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Synopsis of the doctoral dissertation  
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entitled

**AN IMPACT OF THE CORPORATE INCOME TAX EXEMPTION  
IN THE SPECIAL ECONOMIC ZONES  
ON THE VALUE OF THE ENTERPRISE**

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Special economic zones have been operating in Poland since 1994. After almost 30 years of activity they have become the immanent part of incentive system supporting development of entrepreneurship as well as new investments. Within this period numerous studies regarding their effectiveness have been conducted; however, these analyses were primarily performed from the macroeconomic point of view, based on aggregated results of the zones' impact on national economy. Significantly less attention was paid to the evaluation of the zones' activity results from microeconomic perspective, especially in terms of estimating the impact of preferences resulting from locating the investment in the special economic zones on the financial standing of the enterprises.

Main benefit for the corporates from activity within the special economic zone is an income tax exemption regarding corporate or personal income tax depending on the legal form of business activity. Value of the exemption should be taken into consideration by the corporate when assessing the profitability of conducting and locating the investment in the special economic zone. In this respect to make the rational decision on establishing the business activity in the special economic zone, it is necessary to estimate the actual benefit from income tax exemption within the special economic zone.

Rules on calculating the public aid value granted in different forms, especially in the form of income tax exemption, are laid down in the provisions relating to the public aid matters.

On the other hand, as the public aid in the special economic zones is granted in the form of tax exemption, the tax provisions along with tax authorities' and courts' standpoints expressed in tax rulings and case law also influence the amount of tax exemption. In practice it is frequently the case, where the value of public aid received estimated based on the tax provisions and case law differs from the support value calculated according to the public aid provisions. Bearing in mind the above, the demand for systemizing the public aid value issue in the form of income tax exemption within the special economic zones has been identified as well as the need for providing the corporates with the tool enabling them to estimate the actual value of financial benefit from income tax exemption within the special economic zones. The method of estimating the above indicated value has been developed in the doctoral dissertation.

This dissertation focuses on examination of the corporate income taxpayers operating based on the permits to run business activity within the special economic zone (which had been issued till mid 2018). However, it should be emphasized that it fails to exclude the implementation of the developed method by other business entities – paying the personal income tax and/or operating based on the decision on support. Rules on benefiting from these exemptions are mostly similar and the minor differences do not affect the prospect for the implementation of the method in question.

The development of method was based on the well-established in the theory of finance paradigm of maximizing the corporate market value. Hence, the assumption was adopted that the investment location in the special economic zone is acceptable, if it results in higher increase of the enterprise value than conducting the same investment outside the zone.

Based on the above the **two main aims** of the dissertation have been formulated. The first one was to assess from the corporate finance perspective the differences in estimation of the public aid value in the form of corporate income tax exemption in the special economic zones which stem from the tax provisions as well as the tax rulings and case law. The second aim consists of adapting the economic value added model to estimating the value for enterprise of public aid granted in the form of corporate income tax exemption in the special economic zones.

**The research problem** being the scope of the dissertation is to answer the question: does receiving the public aid in the special economic zone in the form of corporate income tax exemption always result in the enterprise value increase? The research question as well as goals have been completed by verification of **three research hypothesis**:

H1: Location of the investment in the special economic zone is not sufficient condition for corporate value increase resulting from the right to corporate income tax exemption.

H2: The tax settlement rules in the special economic zone result in the decrease of the tax shield value.

H3: The value of public aid calculated based on the tax rulings and case law does not correspond to the value of this aid for enterprise.

Verification of the above hypothesis has been conducted on the four extended case studies. A time range of the performed research embraces period starting in the first year, when the first special economic zone permit was received by the examined entities. To avoid the influence of independent circumstances it was decided to finish the study before the pandemic of COVID-19. As a consequence the studies are based on the data up to year 2019 or till the end of tax exemption period for the given entity (if earlier then 2019).

The **chapter 1** of the dissertation presents the general characteristics of the special economic zones, including their history, the main regulations on public aid binding in the European Union as well as harmonization of Polish law in terms of support in the zones to the European Union regional aid system. The special economic zone permit was also described as the basis for receiving public aid.

The **chapter 2** presents legislative rules on calculating the value of public aid in the special economic zones in the form of corporate income tax exemption as the binding method for establishing maximal benefits due to the business in the zone. In this respect the definition of public aid intensity was described as well as the categories of eligible costs and the rules for calculating the discounted amount of public aid in the zones. Further the procedure for calculating public aid value in the special economic zones as the grant gross equivalent (GGE) was presented along with the principles for establishing the tax-exempt income and the value of tax exemption in the annual tax return. The above was described with the distinction between rules stemming from the law provisions and the conditions resulting from the tax rulings and case law.

The **chapter 3** firstly focuses on the assessment of the known methods of determining the corporate value in terms of opportunity of their implementation for the developed method. Based on that analysis two measures: EVA (Economic Value Added) and MVA (Market Value Added) have been selected. It was stated that this pair of measures is the best to reflect all financial aspects resulting from the income tax exemption in the zone, *inter alia* changes in the operational leverage, in non-interest tax shield and in financial leverage. Moreover, it was determined that in terms of the developed method the possibility to select the perspective (*ex ante* or *ex post*) and time scope (one year or long-term) of analysis, which is offered by this pair of measures, is of special importance.

Based on the above the method of estimating the value of corporate income tax exemption in the special economic zone from the corporate perspective was developed. In an one-year approach the method consists of estimating the corporate value increase due to business in the zone ( $\Delta EVA$ ) by determining the difference between the value of corporate if it operates in the zone ( $EVA_{SEZ}$ , economic value added in the special economic zone) and its value if it had operated outside of the zone and *ceteris paribus* had been taxed according to the general rules ( $EVA_{nSEZ}$ , economic value added not in the special economic zone). The established difference was coined public aid net value (PANV) and constitutes economic value of corporate income tax exemption in the special economic zone.

On the other hand in a long-term approach the developed method is based on establishing the growth of the enterprise market value added due to business in the zone ( $\Delta MVA$ ) by determining the difference between the market value added of corporate if it operates in the zone ( $MVA_{SEZ}$ , market value added in the special economic zone) and its market value added if it had operated outside of the zone and *ceteris paribus* had been taxed according to the general rules ( $MVA_{nSEZ}$ , market value added not in the special economic zone). As a result in the long term the public aid value is estimated as a sum of differences between discounted  $EVA_{SEZ}$  and discounted  $EVA_{nSEZ}$  from all examined periods. For calculation of discounted  $EVA_{SEZ}$  the weighted average cost of capital estimated for the special economic zone scenario is applied, while for  $EVA_{nSEZ}$  the weighted average cost of capital estimated for the scenario outside the special economic zone is used.

The above method has been verified based on the case studies performed, the results of which were presented in the **chapter 4**. The research referred to four enterprises operating within the Katowice Special Economic Zone. Based on the conducted analysis the robustness of the developed method was verified critically.

Moreover, the research allowed to verify the adopted hypothesis.

The **hypothesis 1** assumed that location of the investment in the special economic zone is not sufficient condition for the enterprise value increase resulting from the right to corporate income tax exemption. Based on the case studies in the short-term perspective the **hypothesis 1** has been unambiguously confirmed by the negative and zero value of  $\Delta EVA$  in particular years. However, it fails to conclude that the **hypothesis 1** is true in the long-term perspective.

The **hypothesis 2**, indicating that the tax settlement rules in the special economic zone result in the decrease of the tax shield value, has been verified incompletely. Especially, in terms of interest tax shield the case studies failed to confirm its 'crowd out' or 'push out' effect

by other types of tax shield and have not given the unambiguous answer as regards the pecking order of the tax shield classes (especially interest tax shield against non-interest tax shield).

According to the **hypothesis 3** the value of public aid calculated based on the tax rulings and case law fails to correspond to the value of the aid for corporate. Based on the conducted case studies the hypothesis is unambiguously confirmed in the short-term perspective, because the value of public aid calculated as the grant gross equivalent (GGE) is not lower and in most cases is higher than the actual increase of corporate value due to utilized tax exemption, established as  $\Delta EVA$ . To verify the **hypothesis 3** in the long-term perspective,  $\Delta MVA$  was compared with a sum of discounted valued of GGE. Additionally, the comparison embraced the cumulated value of the special economic zone benefit and the available regional aid pool established both: according to law provisions and based on the developed method. As a result, it was stated that in the long-term perspective value of tax exemption calculated as GGE is always significantly higher than the actual benefit for the corporate estimated as  $\Delta MVA$ , what enables considering the **hypothesis 3** as verified also in the long-term perspective.

The above conclusions regarding verification of the hypothesis allow for statement that the differences in the manner of determining the level of tax exemption utilization between the approach based on the law provisions along with tax rulings and case law and the developed method are significant. Moreover, it is established that approach according to the law provisions leads to calculation of overstated value of tax exemption utilization in the vast majority of cases in the short-term perspective and permanently in the long-term perspective.

The aim of the dissertation consisting of developing the method of estimating the tax exemption value in the zone is achieved. The method constitutes a tool for the investors enabling them to estimate an impact of the tax exemption in the zone on the value of corporate benefiting from that exemption. The implementation of the method enables also summarizing the outcomes of the business in the special economic zones from the microeconomic perspective. The application of the method by the corporates allows for making rational decisions regarding locating the business in the special economic zone and applying for the special economic zone permit (or currently for the decision on support), which will entitle them to income tax exemption (*ex ante* analysis). The method will correspondingly be useful for verification of expectations regarding the efficiency of business run in the special economic zone within the period of tax exemption and after it is completed (*ex post* analysis).