

SELECTED AREAS OF SMEs STRATEGIC ACTIVITY AND THEIR IMPACT ON SUSTAINABLE DEVELOPMENT ON THE EXAMPLE OF KWIDZYN REGION

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Summary

In the article competitive strategies of small and medium enterprises in Kwidzyn Region are presented. This region is particularly important and attractive for academic research. It is a high-tech production region where world-wide concerns operate, co-operating with enterprises rated as SMEs. Article distinguishes three models: the Ansoff's Product-Market Growth Matrix, Porter's five forces analysis and also Dawar – Frost model. The authors prove the applicability of these models for identification strategic behaviors of SMEs.

This paper demonstrates the results of research which took place in 2005-2008. All general population (132 enterprises) of the region was included in research. For identification of strategies enterprises operating on foreign markets were researched.

The accession and integration to EU forced Poland and many Polish companies to carry out environmental investments. From an economic point of view, and the point of view of sustainable development the enterprises, which have the biggest and the most dangerous pollution should more invest in the environment than other. The authors, based on data received from the Regional Fund for Environmental Protection and Water Management in Gdańsk, analyses environmental investments carried out from 2003 to 2007 to protect atmosphere in terms of their profitability in the Kwidzyn Region to show the connections between development – pollution and eco-investments.

Key words: strategies of SMEs, strategic behaviors, sustainable development, environmental investments

Introduction

The subject of our article resulted from several years of observations made while working both as members of a team which created a strategy for business and community development of Kwidzyn region as well as being consultants in a committee of strategy for the Town of Kwidzyn. Some of us also created a supporting program for small and medium enterprises in Kwidzyn region in 2007. The program was positively recognised and appreciated in administrative and economic councils of the region.

Dates from enterprises are result of empirical research which took place in 2005-2008. During the survey research were considered 132 SMEs from Kwidzyn Region. Dates used in the second part of this article are result of the desk research method. All of them come from the Provincial Fund for Environmental Protection and Water Management in Gdańsk (WFOŚiGW) and cover the period of 2003-2007.

M. Porter underlines that the combination of national and local factors supports competitive superiority. A tendency to internalisation and globalisation grows up simultaneously with interest in regions. It can be stated that it is a renaissance of regions and the local activities as a consequence of forming the structural policy, changes in management as well as a solid search of enterprises growth of competitiveness.

Kwidzyn region is an example of such a phenomenon. This region is particularly important and attractive for academic research. It is a high-tech production region where world-wide concerns operate, co-operating with enterprises rated as SMEs. Moreover, it is the area of Pomorska Special Economic Zone, which will function until 2016. Kwidzyn region is said to be

an example of excellent privatisation process that contributed to establish small and medium enterprises in co-operation with large global concerns such as: International Paper Company, Philips Consumer Electronics Industries Poland, Lacroix, Jabil Circuit Incorporation and B & K Europe.

Poland, just like other Central European countries, is in the process of stabilising market economy. One of the market economy characteristics is domination of the private sector and significant participation of small and medium enterprises in production and providing services. The small and medium companies play a positive role in the free market economy. Due to such companies, the private sector develops and economy is redirected into more flexible companies which feature high awareness of market thinking. This leads to satisfaction of consumptive needs. Experiences of highly developed countries show that not a great concerns, but enterprises employing up to 250 persons decide about economic strength of national economy. Small and medium enterprises can effectively fill market niches and quickly adapt customers' requirements and economic reality changes.

The data shows that 99.9% out of 20 million companies in Western Europe operate in the SME sector and they employ 122 million people. The 93.3 % enterprises were classified as micro, 6.2 % as small and 0.5% as medium-size companies. In Poland 99.8 % of companies operate in the SME sector and they employ 66.4% of all employed Poles. That data also relates to Kwidzyn region in which 6,884 enterprises operate and 6,413 as privately owned companies. With several exceptions all of them are ranked to the SME category what states 99.79% (according to GUS) of total number. It illustrates the situation both in Western Europe and in Poland.

Diagnoses (what can strengthen the position of SME on a regional market, consequently bring growth of competitiveness to this area) become well-founded directions of scientific research. Moreover, the world research of competitiveness, mainly thanks to M. Porter, went beyond the area of enterprises. Many research institutes and schools of business deal with research of competitiveness of global trades, economy competitiveness of individual states, competitiveness of region clusters, and also individual cities such as Brussels, London or Amsterdam.

The theory of strategic behaviours concentrates presently on attention to co-operation rather than on competition. Therefore, it is fashionable and well-justified subject of the scientific research: strategic alliance, partnership enterprises, clusters and nets, integrated business models. Co-operation among enterprises and perspective of competition penetrate each other. The authorities' research goes further beyond the above-mentioned matter. In order to verify the hypotheses, owners and managers of all SME in region were involved in the research. All SME were determined on employment rate (10-49 persons and 50-249 persons). The research especially concentrates on enterprises that succeeded either on local or international markets. In many cases we realized that small and medium enterprises are part of industrial and service clusters, especially hub and spoke type. In the paper we want to present strategies of small and medium enterprises which are internationalized and identified in clusters.

Strategic Perspective I - Dawar and Frost Model

N. Dawar and T. Frost (1999) have identified distinct strategies and have plotted these strategies in a matrix. In this perspective we have four types of strategy which are dependent on two dimensions. The first dimension is concerned with competitive assets which are customized to home market and transferable abroad. The second dimension is connected with pressure to globalize in the given industry. In this case we have four strategies: dodger, contender defender and extender. The strategies identified by Dawar and Frost are presented in figure 1.

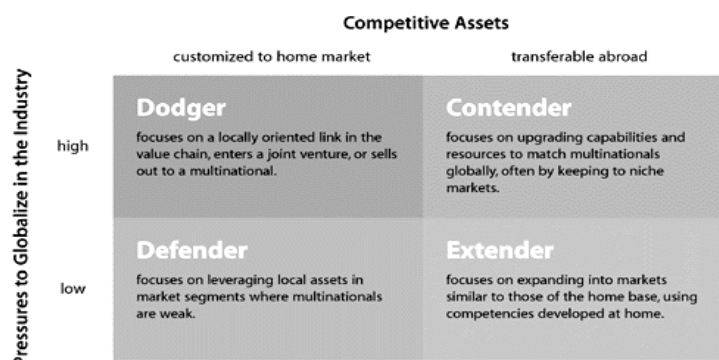


Fig. 1. Strategies Introduced by Dawar and Frost

Source: Dawar N., Frost T., Competing with Giants. Survival Strategies for Local Companies in Emerging Markets, Harvard Business Review, March-April 1999.

The structure of mentioned four strategies of small and medium enterprises in Kwidzyn Region is presented in table 1.

Table 1

Structure of Indicated Strategies

Type of strategy	Percentage of enterprises
Dodger	14 %
Contender	33,0%
Defender	38 %
Extender	15 %
Total	100%

Source: empirical research.

The most enterprises used contender and defender strategy, because of competitive assets, which are in the majority cases not transferable abroad, independently if pressure to globalize is high or low.

Regarding to empirical research, respondents in 53% estimated the pressure of globalization in the sector in which acted as small, but also in 47% estimated as large.

On the other asked question: "If the company defenses on national market before competition from abroad" - 64,4 % of it answered, that so. Questioned asked, how they defend before competition from abroad on national market answered as follows as, it is introduced on figure 2.

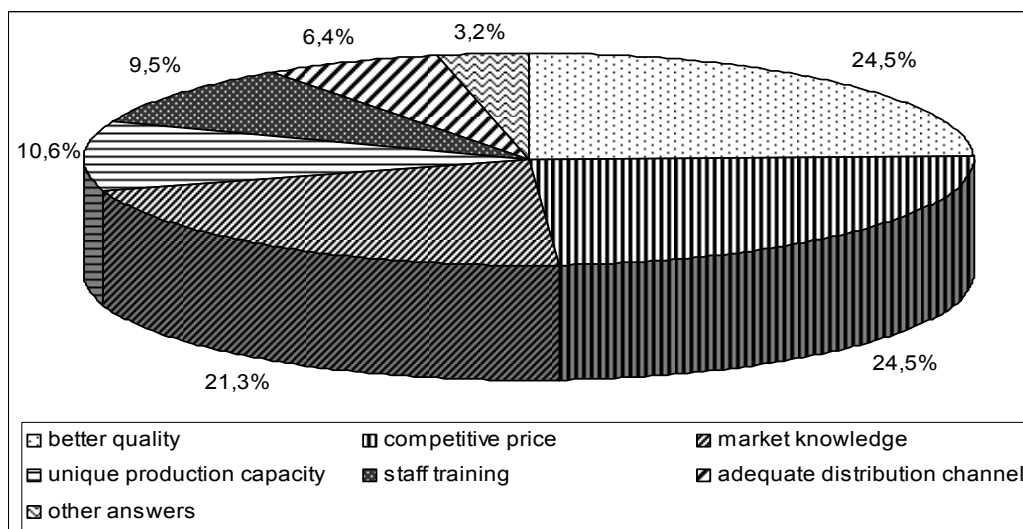


Fig. 2. The Possibility of Defense before Foreign Competition

Source: empirical research.

Strategic Perspective II – Porter Conception

M. Porter (1980) has suggested three generic strategies in dealing with the competitive forces within industry. First of them is overall costs leadership. This strategy is based on the experience curve concept, i.e. aggressive construction of large – scale facilities, tight cost and overhead control, vigorous pursuit of costs reductions associated with learning effect, and utilization of economies of scale for discretionary expenses such as R&D, promotion, or advertising. At minimum, the prerequisites for success of such a strategy are access to sufficient financial resources, adequate process – engineering skills, intense supervision of labor, and low-cost distribution capacity.

The second competitive strategy is product differentiation. This strategy is intended to maximize the value added to a product or service over and above the general cost components that apply to all competitors in the industry. To successfully pursue such a strategy, a company must be able to demonstrate uniqueness of its product in order to justify the price differential. In general, this requires strong marketing skills, superior product engineering and quality, and close coordination of the R&D, production, distribution, and marketing functions, ideally, the firm differentiates itself along several dimensions.

The last strategy is focus. The first two generic strategies are aimed at an industry – wide target market and will result in above-average profit as suggested by the U-shaped curve.

To avoid getting caught in the middle, a company can isolate particular buyer groups, product lines, or geographic markets. By serving narrower market segment, the firm can develop specific skills and reduce the pressure from its industry-wide competitors. Firms that follow a focus strategy by definition try to “monopolize” a niche in the market place. The main competitive threat would come from being “out focused” by the differentiated firm. The major strategies identified by M. Porter are presented in figure 3.

Target Scope	Advantage	
	Low Cost	Product Uniqueness
Broad (Industry Wide)	Cost Leadership Strategy	Differentiation Strategy
Narrow (Market Segment)	Focus Strategy (low cost)	Focus Strategy (differentiation)

Fig. 3. Porter’s Generic Strategies

Source: Porter M. E., *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, Free Press, New York, 1980.

The structure of mentioned three strategies of small and medium enterprises in Kwidzyn Region is presented in table 2.

Table 2

Structure of Indicated Strategies

Type of strategy	Percentage of enterprises
Costs leadership	11%
Differentiation	40%
Focus	49%
Total	100%

Source: Shaping competitiveness of Polish small and medium enterprises on European Union markets – empirical research.

In Porter’s perspective the majority of enterprises used focus as a base of market behaviors. The 11% of enterprises reached cost leadership as the result of differentiation or focus. The 40% of enterprises used differentiation as a base of competitive strategy.

Strategic Perspective III – Ansoff’s Conception

The Product-Market Growth Matrix is a marketing tool created and published by *I. Ansoff (1957)*. The matrix allows marketers to consider ways to grow the business via existing and/or new products, in existing and/or new markets. This matrix helps companies decide what course of action should be taken given current performance. There are four possible product/market combinations, which are presented in figure 4.

The matrix consists of four major strategies:

- market penetration;
- product development;
- market development;
- diversification.

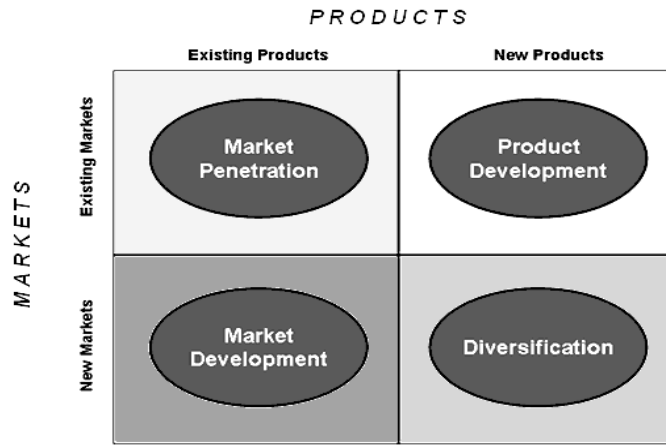


Fig. 4. Ansoff's Matrix

Source: Ansoff I., Strategies for Diversification, Harvard Business Review, Vol. 35 Issue 5, Sep-Oct 1957, p.113-124.

Market penetration is the name given to growth strategy where the business focuses on selling existing product into existing markets. This activity seeks to achieve four main objectives:

- maintain or increase the market share of current products – this can be achieved by a combination of competitive pricing strategies, advertising, sales promotion and perhaps more resources dedicated to personal selling;
- secure dominance of growth markets;
- restructure a mature market by driving out competitors; this would require much more aggressive promotional campaign , supported by pricing strategy designed to make the market unattractive for other competitors;
- increase usage by existing customers – often by introducing loyalty schemes.

Market development is the name given to a growth strategy where business seeks to sell its existing product into new markets. There are many possible ways of approaching this strategy, including:

- new geographical markets (exporting the product to a new country);
- new distribution channels;
- different pricing policies to attract different or create new market segments.

Product development is the name given to a growth strategy where business aims to introduce new products into existing markets. This strategy may require the development of new competencies and requires the business to develop modified products which can appeal to existing markets.

Diversification is the name given to a growth strategy where business markets new products in new markets. This is naturally more risk strategy, for the reason that the business is moving into markets in which it has little or no experience. For a business to adopt a diversification strategy, therefore, it must have clear idea about what it expect to gain from the strategy and an honest assessment of the risk.

The structure of mentioned four strategies of small and medium enterprises in Kwidzyn Region is presented in figure 5.

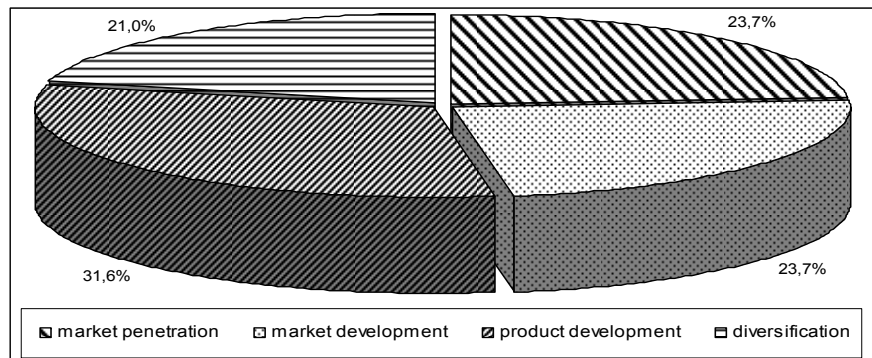


Fig. 5. Internationalization Strategies of SMEs in Kwidzyn Region by Ansoff's Matrix

Source: empirical research.

Sustainable Development – the Case of Kwidzyn Region

Environment protection investments, including ecological projects, relating to the protection of atmosphere are today a need. There are many reasons for investing in the environment, starting from economic loss generated by pollution (*Ch. Leiper, 1989*) through the size of air pollutant emission (*Statistical Annual on Environmental Protection, 2002*) to environmental and social damages (*A. Jankowska-Kłapkowska, 1991*). However, investing in the environment should be based on rational management rules.

Data used in the article come from the Provincial Fund for Environmental Protection and Water Management in Gdańsk (WFOŚiGW) and cover the period of 2003-2007. The study refers to investments, mainly heating system modernisations, carried out to protect the atmosphere. Reduction refers to the following substances: carbon dioxide – CO₂, carbon monoxide – CO, sulphur monoxides expressed in the equivalent of sulphur dioxide – SO₂, nitrogen monoxides, expressed in the equivalent of nitrogen dioxide – NO₂, and dusts.

The production of goods and services cause on the one hand the developing processes in the region, and give work for society, but on the second hand cause the pollution of toxic substances, the necessity of applying several economics instruments for environmental and human protection and the realisation of eco-investments. In the Kwidzyn Region – one of the most developed regions in the province, the emission of air pollution is on a very high level, because of two biggest enterprises – International Paper Company and Jabil Circuit Incorporation. The average emission is presented in table 3.

Table 3

Average Emission of Dust and Gas in Kwidzyn Region (Years 2000 – 2007)

	Emission in [T]					
	dust		gas			
	Total	dust from combustion of fuels	Total	in this		
				Sulfur dioxide	Nitric oxide	Carbon monoxide
Kwidzyn Region	668,0	366,0	5 815,0	3 326,0	2 168,0	308,0
Province	4.952,0	4.111,0	44.582,0	25.260,0	10.176,0	6.782,0

Source: Central Statistical Office in Gdańsk, November 2008.

The applied in European Union as well as in the countries of OECD economic instruments allow to realization the principle "polluters pay" as well as these make possible to achieve the maximum ecological effects, by limited financial expenses, during executing investments in environmental protection (*L. Dziawgo, 2003*). Economic instruments concern different economic categories, like: cost, taxes, as well as financial results, because it is necessary to apply different groups of tools. There are not ideal ways of including the principles of sustainable development in practical management. In practice, we can reach easily a sinergical ecological effect (*J. Stoner, R.E. Freeman, D.R. Gilbert Jr., 1997*), when we administer with whole scale of different, accessible instruments.

The environmental payments are the most important economics instruments, which are used to gather money for environmental investments. The ecological payments are fees for using (direct or indirect) the natural environment in borders of permissions - the water permission and different administrative decisions (*P. P. Matecki, 2007*). These are payments paid for all individual pollutions introduced to environment.

The production in the Kwidzyn Region is on a very high level that suggests the very high level of ecological payments, which are the incomings of environmental funds. In the years 1999 – 2007, the incomings (*Kwidzyn Town Government, 2008*) of the environmental fund in Kwidzyn were: 3.432.800,0 zł; 3.844.454,0 zł; 3.404.163,0 zł; 2.139.042,0 zł; 1.669.980,0 zł; 1.506.200,0 zł; 1.134.589,0 zł; 1.504.230,0 zł; 1.748.189,0 zł.

About 40% of all environmental investments are realised by Environmental Funds from the money, which was collected from the enterprises ("polluter pays"). The question, that should be answered, is – is the money used for investments in the Region or not? The economics instruments, used to realisation of eco-investments are subsidies. The money is granted specially then, when the extreme costs of reduction of pollution are considerably higher as the sum of payments and taxes, paid for these emission or in case when the realized ecological investment helps many subjects. Among subsidy we distinguish (*B. Poskrobko, 1998*):

a) the grants that are the irreclaimable financial help, given subjects realising investments in the field of environmental protection. This subjects, which in past undertook already steps, that decrease the level of emission, more often be granted one more time,

b) preferred credits, having lower interest in relation to proportional market banks percent's given subjects, if they undertake activities against emission;

c) tax granted in a form of permissions for accelerated amortisation reliefs or in form of relaxations, or tax discounts by realisation of ecological investments or for the production, that helps directly or indirectly the environmental protection. Tax reliefs influence directly on profit or income, when the tax differentiation works by price of products;

d) the proper subsidies, defined differently as solid subsidies in a data period of time, depending on financial help for definite ecological activity.

Environmental investments are called "specific investments" in the literature since they are subject not only to economic rules, but environmental rules focusing on society's interests, as well. Each investment reducing the emission of pollution is, from a social point of view, a necessary, profitable and even desired investment. However, from an economic point of view, the situation is different since investment expenditure borne to reduce the pollution plays an important role.

Since 1999 we notice in the Kwidzyn Region the activity for environmental protection, co-financed by the environmental funds, like national, regional and town funds. The investments are presented in table 4.

Table 4

Atmosphere Protection Investments – Kwidzyn Region (1999-2007), Co-financed by the Environmental Fund

Type of Investment	Enterprise	Place	Costs
1999			
The implementation of the existing boiler house, coal conversion to an electric furnace	Municipal Cooperative	Kwidzyn	180.000,0
The modernization of the gas boiler room	Convent of the Franciscan	Kwidzyn	11.126,0
2001			
Modernization and expansion of existing boiler rooms in Schools	Town Sadlinki	Sadlinki	236.940,0
The modernization of the urban heating system	Water, Sanitation and Heating Company	Prabuty	3.113.427,0
The modernization of central heating coal using organic-based heating system for heat pumps and solar collectors	Catholic church	Osiek	366.747,0
2003			
Modernization of heating system	Police Department	Czarne	2.836.000,0
2004			
Adaptation of the Court for Rehabilitation Centre for Persons with Disabilities - upgrade heating and sanitation system.	Foundation "Misericordia"	Kwidzyn	698.678,0
2007			
An exhibition biomass-fired boilers: the adaptation of premises, exhibition design	Development District Kwidzyn	Kwidzyn	41.344,56
Modernization of heating system	BIO-ENERGIA Company	Czarne	5.420.000,0

Source: empirical research - data from Environmental Fund in Gdańsk, (years 1999-2007).

When we compare the emission in Kwidzyn Region with incomes of environmental funds and the number of co-financed eco-investments we can make a conclusion that the allocation of eco-money doesn't help by environmental protection. That conclusion is presented in the figure 6.

Series 1 shows incomings of the Environmental Fund and the series 2 shows outgoings for environmental investments in Kwidzyn Region. The relation between these two indicators shows, that the eco-money are not located in the region, in line with the principle "polluter pay". In four of the analyzed years – in 2000, in 2002, in 2005 and in 2005 we didn't notice any eco-investments in the Region. In the rest of analyzed years – in 2001, in 2003 and in 2004 the outgoes exceed the incomes of the Environmental Funds.

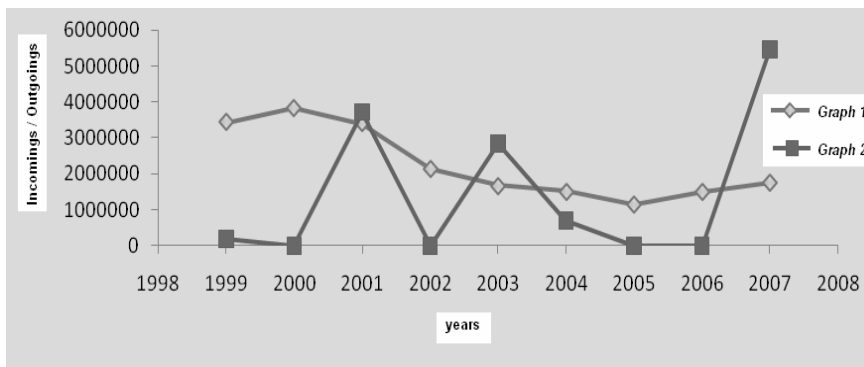


Fig. 6. Incomings of Eco-Funds in Relation to Outgoings for Eco-Investments in the Period 1999-2007, in Kwidzyn Region

Source: empirical research.

Conclusions

In Poland 99.8 % of companies operate in the SME sector and they employ 66.4% of all employed Poles. That data also relates to Kwidzyn Region in which 6,884 enterprises operate and 6,413 as privately owned companies. The Kwidzyn Region is a high-tech production area where world-wide concerns operate, co-operating with enterprises rated as SMEs. Article distinguishes three models: the Ansoff's Product-Market Growth Matrix, Porter's five forces analysis and also Dawar – Frost model. The authors prove the applicability of these models for identification strategic behaviors of SMEs.

According to the empirical research presented as the Dawar – Frost model, most enterprises in the SME sector in Kwidzyn Region used defender strategy (38%) and contender strategy (33%). Regarding to Porter's model the majority of enterprises used focus as a base of market behaviors. The 11% of enterprises reached cost leadership as the result of differentiation or focus. The 40% of enterprises used differentiation as a base of competitive strategy. The internationalization strategies of SMEs in Kwidzyn Region by Ansoff's Matrix showed product development strategy (31,6%), market development (23,7%) and market penetration (23,7%) as the most important strategies, used by most of the enterprises in the SME sector in Kwidzyn Region.

The environmental payments are the most important economics instruments, which are used to gather money for environmental investments. The production in the Kwidzyn Region is on a very high level that suggests the very high level of ecological payments, which are the incomings of environmental funds. In line of the economics and the ecologic point of view in all regions, where the pollution is on a high level, the eco-investments should be on a similar level as well. That allocation of eco-money helps to build up the Sustainable Development. However, when we compare the emission in Kwidzyn Region with incomes of environmental funds and the number of co-financed eco-investments we can make a conclusion that the allocation of eco-money doesn't help by environmental protection in this Region.

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