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## FINANCIAL AND LEGAL ASPECTS OF ARTIFICIAL INTELLIGENCE – AN OPPORTUNITY OR A THREAT TO BUDGETS?

### ABSTRACT

As it results from the assumed, rather unorthodox title, due to the desire to link the issues of artificial intelligence with financial and legal aspects, the groundwork of the considerations will be a demonstration of the impact and effect of the former on the budget system in Poland. Such an approach to artificial intelligence, increasingly common, but also raising doubts and even fears, should be considered extremely important, although not sufficiently described so far.

Noticeable and tangible is the influence of widely understood artificial intelligence both in the professional and private life of every man. These issues are increasingly discussed in various aspects of human life primarily in terms of showing the actual place of a human person and their inalienable rights in the future, the rules for their protection and the liability for acts committed by artificial intelligence products.

In the conducted considerations, however, there is a clear lack of studies related to financial and legal aspects, more specifically budgetary aspects, of the functioning of artificial intelligence. Meanwhile, its very fast development is conditioned by financial resources. This issue is quite obvious in the case of private funds where the entity instituting creation or functioning of artificial intelligence determines the amounts of financial resources, and depending on the needs, it grants appropriate sums for its development. However, it takes on a completely different dimension in relation to public funds contained in the budget, which, as a rule relates its spending to the implementation of public tasks. In this case, artificial intelligence can be financed as long as it can be shown to be related to the implementation of such tasks.

Due to the very complex issues, this study should be seen as a basis for conducting further, much deepened scientific studies.

**KEYWORDS:** *artificial intelligence, budget, public funds, public tasks, private funds.*

## INTRODUCTION

The emergence of artificial intelligence and its very rapid spread has become a fact. Nowadays, it is difficult to imagine functioning in many aspects of life without the support of or even “having things done” by artificial intelligence. It is ubiquitous even when it is imperceptible and hardly seen. All human activities come to be determined by artificial intelligence in its various manifestations.

Currently, it is difficult to imagine a restriction or lack of access to products of artificial intelligence. It is omnipresent and tangible as an expression of human progress and moving towards a “better world” (?). Regardless of the fact whether the answer is yes or no, it is worth referring to selected financial aspects of the functioning of artificial intelligence. The issue is quite obvious when it is financed from private funds. Then its creator, or somebody who wants to use the achievements of artificial intelligence, decides about the amount of financial resources allocated for this purpose.

However, this issue should be perceived completely differently in the case of the so-called budgetary resources, i.e. public funds. In this case, the expenditure of funds related to artificial intelligence can only take place when it is related to the implementation of a public task within the budget of the state or the budgets of local government units.

In order to show real connections in this respect, a certain chronology of the conducted analysis can be adopted. First of all, it is worth clarifying the meaning of the artificial intelligence concept along with an indication to what extent it can be associated with the implementation of public tasks. Secondly, it should be indicated whether there are transparent legal grounds for public financing of artificial intelligence in Poland, and if so, what organizational and legal forms are to secure their functioning based on public funds.

## ARTIFICIAL INTELLIGENCE (HEREINAFTER AI) AND ITS IMPORTANCE

As shown in the reference literature, artificial intelligence is the ability of machines to demonstrate human skills such as reasoning, learning, planning and creativity<sup>1</sup>. In its assumption it is to enable technical systems to perceive their environments, to handle them, to notice and solve diagnosed problems, acting towards achieving goals specified in advance. All these activities, which should be emphasized in the context of inalienable human rights, are to be performed by AI in an autonomous manner<sup>2</sup>.

Currently, artificial intelligence is seen as a central element in the digital transformation of the society<sup>3</sup>, which should be associated with a very rapid technological advancement. In this regard, it is worth paying attention to the huge amount of data that is required from the society, and the need to introduce such technical solutions to catalogue and organize them and, above all, to protect them against unauthorized disclosure.

Due to the above, it is not surprising that it is necessary to use AI to create new, increasingly perfect software that can analyze image and sound, search for information by using Internet resources, and recognize speech, faces and sounds. The “embodiment” of artificial intelligence is the functioning of modern robots, autonomous cars, drones, etc.

Manifestations of artificial intelligence understood in such a way have found application in everyday life even in the form of on-line purchases and advertising, the widespread use of Internet search engines, making machine translations, intelligent infrastructure of buildings or entire cities, industrial production, transportation, health care and comprehensive administration activity and public services that it provides<sup>4</sup>.

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<sup>1</sup> J. Mueller, L. Massaron, *Sztuczna inteligencja dla bystrzaków*, Septem 2021, p.5.

<sup>2</sup> M.A. Boden, *Sztuczna inteligencja. Jej natura i przeszłość*, Wydawnictwo Uniwersytetu Łódzkiego 2020, pp. 7 *et seq.*

<sup>3</sup> On this subject, see J. Pieriegud, *Cyfryzacja gospodarki i społeczeństwa – wymiar globalny, europejski i krajowy* [in:] *Cyfryzacja gospodarki i społeczeństwa – szanse i wyzwania dla sektorów infrastrukturalnych*, (ed.) J. Gajewski, W. Paprocki, J. Pieriegud, Gdańsk 2016, pp. 12-38.

<sup>4</sup> See more broadly, M. Torczyńska, *Sztuczna inteligencja i jej społeczno-kulturowe implikacje w codziennym życiu*, “Kultura i Historia” 2019 (2), No. 36, pp. 107-124.

The above-mentioned types of activities can be carried out by AI and, importantly, they fit the catalogue of public tasks. As it follows from the doctrine<sup>5</sup>, public tasks are primarily those called public by the applicable provisions of law; as a rule, public administration bodies are obliged to perform them (although they may also be performed by other entities specified by statutes); in order to implement public tasks properly, public administration bodies have been equipped, by law, with authoritative (legal, financial, organizational, etc.) instruments, enabling implementation of such tasks. What is very important, both public administration bodies and other bodies authorized to take over the implementation of public tasks are characterized by their total or partial relationship with the budgetary source of funds, and therefore the state or a local government unit are legally responsible for their proper implementation.

## **THE LEGAL BASIS FOR SHAPING AND FINANCING ARTIFICIAL INTELLIGENCE IN POLAND**

In order to demonstrate the legal grounds for the functioning of AI in Poland, one should first refer to the regulations of the Constitution of the Republic of Poland<sup>6</sup>. Although the Basic Law does not address its regulations directly to the concept of artificial intelligence, but from the content of its Art. 73 pointing to the fact that “the freedom of artistic creation and scientific research as well as dissemination of the fruits thereof, the freedom to teach and to enjoy the products of culture, shall be ensured to everyone”, two theses can be derived. Firstly, citizens have been granted the right to undertake, conduct and publish scientific research results also in the field of artificial intelligence, which can be regarded as identical with the encouragement to create SI in Poland. Secondly, if this kind of citizens’ admissible rights has been entered in the Constitution of the RP, this means that such an activity should be included into the public tasks for whose implementation public authority

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<sup>5</sup> E.Feret, *Formy organizacyjno-prawne finansowania samorządowych zadań publicznych*”, Rzeszów 2013, pp.80-81.

<sup>6</sup> The Act of 2 April 1997, Journal of Laws – Dz.U. No. 78, item. 483 as amended (hereinafter the Constitution of the Republic of Poland (RP) or the Basic Law).

bodies are responsible, or those whose sources of financing, as a rule, should come from the budgets.

Assuming such an interpretation of cited Art. 73, entitles to specify the organizational and legal forms of funding this type of research. On the grounds of the applicable legal regulations, three funding types of research in the field of artificial intelligence can be identified : budget funding; public-private funding; private or extra-budgetary funding.

### ***PRINCIPLES OF BUDGETARY FUNDING OF AI RESEARCH***

Discussing the first of the indicated methods of financing, one should refer to the provisions of the Public Finance Act, which defines units of the public finance sector that operate in connection with budgetary funds. As part of the adopted catalogue there, in the context of said artificial intelligence, some attention should be paid to the units of the public finance sector, whose task is to conduct scientific research also in the field of artificial intelligence. This group of entities includes: public universities, the Polish Academy of Sciences and organizational units created by it<sup>7</sup>, and other state or local government legal persons established on the grounds of separate Acts for the purpose of performing public tasks<sup>8</sup> such as: the Polish Space Agency, the National Centre for Research and Development, the National Science Centre<sup>9</sup>. The indicated entities, acting on the grounds of the provisions of separate Acts, perform public tasks aimed at conducting scientific research also in the field of artificial intelligence. Their functioning has become dependent on budget financing, therefore the state budget adopted annually must provide for the financial resources necessary for their activities.

At the same time, what is important from the viewpoint of spending budget funds, the indicated entities take the form of legal persons, therefore they are also independent in the financial field. Thus, their financing burdens the state

<sup>7</sup> Respectively, pursuant to the Acts: of 20 July 2018, the Law on Higher Education and Science, the consolidated text in Journal of Laws – Dz.U. of 2021 item 478 as amended, and of 30 April 2010, the Act on the Polish Academy of Sciences, Journal of Laws – Dz.U. of 2010, item 1796.

<sup>8</sup> Pursuant to the content of Art. 9 of the Public Finance Act of 27 August 2009, the consolidated text in Journal of Laws – Dz.U. of 2021, item 305 as amended.

<sup>9</sup> Pursuant to the content of Art. 30 (1, 4, 5) of the Budget Act of 20 January 2021, Journal of Laws – Dz.U. of 2021, item 190.

budget only in the scope of necessary co-financing of public tasks carried out by them in the scope of the conducted research.

When analysing the financial relationship with the budget for research in the field of artificial intelligence, it is necessary to refer to entities conducting scientific research but not included in the public finance sector. In this case, the reference is made to research institutes, and institutes operating within the Łukasiewicz Research Network<sup>10</sup>. It is worth noting that although they are not included in the public finance sector, they can also count on support for their research activities (also in the field of AI) as part of co-financing investments undertaken by them. This support, however, is optional, and what goes with it, every year when adopting the budget any funding for these entities is determined and defined<sup>11</sup>.

### ***PUBLIC-PRIVATE FUNDING OF SCIENTIFIC RESEARCH***

The public-private method of financing scientific research, which undoubtedly relieves the budget from spending public funds, should be associated with public-private partnership. The regulations resulting from the applicable Act on Public-Private Partnership<sup>12</sup>, allow the possibility of joint operation of a public entity with a private partner in the implementation of a project,

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<sup>10</sup> Pursuant to Art. 9 (14) of the Public Finance Act.

<sup>11</sup> Cf. Art. 132 (2) (7) of the Public Finance Act.

<sup>12</sup> The Act of 19 December 2008, the consolidated text in Journal of Laws – Dz.U. of 2020, item 711 as amended. On this subject, see also J.Gwizdała, *Partnerstwo publiczno-prywatne w finansowaniu inwestycji sektora publicznego w UE – dylematy* [in:] *Prawo finansowe samorządu terytorialnego* (ed.) J.Gliniecka, E.Juchniewicz, T.Sowiński, M.Wróblewska, Warszawa 2013, p.20.

although the doctrine indicates a public task<sup>13</sup>. Currently, therefore, the object of public-private partnership is the joint implementation of a project based on the division of tasks and risks between a public entity and a private partner<sup>14</sup>.

Adoption of the above-mentioned regulation does not raise any doubts as to the meaning of the concept of a project. The Act on Public-Private Partnership, bringing closer its importance, identifies it with specific manifestations of activity whose result is, *inter alia*, construction or renovation of a building object, but also provision of services or execution of works also in the area of scientific research including AI<sup>15</sup>.

In the light of the adopted definition, it is worth paying attention to the definition of the catalogue of entities authorized to implement jointly a project. As it is clear from the name of the Act, it is about concluding a partnership between a public entity and a private partner, which is additionally confirmed by the regulation resulting from Art. 1 (2) of the Act, pointing to public-private partnership. The reference by the legislator to these two categories of entities confirms best the equal right of the public entity and the private partner in relation to the implementation of local government public tasks. At the same time, the legislator defines the group of public entities and private partners entitled to participate in the partnership.

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<sup>13</sup> Cf., M. Perkowski, *Jakie zadania jednostek samorządu terytorialnego nadają się do realizacji w formule PPP?* [in:] *Finanse samorządowe. 580 pytań i odpowiedzi* (ed.) C. Kosikowski and J.M. Salachna, Warszawa 2012, pp.180–182. The author points out that the suitable public tasks carried out under the PPP formula, regardless of the sector, are those concerning, for example, infrastructure, energetics, health, education, and revitalization. Among them, he notes the construction of broadband Internet networks. Public tasks, such as, infrastructure investments, in the field of transport, energetics, water and sewage management, and telecommunication are also indicated by M. Gasz, *Partnerstwo publiczno-prywatne jako instrument realizacji zadań publicznych* [in:] *Sektor publiczny we współczesnej gospodarce* (ed.) R. Przygodzka, Białystok 2008, p.251. Public tasks, which are identified with the own tasks of local government units, are also mentioned by J. Zysnarski, *Partnerstwo publiczno-prywatne*, Ośrodek Doradztwa i Doskonalenia Kadr Sp. z o.o., Gdańsk 2007, p.15, and A. Miruć, *Partnerstwo publiczno-prywatne jako sposób realizacji zadań publicznych* [in:] *Koncepcja systemu prawa administracyjnego* (ed.) J. Zimmermann, Warszawa 2007, pp. 473–489.

<sup>14</sup> Pursuant to Art. 1 (2) of the above-mentioned law.

<sup>15</sup> Pursuant to Art. 2 (4) of the above-mentioned law.

In the case of a public entity<sup>16</sup>, the Act specifies that they are primarily: 1) units of the public finance sector, but also 2) other legal persons established for the specific purpose of meeting the needs of a general nature, not having an industrial or commercial character<sup>17</sup>, and 3) their associations<sup>18</sup>. On the other hand, in the case of private partners, pursuant to the legislator, a domestic entrepreneur or a foreign entrepreneur should be indicated<sup>19</sup>, understood as legal persons, other than units of public finance sector, established for the specific purpose of meeting needs of a general nature, not having an industrial or commercial character, if the legal person does not operate under normal market conditions, its purpose is not to earn a profit and it does not incur losses arising from the conduct of business.

In this way, public entities and private partners indicated by the legislator may implement jointly public tasks – projects, based on the division of tasks and risks<sup>20</sup>. The concluded contract is the basis for the division of tasks and risks incumbent on individual entities<sup>21</sup>. The contract should regulate the following three types of obligations: 1) obligations of the private partner to implement the project and to incur in whole or in part (depending on the content of the contract) expenses for its implementation, or to bear them by a third party; 2) the obligation of the public entity to regulate the remuneration for the private partner; 3) obligations of the parties to cooperate in order to

<sup>16</sup> It should be recognized that the basis for introducing the concept of a public entity has been the principle of legality of the activities of public entities, which can only function within the scope of tasks assigned to them by law. Hence, they can cooperate with private partners in the implementation of only these tasks. In practice, therefore, projects implemented under public-private partnerships will be public tasks. T. Skoczyński, *Ustawa o partnerstwie publiczno-prywatnym. Komentarz praktyczny*, Warszawa 2011, pp.27–28.

<sup>17</sup> It is about a situation where entities, individually or jointly, directly or indirectly through another entity, finance it in more than 50% or hold more than half of the shares or stocks, or supervise the management body, or have the right to appoint more than half of the composition of the supervisory or management body.

<sup>18</sup> Pursuant to Art. 2 (1) of the above-mentioned law.

<sup>19</sup> Pursuant to Art. 2 (2) of the above-mentioned law.

<sup>20</sup> The division of responsibility for the success of a project by both parties is treated in the literature as a “full” partnership. D. Kijowski, M. Kulesza, W. Misiąg, S. Prutis, M. Stec, J. Szlachta, J. Zalewski, *Bariery prawne efektywnego i skutecznego funkcjonowania lokalnej i regionalnej administracji publicznej oraz propozycje ich likwidacji lub ograniczenia*, “Samorząd Terytorialny” 2005, No. 1-2, p.138.

<sup>21</sup> Pursuant to Art. 7 of the above-mentioned law.



implement the project by dividing the tasks<sup>22</sup>, and in the case of the public entity – also expressed by an obligation to make its own contribution.

### ***PRIVATE SOURCES OF SCIENTIFIC RESEARCH FUNDING***

In the context of the carried-out deliberations, it is also worth paying attention to financing of scientific research from private sources. The legislator creates such a possibility by indicating commercial law companies, associations or foundations.

These entities, acting on the basis of their own financial resources, can also conduct research in the field of artificial intelligence without burdening the state budget sources. However, even they have been granted the right to apply for budgetary funds or funds coming directly from foreign sources.

In this case, it is also worth paying attention to an important aspect of their operation, which is the possibility of concluding foreign contracts and applying jointly for funds, which will result in undertaking scientific research also in the field of artificial intelligence. Here, however, it is difficult to indicate the implementation of a public task, and more financial benefits that may be achieved as a result of creating an artificial intelligence product.

## **SUMMARY**

The above-mentioned issues have confirmed the necessity to analyse the financial aspects of artificial intelligence operation. These issues are extremely complex and multifaceted – from indicating the legal grounds for shaping this area of human activity to financial aspects related to determining the principles of financing scientific research.

As *de lege lata* conclusions, it can be assumed that although the legal regulations in force, in particular, the Constitution of the Republic of Poland, do

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<sup>22</sup> As part of the division of tasks, it should be assumed on the basis of the reference literature that the private partner ensures the implementation of individual elements of the project, and the public entity focuses on identifying the goals that should be developed as part of the project implementation and as a result of the public interest, at the level of quality and price mechanism governing the project, and it is responsible for monitoring and controlling the implementation of the project. A. Miruć, *Op. cit.*, p. 476.

not provide an *expressis verbis* formulation of artificial intelligence, its functioning should be equated to indicating the right of every citizen to undertake, conduct and publish scientific research results, also in the field of AI . Such an understanding of constitutional regulations allows for the recognition that conducting research in this area is a type of public task, therefore there is an obvious necessity to finance them by the budget.

In this aspect, the legal regulations that allow for partially budget or even extra-budget financing are also important. In this case, however, it is worthwhile to postulate a clearer indication in the provisions of law of the principles of obtaining funds as a supplement to own funds. The introduction of this type of legal regulations would undoubtedly contribute to the definition of a clearer, and thus more legible from the budget point of view, financial situation of entities operating in the field of artificial intelligence.

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