exceed 70% of the average labour productivity in Poland (Eurostat). Wages in the services sector varied too. For instance, wages in information and communication as well as financial and insurance activities accounted for over 173% and 166% of the average wage in Poland, respectively, while the opposite extreme occurred in accommodation and food service activities, as well as administrative and support service activities, where average wages constituted only 66% and 74% of the average wage (*Mały Rocznik Statystyczny Polski*, 2018).

The specificity of labour productivity in services translated not only into large differences in the level of wages and labour productivity among particular sections, but also the diversity of wage flexibility by section. A significant relationship between wages and labour productivity was observed in sections such as public administration and defence, compulsory social security, administrative and support service activities as well as arts, entertainment and recreation. The Pearson correlation coefficient in the listed sections accounted for over 0.9. The moderate strength of the relationship (a Pearson correlation coefficient of 0.4 to 0.7) was noted, for example, in the wholesale and retail trade; repair of motor vehicles and motorcycles, transportation and storage, professional, scientific and technical activities, real estate activities and other service activities. The weakest relationship between wages and labour productivity was observed in financial and insurance activities, where the Pearson correlation coefficient did not exceed 0.4.

The differences in wage flexibility can also be seen based on the parameter values at the explanatory variable  $X$ , which in this study was labour productivity. Sectors or sections of the economy that are characterized by a relatively higher coefficient of determination  $R^2$  have in most cases a higher value of the parameter in the independent variable  $X$ . This can be interpreted as the higher the parameter, the stronger the response of wages to changes in labour productivity (Nyk, 2016b, p. 186). This means that wages adapt faster to changes in labour productivity and thus are more flexible in these sections. Therefore, in the Polish economy the most flexible wages were observed in industry, particularly in manufacturing and in some services sections:

- sections of market services – administrative and support service activities, accommodation and food service activities, arts, entertainment and recreation as well as information and communication;
- sections of non-market services – public administration and defence; compulsory social security, human health and social work activities and education.

It is also worth adding that some of the sections with high wage flexibility generate a small percentage of gross value added in the Polish economy. As a result, their influence on total wage flexibility in the economy is insignificant. Such sections are, for example, arts, entertainment and recreation, as well as accommodation and food service activities.

## CONCLUSIONS

The collected statistical data enabled the examination of wage flexibility by sections of the Polish economy. The research findings focus on two issues: the differences in wage flexibility amongst the sections and the impact of individual sections on total wage flexibility throughout the economy.

The highest wage flexibility in the Polish economy in 2005–2017 was identified in industry, mainly in manufacturing, where wage reaction to changing labour productivity was the most noticeable. This sector, due to the significant share in gross value added production in the economy, played a significant role in shaping wage flexibility in macroeconomic terms. Wages in agriculture did not seem to depend on labour productivity, which means that wages in this sector cannot be considered as flexible. The service sector, due to its specificity and the strongly outlined role of consumers and their preferences expressed by purchasing power, is characterized by highly diversified wage flexibility amongst sections. Wage flexibility varied from high in administrative and support service activities through moderate in real estate activities to its absence in financial and insurance activities.

To sum up, it should be noted that institutional factors affecting wages were not included in this study. In the current economic reality, the growing minimum wage is an institutional factor whose importance in stiffening wages from the bottom up and intensifying wage pressure is growing significantly. This may set the direction for further research into wage flexibility in Poland.

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### Summary

The paper focuses on the examination of wage flexibility in the Polish economy, indicating the sectoral differences. In spite of the fact that wages depend on many variables, labour productivity (according to the traditional approach) was selected as the most influential determinant of wages. As a result, the paper describes wage flexibility as how wages respond to changes in labour productivity.

The research shows that wages are the most flexible in manufacturing. The survey also discovers the lack of wage flexibility in agriculture and its strong diversification in the services sector. Disparities amongst services sections are determined by the specificity of individual sections and consumer preferences. A rising minimum wage attracts the attention of economists in the current economic climate in Poland, as the minimum wage plays a significant role as the institutional factor of wage flexibility.

The paper consists of two parts. The first, theoretical, part of the article presents the issues of wage flexibility and its determinants. The efficiency wage theory, which emphasizes a positive relationship between wages and labour productivity, and the wage-requirements curve are also presented in the first part of the paper. In turn, the methodological part of the article includes a study of wage flexibility in the Polish economy on the macroeconomic scale and on a sectoral basis.

The division of the economy according to PKD 2007 was applied, while the empirical materials were Eurostat and the Central Statistical Office database.

*Keywords:* wages, labour productivity, wage flexibility.

## Zróźnicowanie elastyczności płac w Polsce

### *Streszczenie*

Celem opracowania jest zbadanie elastyczności płac w polskiej gospodarce ze wskazaniem różnic występujących między sekcjami działalności gospodarczej. Spośród wielu czynników oddziałujących na poziom płac wybrano wydajność pracy, jako determinantę, która powinna w największym stopniu oddziaływać na płace. W związku z powyższym, na potrzeby realizowanego badania elastyczność płac zdefiniowano w tradycyjnym ujęciu, czyli jako reakcję płac na zmiany wydajności pracy w poszczególnych sekcjach polskiej gospodarki. W końcowym efekcie uzyskano odpowiedź na pytanie, w których sekcjach wydajność pracy wpływa najsilniej na płace, a zatem, które z nich cechują się najwyższą elastycznością płac.


Największy wpływ wydajności pracy na płace zidentyfikowano w przetwórstwie przemysłowym. Badanie pokazało także brak elastyczności płac w rolnictwie oraz silne jej zróźnicowanie w sektorze usług determinowane specyfiką poszczególnych sekcji oraz preferencjami konsumentów. W obecnej sytuacji gospodarczej Polski uwagę zwraca rosnąca płaca minimalna, która może odgrywać znaczącą rolę jako czynnik instytucjonalny elastyczności płac.

Artykuł składa się z części teoretycznej i empirycznej. W części teoretycznej zaprezentowano pojęcie i istotę elastyczności płac z uwzględnieniem czynników ją determinujących. Przedstawiono także teorię płacy efektywnej, której zasadniczym elementem jest twierdzenie o dodatniej zależności pomiędzy wysokością stawek płac a wydajnością pracy oraz krzywą płacy-wydajności. Natomiast część empiryczna obejmuje badanie elastyczności płac w gospodarce polskiej w ujęciu sektorowym. Zasadniczą część badania poprzedziła analiza zależności między płacami a wydajnością pracy w skali makroekonomicznej. Zastosowano podział gospodarki wg PKD 2007, zaś materiał empiryczny stanowiły dane statystyczne dostępne w bazach Eurostat oraz GUS.

*Słowa kluczowe:* płace, wydajność płac, elastyczność płac.

JEL: J24, J30, E24.



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## **Influence of social security benefits on the labour market in Poland**

### INTRODUCTION

According to Polish legislation, the gmina (smallest unit of local government) offers a wide range of social security benefits for the purpose of assuring the social safety of the residents. These are: family benefits and allowances for child benefits, child-support benefits and welfare benefits. All Polish citizens and foreign citizens meeting the appropriate statutory requirements are entitled to family benefits. The fact of settling in Poland is an absolute condition to be able to receive benefits.

The aim of the article is to analyse the influence of social security benefits on the labour market. The hypothesis is: *social security benefits are reducing the labour supply*. The research methods applied were: analysis (influence of social security benefits on the labour market), synthesis (research conclusions based on the detailed results) and interpretation (clarification of the results). The research tool was a questionnaire. The main aim of the questionnaire was to obtain information about the relation between the amount of social security benefits and the willingness to take up employment and work.

The main group of benefits legislated for in Poland comprises: child-support benefits, as well as monetary and non-monetary welfare benefits. The benefits are based mainly on the national welfare act. Several definitions of welfare can be found in the literature, for example:

- economic welfare is the level of prosperity and standard of living of either an individual or a group of individuals (Samuelson, 2004);
- welfare as an institution of the social policy of the state, aimed at enabling individuals and families to overcome difficult situations in their lives, which they are not able to overcome by exploiting their own entitlements, resources and possibilities (*Ustawa z dnia 12 marca 2004 r.*, 2017);

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- welfare is an institution that helps people in need;
- welfare aimed at mobilizing the beneficiaries, teaching them how to satisfy their needs independently, being responsible for their own fate (Sierpowska, 2007, p.19).

Only people residing within the Republic of Poland can be provided with welfare benefits, in particular Polish citizens, but also foreign citizens having special rights, e.g. refugee status or a permanent residence permit. The main reasons which affect whether an individual will receive welfare benefits are: poverty, unemployment, homelessness, orphanhood, prolonged sickness, serious disease, disability, need for the protection of motherhood, helplessness in housekeeping, especially in large or incomplete families, alcoholism, drug addiction, natural disasters and ecological disasters (Żukiewicz, 2002, pp. 37–38).

#### LITERATURE REVIEW

In the literature it is possible to find some examples of research showing a correlation between social security benefits and the labour market (Card et al., 2014; Piketty, 2014; Žarković-Rakić et al., 2016; Cuesta et al., 2014; Dilnot, 2013). Auerbach *et al.* (2005) states that *the low coverage of social security programs in developing countries is often attributed to their high rates of informal employment. Implicit in this view is that workers are rationed out of social security against their will because they are unable to find good jobs with benefits.*

Fialova and Mysikova (2009) offer proof on the example of the Czech Republic that social benefits can create substantial disincentives to labour market participation. If the country tries to achieve a higher participation rate, such disincentives should be eliminated in order to “make work pay”. In particular, generous out-of-work income can create significant disincentives to seek well-paid work or to remain in work. These disincentives were often assumed to be one of the main causes of sluggish economic growth and relatively high unemployment in Europe at the end of the last century (European Commission, 2000). On the other hand some authors demonstrate that when beneficiaries receive cash, they spend it and the impacts of the social transfer are then transmitted to others inside and outside the local economy (Davis, 2015, p. 9).

In the opinion of Peters *et al.* (2008), key activities to increase employment have not been linked to reforming the tax-benefit systems but concentrate on reducing labour costs. The EU has recommended that member states develop welfare systems that moderate the negative effects of the market relationships while also enhancing the efficiency of market performance (Michaud, 2004).

The literature indicate that in some countries the primary goal has been to implement measures that encourage – or require – those who receive social security benefits to take steps to find employment. In others, greater emphasis has been

placed on developing social security strategies and programmes that acknowledge the employment barriers which those on welfare face, or allow them to perform important social roles such as parenting young children or looking after frail older relatives (Saunders, 2017, p. 1).

One should be aware that current research on the Polish labour market, presenting the influence of social security benefits on the labour supply, concentrate solely on the benefits of the “Family 500+” program. The authors, however, show that the “Family 500+” program has a negative impact on the labour supply. An example is given in the journal article: *“Family 500+” child allowance and female labour supply in Poland* (Magda, Kielczewska, Brandt, 2018). The results presented in this paper suggest that the recent introduction of child benefits in Poland have had a significantly negative impact on labour force participation and employment among eligible mothers. This finding is robust enough to change the precise outcome variable we examine: labour force participation, employment or labour market withdrawal, to different definitions of the treatment and the control groups in our difference-in-differences methodology and to different estimation approaches. The effects are sizeable, implying that labour force participation and employment would have been 2.5–3% higher by mid-2017 in the absence of the reform. Testing for heterogeneity across different groups reveals that the effects are strongest for the lowest educated mothers (Magda et al., 2018, p. 17).

Ruzik-Sierdzińska also argues that the “Family 500+” program in its current shape, implemented in 2016, has many side-effects. One of them is a noticeable adverse impact on participation in the workforce among parents of small children (mainly mothers). In combination with other parental benefits available since 2016, which are paid to both working and non-working mothers for a year after giving birth to a child, parents receive many financial benefits from the state that reduce their willingness to take up employment. Due to the innate construction of the program, instead of supporting women in their decision to stay active in the labour market, it is inducing some to choose non-activity. This influence is strengthened by the low availability of part-time work on the Polish labour market. An analysis of detailed data about the economic activity of women with children showed that new benefits from the “Family 500+” program could lower the occupational activity of mothers: for this reason, twenty to thirty three thousand women have resigned from the labour market.

It is also necessary to highlight that the analysis did not take into consideration parents who lowered their commitment on the labour market or entered the black market so that their incomes did not exceed the level necessary to qualify for the “Family 500+” benefits for the first child (Ruzik-Sierdzińska, 2017). The results show that the new subsidies decreased the risk of poverty in families with children, and had an impact in terms of a higher number of births – which could be a temporary effect or a result of other family policy reforms implemented in 2013–2016, as well as decreased female labour market activity (Ruzik-Sierdzińska, 2018).

Wiśniewska (2018) reached a different conclusion, and presented a questionnaire survey of households receiving only the “Family 500+” benefit rather than using other forms of welfare. The research concerned only the short, annual period of functioning of the program, which could have had an impact on the results of the study. In the study, Wiśniewska observed that after the introduction of the “Family 500+” program there were no changes in activity on the labour market, and the hypothesis that parents receiving additional benefits from the state would give up work was not proven. One should however emphasize that the author limited the questionnaire survey to those households that received benefits from the “Family 500+” program only (no other forms of social security benefits).

The authors of the above studies analysed only households receiving exclusively the “Family 500+” benefit rather than other forms of welfare. The present article concerns a group receiving different forms of welfare, not only the “Family 500+” program.

#### CURRENT LEGAL REGULATION OF SOCIAL SECURITY BENEFITS IN POLAND

In Poland child-support benefits are the primary group of family benefits. The amount of benefit received by the parent of a child, or the legal guardian or an actual guardian if the parents are not alive, depends on the child’s age. It is based on the Act of 28 November, 2003 (*Ustawa z dnia 28 listopada 2003 r.*, 2017).

Depending on the number of children, their age, health condition and individual family income situation, after complying with all requirements for receiving the child-support benefits, it is possible to obtain different additions (e.g. family allowance) (Kardasz et al., 2007, pp. 34–35).

Under Polish legislation, child-support benefits are a novelty. The act on state aid in child-support is the youngest act discussed in this article. It has many points in common with the legislation for family benefits.

Above all, the main purpose for both of them is the partial covering of the expenses related to supporting the upbringing of children. The benefits are also related by the method of calculating the family income and the period for submission of applications. However, the basic difference between them is the fact that child-support benefits have a higher income criterion, and there is no income criterion applied to the second child. These differences allow more families to apply for money in the form of child-support benefits than through family benefits. This act is a form of support not only for the poorest families but all families with at least 2 children aged less than 18 years (Topolewska, 2016, p. 7).

At present the benefit period begins on 1 October and finishes on the last day of September in the next year. However it is possible to file applications from

1 August. The submission of an application in August guarantees continuity of payments of child-support benefits. After completion of the benefit period at the end of September, with all the criteria being met, the next child-support benefit is received in October (*Rodzina 500+*, 2017, pp. 32–33). The monthly amount of child-support is 500 PLN per child, which is why the colloquial term for the benefit is “500+”.

The other benefits that can be used as income are based on the national welfare act. The nature of welfare here involves supplements for families and individuals in the form of diverse benefits. All goods which are directed toward the needy carry the name of benefits. This includes goods, cash or supplied services for individuals that are sourced from the state budget and which satisfy their important needs. Because the benefits come from the public budget means their accumulation and disbursement must match the purpose and be held under the supervision of the state institution (Nitecki, 2008, p. 179). Welfare takes place by granting benefits which can appear in two forms: monetary (cash) benefits and non-monetary benefits.

Monetary benefits are among the most desired by the beneficiaries offered as part of the welfare process. They mainly comprise benefits that are paid via social welfare centres. The amount of the individual benefits must be balanced: they cannot be too low because they should ensure adequate living conditions, and they cannot be too high since this is discouraging to the needy. Also an obvious fact is that the amount of the benefits should not be levelled up to the minimum salary that could be received by going to work (Sierpowska, 2007, p. 117).

Non-monetary benefits have a far greater scope of assistance. This type of benefit is directed primarily at families, children, older and disabled persons and persons considered marginalised. Non-monetary benefits are characterized by giving advice and help in the engagement against violence, as well as with service delivery and material help (Sierpowska, 2007, p. 125).

Analysing the forms of given welfare benefits, the three entities able to apply for help include single persons, persons in a family and whole families. The benefit amount depends on the type of entity (*Ustawa z dnia 12 marca 2004 r.*, 2017). For single persons the income criterion is 634 PLN and for a person in a family is PLN 514 (*Rozporządzenie Rady Ministrów z dnia 14 lipca 2015 r.*, 2015). The range of benefits pursuant to the act on welfare is large. For example, monetary benefits can be classified as: permanent benefits, non-permanent benefits, intentional benefits, special intentional benefits, benefits for gaining economic independence, etc.

The next group of benefits as part of the welfare system are the non-monetary benefits. Non-monetary benefits are: social work, social security fees, health insurance fees, material help, state funeral, crises intervention, dwelling, meals, clothes, care services in the home, centres for support, centres for family help,

specialist care services at home and at social care centres, stays and services at social care centres, help in gaining adequate housing conditions and help in gaining employment.

### METHODS OF THE ANALYSIS

The main aim of the research was to study the influence of social security benefits on the labour market. The study was conducted in the north-east part of Poland in 2018. The research was based on a random sample. The study involved 172 individuals entitled to social security benefits. The research method was a direct questionnaire form. The research group consisted of people who were submitting applications for social security benefits in public assistance institutions and social welfare centres. It was not a representative sample for the whole population in Poland. The most frequent users of the welfare system were residents of the smallest towns, with primary education or secondary school education, as well as those who assessed their own financial circumstances poorly and achieved a per capita monthly income lower than PLN 900.

The main aim of the questionnaire was to obtain information about the relation between the amount of social security benefits and the willingness to work and take up employment.

Women predominated in the study group, aged 26–50, married, mainly with secondary education. This was the main group applying for social security benefits. This group was the most numerous even though a secondary education gives work opportunities in many sectors of the economy.

The next part of the questionnaire form referred to the types, numbers, amounts and allocated social security benefits by respondents of this gmina in north-east Poland, their personal assessment of the usefulness of the received benefits as well as employed respondents and members of their families.

The results below are intended to help in better understanding the family and income situations of the residents and enable the formulation of the effects that social security benefits have on the labour market.

### DATA AND EMPIRICAL ANALYSIS

The empirical analysis method used was a questionnaire survey. The first steps in preparing the survey was to create an appropriate questionnaire and to choose a suitable population size for the study. The questionnaire comprised 23 questions.

Initially the respondents were asked the question: *what types of social security benefits do you receive?* The results are given in Table 1.

**Table 1. Types of social security benefits that beneficiaries receive  
– more than 1 answer was possible (in %)**

Type of social security benefits	%
Child-support benefits	100
Family allowance	64
Parental allowance	11
Nursing care benefit	6
Nursing allowance	0
Special nursing care allowance	1
Permanent benefits	1
Non-permanent benefits	21
Intentional benefits	6
Special designated benefits	0
Other	6

Source: own research.

Benefits that support families with children are aimed at providing parents with a way to pay for expenses related to their children. By using these benefits the parents should be able to provide the required level of care for children and meet their practical needs. Credit repayments, home renovation or purchasing of electronic equipment are not directly tied to expenses related to children, although they improve the standard of living for the whole family. However, considering the amounts of the benefits and types of expenses not connected directly with children leads to the conclusion that parents with many children can provide them a good life without the need for paid work. Table 2 presents the number of respondents who preferred to obtain social security benefits without taking up employment.

**Table 2. Influence of social security benefits on employment rates among the respondents and members of their families (in %)**

Opinion	%
Nobody quit work	53
I fully quit working – my partner is still working	9
I partially quit working (part time-job) – my partner is still working	7
I have never worked – I live on social security benefits	10
My partner fully quit working	1
My partner partially quit working	1
None of us ever worked – we live on social security benefits	10
One of us has worked, social security benefits were enough for us, in certain situations one person went to work	9

Source: own research.

In order to confirm that some families were not working due to the received social security benefits, the next question asked about the reasons for such a situation (Table 3).

**Table 3. Reasons of not undertaking employment or resignation from employment or other paid work (in %)**

Opinion	%
When we receive social security benefits, work is unprofitable	30
When benefits give us sufficient incomes, it is not necessary to work	30
We want to spend our time with our family	18
The benefits give us sufficient incomes, it is not necessary to work, if we do not have enough money we will go to work	15
Others	7

Source: own research.

Table 3 shows that the assumptions were confirmed. Over 30% of the respondents thought that at the current levels of benefits, steady work was not profitable. The same percentage of respondents thought that the amounts received in the form of benefits gave them sufficient incomes, so it was not necessary to work. A total of 15% claimed that the amount of benefits was sufficient and that it was not necessary to work, although in critical situations they were ready to do odd jobs.

The examples from the tables show that social security benefits in large families can be very high, and if they take up employment they risk losing all or part of the benefits. This explains why the respondents cared so much about the benefits that they do not take up employment in fear of losing them. Only 24% of the respondents said that their lack of employment did not result directly from social security benefits. Over 18% did not work because they thought that it would negatively influence their contacts with their family. Other reasons why it was impossible to take up employment included the need to raise children and to take care of an ill or disabled child.

About 36% of the respondents thought that they could live without social security benefits. About 33% declared that they could live without it, but it would be very difficult to survive without this support for the family. Another 13% stated that they definitely could not live without the social support. About 11% found it difficult to answer the question. Over 7% thought that without social security benefits they might not be able to survive. The study shows that, apart from the intention to take up employment, social security benefits can cause a lack of resourcefulness amongst respondents. About 20% of the respondents thought that they would not be able to cope financially if there were no such benefits.

In the next question the respondents were asked whether any premises would motivate them or members of their families to take up paid work. This part of the study was aimed at identifying the best motivators which could affect the labour market.



**Table 4. Types of determinants which would induce taking up paid work by the respondent or their family members (in %)**

Determinants	%
Higher remuneration	33
Provision of care for children during working hours, e.g. nursery schools, kindergarten	23
Possibility of a professional career	10
Development of my own abilities	10
Nothing will induce me or my spouse/partner to undertake employment, since social security benefits are sufficient and we are afraid that we will lose them	13
Nothing will induce me or my spouse/partner to undertake employment, since the profit from the current work is sufficient, and other employment would make it impossible to spend time with the family	10
Other	1

Source: own research.

The most popular incentive which could result in taking up employment was higher remuneration for work, indicated by 33% of the respondents. About 23% would go to work if child care were provided during work. Only 20% decided to go to work because they considered a professional career and the development of their own abilities. As many as 13% stated that nothing would influence them to undertake employment. They agreed that social security benefits were sufficient and they did not want to lose them. Among the other replies a need was shown to support oneself and the child. In considering answers to the questionnaire, it is important to note that money was not playing the greatest role in the decision to take up employment.

In the next question they were asked to consider whether the chance of getting a job that would mean the simultaneous loss of benefits would induce them to take advantage of this opportunity.

**Table 5. Opinion of respondents whether the chance of getting a job causing the simultaneous loss of benefits would induce them to take advantage of this opportunity (in %)**

Does the opportunity of getting a job that results in the simultaneous loss of benefits induce you to take advantage of the opportunity?	%
Yes	54
No	46

Source: own research.

The next question concerned determining the amount of minimum wage that would motivate unemployed people to take up work.

**Table 6. Minimum monthly remuneration for work which should induce unemployed people to take up employment (PLN and EUR) in %**

Amount of salary in PLN (net value)	Amount of salary in EUR (net value)	%
Less than 2000	about 500	10
2000–3000	500–750	43
3000–5000	750–1250	33
5000–8000	1250–2000	11
8000–10000	2000–2500	1
More than 10000	2500	1

Source: own research.

Most respondents (43%) decided that they would work for a net salary of PLN 2000–3000 (EUR 500–750). About 33% of the respondents claimed that remuneration for work should be PLN 3000–5000 (EUR 750–1250). Around 11% of the respondents would like remuneration of PLN 5000–8000 (EUR 1250–2000). Only 10% of the respondents claimed that the unemployed should work for jobs offering remuneration not exceeding PLN 2000 (EUR 500), this amount being close to the current minimum wage.

About 90% of the respondents do not plan to work abroad. This may mean that they feel that their current financial situation and support systems for families with children in Poland is satisfactory. Only 7% of the respondents were going abroad for work. About 3% of the respondents declared that members of their families are working abroad. This means that these people are receiving welfare benefits in a form of coordinated social security systems.

## RESULTS AND DISCUSSION

In analysing the study results, it can be observed that 100% of the respondents declared that they were receiving child-support benefits. This shows that none of the respondents were single: all of them had a family with at least one child, therefore the benefits they received was the primary support for families with children. The results show that “500+” was the most desirable social security benefit in Poland. Family allowance was the second most popular type of benefit, being received by 64% of the respondents. The third most popular type of benefit was the non-permanent benefit, received by 21% of the respondents. The latter type of benefit, however, does not belong (unlike the first two benefits) to the group of benefits aimed at supporting families with children. The nursing allowance and the special nursing care allowance regulations state that the beneficiary must have a statement of disability. This means that these families have an increased income criterion, e.g. family allowance or child-support benefit.

On the other hand, none of the respondents received the nursing allowance or special designated benefit. The questionnaire results showed that other benefits were received by 6% of the respondents, who claimed that they were still receiving benefits from a maintenance fund.

The majority of the respondents considered public support in a financial form as very useful (69%) or rather useful (23%). This is a very positive assessment of cash benefits, given the fact that there were no negative replies in the questionnaire. Such results indicate that cash benefits are very useful and desired by the beneficiaries. Only 8% of the respondents noticed the advantages and disadvantages of cash benefits simultaneously, but they could not decide whether this was good support or not.

Social security benefit allocation is spent mainly on clothes (70% of respondents), on food (53%), on school fees (37%) and on sport activities (36%). The results indicate that the respondents primarily allocate the benefit amounts to satisfying personal needs like clothes and food.

For 30% of the respondents, social security benefits enabled the payment of bills. Some respondents used the benefits to upgrade the family standard of living e.g. home renovation (10%), purchase of a car (1%), purchase of electronic equipment (10%) and for improving their financial situation i.e. repaying credit/loans (14%) and savings/investments (13%). Only 7% allocated benefits to provide care for children during their absence, such as due to work (fees for nursery schools, kindergartens or nannies).

In the next part of questionnaire the respondents were asked whether they were not working or had resigned from their job as a result of the social security benefits. The results show that 53% of the respondents answered that nobody in their family gave up employment as a result of receiving benefits. This result is not satisfying, and the remaining respondents, almost half (47%), confirmed that they had resigned from work due to the social security benefits. In their opinion, social security benefits were a basic source of revenue. The study shows that:

- 9% fully quit working;
- 7% partially quit working (changed for part time-job);
- 10% never worked and live on social security benefits;
- 2% of partners fully or partially quit working;
- 10% of both partners never worked and live on social security benefits;
- 9% where one partner never worked as social security benefits were enough, and only in critical situations one person went to work.

Such a large percentage of people remaining jobless proves that social security benefits are a significant reason for not working. In this case the respondents or their family members were not taking up employment. Their knowledge about the types of benefits and the rules for getting them meant that they did not have to work as they were receiving benefits at a sufficient level. It is possible to say that the benefits were treated by some respondents as “easy money” which required no effort from their side, providing a regular income that met their needs.

The above responses show that social security benefits not only constitute adequate support for families in difficult financial situations, they can also be a way of life. The child-support benefits for the first child alone often generates considerable income for a family. It is simple to calculate that the annual income for one child can be up to PLN 6000 (about EUR 1500), and for three children this gives an income of PLN 18,000 (about EUR 4500). This leads to the situation where families who receive such incomes do not declare it anywhere, since benefits, according to Polish law, are not considered and accepted as income for the family. As a result, calling such families “poor” is not appropriate. They receive low incomes by performing paid work, while they can achieve relatively high incomes from social security benefits, which (as can be seen from the results) allow them to live respectfully.

Over half of the respondents were not working. None of the respondents were conducting their own business activity. The most popular forms of work were under an employment contract (26% of respondents) and working in agriculture on a farm (10%). Some respondents received a dependents’ pension, benefits for unemployed persons as well as benefitting from social employment in a centre for social integration.

The majority of the respondents worked with a loss of a part or the whole of their social benefits. However this is not a satisfactory result, because if the respondents were aware that they would lose benefits, 46% of them would not take up employment. It may be true that the respondents made the calculations and comparisons here in relation to real incomes which they could receive from employment and what amounts they received currently in the form of benefits. They then chose the more beneficial variant. This is why the provision of such an arrangement allows social security benefits to become a very important financial means, with benefits forming a basic source for the household budget for many people.

The hypothesis of this research is *social security benefits are reducing the labour supply*. The results support this hypothesis. People who receive social security benefits demonstrate a low interest in taking up employment. They prefer to support their household exclusively from welfare benefits rather than lose the entitlement to benefits by taking up employment. The declared amount of remuneration which could motivate them to take up employment is about PLN 3000 (EUR 750) net. However, in the interviews, the respondents emphasized that they were not interested in being employed at all. For a considerable group of respondents (in particular those receiving high social security benefits) they admitted that taking up employment was not in their plans.

It is necessary to add that this study has some limitations. The research group involved people entitled to social security benefits; however, the opinions of those who were not using this help were not considered. The results cannot be considered to reflect all the inhabitants in Poland.

This study could be important for those institutions responsible for state and regional policy. The results of the study could constitute a potential source of information in the process of planning future social policy. Care is required in making advances in this case, taking into account the fact that relatively high amounts of social security benefits can discourage potential employees taking up employment. The experiences of other European Union states (for example Germany, France or the Scandinavian countries) confirm the results.

### CONCLUSION

The research proved the hypothesis that social security benefits are reducing the labour supply. To sum up, it confirmed that:

1. social security benefits are obtained mainly by women remaining in matrimony with secondary education;
2. a large group of respondents take social security benefits from a very young age;
3. among the available social security benefits, dominant are those that support families with children;
4. 69% of the respondents regard social security benefits as very necessary;
5. the appearance of the first child in the family often means money difficulties and the need to apply for benefits;
6. 27% of the respondents consider the family growing in relation to the possibility of obtaining social benefits for children;
7. 90% of the respondents noticed an improvement in their financial situation as a result of getting social security benefits;
8. the total benefits can even amount to several thousand PLN;
9. monthly benefits are generally higher than the minimum work remuneration;
10. almost half of the respondents were not employed due to the possibility of receiving social benefits;
11. about 30% of the respondents claimed that the current benefit situation meant that employment becomes unprofitable;
12. about 45% of the respondents thought that it was not necessary to work because benefits gave them enough income;
13. the most desired benefits were child-support benefits.

The results of this study are similar to previous conclusions described in the literature review. Most authors underline that the “Family 500+” benefit has had a negative impact on the labour market. Both in the research conducted for the purposes of this article as well as resulting from the literature review, an adverse impact of the “Family 500+” benefit is shown in relation to the labour activity of the parents of small children, mainly mothers. This benefit reduces the willingness to take up employment, because instead of supporting women in their decision

to stay on the labour market it is encouraging some toward non-activity on the labour market. This may also be a result of a lack of work availability. The present research confirms that almost half of the respondents did not take up employment due to the possibility of receiving social benefits. In their opinion it is not necessary to work because the benefits give them enough income. The benefits can even amount up to several thousand PLN. It should be mentioned that the authors of the present articles analysed in the literature review those households only receiving only the “Family 500+” benefit rather than using other forms of welfare.

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### Summary

The aim of the article is to analyse the influence of social security benefits on the labour market. The research methods applied were analysis (considering the influence of social security benefits on the labour market), synthesis (research conclusions based on the detailed results) and interpretation (clarifying the results). The research tool was a questionnaire. The main aim of the questionnaire was to gain information about the relation between the amount of social security benefits and the willingness to work and take up employment.

The types of social security benefits are described and the author tries to answer the question whether these benefits positively or negatively influence the employment decision. The hypothesis is that social security benefits are reducing the labour supply. The results can help in better understanding the family and income situations of residents and enable the formulation of the effects of social security benefits on the labour market.

The study shows that people who receive social security benefits demonstrate a low interest in taking up employment. They prefer to support their household exclusively from welfare benefits

rather than lose the entitlement to benefits by taking up employment. A considerable group of respondents (in particular those receiving high social security benefits) admit that taking up employment is not in their plans.

*Keywords:* labour market, social security benefits, child-support benefits, welfare system.

## **Wpływ świadczeń socjalnych na rynek pracy w Polsce**

### *Streszczenie*

Celem artykułu jest analiza wpływu świadczeń socjalnych na rynek pracy w Polsce. W pracy przeprowadzono badania empiryczne na próbie 172 osób zamieszkujących północno-wschodnią Polskę (województwa: warmińsko-mazurskie oraz podlaskie) i korzystających ze świadczeń socjalnych. Zastosowany został losowy dobór próby badawczej. Wykorzystano narzędzie badawcze w postaci kwestionariusza ankiety.

Podstawowe założenia badawcze to próba odpowiedzi na pytanie czy wysokość świadczeń socjalnych może mieć wpływ na skłonność osób do podjęcia zatrudnienia przez osoby korzystające z tychże świadczeń. Hipoteza postawiona w artykule brzmi: świadczenia socjalne redukują podaż siły roboczej w Polsce. Wnioski z przeprowadzonych badań zweryfikowały postawioną hipotezę pozytywnie.

Osoby otrzymujące świadczenia socjalne wykazują niskie zainteresowanie podjęciem zatrudnienia. Znacznie bardziej preferują jako źródło utrzymania wykorzystanie świadczeń socjalnych niż otrzymywanie wynagrodzenie z pracy. Większość osób badanych otrzymujących wysokie świadczenia społeczne przyznaje, iż w najbliższym czasie nie planuje podjąć zatrudnienia. Przeszkodą jest przede wszystkim obawa przed utratą zasiłków pieniężnych.

*Słowa kluczowe:* rynek pracy, świadczenia socjalne, świadczenia wychowawcze, dobrobyt.

JEL: H55, J21.



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## Protection of human capital against depreciation as the primary reason for providing compensation<sup>2</sup>

### INTRODUCTION

Family is the only supplier of human capital for the labour market. Fair pay for an employee is a prerequisite for maintaining an appropriate level of human capital in a household. The pay should be at a level enabling the employee and their family to satisfy their basic needs in order to regenerate their capacity for work and to develop their personality. The right to a fair pay is one of the major norms regulating human rights. The employee compensation level has a substantial impact on the emotional condition of the beneficiary (Karaszewska, 2003, p. 67). It was already Theodore Shultz, one of the precursors of the human capital theory, who noticed that a country's development and its dynamic largely depended on the human capital of its citizens (Dobija, 2003, pp. 150–151). The knowledge, experience and physical condition of people are all significant productivity factors. So it is important to create appropriate conditions in the country for proper development of the components of human capital. The size and stability of income are treated as measures of an individual's social value. They also determine the individual's place in the hierarchy and assign them to specific social strata.

From the employer's point of view, employee compensation has various functions, incentive being an important one. For the compensation to serve as an incentive, the employee must find it satisfying. And an employee can be satisfied with their compensation only if they consider it fair. As has already been mentioned, a fair pay permits regenerating at least the same level of human capital, both in the short term and in the long run. Additionally, pay amount impacts more than just

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the performance of the contract between the employer and the employee – it also indirectly influences the image of the company as an employer. The compensation solutions applied by a business entity should be structured to serve as an incentive for employees with appropriate qualifications (Borkowska, 2001, p. 21).

The purpose of this article is to present the role of family in shaping human capital and to attempt to estimate the minimum fair pay in Poland that permits regenerating the human capital, both in the short term and in the long run – through generational change.

### HUMAN CAPITAL MODEL

The compound interest formula is crucial for the capital growth model. Compound interest is a solution where interest from a cash contribution for a particular period is compounded and as such contributes to the profit generated in the next period. Albert Einstein once said that *compound interest is the 8th wonder of the world* and called it *the greatest mathematical discovery of all time and the most powerful force in the universe*. There is no exaggeration in this opinion as it is indisputably an effective and practical model. The confirmation of these words can be found in the story of Warren Buffett, whom the fascination with compound interest has enabled to make billions of dollars in an honest way (Bednarski, Dobija, 2003). The simple formula for continuously compounded interest is as follows:

$$C_t = C_0 \times e^{rt} \quad (1)$$

where:

$C_t$  – end capital,

$C$  – initial capital,

$e$  – Euler's number,

$t$  – number of years until deposit maturity date,

$r$  – nominal annual interest rate

Formula (1) presents the simplest model of capital growth in the economy and it can be derived from the fundamental accounting principle of duality. According to that principle, property resources are disclosed dually – both as assets and as the capital concentrated therein (Dobija, 2003). So, the issues of ownership aside as they will have no impact on the nature of the discussion, the duality principle will be presented through the simple formula:

$$A_0 = C_0 \quad (2)$$

where:  $A_0$  – the value of the assets at the beginning of the period,  $C_0$  – the value of the capital at the beginning of the period.

Formula 2 requires identifying the essence of the capital. Assuming that the asset is just one excavator, the current capital may be the abstract capacity of the excavator to perform work. As time goes by, the excavator loses its capacity for work, even if it stands idle. The potential of the excavator did not come from nothing but it was created in the manufacturing process. The capacity for work is the guarantee for the existence of both machines and people. Only living people are the carriers of human capital, while machines and equipment having no capacity for work are scrapped. An analysis of the above deliberations shows that the duality concept and the Debit-Credit rule make it impossible to produce capital out of nothing. Capital cannot be created so the formula presenting the growth of capital includes the initial capital  $C_0$ .

It is common knowledge that profit is a periodic capital growth so by using a basic accounting equation, we obtain Formula 3:

$$\text{Profit} = \Delta C = \Delta A \quad (3)$$

where:

$\Delta C$  – the difference between value of the capital at the end and at the beginning of the analysed period,

$\Delta A$  – the difference between value of the assets at the end and at the beginning of the analysed period.

Afterwards, we may use the above values to calculate the rate of return:

$$ROA = \frac{\Delta C}{C_0} = \frac{\Delta A}{A_0} \quad (4)$$

where:  $ROA$  – rate of return.

So the capital after the initial reporting period is as follows:  $C_1 = C_0(1 + ROA_1)$ , and after subsequent  $n$  periods:  $C_n = C_0(1 + ROA_1) \times \dots \times (1 + ROA_n)$ . Accordingly, there is a mean  $ROA$  for which:  $C_n = C_0(1 + ROA)^n$ . This results in Formula 5:

$$C_1 = C_0 \times e^{ROAt} \quad (5)$$

where:  $t$  – reporting period (period of time).

Since the capital grows according to Formula 5, many scientists use this formula as the starting point for their deliberations regarding growth. As we continue, we should also address the issue of the growth rate structure. Research has shown (Dobija, 2007) that the  $ROA$  rate of return is a total of three components

which have a substantial impact on the end value of the capital (Dobija, Renkas, 2011, p. 182). In view of the foregoing, the capital growth model is as follows (Dobija, 2009):

$$C_t = C_0 \times e^{(p-s+m)t}, p = E(s) = 0.08 [1/year] \quad (6)$$

where:

$p$  – economic constant of potential growth (ECPG);

$s$  – natural spontaneous capital dispersion rate;

$m$  – capital growth rate resulting from capital inflow through work processes.

Presented below is the interpretation of the forces acting in the law of exponential growth:

$e^{pt}$  – a component expressing the natural capital growth capacity that is attainable due to the properties of the world we live in, governed by the laws of nature – the economic constant of potential growth (ECPG)  $p = 0,08 [1/year]$ ;

$e^{-st}$  – a component presenting the impact of the thermodynamic arrow of time as random capital dispersion (the impact of the second law of thermodynamics),  $t$  – calendar time;

$e^{mt}$  – a component representing actions that boost capital growth through management and work performance and eliminate the impact of the thermodynamic arrow of time.

It must be noted that the right side of the equation (6) is the initial capital, which – according to the first law of thermodynamics – does not come from nothing. Only if already acquired, capital may change – as a result of the income derived from natural sources and from work, and may be dispersed. An individual with their human capital is a perfect example to illustrate those statements. At the moment of birth, the child already has its initial capital ( $C_0$ ), which would undergo dispersion without the care of its parents ( $e^{-st}$ ), thus resulting in the infant's death. The efforts of the parents and the society compensate for the dispersion of the capital and guarantee its existence ( $e^{mt}$ ), while its growth rate is determined by the  $p$  constant.

An analysis of the capital model reveals that work is not the only or even the main growth factor. All that work does is reduce the impact of the thermodynamic arrow of time ( $e^{-st}$ ). As physiocrats used to claim, work is *fruitless* but only in the sense that work transfers the capital rather than increasing its amount in the general balance of capital. To be able to work, one must first accumulate human capital, i.e. the capacity for work. Work transfers the capital but it cannot increase it. However, without work, the spontaneous capital dispersion 's' would reduce the natural growth potential that we owe to Nature.

So assuming that an individual is the owner of their human capital, we obtain a formula for the human capital of an employee ( $H_t$ ) where the capital depends on

the initial investment ( $H_0$ ), the economic constant ( $p$ ) and the compounding time ( $t$ ). The general capital model, with the assumption that  $s = m$ , leads to the following general formula for human capital:

$$H_t = H_0 e^{pt} \quad (7)$$

Formula 7 presents the significance of the constant of potential growth in the calculation of human capital. It must be noted that the variable  $H_0$  is not a one-time investment but a stream of investments (costs of living, costs of professional education) (Dobija, 2010, p.77).

#### RULES OF PAYING FOR HUMAN CAPITAL

According to the theory of human capital and fair compensation, as has been mentioned above, work means the transfer of human capital to the objects of work. Compensation for work is the cash equivalent paid to the employee in exchange for providing human capital. The rules of paying for human capital depend on the nature of the capital. The pay model must take into account the impacts of the environment on changes in human capital and its natural capacity for growth. The initial value of human capital is influenced by random dispersion, which leads to gradual loss of its value. To preserve the value of human capital, the pay must reduce the natural losses of the capital. For physical resources, the dispersion of value is driven by the deterioration of their condition in connection with the passing of time (e.g. metal parts of a car corrode as time goes by). Preservation of the initial capital requires a continuous inflow of value to balance out the natural capital dispersion. So the value of the capital will be guaranteed if the assets where the capital is allocated create a stream of inflows leading to a proportionate rate of return. The rate of return should not be lower than the compounding rate, otherwise the value of the capital will drop to below its purchase value (Dobija, 2002, pp. 8–13).

An employee's human capital decreases as a result of the effort related to work and in connection with the passing of time. The pay is to compensate the loss of human capital and its amount should arise from the application of the economic constant or potential growth. Empirical studies in a number of publications (Dobija, 1998; Cieślak, 2008; Kozioł, 2010; Kurek, 2011; Renkas, 2012) confirm that the constant is about 8% per annum.

A general capital model includes various categories that represent active measures and potential measures. It must be noted that the  $s$  variable represents active forces of nature, while the  $m$  variable stands for measures in the form of work-related capital inflow, which may balance out the dispersion of the capital. The economic constant of potential growth  $p$  is the symbol of potential forces. The  $p$

constant determines the natural potential that guarantees human capital growth only on condition that the  $s$  dispersion level is compensated by the  $m$  measure. If  $s = m$ , the human capital grows at a rate  $p = 8\%$ . Sometimes  $m$  may actually be bigger than  $s$  (e.g. due to specialised and professional education), which means that the human capital growth rate will be faster than  $p = 8\%$ . However, the situation may also be opposite, where the  $m$  balances out the  $s$ . In such a case, the capital growth rate is lower than  $p = 8\%$ , which may bring the demise of the individual (Oliwkiewicz, 2018, pp. 369–370). So a pay that balances out the outflow of the employee's human capital can be established based on the mean value  $E$ :

$$W = E(s \times H) = E(s)H = p \times H \quad (8)$$

where:  $W$  – basic salary,  $p$  – economic constant of potential growth,  $H$  – value of employee's human capital.

#### FAMILY VERSUS THE PROCESS OF SHAPING HUMAN CAPITAL

The level of human capital in a household substantially depends on the living conditions of the family, especially its disposable income, expenses, and the institutional environment, which may either support or hinder the development of human capital. The passing of time is always accompanied by outflow of human capital so the task of a household is to regenerate it, both in the short term and in the long run. Human capital regeneration short term means replenishing the vital energy lost during daily tasks (e.g. through meals, rest, sleep, etc.). Preparing children to work and live in the society is a set of actions taken to regenerate human capital in the long run. Economic progress requires using such solutions in the preparation of the next generations for work to make them at least as prepared as their predecessors. Those objectives are only attainable if all family members take appropriate actions in an economic dimension. This is especially about economic relations with the units that create the market environment and the institutional environment for the household. A household is the only supplier of human capital and employment is the most important element of its cooperation with the environment. The household is remunerated for the provision of human capital and it spends the money primarily to cover the costs of regenerating the human capital, both in the short term and in the long run. So the pay level is particularly important from the point of view of the dynamic of the household's human capital in the long term. The income of the family should be at a level balancing out the dispersing forces – it should be based on the 8% economic constant.

Fair compensation of an employee with primary education in a family of four was estimated based on the measurement of human capital and fair pay. The model used the assumptions that applied to Poland's economic situation

for 2018. The costs of living were based on the subsistence minimum published annually by the Institute of Labour and Social Studies (IPiSS). Subsistence minimum is a category representing the costs of living of modest households which are established at a level securing the conditions that allow people to replenish their vital energy at any time, to have and raise children and to maintain bonds with the society (Deniszczuk, 1977). It must also be added that the costs should be calculated as the costs of living of one person in a model of working family of four (a prerequisite for the human capital to be regenerated in the long run). The monthly costs of living at the subsistence minimum level in June 2018 were PLN 941.34 (Kurowski, 2018). The model takes into account only the costs that fall within the limits of necessary consumption (are socially justified), so the subsistence minimum of PLN 941.34 is recommended to be reduced by 10%. The resulting socially justified costs are **PLN 847** [PLN 941 – (PLN 941×10%)] a month. For an employee with primary education, human capital will be calculated according to the following formula:

$$H(T) = K \quad (9)$$

where:

$H(T)$  – the value of human capital,  $K$  – compounded costs of living for 18 years,  
 $T = 0$

Presented below are formulas illustrating the formation of human capital from the costs of living:

**Table 1. Formulas illustrating the formation of human capital**

	Costs of living
Annual compounding	$K_t = k \times 12 \times \frac{(1 + p)^t - 1}{p}$
Continuous compounding	$K_t = k \times 12 \times \frac{e^{pt} - 1}{p}$

Source: own work (Oliwkiewicz, 2016, p. 484).

where:

$K_t$  – compounded costs of living,

$k$  – necessary monthly costs of living,

$t$  – number of compounding years for the necessary costs of living.

Estimation of the human capital value and the minimum fair pay for an employee with primary education: data:  $k = \text{PLN } 847$  a month,  $p = 8\%$ .

Compounded costs of living:

$$K_{t,p} = k \times 12 \frac{e^{pt} - 1}{p} \quad (10)$$

Costs of living are compounded for 24 years, so:

$$K_{18} = 847 \times 12 \times \frac{e^{0,08 \times 18} - 1}{0,08} = \text{PLN } 409,189.40$$

Human capital value  $H_0$ :

$$H_0 = K = \text{PLN } 409,189.40$$

The annual labour costs are determined by the formula  $p \times H(0)$ :

$$\text{PLN } 409,189.40 \times 0.08 = \text{PLN } 32,735.15$$

Monthly compensation (labour costs):

$$\frac{32\,735,15}{12 \text{ m - cy}} = 2\,727,93 \text{ zł}$$

The resulting amount **PLN 2,727.93** is the total compensation, so to estimate the gross compensation, one must reduce the amount by the contributions paid by the employer (for retirement pension: 9.76%; for disability pension: 6.50%; for accidents: 1.80%; for the Labour Fund: 2.45%; for the Employee Benefit Fund: 0.1%; which totals: 20.61%). The resulting gross compensation is **PLN 2,261.78**.

Based on the prior calculations of a minimum fair pay for a worker's family of four, presented below is an example showing the preservation of the human capital value in the context of generational change:

- value of the capital of one of the parents ( $H(T)$ ): PLN 409,189.40
- annual basic pay ( $H(T) \times p$ ): PLN 32,735.15,
- monthly basic pay ( $\frac{H(T) \times p}{12}$ ): PLN 2,728 (for two parents 5,456).

Assuming that the family pays the healthcare costs and the retirement security costs, the following solution has been adopted:

- healthcare and sickness insurance contribution 14% of the compensation (PLN 764),
- retirement pension fund contribution 14% of the compensation (PLN 764),
- income available to the family:

$$\text{PLN } 5,456 - \text{PLN } 764 - \text{PLN } 764 = \text{PLN } 3,928$$



It can be noticed that after the contributions are paid, the income is PLN 3,820, i.e. PLN 982 per capita. The amount is slightly higher than the subsistence minimum so it allows a model family to live decently and to prepare their children for work at least at the same level as the parents.

A pension fund regularly increased for 45 years makes it possible to save enough to retire at the age of 65. The retirement pension amount will be equal to the basic pay. Assuming that the retirement pension contributions will be compounded at an interest rate of 3%, we obtain the following value of the capital accumulated within the retirement fund:

$$KE = FE \times \frac{(1 + r)^t - 1}{r} \quad (11)$$

where:  $KE$  – the capital accumulated for the retirement fund,  $FE$  – retirement fund contributions,  $r$  – retirement account interest rate,  $t$  – period during which the contributions are paid.

$$KE = 764 \times 12 \times \frac{(1 + 0,03)^{45} - 1}{0,03} = 850\,056 \quad (\text{PLN})$$

Based on the data of the Polish Social Insurance Institution (ZUS), the average retired life in Poland is 15 years. So to guarantee retirement pension equal to the pay, the following amount of capital is required:

$$KW = W \times \frac{(1 + r)^n - 1}{r} \times \frac{1}{(1 + r)^n} \quad (12)$$

where:  $KW$  – the capital required to cover the  $W$  contributions over the  $n$  period.

$$KW = 5\,456 \times 12 \times \frac{(1 + 0,03)^{14} - 1}{0,03} \times \frac{1}{(1 + 0,03)^{14}} = 781\,600 \text{ zł}$$

The above deliberations lead to a conclusion that the basic pay of  $0.08 \times H$  compensates the natural dispersion of an employee's human capital and makes it possible to preserve it over a longer period, i.e. it is sufficient to maintain a decent standard of life in the family, raise two children with a level of human capital not worse than that of their parents, and create a sufficient retirement pension fund for the parents.

## CONCLUSIONS

The basic assumptions of the human capital model apply to an individual person. However, it must be stated that the growth of and payment for human capital is one of the most important economic processes taking place in a household. Human capital

is unique and non-transferable. It is individual and assigned to a specific human capital holder. However, the non-transferability does not apply to the long period of generational change. An individual as the holder of the capital is responsible for preparing their successors (children) to work and function in the society. A family, or a household, can be defined as a managing micro-unit, usually connected through familial bonds, which produces income, distributes it for various purposes, provides services, produces goods and accumulates supplies (Pałaszewska-Reindl, Michna, 1986, p. 34).

Unfortunately, fair compensation does not guarantee that the human capital will be fully regenerated. Families may be guided by various preferences as to how to spend the income remaining at their disposal. Reasonable and creative actions of family members will additionally increase human capital. But lack of concern for one's health or careless use of the available funds, e.g. to abuse alcohol, will cause it to drop. It can be noticed that the impacts of the  $m$  variable are incredibly important as they make it possible to increase the chance of preserving or growing human capital. The ability of a family to regenerate the human capital also largely depends on institutional determinants. Taxes and other mandatory withholdings from the pay make it much harder, or even impossible, to finance the reproduction of human capital (Oliwkiewicz, 2018).

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### Summary

The family is the only supplier of human capital to the labour market. A prerequisite for maintaining a proper level of human capital in the household is to provide the employee with a fair wage. A good wage is one that gives the opportunity to reproduce human capital at least on the same level, both in the short and long term. The growth and method of paying human capital is one of the main economic processes taking place in the household. Human capital has a unique character that is characterized by inalienability. The capital is individual and assigned to a specific holder of human capital. However, inalienable does not apply to the long period of generational exchange. Man, as the owner of capital, prepares his successors (children) to provide work and functioning in society. However, a reasonable remuneration does not guarantee full reconstruction of human capital. Families may be guided by various preferences when it comes to using their income at their disposal. Reasonable and creative actions of family members will lead to an additional increase in human capital. However, the lack of care for health or the use of available resources in a careless manner, e.g. alcohol abuse will lower its value. The purpose of this article is to present the role of

the family in shaping human capital as well as an attempt to estimate the minimum fair remuneration in Poland, which will enable the reconstruction of human capital in the short and long-term through generational exchange.

*Keywords:* minimum wage, human capital, fair remuneration, work.

## **Ochrona kapitału ludzkiego przed deprecjacją jako podstawowa przesłanka wynagradzania**

### *Streszczenie*

Rodzina jest jedynym dostawcą kapitału ludzkiego na rynek pracy. Warunkiem koniecznym utrzymania odpowiedniego poziomu kapitału ludzkiego w gospodarstwie domowym jest zapewnienie pracownikowi płacy godziwej. Godziwa płaca to taka, która daje możliwość odtworzenia kapitału ludzkiego przynajmniej na tym samym poziomie zarówno w krótkim, jak i w długim okresie. Wzrost i sposób opłacania kapitału ludzkiego to jeden z głównych procesów ekonomicznych mających miejsce w gospodarstwie domowym. Kapitał ludzki ma unikalny charakter, który cechuje się niezbywalnością. Kapitał jest indywidualny i przypisany do konkretnego posiadacza kapitału ludzkiego. Jednakże niezbywalność nie dotyczy długiego okresu, jakim jest wymiana pokoleń. Człowiek, jako posiadacz kapitału, prowadzi przygotowania swoich następców (dzieci) do świadczenia pracy i funkcjonowania w społeczeństwie.

Godziwe wynagrodzenie jednak nie gwarantuje pełnego odtworzenia kapitału ludzkiego. Rodziny mogą się kierować różnymi preferencjami, jeśli chodzi o wykorzystanie dochodu pozostającego w ich dyspozycji. Rozsądne i twórcze działania członków rodziny doprowadzą do dodatkowego wzrostu kapitału ludzkiego. Natomiast brak troski o zdrowie lub wykorzystywanie dostępnych środków w niefrasobliwy sposób, np. nadużywanie alkoholu, spowodują obniżenie jego wartości.

Celem niniejszego artykułu jest przedstawienie roli rodziny w kształtowaniu kapitału ludzkiego, jak również próba oszacowania minimalnego wynagrodzenia godziwego w Polsce, które umożliwi odtworzenie kapitału ludzkiego w krótkim i w długim okresie poprzez wymianę pokoleniową.

*Słowa kluczowe:* płaca minimalna, kapitał ludzki, wynagrodzenie godziwe, praca.

JEL: E24, J24.

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## **Practical dimensions of knowledge transfer in the diverse modern labour market – a research-based discussion<sup>2</sup>**

### INTRODUCTION

The modern world is governed by new economic conditions, which result from the transformations that have come with yet another technological revolution. Breakthrough technologies have been created, new branches of industry have developed, and the old dominant sectors have had to redefine themselves. These changes have had a global, economic and social significance as the network society has emerged. Nowadays we all function in an era of industries created by humans, based on our knowledge and the power of our minds. Moreover, the low innovation level of the economy and its poor ability to compete are usually assumed to be a consequence of inadequate support of the economy with knowledge and intellectual capital (Wiatrak, 2005, p. 19). As a result, analyses are currently conducted from the perspective of an orientation towards knowledge at all levels of economic life. The issues are discussed from both a global and national standpoint and from the point of view of a single organisation.

The dynamic transition to a knowledge-based economy has also led to transformations in the very nature of work and has organised it around the use of abstracts and notions. This, in turn, has resulted in significant shifts in employment structures – the working class has shrunk and the headcount in the service sector has increased. Furthermore, the results and efficiency of work have started to increasingly depend on the soft skills of employees (Solarczyk-Ambrozik, 2018, pp. 51–52).

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We are currently living in a “second” *belle époque*, where – just as in the original one in the 1872–1914 period – tremendous economic and social inequalities emerged, with wealth concentrated in the hands of a narrow group of the richest people (Gwiazda, 2015, pp. 26–27). It is not just the nature of the wealth that has changed – today it is knowledge and the possibility of controlling it. This is why a new dimension of social inequalities has been identified, i.e. access to knowledge (including digital inequalities) (Krot, Lewicka, 2016, p. 234). Organisations invest in the development of those employees who are the swiftest learners, which usually depends on their fundamental knowledge. And so the disproportions between employees and their knowledge resources keep growing geometrically.

In the new knowledge-based economy, only those with the highest qualifications have experienced actual pay rises; however, they are also let go once their skills become obsolete or too expensive or if there are cheaper employees with similar qualifications in another part of the world. The basic social contract is being destroyed, which is why key professionals, usually knowledge employees, are the first ones to quit their jobs once a new opportunity arises. So the possibilities of building a career for one’s whole life are vanishing, which stimulates the growing inequalities.

This is one of the reasons why the role of knowledge transfer keeps growing. After all, knowledge transfer is not only recognised as fundamental and essential for success in the area of knowledge management in organisations but it gains significance in the context of the diversification existing in the modern labour market. The weight and specificity of knowledge transfer encourages a multidimensional and multifaceted analysis, especially in terms of the diversity of employees and the circumstances of their work. Besides, solutions must be proposed for shaping the optimum conditions of such transfer, both universal ones and dedicated to specific employee groups.

The study is both theoretical and empirical. Its objective is to review the literature regarding knowledge transfer seen as a process with the participation of knowledge and to identify the dimensions of that process versus the existing diversification in the labour market. Critical analysis was used as the method to identify knowledge transfer determinants, to propose the tools to facilitate the process for particular employee groups and to establish the related primary values and principles.

The objective of the empirical section is to verify the assumptions that knowledge transfer differs for particular employee groups, with different dominant subprocesses and different instruments supporting its implementation.

#### SPECIFICITY AND DIMENSIONS OF KNOWLEDGE TRANSFER IN THE CONTEXT OF THE DIVERSIFICATION OF THE MODERN LABOUR MARKET

Diffusion of knowledge has attracted the attention of researchers since the very beginnings of the knowledge management concept. It is currently treated as a factor in effective organisation management (Purgał-Popieła, 2017, p. 6; Sinell, Iffländer,

Muschner, 2018, p. 1460), a determinant of the innovation level of an enterprise and the limits of dynamic development (Tworek, Walecka-Jankowska, Martan, 2016; Luo, Lui, Kim, 2017, p. 2), a driver of the modern economy (Michalak, Zagórowski, 2017, p. 300), or a stimulus of the leverage effect in the creation of value by an organisation (Sveiby, 2005, p. 49).

Studies dedicated to the flow of knowledge often use the following terms as synonyms: knowledge diffusion, transfer, distribution, flow, exchange, and transmission (Intezari, Taskin, Puleen, 2017, pp. 499, 501). The term ‘knowledge diffusion’ should be treated as the broadest category, which also embraces knowledge creation as a result of its flow. Its essence is self-duplication of knowledge (Zhang, Li, Aziz-alaoui, Bertelle, Guan, Zhou, 2016, p. 2). When compared to transfer, the process is set strictly in a social context – it requires mutual interactions between its participants, it is determined by knowledge characteristics such as its viscosity and ambiguity (Klarl, 2014, p. 2), it is more closely connected with tacit knowledge and it highly depends on the organisational structure of the enterprise (Paliszkievicz, Svanadze, Jikia, 2017, p. 37). So knowledge diffusion takes into account the positive outcomes of knowledge transfer, along with the determinants and context of the process.

Knowledge transfer is usually defined in process terms and as such it should be described as a process involving knowledge that is the basis of organisational learning. It is described as flow of tacit or explicit knowledge between knowledge agents for the primary purpose of communicating knowledge of appropriate content and set in an appropriate context (Kim, Kang, Wang, 2016, p. 960) (Figure 1).

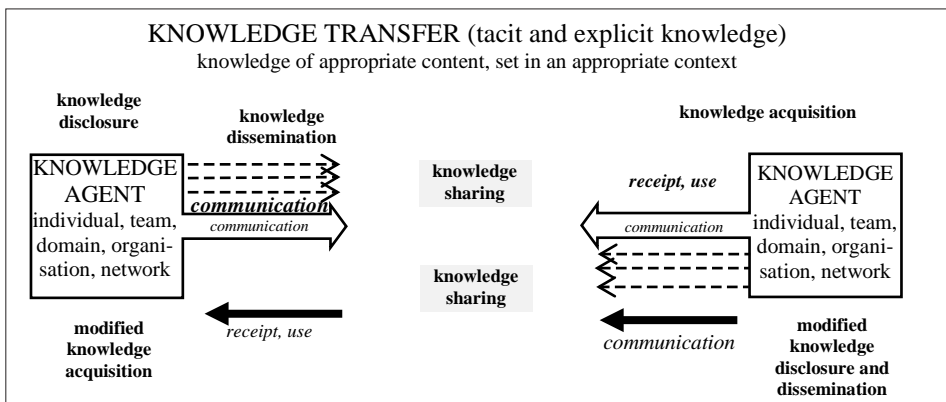


Figure 1. Knowledge transfer as a process involving knowledge

Source: (Pietruszka-Ortyl, 2019, p. 21).

B. Mikuła (2011, s. 64–65) brings the process involving knowledge down to activities that consist of 4 subprocesses: knowledge acquisition (gaining knowledge from various external and internal sources), knowledge disclosure (knowledge

communication to specific people), knowledge dissemination (a wider range of disclosure, aimed at turning specific knowledge into a generally available resource) and knowledge sharing (mutual provision of knowledge between people in a communication process).

The modern labour market is highly diversified. This diversity has resulted in certain inequalities. First of all, its clear dichotomy can be observed.

On the one hand, its main actors are highly qualified employees – new-era professionals, enjoying the safe position of specialists with the key competencies required by employers and as such desired by employers and dictating their terms in those relations.

The other perspective focuses on workforce with low qualifications. In that case, issues characteristic of the employer market prevail, related to dysfunctional flexibilisation of an organisation, sometimes resulting in the waste of qualifications of young people, employees at a mature age or socially excluded population.

So one may conclude that this diversity of the labour market is what generates the inequalities in that market and creates the dimensions for its analysis, especially from the perspective of effective implementation of knowledge transfer by organisations.

Considering the inequalities in the modern labour market, a knowledge transfer analysis must be multifaceted and it must address:

- transfer in hierarchic systems (between employees representing different organisation management levels or various places in the organisational structure of the enterprises or its various international branches),
- intergenerational transfer,
- intercultural transfer,
- interorganisational transfer (between employees, teams of particular enterprises or between individuals, groups and specific partnership enterprises),
- transfer between professionals,
- transfer between specialists and employees with lower qualifications.

Each of the above knowledge transfer analysis levels has different challenges. They apply in particular to issues related to the strategic value of transferred knowledge, its type or the most common knowledge diffusion subprocesses and the optimum tools to stimulate knowledge circulation, depending on the dimension that is being considered (Table 1).

In terms of knowledge transfer between professionals, the key efficiency factor is concentration on the knowledge sharing subprocess. It is most important for this group of employees as prominent individuals since they have the resources of the key – usually tacit – knowledge which is very hard to communicate. In their case, interpersonal relations and personal contacts that create a context of trust and reciprocity are of essence (Ensign, Hébert, 2010, p. 80). The level of trust and mistrust affects attitudes and behaviours, such as: entrepreneurial behaviours, behaviours in the labour market, relational behaviours, risk acceptance, and controlling behaviours (Krot, Lewicka, 2016, p. 238). Professionals' individual



motivation to become actively involved in knowledge transfer is shaped through reputation (i.e. a set of characteristics or capabilities recognised by the environment) and altruism stemming from the wish to satisfy such needs as acceptance, prestige, identification, status and appreciation and intended to draw satisfaction from helping others. Reciprocity is manifested through the attitude that each member of a community should help others and may expect the same or a favour in return (Taylor, Murthy, 2009, p. 162).

**Table 1. Selected knowledge transfer aspects and the dimensions of their analysis in the context of labour market diversification**

strategic value of knowledge			type of knowledge dominant in the transfer		the main subprocess for the knowledge transfer implementation				recommended tools and methods assisting knowledge transfer										analysis dimension
high	medium	low	tacit	explicit	Knowledge acquisition	Knowledge disclosure	Knowledge dissemination	Knowledge sharing	Specialised publications	Seminar speeches	Documentation disclosure	On-the-job training	Managerial training	Creative thinking techniques	Psychological workshops	Coaching	Mentorship	Meetings and briefings	
	X	X		X	X	X	X			X	X	X					X	X	hierarchic
X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	intergenerational
X	X			X	X			X	X	X	X		X		X			X	interorganisational
X	X		X		X	X		X					X	X	X	X		X	between professionals
	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	intercultural
	X	X		X		X	X	X		X	X	X	X	X			X	X	between specialists and their co-workers

Source: (Pietruszka-Ortyl, 2019, p. 21).

In the case of knowledge transfer in a multicultural and intergenerational aspect, and partially an interorganisational aspect, the efficiency of the process involving knowledge depends on some special elements, the leading one being the frequency of contacts – the more frequent, the better for knowledge transfer. In this context, problems connected with different mental models, metaphors and analogies arise. So it seems that the dominant factor simulating efficient knowledge exchange in this case is the ability of particular employees to learn at a universal level.

Intergenerational knowledge transfer gains special significance due to its increasing range. Contemporary living conditions have resulted in longer life expectancy and coexistence of many generations. Both traditionalists and Generation Z can function in the labour market simultaneously, which is a challenge for company management. Organisations need both the youngest generation – proficient users of IT tools, born in the era of digital economy, and the older generation – a carrier of knowledge (Godlewska-Majkowska, Lipiec, 2018, p. 9).

The issue of proper knowledge transfer between the organisation management and the reporting employees, also with regard to global operations, is an intriguing issue. This is where problems emerge in connection with proper communication and implementation of the strategies adopted without adjustment to the requirements of local markets or other peculiarities of specific individuals. In such cases, the alertness and vigilance of managers is emphasised as it determines the transparency of the message and the selection of knowledge diffusion tools suitable for the recipients and it eliminates the use of mental shortcuts, cultural simplifications or hermetic language (Ishihara, Zolkiewski, 2017, p. 840).

#### EMPIRICAL RESEARCH METHODOLOGY

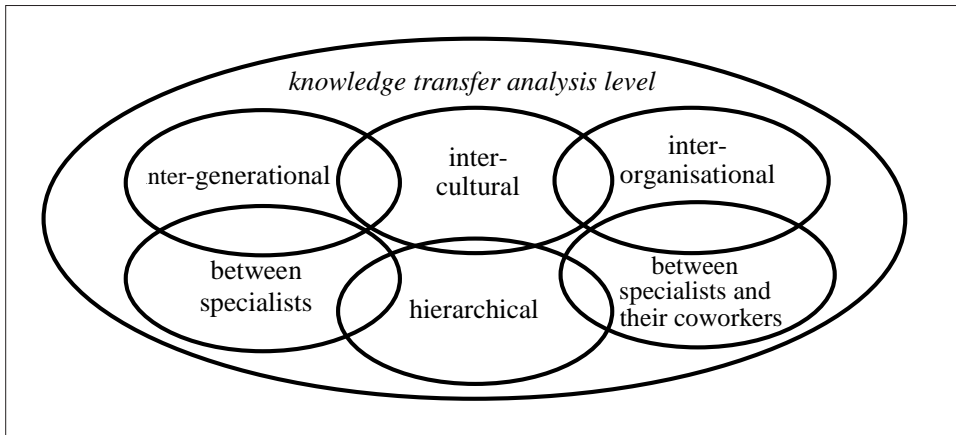
The main hypothesis was developed before the pilot empirical research aimed at preliminary analysis and diagnosis of knowledge transfer conditions in the perspective of the diversification of the modern labour market, and it assumed that the knowledge transfer process depended on the knowledge agents involved. The main hypothesis was complemented by the following detailed hypotheses:

- the group of knowledge agents determines the dominant subprocess in a specific knowledge transfer process,
- various groups of knowledge agents use different instruments supporting the implementation of particular knowledge transfer subprocesses.

Thus phrased theoretical assumptions led to specific questions and, by extension, to research tasks involving identification of:

- the knowledge transfer subprocess dominant in the group of knowledge agents,
- the methods and tools supporting each of the identified knowledge transfer subprocesses used with regard to specific groups of knowledge agents.

The research hypotheses were verified and the research objectives were pursued based on a survey held in spring 2019. The research tool consisted of 15 closed, mostly multiple choice questions. Eighty-eight surveys were fully completed.



**Figure 2. Knowledge transfer analysis dimensions versus labour market diversification**

Source: (Pietruszka-Ortyl, 2019, p. 21).

The respondents were of different ages (the average age was 38.5), had mostly higher education (89.7% respondents) and moderate professional experience, they were connected through various forms of cooperation, they formed a collaborative network, they had 14 years of service on average, they represented various groups of knowledge agents and participated in knowledge transfer processes at various levels according to the pattern presented in Figure 2.

As a result, the respondents were concurrently assigned to several groups of knowledge agents and they took part in knowledge circulation processes at several different levels of knowledge transfer analysis. 21 (23.9%) respondents were senior executives, 58 (65.9%) represented middle management, and 9 (10.2%) were operational managers. 23 (26%) of the respondents were specialists in their field. Considering the generation diversification, 46 (52.3%) respondents were from Generation X, 33 (37.5%) were from Generation Y and 9 (10.2%) represented Generation Z. The first group was homogeneous in terms of gender (men) and diverse in terms of nationality (19 (21.6%) Ukrainians, 11 (12.5%) UK citizens, 9 (10.2%) Germans, 49 (55.7%) Poles).

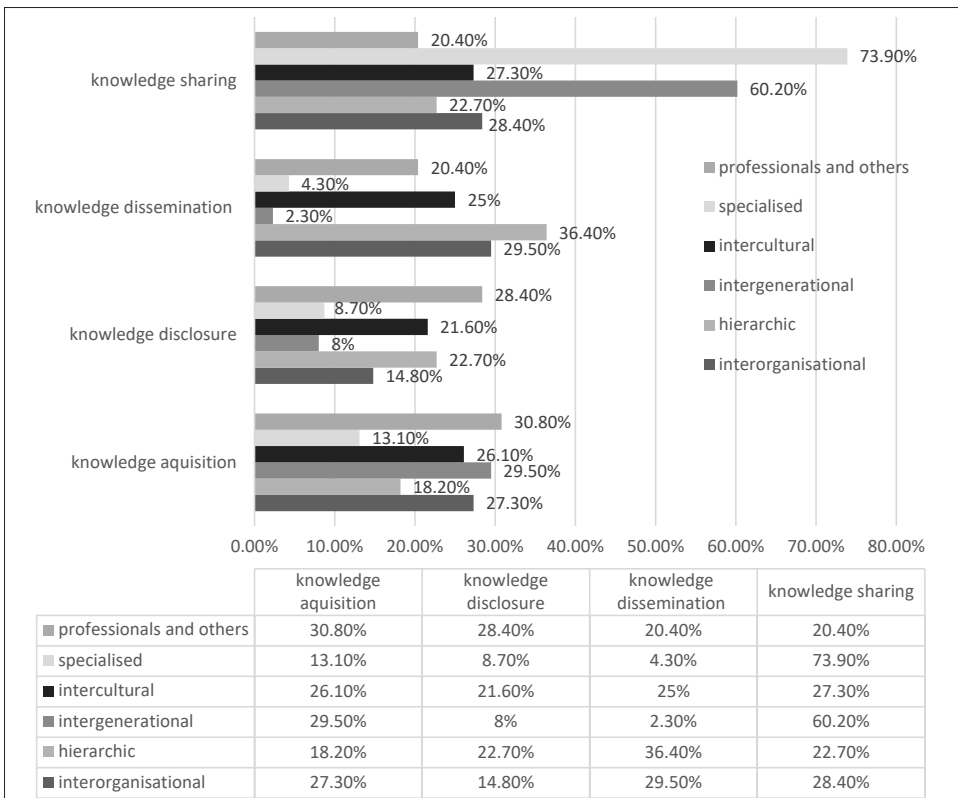
#### DETERMINANTS OF THE KNOWLEDGE TRANSFER PROCESS DEPENDING ON THE CHARACTERISTICS OF KNOWLEDGE AGENTS

##### – RESEARCH RESULTS

In search of arguments to verify the correctness of research assumptions, the answers given by the respondents to particular survey questions were addressed.

First, every respondent group was asked to specify which of the four subprocesses was the most common, the most preferred and, in their opinion, the most important for effective implementation of knowledge transfer (Figure 3).

For knowledge transfer carried out by specialists, the respondents specified knowledge sharing as the dominant and the most important subprocess (73.9%). This reflects the professionals' high awareness of the significance of such actions as they lead to the creation of new knowledge and involve the most valuable tacit knowledge. Knowledge acquisition was also a fairly popular response (13.1%), which reflects attitudes characteristic of professionals, entailing determination in learning on their own, directly from others, as a result of functioning in communities of practitioners. The orientation towards knowledge dissemination (4.3%) and knowledge disclosure (8.7%) was noticeably low. Such results may suggest low motivation of specialists in this respect and adoption of an orientation that knowledge is power.



**Figure 3. Significance of particular knowledge transfer subprocesses depending on analysis dimensions**

Source: own compilation based on empirical research results.

Table 2. Knowledge transfer instruments by knowledge transfer subprocess and knowledge agent group

identified tool	hierarchical	intergenerational	between professionals	intercultural	between specialists and their co-workers	inter-organisational
on-the-job training	48.2%	61.3%	23.7%	65.7%	58.6%	13.2%
presentation	28.5%	27.3%	45.3%	43.2%	48.1%	63.7%
e-mail	29.3%	23.1%	28.7%	29.1%	38.2%	88.8%
demonstration and display	38.2%	43.3%	43.9%	44.8%	42.1%	59.7%
marketing research	33.8%	12.3%	21.8%	32.6%	19.8%	48.3%
knowledge disclosure						
on-the-job training	62.4%	74.2%	43.5%	64.2%	69.8%	46.3%
meetings and briefings	68.3%	63.8%	43.5%	65.2%	69.1%	38.2%
product manuals	43.2%	38.3%	39.5%	48.3%	48.6%	58.2%
training	38.3%	58.9%	56.8%	56.3%	68.3%	48.5%
documentation disclosure	48.3%	39.5%	38.9%	47.9%	55.8%	56.1%
knowledge dissemination						
organisation websites	28.3%	34.5%	28.3%	38.2%	49.3%	89.2%
advertising of the company and its products	38.2%	46.2%	57.4%	39.6%	46.2%	86.3%
specialised publications	36.6%	43.1%	61.8%	41.8%	49.8%	73.1%
speeches in the environment	42.8%	44.2%	62.3%	38.5%	38.3%	65.8%
knowledge sharing						
meetings and briefings	63.2%	48.3%	48.9%	45.3%	67.2%	25.6%
training on group work	43.2%	58.3%	46.9%	44.2%	66.6%	38.2%
mentorship	38.2%	58.2%	45.8%	41.8%	74.2%	35.3%
coaching	35.8%	48.6%	51.3%	41.8%	77.2%	35.3%
communities of practitioners	28.9%	48.6%	64.2%	51.3%	24.6%	45.6%

Source: own compilation based on empirical research results.

As a result, it seems advisable to re-design incentive systems to make them stimulate these subprocesses and the use of appropriate instruments to catalyse these activities and thus transform tacit knowledge into explicit knowledge and human capital into the company's structural capital.

In the answers given by the respondents, interorganisational knowledge transfer seems to make equal use of all four subprocesses. However, one may notice clear trends in applying the knowledge protection strategy (low percentage of answers for knowledge disclosure – 14.8%) and the determination to consciously shape the image of the organisation outside (knowledge dissemination 29.5% of responses).

Hierarchical knowledge transfer shows low orientation towards feedback (knowledge acquisition 18.2% of responses) and suggests high formalisation of activities, which limits knowledge disclosure and knowledge sharing (both subprocesses had 22.7% responses each).

Intergenerational knowledge transfer, according to the respondents, makes the greatest use of knowledge sharing (60.2% of responses) and knowledge acquisition (29.5% of responses). They appreciate the mutual benefits from cooperation with those who represent different systems of values and communication methods. There is an established openness to cooperation, stemming from the appreciated reciprocity.

As far as intercultural knowledge transfer is concerned, the responses confirm the need for and awareness of the significance of that variant of knowledge transfer but they also show how complex and difficult it is. Knowledge sharing in this case fails (27.3% of responses), limited essentially by differing mental models and cultural inclinations regarding the communication process.

The results obtained for knowledge transfer between professionals and their co-workers are questionable. They may arise from the high disproportion between the number of specialists and the representatives of other employees (23/65). As a result, the characteristic attitude is knowledge acquisition on the part of other employees (30.8% of responses), the willingness to disclose professional knowledge to co-workers (28.4%) and a clear reluctance to disseminate and share knowledge (20.4% of responses).

For the most commonly used and preferred tools specific for particular knowledge transfer subprocesses, the research results reveal the following patterns (Table 2):

- in the majority of knowledge agent groups, knowledge acquisition takes place through on-the-job training and demonstration and display; the level between professionals is an exception as it is dominated by specialised presentations and interorganisational transfer, where the acquisition takes place also via presentations and e-mails;
- knowledge disclosure essentially takes place through on-the-job training and meetings and briefings; different responses were given for the professional dimension of knowledge transfer, which uses mostly training, and the interorganisational level, with on-the-job training and documentation disclosure being popular tools;

- knowledge dissemination takes place through tools that are more varied for specific groups of knowledge agents; advertising of the company and its products is used for all knowledge transfer subprocesses; speeches in the environment and development of specialised publications are also relatively common; the tools used in the professional and intercultural dimension include primarily speeches in the environment, and in the intercultural level – company websites,
- knowledge sharing takes place based on the most diverse tools, which is an outcome of the significance and specificity of this subprocess; in the hierarchical dimension, meetings and briefings and training of group work are most frequently used; the most popular tools for intergenerational knowledge sharing are training of group work and mentorship; professionals usually use communities of practitioners and coaching, and representatives of various cultures – communities of practitioners and meetings and briefings; specialists usually share their knowledge with other employees through coaching and mentorship; the interorganisational level of knowledge sharing is based on communities of practitioners and group work training.

## CONCLUSIONS

The principles of the “good society” by T. Piketty suggest that attempts should be made to eliminate social inequalities arising from the accumulation of wealth (Drabowicz, 2016, p. 79). Considering the negative consequences of inequalities for economies and organisations in connection with society ageing and talent deficits, it is emphasised that their eradication could help improve general prosperity (Krot, Lewicka, 2016, pp. 234–235). Since nowadays, in the era of knowledge-based economy, wealth concentrates around knowledge, conscious control of its diffusion among various labour market groups gains special significance.

This is why the paper attempted to identify particular dimensions of knowledge transfer and capture their specificity from the perspective of particular groups of knowledge agents. Efforts were made to determine, based on the empirical research, the basic knowledge transfer subprocesses followed by specific groups of knowledge agents and to establish the instruments used in their course.

The results discussed should be treated as indicative only due to their considerable constraints related to the size of the sample. The research should be construed as pilot studies that confirm the diversity of knowledge transfer across various groups of knowledge agents and may justify undertaking proper multidimensional scientific studies.

Nonetheless, it shows that knowledge sharing is a subprocess that is reserved for professionals and for intergenerational exchange of knowledge. Knowledge acquisition most often takes place between specialists and their co-workers and at the intergenerational level. Knowledge disclosure is the

domain of specialists and it usually happens during their contacts with their co-workers. Whereas knowledge dissemination is the primary subprocess of hierarchical knowledge transfer.

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### Summary

Nowadays knowledge has clearly gained the attribute of domination and has been widely recognized as the one from intangible resources, which has great importance for shaping competitive advantage. Knowledge, therefore, has become a new foundation of organisations' well-being, and in the future the property will be the ability to gain control over knowledge. At present, we are pointing to a new dimension of social inequalities, the base of which is access to knowledge. Therefore, one of the ways of bridging these inequalities can be the conscious and controlled shaping of knowledge transfer between groups of knowledge agents, representing diverse, often overlapping, social and organizational categories.

The study has a theoretical-empirical character. Its purpose is to synthesize a work on literature devoted to the transfer of knowledge and to indicate the dimensions of this process in view of the existing diversity in the labour market. The aim of the empirical part is to check in which groups of knowledge agents and by using which instruments, which sub-processes of knowledge transfer are implemented.

The general research hypothesis is the assumption that the course of the knowledge transfer process depends on which groups of knowledge agents it concerns. It caused the emergence of detailed hypotheses and specific research questions.

In order to find answers to these, the method of critical analysis and empirical research, based on a questionnaire based on in-depth interviews, was used.

The results obtained from empirical research prove that sharing knowledge is the domain of professionalists and the dimension of the intergenerational exchange of knowledge. Acquiring knowledge is most often carried out at the level of specialists' relations with other employees and between generations. Sharing knowledge is the domain of specialists and is usually and most often

performed during their contacts with other employees. Dissemination of knowledge, in turn, is the chief subprocess of the hierarchical dimension of knowledge transfer.

*Keywords:* knowledge transfer, diversification of the labour market, knowledge agents.

## **Praktyczny wymiar transferu wiedzy w warunkach zróżnicowania współczesnego rynku pracy – refleksje z badań**

### *Streszczenie*

Współcześnie wiedza bezspornie zyskała atrybut dominacji i została powszechnie uznana za ten z zasobów niematerialnych, który ma naczelną rolę w kształtowaniu przewagi konkurencyjnej. Wiedza zatem stała się nową podstawą dobrobytu, a w przyszłości majątkiem będzie właśnie umiejętność sprawowania nad nią kontroli. Obecnie wskazuje się więc na nowy wymiar nierówności społecznych, jakim jest dostęp do wiedzy. Dlatego też jednym ze sposobów niwelowania tych nierówności może być świadome i kontrolowane kształtowanie transferu wiedzy między poszczególnymi grupami agentów wiedzy, reprezentującymi zróżnicowane, często nakładające się, kategorie społeczne i organizacyjne.

Opracowanie ma teoretyczno-empiryczny charakter. Jego celem jest dokonanie syntezy dorobku literaturowego poświęconego transferowi wiedzy oraz wskazanie wymiarów tego procesu wobec istniejącego zróżnicowania na rynku pracy. Celem części empirycznej jest sprawdzenie, w jakich grupach agentów wiedzy i przy użyciu jakich instrumentów, które z subprocessów transferu wiedzy są realizowane.

Ogólna hipoteza badawcza sprowadza się do sformułowania przypuszczenia, że przebieg procesu transferu wiedzy uzależniony jest od tego, których grup agentów wiedzy dotyczy. Spowodowała ona wyłonienie się hipotez szczegółowych oraz konkretnych pytań badawczych.

Aby znaleźć na nie odpowiedzi wykorzystano metodę analizy krytycznej oraz badania empiryczne, zrealizowane w oparciu o kwestionariusz ankiety wsparty wywiadami pogłębionymi.

Uzyskane wyniki badań empirycznych dowodzą, że dzielenie się wiedzą to domena profesjonalistów oraz wymiaru międzypokoleniowej wymiany wiedzy. Pozyskiwanie wiedzy jest najczęściej realizowane na poziomie relacji specjalistów z innymi pracownikami oraz międzypokoleniowym. Udostępnianie wiedzy jest domeną specjalistów i dokonuje się zwykle i najczęściej podczas ich kontaktów z innymi pracownikami. Rozpowszechnianie wiedzy z kolei, to naczelną rolę w procesie hierarchicznego wymiaru transferu wiedzy.

*Słowa kluczowe:* transfer wiedzy, zróżnicowanie rynku pracy, agenci wiedzy.

JEL: D23, D64, D83, D91.

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## **Empirical analysis of the perception of financial exclusion in Poland by women**

### INTRODUCTION

Financial exclusion is an important economic and social problem that has been present worldwide for thousands of years, albeit in different forms. But it was not until the second half of the 20<sup>th</sup> century that the changes taking place in the market of financial services have drawn the interest of scientists to the subject. In a narrow sense, the issue is connected with a lack of access to basic banking services. In a broader sense, it means the inability to use a set of financial products and services that would be optimum for the individual.

Financial exclusion can affect every member of a particular community, notwithstanding their place of living, age, sex or financial status. It directly affects the individual's quality of life and may lead to their social exclusion. Financial exclusion is caused on the one hand by the representatives of the supply side, i.e. banks and financial institutions, which may, in the implementation of their strategy, limit access to their services for specific groups of customers<sup>2</sup>. On the other hand, it is caused by the representatives of the demand side, i.e. the customers, who take actions on that market guided by economic and behavioural reasons. So the actual presence of the phenomenon in question depends not only on financial factors but also on the attitude of prospective customers to the use of financial services and on the level of financial education of the society.

The objective of the article is to establish Polish women's knowledge about and interest in financial exclusion and to specify the determinants that they see as con-

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<sup>2</sup> For example through the locations of their branches, through the form of service provision or through exclusion of some products for specific groups (e.g. mortgages for customers over the age of 70).

tributing to the occurrence of the phenomenon. The article also attempts to identify who is, according to the respondents, at the greatest risk of such exclusion and what entities are responsible for prevention in that area. The paper presents the results of studies carried out in 2017 on how women perceive financial exclusion in Poland.

## LITERATURE REVIEW

The changes that took place in global markets at the turn of the 21<sup>st</sup> century have resulted in a situation where unlimited access to the range of financial services is now a prerequisite for a citizen's full involvement in the economic and social life. A lack of access to a bank account and limited access to the financial products offered in the market, or access to those products on worse terms than other customers – all of this leads to the social exclusion of an individual (Richardson, Le Grand, 2002).

The phenomenon of financial exclusion was described for the first time with reference to physical access to banking services from a geographic perspective (Leyshon, Thrift, 1995). It is hard to come up with one conclusive interpretation, which is why so many definitions have emerged over the past two decades. According to S. Sinclair, financial exclusion means a lack of access to the necessary financial services in an appropriate form<sup>3</sup>. The European Commission has defined it as a process where citizens encounter difficulties accessing financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society (European Commission, 2008). L. Anderloni believes that such difficulties pertain primarily to universal products that influence the sense of security and that allow people to be actively involved in the social and economic life (Anderloni, 2007).

Financial exclusion may affect anyone on the planet, regardless of age, place of living, education, religion<sup>4</sup> or sex. It usually affects people in third-world countries, where not more than 30% of the population have access to a bank account, rather than citizens of rich, highly-industrialised countries, where bank accounts are held by over 98% of inhabitants<sup>5</sup>. At a global scale, the phenomenon affects women more

<sup>3</sup> S. Sinclair believes that social exclusion may arise from access problems, conditions, prices, marketing or self-exclusion, in response to negative experiences or perceptions (Sinclair, 2001, p. 4). Similar opinions are expressed by the authors of *Finance for All? Policies and Pitfalls in Expanding Access*. They believe that financial exclusion is connected with citizens' inability to use financial services due to both price-related and non-price-related barriers (Demirgüç-Kunt, Beck, Honohan, 2008, p. 27).

<sup>4</sup> According to N. Mylonidis, M. Chletsos, V. Barbagianni, religion has an impact on access to basic banking services in the USA and as such on the level of financial exclusion (Mylonidis, Chletsos, Barbagianni, 2017).

<sup>5</sup> For example, over 98% of inhabitants over the age of 15 have a bank account in: Australia, Austria, Belgium, Denmark, Estonia, Finland, Germany Japan, Canada, Luxembourg, the Netherlands, New

often than men, especially in countries at a lower level of economic development<sup>6</sup>. In 2017, 68.5% of people on the planet over the age of 15 (Figure 1) had a bank account. Banking penetration was lower for women – 64.8% (*The Little...*, 2018, p. 2). The situation in the Polish society was found to be opposite – the banking penetration rate for Polish women was 88% and it was higher than the overall average banking penetration rate of 86.7%.

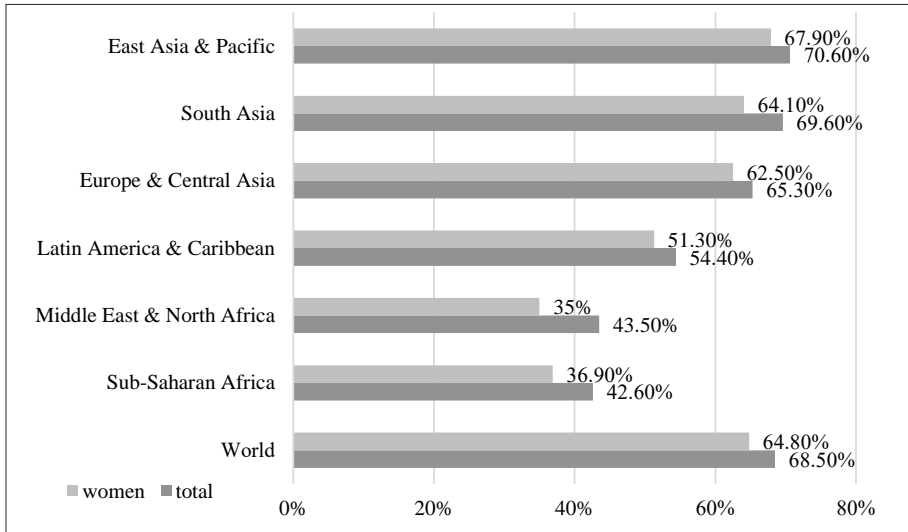


Figure 1. Banking penetration worldwide

Source: own compilation based on (*The Little...*, 2018).

Such diversification of the risk of financial exclusion directly contributes to the fact that it may be perceived differently by inhabitants of particular countries, members of various religions and representatives of different sexes or age groups. The perception of the phenomenon in a particular country by the representatives of particular sexes<sup>7</sup> will highly depend on equal access to financial services.

Zealand, Sweden, and Switzerland. The least inhabitants have a bank account in South Sudan (8.6%), Central African Republic (13.7%), Afghanistan (14.9%), on Madagascar (17.9%) (*The Little...*, 2018).

<sup>6</sup> For example, in Turkey 68.6% of the population versus only 54.3% of women have a bank account, in Bangladesh – 50% of the population versus 35.8% of women, in Pakistan 21.3% of the population versus 7% of women, in Saudi Arabia – 71.7% of the population versus 58.2% of women, in Algeria 42.8% of the population versus 29.3% of women, in Nigeria 39.7% of the population versus 27.3% of women. A higher banking penetration rate is observed for women than for the whole population e.g. in the Philippines (34.5% versus 38.9% of women), in Georgia (61.2% versus 63.6% of women), in Argentina (48.7% versus of 50.8% of women), in Mongolia (93% versus 95% of women) (*The Little...*, 2018).

<sup>7</sup> Relevant literature includes a proposal to analyse financial exclusion not based on biological sex but based on gender (Visvanathan (ed.), 2012, p. 20).

The literature overview shows that in their studies on financial exclusion, the majority of authors focus primarily on analysing the level of the phenomenon in a given area and on identifying the factors determining its occurrence. Such studies are mostly based on analysing statistical data and expert opinions. They are carried out with regard to whole populations and to homogeneous groups (sharing the origin, age, place of living or education), at both a national and international level (*Financial*, 2015; Triki, Faye (ed.), 2013; European Commission, 2008; Corr, 2006; Kempson, Whyley, 1999; Leyshon, Thrift, 1995). What stands out is the absence of papers presenting study results regarding knowledge about financial exclusion and its perception by members of a particular community<sup>8</sup>.

### STUDY METHODOLOGY AND RESULTS

Literature review has shown that the study results regarding “*The perception of financial exclusion by Polish women*” presented in the article may complement the existing body of research on this phenomenon. The studies, conducted in 2017, used a questionnaire as the measurement instrument. The study group, consisting of 909 respondents over the age of 18, was selected based on non-random sampling<sup>9</sup>. The participating women were divided into six segments depending on age (age of 18–25 (16.61%), age of 26–35 (16.06%), age of 36–45 (17.49%), age of 46–55 (17.05%), age of 56–65 (16.61%), over 65 (16.17%)), into five segments depending on the place of living (countryside (17.93%), town up to 25,000 inhabitants (22.66%), town from 25,000 to 50,000 (20.13%), town from 50,000 to 100,000 (18.04%), city above 100,000 (21.23%)), and into three segments depending on education (primary/middle school education (5.39%), secondary education (61.5%), higher education (33.11%)).

The basic objective of the study was to assess Polish women’s knowledge about the issues connected with financial exclusion. Furthermore, specific objectives were formulated, i.e. to identify the group of people who, in the respondents’ opinion, were at risk of financial exclusion and to establish the determinants that, according to the participating women, contributed to the occurrence of the phenomenon.

During the studies, attempts were made to verify the following hypotheses: h1 – The knowledge of Polish women about the occurrence of financial exclusion is poor. It is directly correlated with their education and place of living; h2 – Financial exclusion is not of interest to Polish women. They are not too interested in expanding their knowledge about the subject; h3 – A lack of employment and low income are the main reasons for financial exclusion, which is why financial exclusion usually

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<sup>8</sup> Study results regarding the knowledge about financial exclusion and the way it is perceived by members of the Polish society have been presented in (Sołtysiak, 2017a; Sołtysiak, 2017b).

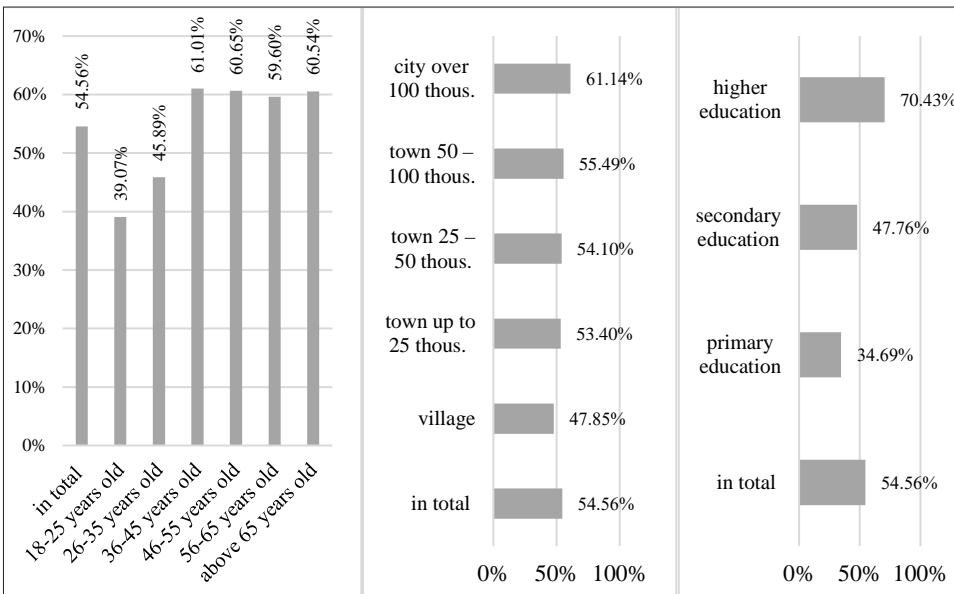
<sup>9</sup> The required number of respondents for the population of women in Poland, with a confidence level  $\alpha=0.95$ , is 384. The maximum error for a study group of 909 respondents is 3%.

affects the unemployed and those with low income; h4 – The main non-financial cause of financial exclusion is a lack of access to online services; h5 – Banks and the State authorities have the key role in preventing financial exclusion.

Before the study, the participating women were able to read the definition of the term ‘financial exclusion’. The purpose of this was to limit the number of incorrect answers that the respondents could have given because of being unaware of the essence of the analysed phenomenon.

**AWARENESS THAT FINANCIAL EXCLUSION EXISTS**

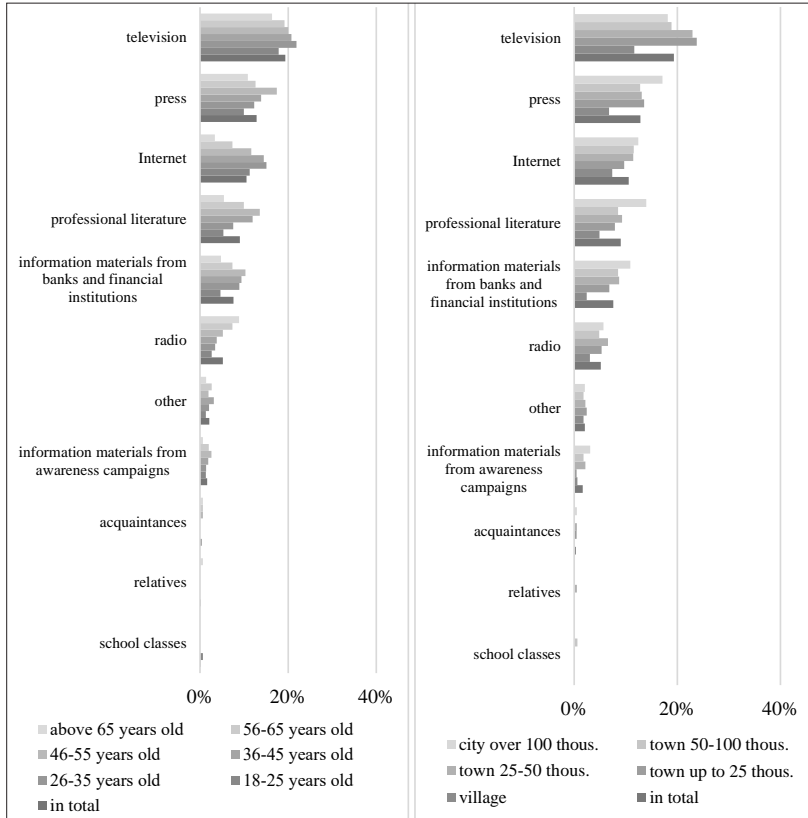
54.56% of respondents in the analysed study group stated that they were aware of the existence of financial exclusion (Figure 2). The answer was given the most by women from the 36–45 age group (61.01%) and the least by women from the 18–25 age group (39.07%). Analysis of the level of awareness of the phenomenon depending on the place of living of the respondents revealed that the lowest awareness level was found in the countryside (47.85%) and the highest was among women from cities with a population of over 100,000 (61.14%). It must also be noted that the percentage of women aware of the existence of financial exclusion grew with the size of the town. The situation was similar for the education criterion – higher education was directly correlated with higher awareness of financial exclusion.



**Figure 2. The respondents’ awareness of the existence of financial exclusion**

Source: compilation based on own studies.

Afterwards, the sources from which the respondents had information about the existence of financial exclusion were analysed (Figure 3). The participating women usually expanded their knowledge on the subject through the mass media, i.e. the TV (19.36%)<sup>10</sup>, newspapers (12.87%)<sup>11</sup>, and the Internet (10.56%)<sup>12</sup>.



**Figure 3. Sources of the respondents' information about financial exclusion**

Source: compilation based on own studies.

<sup>10</sup> TV as the source of information was the most popular with: respondents from the 26–35 age group (21.92%), from towns with a population of up to 25,000 (23.79%), with primary/middle school education (22.45%). It was the least popular with: respondents from the age group of over 65 (16.33%), from the countryside (11.66%), with secondary education (18.6%).

<sup>11</sup> Newspapers as the source of information were the most popular with: respondents from the 46–55 age group (17.42%), from cities with a population of over 100,000 (17.1%), with higher education (13.95%). They were the least popular with: respondents from the 18–25 age group (9.93%), from the countryside (6.75%), with primary/middle school education (4.08%).

<sup>12</sup> The Internet as the source of information were the most popular with: respondents from the 26–35 age group (15.07%), from cities with a population of over 100,000 (12.43%), with higher education (13.29%). It was the least popular with: respondents from the age group of over 65 (3.4%), from the countryside (7.36%), with primary/middle school education (4.08%).



A group of over 5% of respondents drew information on the subject from the radio. This mass medium was usually used by respondents from the age group of over 65 (8.84%), with primary/middle school education (12.24%), living in towns with a population of 20,000–50,000 (6.56%).

There was also a small group of respondents that expanded their knowledge using professional literature (9.02%) and information materials developed by banks or financial institutions (7.59%). Both sources of information were usually used by respondents from the 46–55 age segment, living in cities with a population of over 100,000, and having higher education.

It must be emphasised that only 1.65% of respondents declared obtaining information from materials prepared for social awareness campaigns. The issues are not discussed with family members or friends, and knowledge about them is taught during school classes only to a minimum degree.

Such an approach of the respondents to the expansion of their knowledge about financial exclusion may result from the fact that the availability of information about the subject is, in their opinion, limited. Over 75% of the respondents claimed that it is either low (34.1%) or very low (41.03%). And only 4.18% respondents believed it was high.

#### REASONS FOR FINANCIAL EXCLUSION

The participating women specified over ten reasons that they believed could contribute to the financial exclusion of an individual (Figure 4). The two most frequent reasons listed by the respondents were a lack of permanent employment (77.78%) and low income (69.2%). Both factors were usually specified by respondents from the age group of over 65<sup>13</sup>. A lack of employment was most often listed by inhabitants of towns up to 25,000 (83.98%) and respondents with higher education (79.73%). Low income was considered the primary reason by inhabitants of towns from 50,000 to 100,000 (71.95%) and respondents with secondary education (70.3%).

Subsequent places among the factors specified by the respondents as contributing to the financial exclusion of an individual were the inability to manage one's finances (47.30%) and low education level (47.19%). Both factors were emphasised the most by respondents from the age group of over 65<sup>14</sup>, living in cities with a population of over 100,000<sup>15</sup>, and study participants with higher education<sup>16</sup>.

<sup>13</sup> 91.15% of the respondents listed a lack of permanent employment, while 74.83% mentioned a lower income.

<sup>14</sup> 56.46% of the respondents listed an inability to manage one's finance, while 53.74% mentioned a low education level.

<sup>15</sup> 51.29% of the respondents listed an inability to manage one's finance, while 56.48% mentioned a low education level.

<sup>16</sup> 60.13% of the respondents listed an inability to manage one's finance, while 63.45% mentioned a low education level.

Over 35% of the respondents linked financial exclusion to a lack of Internet access, and 7.37% to a lack of access to mobile tools. Both factors were considered to be the most important by young educated Polish women living in big cities<sup>17</sup>.

Every third study participant linked the possibility of financial exclusion to the age of the person. The respondents were of the opinion that both being at a retirement age (34.32%) and being young (13.09%) may contribute to the phenomenon.

Ever fourth study participant believed that the financial exclusion of an individual depended on their place of living. This opinion was shared the most by women from towns with a population of up to 25,000 (32.52%) and from the countryside (31.29%), and the least by inhabitants of towns with a population of 50,000 to 100,000 (25%).

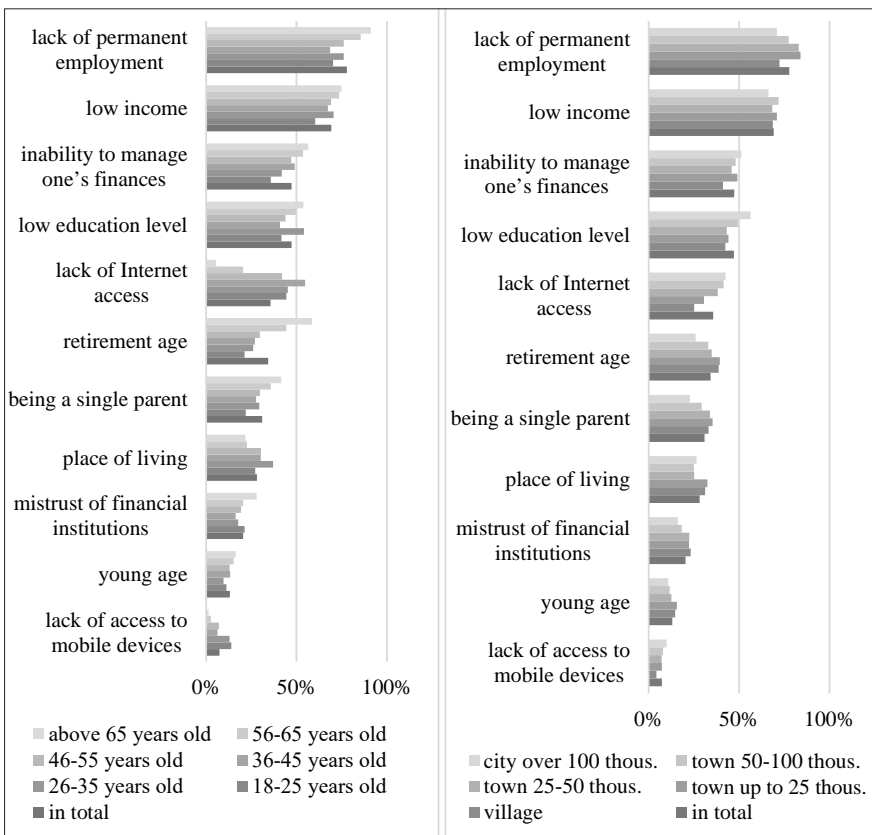


Figure 4. Basic reasons for social exclusion according to the respondents

Source: compilation based on own studies.

<sup>17</sup> A lack of Internet access was emphasised the most by respondents from the 36–45 age group (54.72%), living in cities with a population of over 100,000 (42.49%), with higher education (40.86%). A lack of access to mobile devices was emphasised the most by respondents from the 18–25 age group (13.91%), living in cities with a population of over 100,000 (9.84%), with higher education (7.97%).

It must also be noted that over 20% of respondents listed possible self-exclusion, manifested in a mistrust of financial institutions, as a financial exclusion contributing factor. The greatest weight was given to that factor by respondents from the age group of over 65 (27.89%), from the countryside (23.31%), and with primary/middle school education (48.98%).

#### PEOPLE AT A RISK OF FINANCIAL EXCLUSION

According to the participating women, the unemployed were at a greatest risk of financial exclusion (80.2%). The opinion was usually expressed by respondents from the age group of over 65 (89.79%), living in cities with a population of 50,000 to 100,000 (85.98%), and with primary/middle school and secondary education (89.8%).

People with low income came second for the respondents (54.46%). This group was usually specified by respondents from the age group of over 65 (61.9%), living in cities with a population of 50,000 to 100,000 (60.37%), and with primary/middle school education (65.31%).

Every third respondent believed that retired people could be at risk of financial exclusion. Every fifth respondent listed single mothers, and every seventh, members of large families.

According to the respondents, the place of living highly contributed to the risk of financial exclusion of an individual – the smaller the town, the greater the risk. The respondents stated that the risk was highest for people in the countryside (22.99%)<sup>18</sup>, lower for those living in small towns (13.97%)<sup>19</sup>, and lowest for the inhabitants of big cities (3.41%).<sup>20</sup>

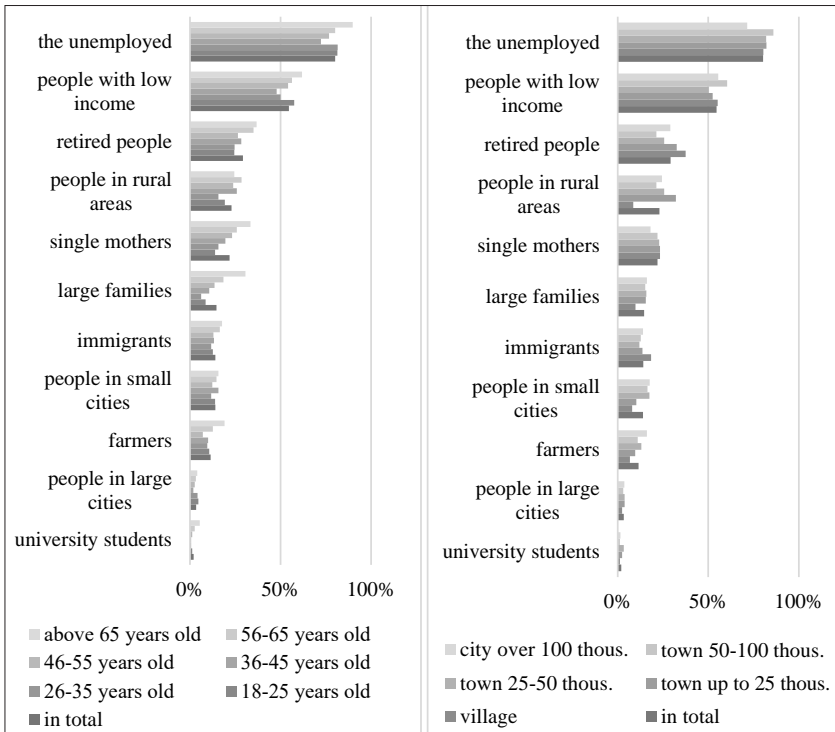
The respondents believed that financial exclusion might apply to young people who are university students (1.98%) to a minimum degree. The risk of such a threat for that group was usually mentioned by respondents from the age group of over 65 (5.44%), from towns with a population of 25,000–50,000 (3.28%), and with primary/middle school education (14.29%). It must be emphasised that no respondent with higher education mentioned university students as facing the risk of financial exclusion.

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<sup>18</sup> People from the countryside were usually specified by respondents from the 56–35 age group (28.48%), from towns with a population of 25,000–50,000 (25.68%), with primary/middle school education (42.86%).

<sup>19</sup> People from small towns were usually specified by respondents from the 36–45 age group (15.72%), from cities with a population of over 100,000 (17.62%), with primary/middle school education (36.77%).

<sup>20</sup> People from big cities were usually specified by respondents from the 18–25 age group (4.63%), from towns with a population of up to 25,000 (3.88%), with primary/middle school education (8.16%).



**Figure 5. People at a risk of financial exclusion according to the respondents**

Source: compilation based on own studies.

#### LEVEL OF FINANCIAL EXCLUSION ACCORDING TO THE RESPONDENTS

Further in the study, the respondents assessed the occurrence of financial exclusion in Poland (Figure 6) and their own risk of facing financial exclusion (Figure 6).

About 18.5% respondents from the study group believed that the risk of financial exclusion in Poland is currently high (15.18%) or very high (3.3%). The opinion was usually expressed by respondents from the 18–35 age group (23.83%), living in towns with a population of up to 25,000 (24.27%), with primary/middle school education (20.41%).

A vast majority of respondents believed that the presence of financial exclusion in Poland is *low* (36.19%) or *average* (39.38%). The answer “low” was usually given by respondents from the 56–65 age group (41.72%), living in cities with a population of over 100,000 (54.4%) and with higher education (42.53%).

When asked about their own risk of financial exclusion, over 77% of respondents stated that it was low. The opinion was usually expressed by respondents from the 36–45 age group (83.02%), living in cities with a population of over 100,000 (84.46%), and with higher education (90.7%).

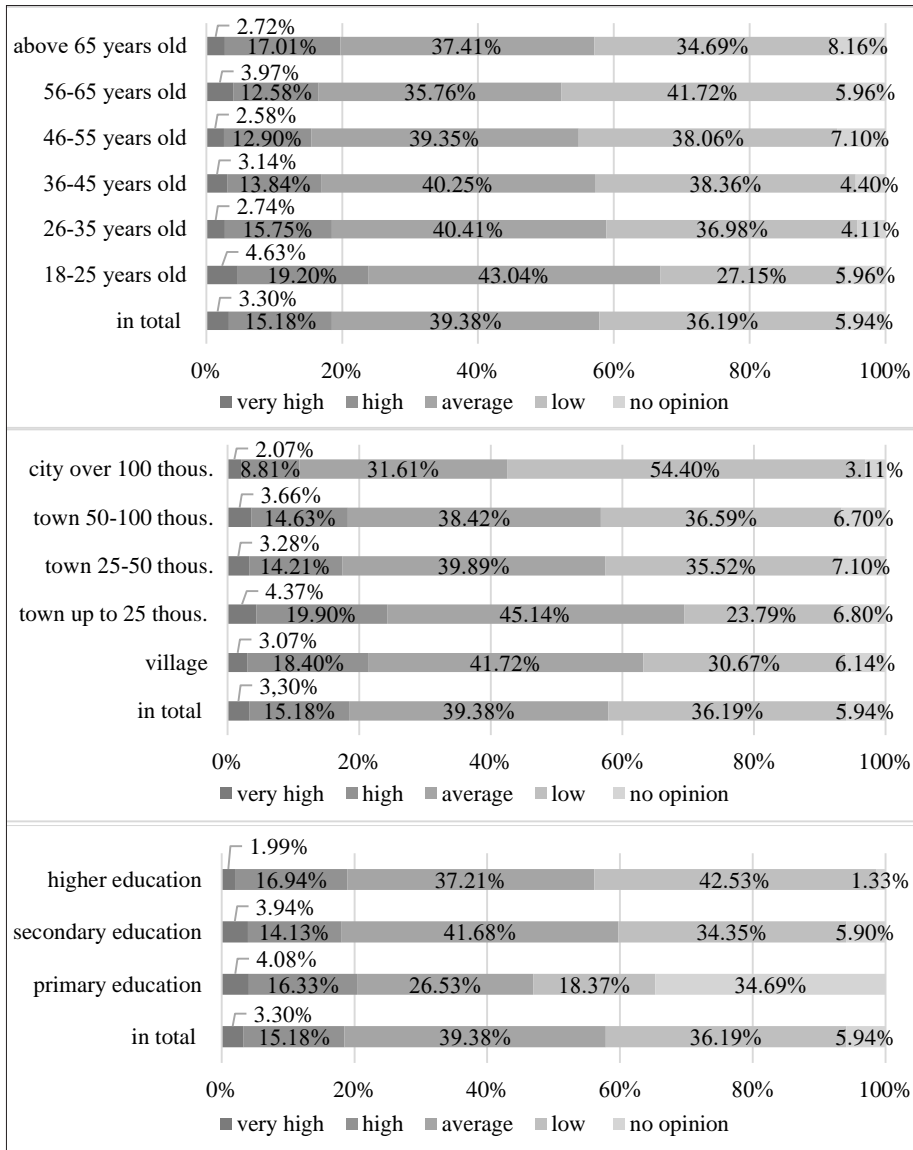


Figure 6. Level of financial exclusion in Poland according to the respondents

Source: compilation based on own studies.

Only 7.15% of respondents believed that their own risk of financial exclusion was high. They were usually from the 26–35 age group (11.64%), living in towns with a population of 25,000–50,000 (9.84%), and with a secondary education (9.66%). It must be noted that none of the study participants believed that their own risk of financial exclusion was very high.

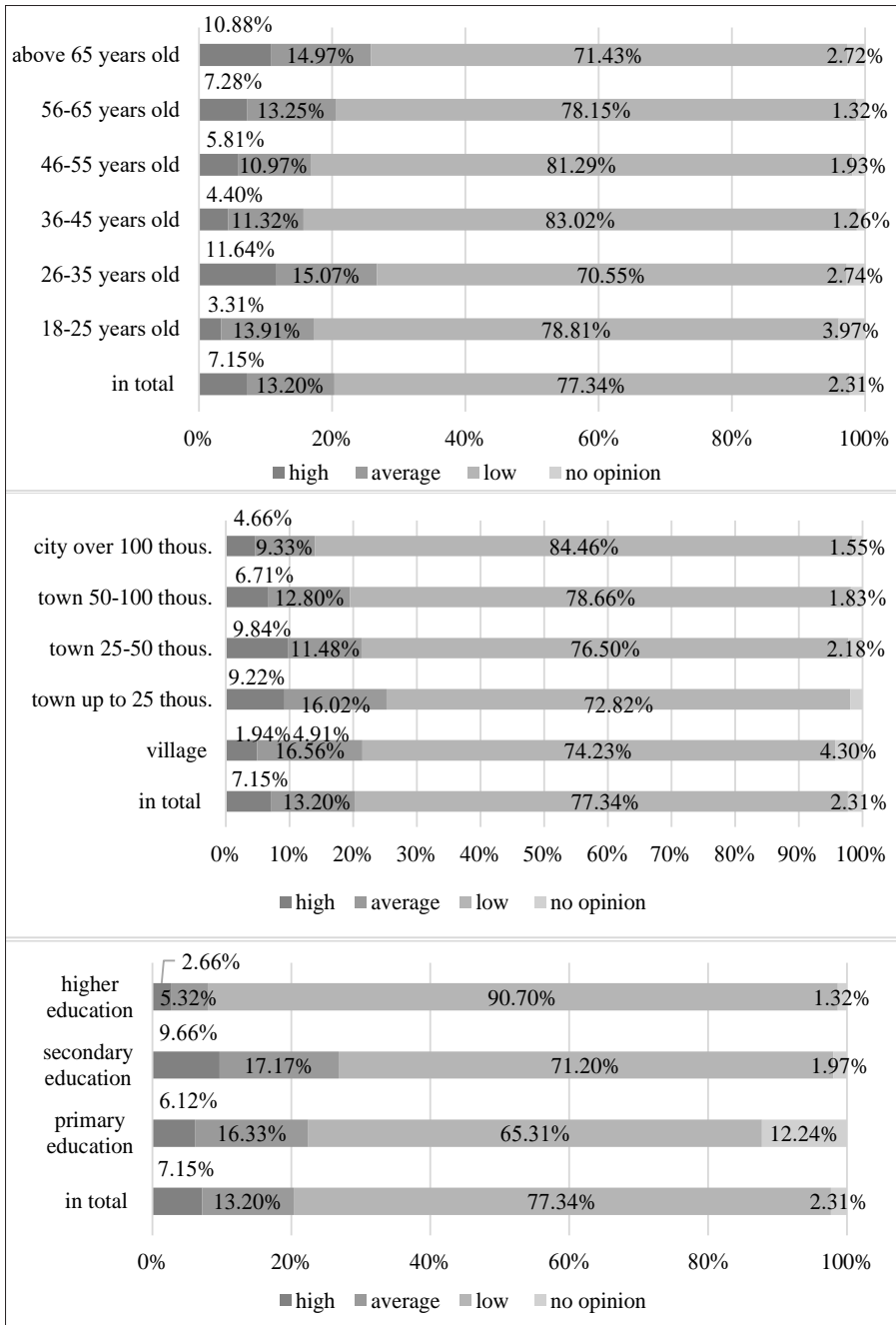


Figure 7. The respondents' assessment of their own risk of financial exclusion

Source: compilation based on own studies.

COUNTERACTING FINANCIAL EXCLUSION

According to the respondents, taking actions to prevent financial exclusion is the responsibility primarily of the State authorities. The opinion was shared by as many as 87.57% study participants (Figure 8). It was the most popular answer for women over the age of 65 (96.6%), living in the countryside (90.18%), with primary/middle school education (95.92%). It must be noted that almost 65% of the respondents believed that such actions should be taken by the local government. It was the most common opinion for respondents from the age group of over 65 (92.52%), from the countryside (74.23%), with primary/middle school education (95.92%). It was the least common for study participants from the 36–35 age group (42.14%), living in cities with a population of over 100,000 (56.48%), with higher education (59.47%).

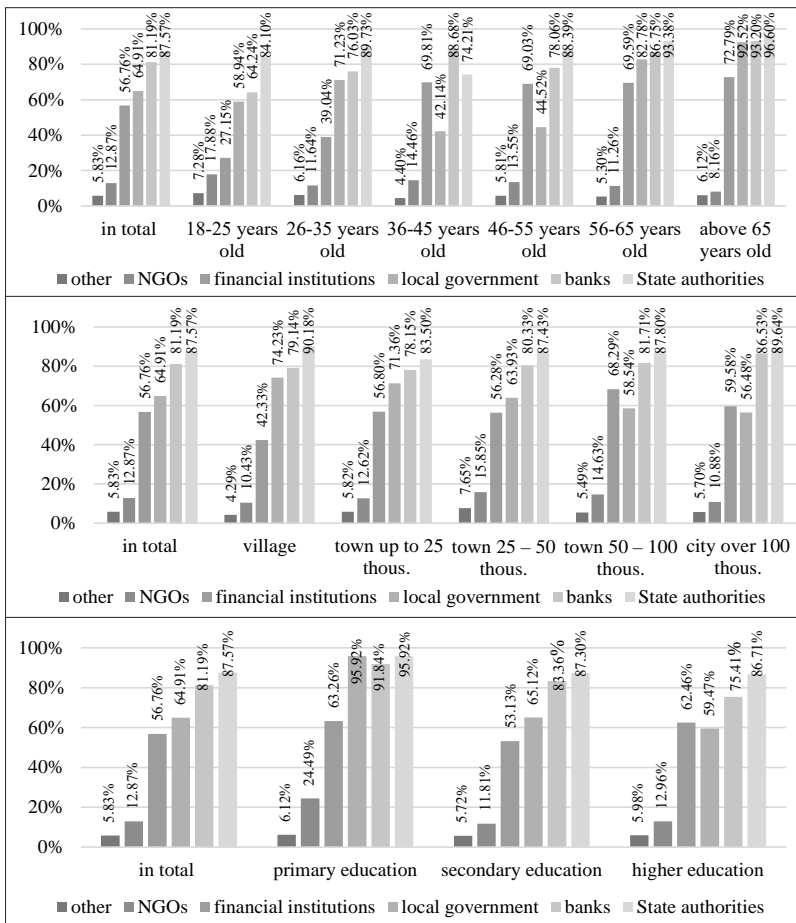


Figure 8. Entities responsible for preventing financial exclusion

Source: compilation based on own studies.

Over 81% of the respondents believed that such actions should be the responsibility of banks, and 56.76%, of financial institutions. Those entities were usually listed by respondents from the oldest age groups, from big towns with a population of over 50,000, and with primary/middle school education.

Every eighth respondent was of the opinion that NGOs should also be involved in actions to prevent financial exclusion. The need for their involvement was usually mentioned by young women from the 18–25 age group (17.88%), from towns with a population of 25,000–50,000 (15.85%).

## CONCLUSIONS

Financial exclusion, albeit present in various forms over the ages, has become particularly visible since the turn of the 21<sup>st</sup> century. This was when financial institutions started to use modern distribution channels to provide services. As a result, the phenomenon deepened in various parts of the world, no longer just for economic reasons but also for technical reasons.

An analysis of the study results has led to positive verification of the research hypotheses. It showed that the awareness of financial exclusion is not common among Polish women. Only every second respondent declared having knowledge about the phenomenon. It is also disconcerting that the lowest awareness of financial exclusion was declared by the youngest study participants – from the 18–25 age group (39.07%). It must also be noted that the knowledge about the phenomenon grew with the education level and the size of the place of living.

The poor knowledge about financial exclusion may result from the fact that over 70% of study participants did not make the effort to learn more about the issue. Over 75% of respondents claimed that access to information was difficult. And those respondents who grew their knowledge about the subject used primarily the mass media.

According to the majority of the study participants, the primary factors contributing to the exclusion of a person were a lack of permanent employment (77.78%) and low income (69.2%). Hence their opinion that the risk is highest for the unemployed (80.2%) and those with low income (54.46%). It must also be noted that every third respondent listed technical factors, i.e. hindered use of financial services online, as a reason of financial exclusion.

The Polish women participating in the study are not afraid that financial exclusion may occur in Poland. Asked to assess their own risk, the majority of the respondents claimed it was low (77.34%). Only 7.15% respondents stated that it was high. None of the women defined it as very high.

To conclude, it must be emphasised that according to the respondents, the responsibility for preventing financial exclusion should rest primarily on State authorities (87.57%) and on banks (81.19%). Study participants also expressed an opinion that minimising the risk of financial exclusion requires actions to increase the financial knowledge in the society.



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*Summary*

The issue of financial exclusion has been the topic of scientific research for decades now. Each and every individual may become excluded with respect to an array of criteria, such as for instance educational background, income level, financial status, nationality, religion or even lifestyle. This means they are not allowed to perform certain social activities, even though they are both able and willing to undertake them. This unfavourable condition is usually caused by other people's reluctance.

The article addresses the issues of the perception of financial exclusion by female Poles on the basis of the results of a survey. Firstly, the awareness of the problem of financial exclusion among Polish female respondents is presented. Secondly, the causes of the phenomenon are elaborated on, as well as the types of individuals potentially endangered by such an exclusion. Finally, the outcome of research is provided in terms of the evaluation of the phenomenon's range in Poland and identification of the risk of self-exclusion. Moreover, entities in charge of counteracting the risk of financial exclusion are indicated by the respondents in question.

*Keywords:* financial exclusion, perception, women.

**Empiryczna analiza percepcji zjawiska wykluczenia finansowego w Polsce przez kobiety***Streszczenie*

Zjawisko wykluczenia finansowego stanowi przedmiot badań naukowych od dziesięcioleci. Każdy członek społeczeństwa może stać się osobą wykluczoną ze względu na szereg kryteriów, do których możemy zaliczyć na przykład wykształcenie, poziom dochodów, status finansowy, narodowość, wyznawaną religię, a nawet styl życia. W praktyce oznacza to, że wykluczona jednostka pomimo wykazywanej chęci nie może brać udziału w normalnych działaniach, jakie mają możliwość podejmować inni członkowie danej społeczności.

W artykule zaprezentowano wyniki badań ankietowych dotyczących percepcji zjawiska wykluczenia finansowego wśród reprezentantek polskich kobiet. W pierwszej części omówiono poziom znajomości tego zjawiska wśród uczestniczących w badaniach kobiet. Przedstawiono wskazane przez nie przyczyny jego występowania oraz grupy osób zagrożone możliwością wykluczenia. Następnie zaprezentowano wyniki przeprowadzonej przez respondentki oceny poziomu występowania tego zjawiska w Polsce oraz oceny poziomu możliwości wykluczenia finansowego własnej osoby. Ponadto wskazano, kto ich zdaniem jest odpowiedzialny za przeciwdziałanie zjawisku wykluczenia finansowego.

*Słowa kluczowe:* wykluczenie finansowe, percepcja, kobiety.

JEL: G20, G29.

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## **Social inclusion through service provision for the armed forces community: the officers' perspective**

### INTRODUCTION

Recent research published by The Royal British Legion (2014) defines the United Kingdom (UK) armed forces community as service personnel who have served or are currently serving in the armed forces, their spouses/partners (including separated and widowed) as well as dependent children. Currently, the full-time UK armed forces across all services number just under 153,000 (Dempsey, 2019), 29,530 (19%) of whom are from the officer ranks and above (Dempsey, 2019). Recent statistics by the Ministry of Defence predicts that by 2028 there will be 1.6 million veterans of the armed forces living in the UK. This indicates an increasing need for effective plans concerning the social inclusion of service personnel by providing them with services that support their civilian life. The voluntary sector plays a key role in the provision of health and welfare services to the UK armed forces community (Gribble et al., 2014). Although there has been research into the armed forces community, by academics as well as the charity sector, more in-depth understanding of the various cohorts of the armed forces community is required. Amidst increased support and awareness of the UK armed forces (Ashcroft, 2012), this study aims to understand the different service needs of just one segment of the UK armed forces community – namely, officers and their families. A better understanding of this segment will help the various charities that support the armed forces community in tailoring their services to meet the needs of officers and their families. Additionally, it will provide insights into how to position their brands to ensure their services can be publicised more effectively.

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## THEORETICAL BACKGROUND

There has been an increased interest amongst the public and the media about the armed forces and, more specifically, on what happens to them after they leave the service (Iversen et al., 2005). The media often focus on a minority of veterans who face problems once they have left the service, which includes homelessness, Post-Traumatic Stress Disorder (PTSD), alcohol abuse and so on. Recent research has found that, contrary to common myths, the majority of veterans leaving the service make a smooth transition and enjoy a perfectly normal civilian life (Iversen et al., 2005; The Royal British Legion, 2014). However, even those who have made such a smooth transition may still need help and support in the future. The multitude of armed forces charities operating in the UK and the public support for these charities indicate that there is a need for these services. It is estimated that approximately 20,000 service personnel leave the UK armed forces each year (Hatch et al., 2013). This, in combination with the Ministry of Defence (2019) projection that veteran numbers will increase to 1.6 million in the UK by 2028, indicates that the various armed forces charities need to be better prepared to meet the needs of the armed forces community.

Most research published on the subject of the armed forces has been carried out in the USA, with relatively little concerning the UK armed forces (Iversen et al., 2005). Although the existing research on the US armed forces provides great insights, the cultural and administrative differences mean that they lack relevance to the UK context (Ashcroft, 2012). However, there is some interesting and insightful research emerging on the UK armed forces, both from academia and the charity sector, including from The Royal British Legion (2014) and Forces in Mind Trust (2013). Most of the existing research from the USA and the UK focuses on understanding the mental health issues faced by veterans during and after their service, as well as the transition from the armed forces into civilian life (Hatch et al., 2013; Hoge, Auchterlonie, Milliken, 2006; Iversen et al., 2005; Jordan, 2011). Very little research has been carried out related to the needs of the UK armed forces and how charities can best meet these needs. Some inroads have been made into this by the armed forces charity sector (Forces in Mind Trust, 2013; The Royal British Legion, 2014; etc.), but more research is needed here.

The studies involving the UK armed forces have largely considered the armed services as a single cohort. However, there are significant differences between ranks, and especially between the officer and non-officer ranks. For instance, MacManus *et al.* (2012) studied the anti-social behaviour of armed forces personnel before joining the service and its impact on mental health and behaviour during and after service. They found that only 6% of officers reported anti-social behaviour prior to joining the service. This was attributed to the comparatively higher educational levels of those joining the service as an officer. Iversen *et al.* (2005) investigated

the transition of the armed forces personnel leaving the service, and found that officers were less likely to leave the service early than junior soldiers. These differences amongst the ranks indicate that the service needs of these armed forces groups also differ. Although service charities such as The Royal British Legion have begun to investigate the service needs of the UK armed forces community, the differences between officers and other ranks have not been examined in detail. Furthermore, The Royal British Legion (2014) estimates that 1 in 20 members of the UK armed forces community had unmet needs for support. This study aims to fill this gap and provide some insight into the service needs of officers of the UK armed forces and their families.

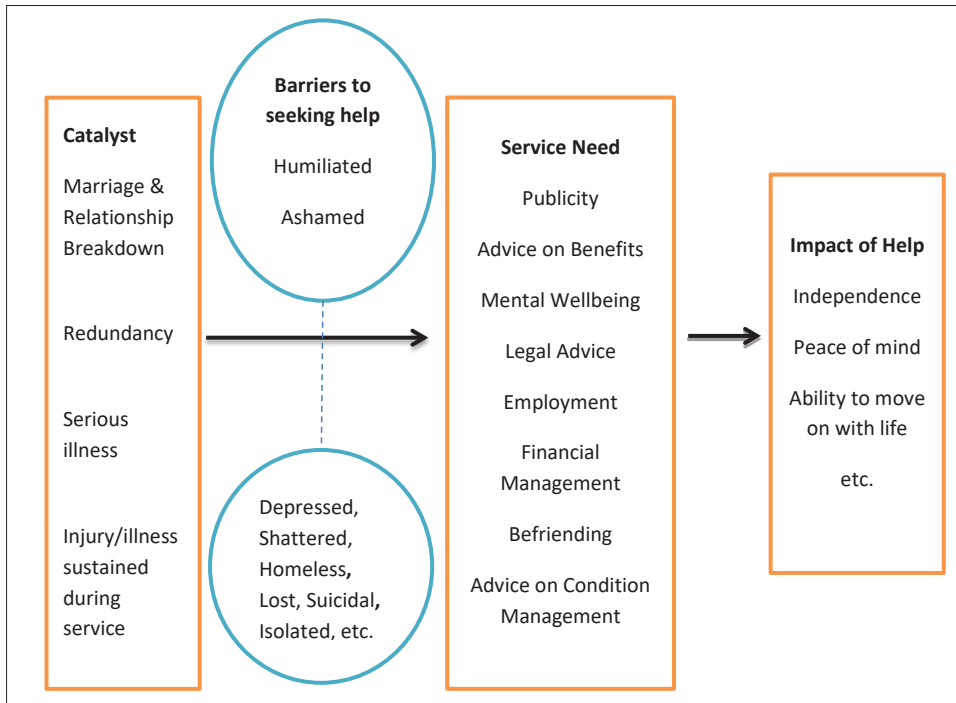
## METHODOLOGY

This is an exploratory study, which aims to understand the service needs of the officers of the UK armed forces community. Consequently, a multi-stage qualitative research method was used. The first stage was to review the published research from some of the UK armed forces charities. The second stage involved personal conversations and interviews with armed forces benevolence charities and visits to outreach services held for armed forces communities in the South-East of England, which were used to observe the nature of the services provided and the interactions between beneficiaries and service providers. Finally, in-depth interviews were carried out with case workers and beneficiaries of a service charity that provides services to the officers of the UK armed service community, using a self-selected sample. All the participants were based in England. In total, eight case workers and eight beneficiaries were interviewed. The personal interviews, observations from the outreach services and the interviews with benevolence charities were thematically analysed to identify service needs.

## FINDINGS

The findings of the research are summarised in Figure 1 and identify some of the catalysts that create the need for various services.

The majority of the beneficiaries required the services of a benevolence charity due to relationship breakdown. This agrees with research carried out in the US, which identified that the armed forces and their families increasingly required counselling due to the pressures and stress placed on relationships as a result of deployment (Jordan, 2011). Other catalysts include redundancy (either being discharged from the armed forces or being made redundant from a civilian job post-service), serious illness, including of a dependent family member, and also injuries or illnesses sustained as a result of service in the armed forces.



**Figure 1. Summary of findings**

Source: own study.

As a result of some of these catalysts, former officers and their families can be left homeless, depressed, isolated and, in some rare cases, feeling suicidal. Many case workers reported, in addition to being identified by the beneficiaries themselves, that this is segment of the community is very proud and has experienced a higher standard of living, which makes asking for help an alien concept for most of them. They described their feelings as humiliation and being ashamed of having to seek help. In some cases, they did not inform their extended family or friends about their contact with an armed services charity. However, some explained that they felt a sense of pride in overcoming these barriers and taking the first step in sorting their lives out by seeking help.

In terms of specific service needs, publicity, advice on benefits, mental well-being, legal advice, employment, financial management, befriending and advice on condition management were all identified as recurring themes, and therefore more relevant.

In most cases, those who needed help were not aware of specific service charities that they could approach for help. Although the majority of service personnel and the public are aware of the largest service charities, such as The British Legion and Help for Heroes, there are a multitude of more specific ser-

vice charities (Gribble et al., 2014). Most officers and their families were either unaware of these charities or did not understand the various ways in which the charities could help them. As one participant mentioned, '*knowing that there were people out there that we could go to would be the first service anyone could provide us*'.

The need for advice on eligibility for and availability of state benefits, as well as legal advice, were two key service needs. Officers and their families are not generally familiar with the benefits system and lack awareness of the various state aids that are available to them. As well as advice on eligibility for state benefits, the respondents also mentioned that they would need someone to help them '*navigate the benefits system*'. The need for legal advice stemmed from various issues, such as divorce settlements, child custody issues and redundancy.

Mental wellbeing was a major service need that was reiterated by all participants. Recently, there has been growing concern about the impact of military deployment, especially to Iraq and Afghanistan, on the psychological wellbeing of the armed forces (Hoge, Auchterlonie, Milliken, 2006; Jordan, 2011; MacManus et al., 2012). In a study of US veterans, Hoge *et al.* (2006) identified that the use of mental health care services for the entire armed forces population shows a linear increase over time since 2000. As well as serving personnel, deployment also has an impact on spouses and partners (Mansefield et al., 2010). This study found that, for the officers and their families, mental wellbeing encompassed issues such as relationship counselling, stress, anxiety and depression.

A study on the UK armed forces community identified that 33% of officers mentioned that one of their biggest concerns about leaving the forces was financial and budgeting issues (Ashcroft, 2012). This corresponded with the findings of this study, where the participants identified the need for help and advice on managing their finances effectively. Employment was also an important service need. A recent survey by The Royal British Legion (2014) identified that for those aged 16–54, employment was a major concern. Although the survey did not differentiate between officers and other ranks, the survey findings concurred with those from this study.

Befriending was a need mentioned by almost all participants in some form or another. For some, it was a case of knowing that there was someone available who understood their situation and could keep them motivated through a difficult stage of their life. For others, it was the simple need of having a friend that they could talk to. Hatch *et al.* (2013) found that service leavers experienced less social participation outside of work and experienced more social isolation and disengagement. Although the Hatch *et al.* study did not differentiate between officers and other ranks, the results identified it as a need among the officer community. A further need was of condition management. Families who had members who became seriously ill or were injured as a result of the service mentioned the need for advice on adapting their lives to be able to live with the condition.

## CONCLUSION

This has aided the better understanding and identification of the service needs of the officers of the UK armed forces and their families. The needs identified here can help those organisations that assist officers and their families to target their services more effectively to their beneficiaries. In this way, the service charities can ensure that the specific needs of the officers are catered for and their services make a genuine impact on the lives of their beneficiaries. It is important to note the barriers to seeking help and their implications for branding and marketing by the charity services. As a result of these barriers, organisations serving the armed forces community, especially officers, may need to communicate their message in such a way that the feeling of 'asking for help' is considerably minimised. In other words, the marketing efforts need to focus on building a brand image that promotes the theme of serving the armed forces community as opposed to the armed forces community seeking and receiving help.

Although the research here focussed on a relatively small sample, it is noteworthy that all interviews elicited similar responses. This may indicate that for this cohort of the UK armed forces (i.e. officers), these needs apply in general. It also further highlights the benefits of applying the principles of market segmentation to the armed forces community with a view to gaining a better understanding of the different cohorts. This may help various service charities cluster their services for different cohorts and thereby make their services more relevant.

This study only focused on those who are current beneficiaries of a service charity. Future research needs to expand this study further so that current and future potential beneficiary needs are also taken into account.

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### Summary

Public awareness and interest in the UK armed forces has increased over the years as a result of their involvement in various conflict situations. Research has also identified the increasing support and services that the armed forces community need, including mental wellbeing and the transition to civilian life. The voluntary sector has played a key role in the social inclusion of the armed forces by providing support and services for the armed forces community in the UK. This paper argues that gaining a more in-depth understanding of the armed forces community and their needs would help the various service charities to plan and deliver their services as well as to promote themselves more effectively. The purpose of this research was to understand and identify the service needs of one cohort of the UK armed forces – officers and their families. Qualitative, in-depth interviews of case workers and the beneficiaries of a service charity working with officers and their families were carried out, as well as observations and discussions with various service charities and the attendees of outreach services for veterans. The thematic analysis of the interviews, observations and discussion notes helped identify eight specific service needs that were important to the officers and their families.

*Keywords:* social inclusion, service personnel, service needs.

## **Włączenie społeczne poprzez świadczenie usług na rzecz społeczności sił zbrojnych: perspektywa oficerów**

### *Streszczenie*

Świadomość społeczna i zainteresowanie brytyjskimi siłami zbrojnymi wzrosły na przestrzeni lat w wyniku ich zaangażowania w różne sytuacje konfliktowe. Badania wykazały również, że wzrasta zapotrzebowanie społeczności sił zbrojnych na usługi wsparcia, ukierunkowane na wzmacnianie dobrego samopoczucia psychicznego i ułatwiające przejście do życia cywilnego. Sektor wolontariatu społecznego odegrał kluczową rolę w integracji społecznej przedstawicieli sił zbrojnych, zapewniając wsparcie i usługi dla tej społeczności w Wielkiej Brytanii. Niniejsze opracowanie dowodzi, że głębsze zrozumienie społeczności sił zbrojnych i ich potrzeb pomogłoby organizacjom charytatywnym w planowaniu i świadczeniu usług, a także w skuteczniejszym promowaniu własnej aktywności. Celem przeprowadzonych badań było zrozumienie i zidentyfikowanie zapotrzebowania na usługi wsparcia ze strony jednej z kohort brytyjskich sił zbrojnych – oficerów i ich rodzin. Przeprowadzono jakościowe, pogłębione wywiady z pracownikami prowadzącymi działania wspierające funkcjonariuszy sił zbrojnych i ich rodziny, a także samymi beneficjentami organizacji charytatywnych. Ponadto, podstawą wnioskowania były obserwacje i dyskusje z przedstawicielami organizacji charytatywnych oraz uczestnikami usług pomocy dla weteranów. Tematycznie ukierunkowana analiza wywiadów, obserwacji i notatek z dyskusji pomogła zidentyfikować osiem konkretnych obszarów zapotrzebowania na usługi wsparcia, które były ważne dla oficerów i ich rodzin.

*Słowa kluczowe:* włączenie społeczne, personel usługowy, potrzeby usługowe.

JEL: H55.

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## Regional differentiation of households in the context of a subjective assessment of the level of income

### INTRODUCTION

In this era of global competition and ever-changing consumer preferences, households usually adjust the consumption structure to the real opportunities resulting from earned income etc. Inequalities in income, as shown by the analyses, affect the structure of consumption of household goods and services, as well as the quality of goods and services consumed. All households, irrespective of the level of obtained income, first focus on satisfying essential basic needs, such as: housing, energy carriers and food and non-alcoholic beverages, leaving small amounts (or none) for additional purchases in their budget (Bywalec, 2007).

According to the Polish Central Statistical Office (*Budżety gospodarstw domowych*, 2017), the average monthly expenditure in households per capita in 2016 was 4.3% higher than in 2015, and accounted for 76.7% of income (78.7% in 2015). Expenditure on consumer goods and services averaged 4.5% higher compared to 2015 (in 2015, real growth of expenditure on consumer goods and services was 2.0%). One of the most likely factors to influence the increase in spending was the introduction of the Family 500+ program by the Ministry of Family, Labour and Social Policy. This benefit (launched on 1 April 2016) in the households entitled to this supplement represented an average increase of 16.8% in disposable income per capita. Expenditure on food and non-alcoholic beverages constituted the highest share in the expenditure of all households (those receiving and not receiving 500+), at 25.1% of the total expenditure. Expenditure on the use of an apartment or house and energy carriers accounted for 17.8% of total expenditure. A noticeably higher

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share of expenditure on households receiving childcare benefit than on households not receiving it occurred, especially in the group of expenditures on recreation and culture (by 2.0 percentage points) and clothing and footwear (by 1.8 percentage points) (GUS, *Warunki...*). The subjective needs assessment has an impact on the level and structure of expenses. The subjective character of needs means that certain regularities occur in the process of consumption development. Satisfying needs does not limit them, even when we meet all the needs occurring at the moment; on the contrary, it leads to new needs (Bywalec, Rudnicki, 2002).

When there is progress and economic development in a given society, one can notice a decrease in the share of foodstuffs and an increase in non-food services and articles. This is in line with economic theory, i.e. with Engel's law (Gregor, 2003). Sometimes this decrease is not noticeable in the first period of increase in household incomes. This is related to the consumption of more expensive substitute goods, which often gives a subjective feeling of belonging to a better segment (according to the consumer's assessment). The sustained increase in income in the long run causes a drop in the share of foodstuffs in favour of, for example, the consumption of durable goods or the consumption of free time. In the subject literature we find two research approaches to analysing changes in consumption:

- directly, by analysing the level of household income, solely on the basis of data from surveys of household budgets conducted by the Polish Central Statistical Office (CSO),
- indirectly, by accepting consumption as an indicator of social change (e.g. living standards).

The first approach was selected in the present article. The analysis of the diversity of the differentiation of income level assessments was carried out in a spatial cross-section (variation of the phenomenon by voivodeship) (Słaby, Czech, 2011).

Data from the Household Budget Survey (CSO database) provided information on the assessment of the actual economic situation, but also included subjective assessments of this situation. The assessment of prosperity, conditions and quality of life consisted of both objective and subjective aspects of the financial situation, as well as the way in which the person perceives his material and immaterial financial situation (Joo, Grable, 2004). The relationship between the income level and the financial satisfaction of households is also significant. Van den Berg and Ferrer-I-Carbonell (2007) showed that income has a positive impact on the level of financial satisfaction.

The behaviour of the household becomes important in the options of managing its finances. Indebtedness or debt is an objective measure in measuring the financial vulnerability of households. Households with similar financial abilities can make different decisions (Vlaev, Elliott, 2014). A survey of household budgets, carried out by the Central Statistical Office, used the opinions of respondents regarding the financial situation of the household. The following assessments of the material situation could be distinguished: very good, rather good, average, rather bad, bad. From the point of view of the set objective, this article focuses on the second group of information

provided by households, i.e. information on the level of net income, defined by the households as: very bad, insufficient, barely sufficient, good, very good. These variables, although subjective in nature, are used increasingly often in surveys of the degree of satisfying needs (Podolec, 2008).

The level of current incomes of the population is therefore a key economic indicator of consumption shaping, co-deciding together with other determinants the amounts spent on satisfying consumption needs (Grzywińska-Rapca, 2018). Therefore, it can be said that the income obtained by consumers is an economic pillar of the functioning of each family, thus defining the standard of living, the level of consumption and the ability to meet the needs of common and individual members of households (Carroll, Summers, 1991; Zalega, 2012). In a situation where financial resources are treated as a key limiter of consumption, changes in the level and scope of income differentials per capita begin to play a significant role. This means that for the assessment of the household consumption structure, the income generated by individual members of the household is significant. The amount of income has a direct impact on the individual attitudes and behaviour of consumers, affecting their market behaviour, regardless of the relationship to the objective situation.

The aim of the presented material was to show the diversity of voivodships depending on the subjective assessment of the level of household income.

To assess regional differences related to the subjective economic assessment of households, data were used to present the households' expectations regarding the level of income per capita in a household, including administrative division units. Based on the data from the Household Budget Survey conducted in 2016, the average values for five levels were determined. Households participating in the Household Budget Survey assessed the value of income that could be described as: very weak, insufficient, barely sufficient, good and very good. A qualitative assessment of the households was not taken into account, due to the desire to indicate specific values of income that, in the subjective assessment of households, would allow the meeting of consumption needs. Grouping of voivodships was carried out depending on the main source of income for households. Groups of employees, farmers and households whose main source of income was self-employment were selected for the analysis.

## METHODICAL ASSUMPTIONS

Based on data from the household budget survey conducted by the Central Statistical Office, in 2016 a grouping of the households representing individual voivodships was carried out. The focus was on a subjective assessment of the level of net income indicated by the households participating in the survey. Each of the respondents indicated the amount of net income in one of five categories: very poor, insufficient, barely sufficient, good and very good. Thanks to such a data system, these levels can be treated as successive variables.

In order to demonstrate the diversity of voivodships, the number of clusters was determined and taxonomic units were allocated to groups to minimize intra-group variability while maximizing inter-group variability.

Among the methods used to analyse economic phenomena were hierarchical methods based on such measures as Euclidean distance, urban distance and the Mahalanobis measure. Another method often used in the analysis of socio-economic phenomena is the Ward method, based on the analysis of variance. An equally common method is k-means analysis, which belongs to the group of non-hierarchical methods of cluster analysis (Grzywińska-Rapca, Markowski, 2018). According to Panek and Zwierzchowski (2013) and Walesiak and Gatnar (2009), this method requires an arbitrary decision about the number of classes to which the input set of observations can be divided.

To date, many methods have been developed in the field of cluster analysis, in which different approaches to solving the problem have frequently been used, but there are no premises that explicitly support the choice of any one of them. However, the methods always aim to divide the set into such subsets as the main goal, ensuring that the elements in the subsets are as similar as possible, although the elements from separate subsets clearly differ from each other.

An interesting approach to cluster issues seems to be the use of neural networks, which are an important part of what is known as artificial intelligence. For the purposes of this article, a self-organizing neural network (TeMax Kohonen), developed in 1982, was proposed. Kohonen's network is a self-learning, unsupervised learning network, but it involves learning with competition. A characteristic feature of self-learning networks is that they do not use "external" information. The Kohonen network learns alone, by observing only the data sent to it, where the internal structure and unknown logic hidden in the structure determines the final picture of the classification and the final operation of the network (Tadeusiewicz, Gąciarz, Borowik, Leper, 2007). The SOM application allows, like other methods such as k-means, the analysis of multidimensional data sets. The network itself consists of neurons placed in two layers – the input and output. Each input layer neuron is coupled to all the neurons of the output layer (Kohonen, 2001; Tadeusiewicz, 1993).

As a result, the application of the Kohonen network to the multidimensional data space provides a two-dimensional structure, whereby the obtained image retains the topology of the input file. In the case of cluster weight analysis, the neurons of the output layer are determined by centroids, which are the centre of gravity for the groups. For each component cluster analysed, the distances to the centroid are calculated, from which the minimum distances are searched. All elements centred on a given centroid form one group.

The Kohonen neural network (SOM) was used as a tool for the classification of households according to the variables selected for the analysis of variables. This is a tool used to group input value vectors, describing the subjective assessment of

the household income level in spatial terms. Tarka (2010), Wehrens and Buydens (2007) used SOM as a tool to implement non-linear transformations of any metric space into a discrete space, and also to match the code vectors to the distribution of objects in the space of features. In fact, SOM is a method rarely used in the analysis of consumer behaviour, instead being most often used in issues related to the analysis of financial markets. The SOM method was used to identify clusters generated on the basis of the variables accepted for analysis.

#### ASSESSMENT OF THE FINANCIAL SITUATION OF HOUSEHOLDS BASED ON EARNED INCOME

The subjective assessment of one's own economic situation may be largely divergent from the actual economic situation of a given household and not coincident with the objective research results. Often satisfaction with material living conditions is not proportional to changes in income. In 2016, the largest number of households living in the Pomorskie voivodeship reported having a very good financial situation (Table 1).

**Table 1. Assessment of the overall financial situation of the household**

Specification	Assessment of the overall financial situation of the household				
	Very good	Rather good	Average	Rather bad	Bad
	[% of households]				
Dolnośląskie	13.42	20.35	53.74	9.31	3.17
Kujawsko-Pomorskie	12.35	17.73	57.88	7.83	4.22
Lubelskie	7.76	19.16	57.27	12.37	3.44
Lubuskie	14.41	19.32	50.35	11.11	4.80
Łódzkie	9.82	17.02	58.57	9.74	4.85
Małopolskie	12.45	22.33	55.09	8.05	2.09
Mazowieckie	14.49	19.40	53.35	9.30	3.45
Opolskie	16.24	27.65	47.07	6.78	2.26
Podkarpackie	7.93	19.33	59.37	10.70	2.66
Podlaskie	9.20	20.05	55.90	9.98	4.86
Pomorskie	18.39	19.15	49.01	8.88	4.57
Śląskie	17.48	18.78	51.25	9.26	3.23
Świętokrzyskie	9.47	21.12	57.59	9.81	2.01
Warmińsko-Mazurskie	14.41	18.20	53.25	11.03	3.11
Wielkopolskie	11.81	20.87	56.65	8.25	2.41
Zachodniopomorskie	13.78	21.52	49.54	11.94	3.22

Source: Author's own work based on CSO data.

The largest number of households (over 50% in each voivodeship) assessed their current economic situation as average. In the Podkarpackie voivodeship, 59.37% of the household budgets participating in the survey indicated this answer. In the subjective assessment of households for the Podlaskie voivodeship, the general financial situation of their household was bad, according to 4.86% of respondents. This was the highest value in the structure of responses given by respondents. Another aspect included in the survey of household budgets was the subjective assessment of income generated by the household. The assessment of the overall financial situation of households (Table 1) can be treated by respondents as an assessment of material resources along with the obtained income. For a subjective assessment of the income level, the results should be interpreted as: what level of household income participating in the survey in the context of a current consumer is considered: very bad, insufficient, barely sufficient, good or very good by voivodeships (Table 2).

**Table 2. Average level of income recognized as: very poor, insufficient, barely sufficient, good or very good, by voivodeship**

Specification	Average level of income recognized as:				
	Very poor	Insufficient	Barely sufficient	Good	Very good
	[PLN]				
Dolnośląskie	1593.36	2094.07	2700.09	4319.45	6194.17
Kujawsko-Pomorskie	1546.85	2004.28	2561.19	3941.12	5492.23
Lubelskie	1343.68	1795.62	2368.06	3812.77	5540.79
Lubuskie	1735.31	2197.31	2734.71	4173.07	5621.82
Łódzkie	1639.24	2146.66	2769.61	4551.61	6458.05
Małopolskie	1518.65	2042.85	2684.25	4226.66	5918.82
Mazowieckie	1784.03	2343.30	3019.53	5071.68	7599.18
Opolskie	1600.21	2038.68	2584.53	4018.57	5536.18
Podkarpackie	1489.04	1956.17	2498.17	3932.27	5472.52
Podlaskie	1398.24	1846.11	2432.42	3814.47	5249.74
Pomorskie	1805.40	2317.69	2966.64	4659.03	6760.22
Śląskie	1660.94	2185.25	2812.84	4390.35	6294.15
Świętokrzyskie	1415.33	1794.82	2248.06	3767.38	5239.48
Warmińsko-Mazurskie	1528.11	2012.61	2579.28	3994.25	5656.94
Wielkopolskie	1717.82	2238.31	2853.67	4577.75	6655.45
Zachodniopomorskie	1547.12	2054.16	2644.72	4204.78	6159.65

Source: Author's own work based on CSO data.

According to the households participating in the household survey, the level of income ensuring the conditions of meeting the needs as very good ranged from PLN 5239.48 to PLN 7599.18. These values were indicated respectively by



respondents from the Świętokrzyskie and Mazowieckie voivodeships. The level of income allowing for the standard of living defined on average as very poor was indicated households at the level of PLN 1582.71.

### DIAGNOSTIC VARIABLES AND DATA SOURCES

To obtain the correct result of the cluster analysis, an appropriate set of decision variables should be selected, whose values is to be used as input data for the algorithm. Bearing in mind the purpose of the analysis, the voivodeships were divided into separate concentrations. The variables that were accepted for the analysis to map the above information needs were: assessment of net income level. During the analysis, the concentrations of voivodeships were determined based on the following subjective assessments of the level of income obtained by households: very poor, insufficient, barely sufficient, good and very good. The classification was carried out among three groups of households: employees, farmers and self-employed persons.

### GROUPING THE VOIVODESHIPS USING THE KOHONEN ALGORITHM

The variables used in the analysis included data on the economic situation of households, which according to the main source of income were classified as households of employees, farmers and the self-employed.

The data illustrating the assessment of the level of income providing specific living conditions according to the subjective assessment of households constituted a set of input data to be used in the self-organizing neural network function, SOM (Tadeusiewicz, 1993). It was assumed that the output layer would consist of 4 nodes ( $x = 2$ ;  $y = 2$ ) organized in a square form. The most important result returned by the SOM () function is a juxtaposition (codebook) containing the centroid coordinates around which the grouped units focus. The coordinates of the centroid of the grouped voivodeships for households of employees are presented in Table 3.

**Table 3. Centroid coordinates of grouped voivodeships – employee households**

Voivodeship	Very bad	Insufficient	Scant	Good	Very good
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Łódzkie	1.550969	-0.75178	-0.01281	0.154288	-0.0567
Małopolskie	-2.05525	-1.05837	0.13801	0.046724	0.035229
Mazowieckie	-3.23657	0.980739	0.225135	0.157238	-0.03405
Podlaskie	3.455582	-1.31839	0.142871	-0.13082	-0.09191
Śląskie	0.923746	1.260701	0.267928	-0.18579	-0.02482
Dolnośląskie	0.016139	0.024306	-0.22974	-0.09199	0.014383
Kujawsko-Pomorskie	0.783176	1.432514	-0.01736	-0.06105	0.033317

1	2	3	4	5	6
Opolskie	0.497028	-0.75603	-0.00847	-0.08953	0.128929
Pomorskie	-0.38928	-0.01377	-0.14593	-0.11058	-0.03689
Świętokrzyskie	-3.49458	-0.67836	-0.07998	-0.05142	0.097747
Warmińsko-Mazurskie	2.561201	-0.08634	0.443849	0.210173	0.048577
Wielkopolskie	2.06005	0.125136	-0.25937	0.176174	0.077765
Zachodniopomorskie	-1.44927	-0.54351	0.409823	-0.14096	-0.02549
Lubelskie	-2.19642	-0.2268	-0.01725	0.112622	-0.13991
Podkarpackie	0.768956	1.385438	0.186039	0.002156	0.007007
Lubuskie	0.204537	0.224527	-1.04274	0.002767	-0.03319

Source: Author's own work based on CSO data.

As a result of the procedure, four clusters of voivodeships were obtained. The objects they contained were characterized by similarities in terms of the analysed features. The classification of the voivodeships is presented in Table 4.

**Table 4. Descriptive statistics of clusters for employee households**

Voivodeship	Segment elements	Subjective assessment	Average level of income (PLN) recognized as:	Standard deviation	Coefficient of variation (%)
Cluster 1	Dolnośląskie Lubuskie	Very bad	1450.633	41.014	2.83
		Insufficient	1989.699	14.568	0.73
		Scant	2646.652	69.217	2.62
		Good	4082.705	4.851	0.12
		Very good	5716.418	26.609	0.47
Cluster 2	Łódzkie Opolskie Warmińsko-Mazurskie Wielkopolskie	Very bad	1603.539	41.325	2.58
		Insufficient	2084.585	41.068	1.97
		Scant	2698.885	53.368	1.98
		Good	4224.404	128.517	3.04
		Very good	5970.084	340.043	5.70
Cluster 3	Małopolskie Mazowieckie Kujawsko-Pomorskie Świętokrzyskie Lubelskie Podkarpackie	Very bad	1410.939	65.134	4.62
		Insufficient	1868.24	89.380	4.78
		Scant	2451.7	121.701	4.96
		Good	3895.226	334.849	8.60
		Very good	5554.924	651.381	11.73
Cluster 4	Podlaskie Śląskie Pomorskie Zachodniopomorskie	Very bad	1542.703	131.953	8.55
		Insufficient	2023.463	151.092	7.47
		Scant	2595.622	159.101	6.13
		Good	4169.285	257.305	6.17
		Very good	5793.213	434.133	7.49

Source: Author's own work based on CSO data.

The smallest variation in the assessments of household income participating in the survey can be observed in the first segment, comprising the Dolnośląskie and Lubuskie voivodeships. Coefficients of variation ranged from 0.12% to 2.83%. The respondents of these voivodeships also indicated the lowest amount (PLN 4082.70) that ensures, according to their subjective assessment, that the household needs are met at a good level.

The first and second focus is the concentration of the western and southern parts of Poland, namely, the following voivodeships: Dolnośląskie, Lubuskie, Łódzkie, Opolskie, Warmińsko-Mazurskie and Wielkopolskie. The obtained values of standard deviation and the level of variation coefficient for households in these groups indicated a slight regional differentiation among these voivodeships.

The greatest variation in the variables accepted for analysis can be observed in the third cluster. This is indicated by the values of standard deviation and the coefficient of variation. The coordinates of the centroid of grouped voivodeships for farmer households are presented in Table 5.

**Table 5. Centroid coordinates of grouped voivodeships – farms whose main source of income is agricultural work**

Voivodeship	Very bad	Insufficient	Scant	Good	Very good
Dolnośląskie	0.320827	-0.07301	0.257728	0.021375	0.047013
Kujawsko-Pomorskie	0.421323	-0.44105	0.035375	0.033264	0.01912
Lubelskie	-2.6926	0.02901	0.074729	0.106491	0.006721
Lubuskie	3.586097	-0.76188	-0.02545	-0.12256	0.05328
Łódzkie	0.586021	0.852334	-0.19041	-0.32394	0.004866
Małopolskie	-2.31442	-0.27293	-0.14177	-0.0381	0.022884
Mazowieckie	-0.41872	1.044963	-0.01604	0.100204	0.027596
Opolskie	1.003391	-0.26112	0.180979	-0.04743	-0.08903
Podkarpackie	-2.79034	-0.86769	-0.04621	0.101698	-0.06227
Podlaskie	-1.97751	0.265496	-0.30103	0.096954	0.003151
Pomorskie	0.971217	-0.15335	0.114808	-0.24535	-0.04013
Śląskie	0.162827	1.02469	0.318202	0.108224	-0.0145
Świętokrzyskie	-2.3974	-0.21054	-0.06064	-0.13469	0.011502
Warmińsko-Mazurskie	4.817295	0.062442	-0.26459	0.255361	-0.0342
Wielkopolskie	0.302252	0.272957	-0.0403	-0.02141	-0.02156
Zachodniopomorskie	0.419731	-0.51032	0.104615	0.109917	0.06555

Source: Author's own work based on CSO data.

On the basis of centroid measures, the voivodeships were classified by the corresponding value of this measure (Table 5). Four classes of voivodeships were defined for the needs of the analysis based on centroid values (Table 6).

**Table 6. Descriptive statistics for clusters of households whose main source of income is work in agriculture**

Voivodeship	Segment elements	Subjective assessment	Average level of income (PLN) recognized as:	Standard deviation	Coefficient of variation (%)
Cluster 1	Łódzkie Pomorskie Świętokrzyskie Wielkopolskie	Very bad	1636.211	250.949	15.34
		Insufficient	2181.964	318.532	14.60
		Scant	2865.866	414.948	14.48
		Good	4867.75	684.989	14.07
		Very good	6864.838	999.765	14.56
Cluster 2	Kujawsko-Pomorskie Lubuskie Małopolskie Zachodniopomorskie	Very bad	1819.485	444.190	24.41
		Insufficient	2518.429	614.099	24.38
		Scant	3185.329	706.729	22.19
		Good	4868.273	895.975	18.40
		Very good	6634.888	1007.412	15.18
Cluster 3	Dolnośląskie Lubelskie Mazowieckie Podlaskie Śląskie	Very bad	1437.71	242.764	16.89
		Insufficient	1982.774	289.834	14.62
		Scant	2680.189	336.707	12.56
		Good	4433.505	521.162	11.76
		Very good	6842.5	1027.194	15.01
Cluster 4	Opolskie Podkarpackie Warmińsko-Mazurskie	Very bad	1861.473	524.784	28.19
		Insufficient	2578.728	834.389	32.36
		Scant	3395.076	1109.458	32.68
		Good	5059.291	1615.384	31.93
		Very good	6988.36	2227.955	31.88

Source: Author's own work based on CSO data.

Voivodeships belonging to the same classes can be considered similar due to the numerical values of the analysed variables. In the case of households, whose main source of income is agricultural income, the third segment is the largest. The focus characterised by the highest values of the coefficient of variation were the Opolskie, Podkarpackie and Warmińsko-Mazurskie voivodeships, characterized by the relatively highest levels of the variables studied.

The coordinates of the centroid of grouped voivodeships of households whose main source of income was self-employment are presented in Table 7.

**Table 7. Centroid coordinates of grouped voivodeships – households whose main source of income is self-employment**

Voivodeship	Very bad	Insufficient	Scant	Good	Very good
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Dolnośląskie	0.572139	-0.47133	-0.11762	-0.0874	-0.00559
Kujawsko-Pomorskie	0.190088	-0.83843	0.013486	-0.02095	0.095912
Lubelskie	-2.76342	0.406997	-0.09767	0.10628	-0.02831

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Lubuskie	0.713677	-0.51773	0.406442	-0.05187	-0.0147
Łódzkie	0.074148	0.696655	-0.12199	-0.17167	-0.01531
Małopolskie	-0.55599	0.0187	-0.13874	0.030389	0.011218
Mazowieckie	5.765698	0.145957	-0.0823	0.13272	0.003595
Opolskie	-0.87953	-0.09784	0.105448	0.007162	-0.05672
Podkarpackie	-2.45031	-0.15252	-0.02992	-0.04899	0.03681
Podlaskie	-2.50568	0.20719	-0.04086	-0.02503	0.030589
Pomorskie	3.371231	0.080352	0.022489	-0.02897	-0.01807
Śląskie	0.269435	0.499237	0.020026	-0.10162	-0.01692
Świętokrzyskie	-1.55251	-0.19006	0.214883	0.063481	-0.04548
Warmińsko-Mazurskie	-1.11601	0.09684	-0.02188	0.253659	0.013574
Wielkopolskie	0.702293	0.9084	0.144982	-0.02092	0.054522
Zachodniopomorskie	0.164746	-0.79242	-0.27677	-0.0363	-0.04512

Source: Author's own work based on CSO data.

The classification of voivodeships is presented in Table 8.

**Table 8. Descriptive statistics for clusters of households whose main source of income is self-employment**

Voivode-ship	Segment elements	Subjective assessment	Average level of income (PLN) recognized as:	Standard deviation	Coefficient of variation (%)
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Cluster 1	Mazowieckie Pomorskie	Very bad	2402.247	181.907	7.57
		Insufficient	3235.745	260.775	8.06
		Scant	4227.751	366.510	8.67
		Good	6891.31	549.058	7.97
		Very good	10494.58	1186.175	11.30
Cluster 2	Dolnośląskie Kujawsko-Pomorskie Podkarpackie	Very bad	1896.863	219.615	11.58
		Insufficient	2484.584	286.507	11.53
		Scant	3246.915	375.037	11.55
		Good	4875.628	525.956	10.79
		Very good	6677.149	772.755	11.57
Cluster 3	Lubelskie Łódzkie Małopolskie Opolskie Podlaskie Śląskie Warmińsko-Mazurskie Wielkopolskie Zachodniopomorskie	Very bad	1787.488	141.133	7.90
		Insufficient	2397.628	194.946	8.13
		Scant	3126.934	260.974	8.35
		Good	4996.499	540.304	10.81
		Very good	7293.372	879.273	12.06

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Cluster 4	Lubuskie Świętokrzyskie	Very bad	1949.184	226.755	11.63
		Insufficient	2492.783	259.378	10.41
		Scant	3129.579	321.824	10.28
		Good	5025.397	601.602	11.97
		Very good	6924.306	688.447	9.94

Source: Author's own work based on CSO data.

The least numerous of the isolated clusters were clusters 1 and 4, containing the Mazowieckie and Pomorskie voivodeships, as well as the Lubuskie and Świętokrzyskie voivodeships. In cluster 1 we can see the reflection of the most economically developing voivodeships, which results in higher incomes for the inhabited population.

Based on the analysis, it can be assumed that the results may be derived from the diversity of living costs within voivodeships. One measure of these costs is the expenditure incurred by households for the use of a home and energy carriers. These expenses (per person) in the analysed period ranged from PLN 160.58 (Podkarpackie) to PLN 253.50 (Śląskie). The high costs of housing maintenance were also incurred by employees' households in the voivodeships of Lubuskie and Dolnośląskie (respectively PLN 241.12 and PLN 253.40 per person in the household). As a result of the grouping, households of employees from these voivodeships were located in the same cluster. A similar relationship can be observed in clusters concerning households whose main source of income was self-employment. For example: Pomorskie and Mazowieckie, located in the same cluster.

## CONCLUSION

Persistent regional disparities in Poland can be determined by many economic and social factors. This translates into the living conditions of the residents of individual voivodeships. When discussing the income situation in Polish households under the regional (voivodeship) approach, one can analyse changes, indicators of the level of regional development and the degree of satisfying needs. The literature on the subject emphasizes that the existing differences in the level of macro- and microeconomic indicators are reflected in the income level of the population (Księżyk, 2012).

The obtained results of grouping voivodeships in terms of a subjective assessment of their inhabitants – in the case considered in this article because of their needs – indicate that neural networks (particularly the Kohonen network) may be useful for this type of analysis. An interesting issue is also the comparison of the grouping results obtained by SOM and with the use of other previously developed methods, especially k-means, so often used in economic analyses. Based on the re-

sults of the analysis and presented in the article, further research into the economic situation of households is required. An analysis of the conditions that determine the situation related to differentiating subjective assessments of Polish households may indicate directions of changes and increase the chances of improving the living conditions of the inhabitants of individual voivodeships. In summing up, it can be stated that in terms of the level of household financial resources and their subjective evaluation, voivodeships exist in which the pursued policy should attempt to level their chances of better satisfying the inhabitants' needs.

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### Summary

One of the factors affecting the stratification and diversity of living conditions of the population is the level of income of the population. Income levels indicate inequalities that are inevitable and even necessary to some extent. They are part of the incentive mechanisms in consumer behaviour. The aim of the article was to show, by grouping voivodships, the differences in the assessment of the subjective level of household income. Households participating in the *Household Budget Survey* conducted by the Polish Central Statistical Office reported the amount of income (in PLN) allowing (in their assessment) to recognize the given income as: very weak, insufficient, barely sufficient, good and very good. The specified values of the centroids made it possible to organize voivodships in Poland due to the level of analysed features and identification of groups in which there are households with similar expectations and a subjective assessment of the economic situation. Based on the analysis, it can be concluded that in terms of subjective assessments of the level of income obtained by households there are stratifications in the individual groups of voivodships. The analysis of the diversity of income level assessments was conducted in a spatial section (diversification of the phenomenon by voivodships). The SOM-Kohonen method was used for the analysis.

*Keywords:* household, subjective assessment, material situation, SOM, Kohonen.

## **Regionalne zróżnicowanie gospodarstw domowych w kontekście subiektywnej oceny poziomu dochodów**

### *Streszczenie*


Jednym z czynników wpływających na rozwarstwienie i różnorodność warunków życia społeczeństwa jest poziom dochodu ludności. Poziom dochodu wskazuje na nierówności, które są nieuniknione, a nawet w pewnym stopniu niezbędne. Są elementem mechanizmów motywacyjnych w zachowaniach konsumentów. Celem artykułu jest wykazanie, za pomocą grupowania województw, zróżnicowania w ocenie subiektywnego poziomu dochodów gospodarstw domowych. Go-



spodarstwa uczestniczące w *Badaniu budżetów gospodarstw domowych* przeprowadzonym przez Główny Urząd Statystyczny podawały wysokość dochodów (w złotych) pozwalających (w ich ocenie) uznać dane dochody, jako: bardzo słabe, niewystarczające, ledwo wystarczające, dobre i bardzo dobre. Określone wartości centroidów umożliwiły uporządkowanie województw w Polsce ze względu na poziom analizowanych cech oraz identyfikację grup, w których są gospodarstwa domowe o podobnych oczekiwaniach i subiektywnej ocenie sytuacji gospodarczej. Na podstawie analizy można stwierdzić, że pod względem subiektywnych ocen poziomu dochodów uzyskiwanych przez gospodarstwa domowe istnieją stratyfikacje w poszczególnych grupach województw. Analiza różnorodności ocen poziomu dochodów została przeprowadzona w przekroju przestrzennym (zróżnicowanie zjawiska według województw). Do analizy zastosowano metodę SOM-Kohonen.

*Słowa kluczowe:* gospodarstwo domowe, subiektywna ocena, sytuacja materialna, SOM, Kohonen.

JEL: C10, D12, D14, D31, C38.

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## **Innovation management: subject re-evaluation**

### INTRODUCTION

This article has a conceptual character. It is founded on the assumption that there is both the necessity and the possibility of enhancing the subjective role of the individual (human) in the process of innovation. Therefore, the purpose of the article is to dissect the innovation process as the capacity to introduce innovations, and then to integrate it into a subjective approach to innovativeness. With this approach, and in line with the needs of an innovative economy, innovation management is nowadays becoming the main tool for ensuring and discounting development benefits through innovation. This is in accordance with the basic functions of management, but experience shows that problems are encountered in its implementation due to the special nature of innovative activities. These are characterized by a greater degree of creativity and a significant possibility of success. What makes the process of coordinating the activities of individuals under innovation management more difficult is the fact that the number of individuals increases due to the dissemination of the concept of open innovation (Bajenescu, 2019) in all areas of human activity, not just in business but also in the public or social sphere, and not only for corporations but also for small and medium-sized enterprises (Zastempowski, Przybylska, 2016).

Contemporary innovation management is largely subject-matter, characterized by the fact that the impact management instruments are oriented to the stages of the innovation process (Tidd, Bessant, 2013; Trott, 2008; Pomykalski A., Pomykalski P., 2013). In practice, this means that the role of the participants in innovative processes is underestimated in enterprises. Frequently their subjectivity (Bal-Woźniak, 2016) as well as their innovative competences are neglected (Przyborowska, Błajet, 2014; Marin-Garcia et al., 2016). This leads to a paradoxical situation. On the one hand, the development of a knowledge-based

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economy and the levels of uncertainty and risk require a good management skill set for efficient functioning and increased organizational efficiency (Skrzypek, 2013; Bratnicka, 2015). On the other hand, the resources of human/intellectual capital are wasted (Ujwary-Gil, 2017). The idea of lifelong learning is underestimated, although it is a key measure of the knowledge-based economy (Tkacz, 2019).

The developing trend towards positive organization management (Laloux, 2014; Helzer, Kim, 2019) shows the possibilities for the active involvement of members of the organization's community in shaping their own work environment (Shabunova et al., 2018). Due to changes in the environment of enterprises, mainly in the form of new types of competition, the progressive globalization of liberalization, digital revolution 4.0 and the dissemination of network structures, existing innovation management has become inadequate (Kraśnicka et al., 2018; Francik et al., 2018). The imitation of patterns based on the technocratic (objective) approach oriented towards innovation management is burdened with a high risk of ineffectiveness in the 'catching up' countries, which include Poland and other countries of Central and Eastern Europe (Bal-Woźniak, 2015b; Paliokaitė, 2019).

#### DEVELOPMENT DILEMMAS, INNOVATIVENESS OF ENTERPRISES AND THE POLISH ECONOMY

A multitude of empirical studies, together with a multitude of scientific studies and various types of guidebooks, may suggest that the problem of insufficient innovation among people, enterprises, regions and entire economies is well understood. In such a situation, the consistent implementation of enterprise development strategies as well as governmental and EU innovation programs should allow the effective achievement of development goals. However, regular reports continue to describe trends (GII, 2019; EIS, 2019) which do not confirm significant improvement. Irrespective of the cross-section studies and the scope of research, as well as the adopted research methods, the conclusions indicate 'weak research and development activities in many companies, resulting in a low level of innovation activity, which leads to insufficient innovation in the Polish economy' (Jasiński, 2014, p. 21). This situation in terms of a specific innovation gap has not changed significantly, even with access to a wide stream of European Union funds, both in relation to the country as a whole and in levelling the regional disparities (Czudec, Kata, Wosiek, 2019). Therefore, the conditions for integrated development are still more in the declarative sphere (Śłodowa-Hełpa, 2015). It is also difficult to talk about the impact of the modernization processes on deepening socio-economic cohesion, despite the fact that 'it is important to focus a coherent policy in the EU on creating new jobs, especially in new sectoral growth poles, which can be found mainly in services requiring high knowledge' (Cyrek, 2017, p. 203).

The elimination of the innovation gap, including the technological gap, is hindered in Poland by a number of factors, such as the issues of an effective investor,

exclusivity, voluntary transferability of property rights and conditions of the capital market functioning related to ownership relations (Woźniak, 2019b).

Andrzej H. Jasiński (2014, p. 21) summarizes the reasons for the too small supply of innovation in as five points:

- the lack of well-functioning R&D and innovation markets, with low demand for innovation from companies, the small scale of knowledge transfer and innovation diffusion between companies, and inefficiencies in the processes of innovation commercialization;
- poor location of the R&D potential, i.e. ‘far from the market;’
- insufficient cooperation between R&D and the business sectors;
- the lack of an innovation culture in companies;
- a slim R&D effort on the part of Polish companies.

The same author also emphasizes that ‘we must remember certain shortcomings in public innovation policy’ (Jasiński, 2014).

Little progress in eliminating the existing obstacles to innovation means that all the cases discussed can be treated as part of the premise that there is a great need to look for new ways to increase the innovativeness of Polish companies and the economy as a whole.

#### INNOVATION MANAGEMENT: AN APPLICABLE OBJECTIVE APPROACH

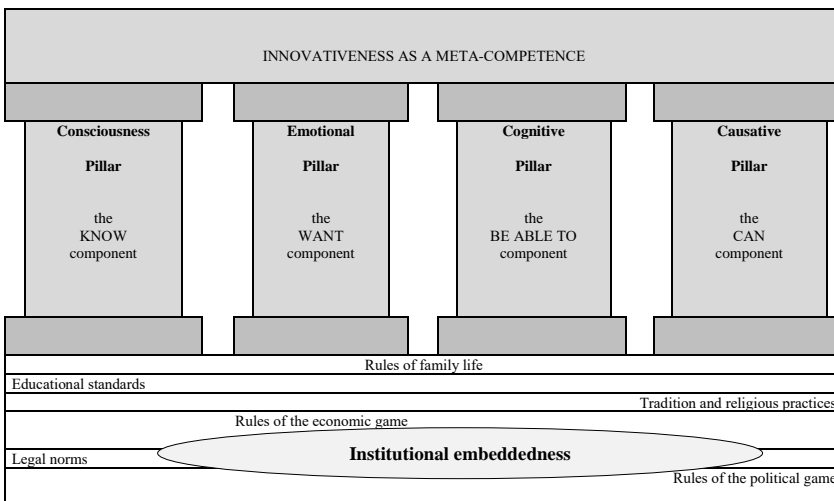
Traditional innovation management can be termed Schumpeterian as it refers to specific innovative ventures, mainly related to original technological (product and process) innovations. To describe this transformation process associated with new innovations, Joseph A. Schumpeter used the term ‘creative destruction’ (1942). This system involves letting outdated companies fail so that we can free up the resources that allow new companies to become huge and introduce innovations. The idea of ‘creative destruction’ therefore refers to business innovations, and in particular to innovations in industrial companies. The main emphasis can be placed on industrial companies for two reasons: industry is home to the vast majority of apparent technological innovations and the European Union currently places enormous stress on the development of the kind of industry indispensable for finding solutions to the challenges our society face, today and in the future (Jasiński, 2014, p. 17). We are currently observing the continuous development of this research trend, both using theoretical (Foster, Kaplan, 2001; Zorska, 2011) and empirical approaches (Chun et al., 2008; Andersson et al., 2011). Its notable effect is innovation, which in a broad sense is interpreted by OECD and Eurostat as the implementation of a new or significantly improved product (or service) or process, which should be new or improved and available to the potential user (Oslo Manual, 2018).

In fact, today we are dealing with a much broader wave of innovations, not only technological but also non-technological (organizational and marketing), as well as

social, financial, ecological, management (management innovations), educational, pedagogical, systemic (in relation to systems, e.g. education), political and institutional. In the ontological sense, they are all either a product or a process, but as for the domain criterion, their number is constantly growing. This means there is a need for mechanisms other than just ‘creative destruction’ to explain innovative processes. The concept proposed in the study gives appropriate consideration to this issue.

**TOWARDS THE SUBJECTIVE APPROACH OF INNOVATIVENESS: ASSUMPTIONS**

Innovativeness should be understood as the ability to introduce innovations. There seems to be agreement concerning this understanding. However, for speech and writing, this concept is understood as the intensity of implementing innovations. Meanwhile, there is a fundamental difference between competences and the effects of their use. Innovativeness is not a new concept, but it still does not translate into effective mechanisms of functioning in this sphere of activity for people and organizations. The opportunity to change this situation is in popularizing innovativeness based on the subjective approach (Figure 1). Demonstrating innovativeness in the subjective approach means expressing innovative behaviour. Therefore, the subjective approach to innovation is associated not only with the opportunity to focus innovations on catching-up with development but also to harmonize these methods with natural human traits. Innovative activities, in which the creative element is greater than in other areas of economic activity, can create special conditions for the self-realization of the individual.



**Figure 1. Innovativeness from a subjective perspective**

Source: own work.

Adopting the assumption that the ability to introduce innovations is a category that is too aggregate to explore real sources of still low levels of innovation in enterprises and the economy has become the basis for deconstructing the category of capabilities (Czarniawska, 2010). Man's ability to effectively shape attitudes and take innovative behaviours as part of the implementation of the innovation process takes place in the following sequence: know – want – be able to – can (Figure 1).

The KNOW component means *being aware of the necessity for innovation in the context of opportunities and threats*. A human being can recognize a situation; in other words, notice and receive signals indicating the innovative character of a situation whose consequences (positive or negative) may be visible only in the future. Subjectivity in this aspect facilitates the recognition of the character of a situation by noticing and receiving various signals from a certain human situation, sent by other elements of the environment or being a derivative of the mutual relations between a person and other elements of an environment. In the case where there are no dispositions to observe development challenges in the context of innovations evaluated as valuable, and a low level of sensitivity of the subject, i.e. a lack of sufficient awareness of innovative needs, then the stimuli which signal the need to replace the current state with a new and more beneficial one according to various criteria will not be received.

The WANT component means *feeling obliged to engage in and release motivation for innovative activities*. A human being may evaluate and interpret the opportunity and necessity for innovative activities according to their own feelings (comfort or the lack of it) and aspirations resulting from them, as well as the feeling that there is an obligation to act. Subjectivity in the emotional aspect is connected with dispositions to release the feeling of an obligation regarding the search for new solutions to improve the wellbeing achieved by developing one's own competences, economic success and the business sphere. A rational explanation of this feeling is an expected surplus in the sum of benefits from the change, which is greater than its costs in comparison to the effects achieved in a situation of no change. Such expectations have, first of all, an intentional character, in that they stem from the certainty of innovation functionality in comparison to the realized development goals, and they are formulated based on, for example, opinions about the nature and characteristic of the innovations.

The BE ABLE TO component means *possessing necessary competences: knowledge and proficiency in using them*. A human being can understand a situation in the context of various relations thanks to their capability to connect the observed phenomena with patterns, based on the knowledge they possess. Subjectivity in this aspect facilitates making knowledge useful in all scopes, and also in seeking new knowledge (learning to learn) with reference to all spheres

of human existence. This happens when a subject becomes capable of using the knowledge to discover and develop creative potential.

The CAN component means *acting effectively: find opportunities, create those that are needed and seize the existing ones*. Opportunities in a general sense are the ways to achieve specific intentions. Subjectivity in the causative aspect leads to taking action in a sense of freedom, the possibility of self-determination and responsibility. Innovative action can mean a direct independent activity or combined team activities. It shifts the responsibility for the organizational level. Achieving these dispositions requires various (financial, technical, systemic, infrastructure) conditions. The behavioural attitude component and subjectivity connected with it refers to a disposition to shape implementation opportunities to introduce innovations in an organization, such as the process of seeking sources of financing for new solutions. These four types of dispositions: awareness, emotional, cognitive and behavioural increase the effectiveness of the implemented innovation process.

The process of isolating individual innovative competences (awareness, engagement, proficiency, effectiveness) into structural elements has an analytical character. This subjective mechanism can be used in all organizations, not only economic ones, where the effects of the functioning of a 'system' depend on people capable of creativity, binding competition and cooperating on single positions, not only in network structures but also within the framework of neighbourhood or public structures, and the structures of a family, and not only business and R&D structures, including transnational organizations.

It is also crucial to emphasize the issues of institutional embeddedness, which must always be taken into account when talking about behaviour. Our behaviour is influenced by various institutions related to all human environments such as family, school, religion, economy, law and politics (Turner, 1997). Institutions influence the development of people's professional maturity. Behavioural institutions (referred to as institution-rules, to distinguish them from institution-organizations) are defined as a formal and informal framework, limiting the space of free choice, shaping human interactions and the rules of the game in society (North, 1990).

#### THE CONCEPT OF THE SUBJECT-ORIENTATED MODEL OF INNOVATIVENESS

The consequence of adopting the concept of the subjective innovativeness is the subject-oriented model of innovativeness based on four separate pillars of specific innovative competences (Figure 2).

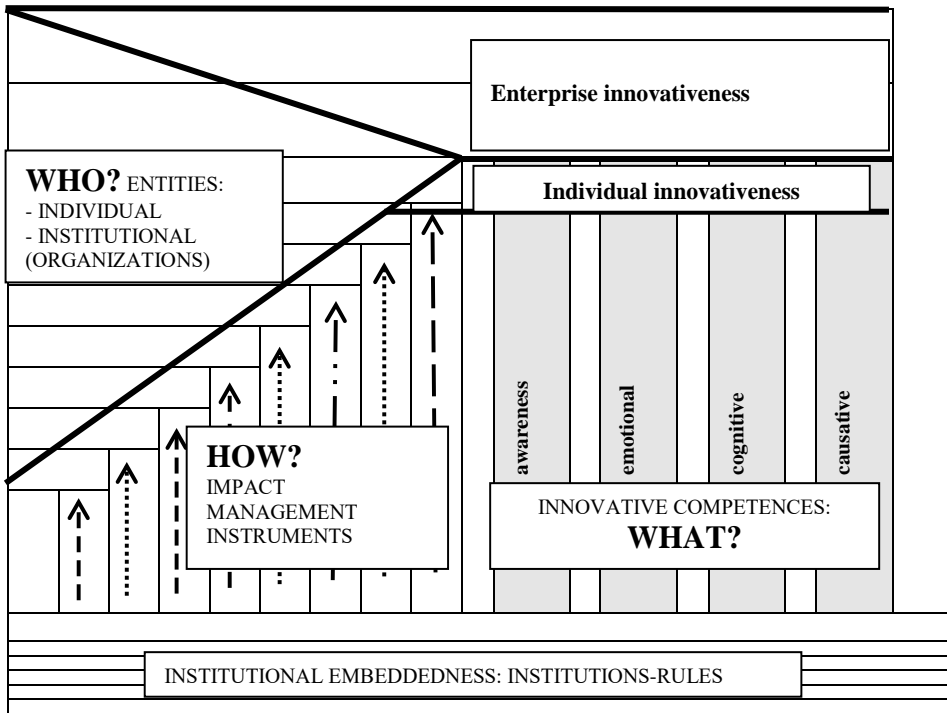


Figure 2. Subject-oriented model of innovativeness

Source: own work.

The area of potential solutions consistent with the model approach, as shown in Figure 2, is determined by the answers to three questions.

The WHO is mainly about the subjectivity of human beings acting as managers and employees in non-managerial positions, including the consumers and non-economic participants of organizations. Institutional entities, i.e. organizations set up to implement specific goals and respect a specific order, set by all behavioural institutions competent for these entities, are also included here. The theoretical basis for identifying subjects involved in given innovations may be the concept of stakeholders, widely used in management and quality sciences. However, the Quintuple Helix model is increasingly used, indicating the need for cooperation between universities and business, and the spheres of state and government in the media, civil society and the environment (Carayannis, 2012).

The WHAT refers to the specific innovation competences of individuals. The condition for achieving the objectives of the subject-oriented model of innovativeness is to incorporate into the mechanism of shaping innovative competences the rules of integrated development. This will ensure that innovation ‘does not diminish the possibility of achieving the development goals in non-business areas of human



existence.' In this way, the model is associated with improving the quality of valuable life in all spheres of human activity. Apart from these three components respected in the concept of economically, socially and ecologically sustainable development, there are also five others: politics, consumption, knowledge, technology, and axiology (more on this subject in: Woźniak, 2019a).

The HOW is associated with the selection of specific procedures, tools, regulations as well as control and self-control mechanisms. For companies it is about selecting specific impact management instruments that are used as part of the management systems. Slightly different methods are used in the systems of government, administration or command. The selection of 'impact instruments' is important to prompt another field which seeks opportunities to include Multi-Level Governance according to Hooghe and Marx (2003). This will lead to the management of innovation as a meta-competence and increase the efficiency of innovation management.

#### INNOVATION MANAGEMENT IN THE SUBJECTIVE APPROACH: BASIC FINDINGS

The concept presented opens the perspective of making innovation a universal competence (meta-competence). It may lead to an increase in the effectiveness of innovation management in the form of stronger effort or higher innovation intensity. This higher efficiency is indirectly achieved by shaping the appropriate innovative attitudes and behaviours of people before they become active participants in various organizations, the employees of companies in particular.

One of the conditions for the implementation of the proposed management model is the requirement for individual treatment of participants in innovative processes in all environments. If the impact management instruments are to shape innovative behaviours in work environments, certain mechanisms can be activated to disseminate the expected (desired) individual innovative competences. They are anchored in the natural dispositions of each person, although they are considerably influenced by behavioural institutions.

Individual innovative competences form the 'pillars supporting the innovativeness' of companies, which are undoubtedly the main connection in national economies. Innovative competences are not effective until they reach a certain level.

The subject re-evaluation of innovation management is associated with the need to widely disseminate the belief that innovativeness is the ability to implement innovation that requires innovation competences from the people participating in the various innovation process. The key factor here is the correct understanding of the essence of innovation as an implemented change in various areas of human existence, both in the individual and social dimensions, over the long term.

## CONCLUSIONS

The concept of enhancing innovation management by a subjective approach has epistemological and application implications. The results of the research conducted will increase understanding of the reasons for insufficient innovation by Polish enterprises and the economy as a whole. In practical terms, the findings of the study can help practitioners see the possibility of eliminating this specific innovation obstacle.

The main idea behind showing specific innovative behaviours from the perspective of a comprehensive (integrated) model is to direct our attention to a practical problem, which is not about incidental behaviour, but rather about the shaping and consolidating of specific repetitive, perceptible behaviours that give the whole organization the 'character' of an innovative one.

The concept proposed is also a response to the need for Polish society and the economy to take active preparations in order to achieve a new level of socio-economic development based on innovation. This is directly related to the idea of a sustainable enterprise (Bal-Woźniak, 2015a) and the program for sustainable development (UN, 2015).

The main advantage of the study is that it draws attention not only to the need to disseminate a subject-oriented approach to innovativeness, but it also shows the opportunities in this field. The original contribution is in exploring innovativeness as the ability to implement innovation by showing the spiral of feedback of the internal mechanism of attitude towards innovativeness. Some recommendations can be made, based on this mechanism, regarding the directions and methods of shaping pro-innovative attitudes and behaviours. These include:

- building innovation awareness at all levels and in various types of organizations; focusing on the possibilities of perceiving innovative situations in and around the enterprise;
- triggering innovative engagement to change passive, often sceptical and even reluctant attitudes towards innovation, i.e. stimulating interest in the innovative situation along with evoking a sense of necessity to take action or discomfort in the absence of action;
- rewarding proficiency, i.e. a high level of skills in using the available knowledge and suggesting opportunities to supplement the skills necessary to acquire proficiency;
- stimulating the taking of action to free people from feelings of helplessness, mobilizing them to take action, i.e. finding solutions to a problem in an innovative situation.

The concept of the subjective approach of innovativeness requires further study, including the institutional determinants of innovation and innovativeness, as well as providing the answers to three model questions in the context of subject-oriented innovation management.

The research also indicates some directions for integrating innovation management in the subject approach, with the innovation policy of governments and institutional reforms oriented towards the dissemination of civilization progress.

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### Summary

The article is of a conceptual character and proposes a change in the paradigm of thinking about innovation management. The growing belief in the importance of innovation for increasing the competitive advantage of companies and the international position of the national economy does not go hand in hand with the effectiveness of innovation management. This applies in particular to the so-called catching-up countries, which include Poland and other countries of Central and Eastern Europe. It was the basis for proposing the concept of innovation management from the subjective approach and its operationalization in the context of the needs arising from contemporary development trends. The author proposes appreciating the subjective role of the individual (a human being) in the innovation process. Therefore, the purpose of the article is to dissect the innovation process as

the capacity to implement innovations, and then integrate them into the subjective approach of innovativeness. The hypothesis is proved by demonstrating that the new approach opens the perspective of causing that innovativeness becomes a universal competence (meta-competence), which may lead to an increase in the effectiveness of innovation management in the form of higher innovation intensity. This higher efficiency is indirectly achieved by shaping the appropriate innovative attitudes and behaviours of people. The results of the conducted research will increase understanding of the reasons for insufficient innovation in Polish enterprises and the economy as a whole. At the same time, they set the direction for further research, including institutional conditions for innovation and innovativeness, because people's innovative attitudes and behaviours are influenced by a series of behavioural institutions. The study also indicates some directions for integrating innovation management in the subject approach with the innovation policy of governments and institutional reforms oriented towards the dissemination of civilization progress.

*Keywords:* innovation, innovation management, innovativeness, innovative work behaviour.

## **Zarządzanie innowacjami: przewartościowania w kierunku podmiotowym**

### *Streszczenie*

Artykuł o charakterze koncepcyjnym postuluje zmianę paradygmatu myślenia o zarządzaniu innowacjami. Rosnące przekonanie o znaczeniu innowacji dla zwiększania przewagi konkurencyjnej firm i międzynarodowej pozycji gospodarki narodowej, nie idzie w parze ze skutecznością zarządzania innowacjami. Odnosi się to w szczególności do grupy tzw. krajów goniących, do których należy Polska i inne kraje Europy Środkowo-Wschodniej. Legło to u podstaw zaproponowania koncepcji zarządzania innowacjami w ujęciu podmiotowym i jej operacjonalizacji, w kontekście potrzeb wynikających ze współczesnych trendów rozwojowych. Przyjęto hipotezę o konieczności i możliwości dowartościowania podmiotowej roli jednostki (człowieka) w procesie innowacyjnym. Dlatego celem artykułu jest rozłożenie na czynniki pierwsze innowacyjności jako zdolności wprowadzania innowacji, a następnie wprowadzenie ich do podmiotowego modelu innowacyjności. Hipoteza dowodzona jest przez wykazywanie, że nowe podejście otwiera perspektywę uczynienia z innowacyjności uniwersalnej kompetencji (metakompetencji), co stanowi przesłankę wzrostu skuteczności zarządzania innowacjami w postaci większej intensywności wprowadzania innowacji. Ta wyższa skuteczność osiągalna jest pośrednio, przez wcześniejsze ukształtowanie odpowiednich postaw i zachowań innowacyjnych ludzi. Wyniki prowadzonych badań wzbogacają wiedzę z zakresu przyczyn niedostatecznej innowacyjności przedsiębiorstw i gospodarki jako całości. Wyznaczają jednocześnie kierunki dalszych poszukiwań badawczych, w tym nad instytucjonalnymi uwarunkowaniami innowacji i innowacyjności, ponieważ postawy i zachowania innowacyjne ludzi pozostają pod wpływem splotu instytucji behawioralnych. Z badań wyłaniają się także kierunki integrowania zarządzania innowacjami w ujęciu podmiotowym z polityką innowacyjną rządów i reformami instytucjonalnymi zorientowanymi na upowszechnianie postępu cywilizacyjnego.

*Słowa kluczowe:* innowacje, zarządzanie innowacjami, innowacyjność, zachowania innowacyjne w środowisku pracy.

JEL: O31, M10, I25.

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