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MANAGEMENT OF AN ENERGY COMPANY USING THE SENT TRANSPORT REGISTRATION AND MONITORING SYSTEM

A b s t r a c t: The article is a case study on the management of an energy company using the SENT transport registration and monitoring system - an electronic record mechanism for the movement of goods implemented since April 2017, operating in the transport of “sensitive” goods. The functioning of SENT as a tool for managing an energy enterprise was presented, the phenomenon of the shadow economy was identified, and the impact of the implementation and impact of SENT on reducing the scale of economic crimes and increasing the country’s cash revenues from taxes paid by enterprises was examined.

K e y w o r d s: management, SENT, transport, sensitive goods, gray zone

J E L C o d e: M21, L90

INTRODUCTION

Trading companies prospering in Poland in the so-called sensitive goods have undergone a severe test of survival in the last nine years. The reason for this forced test for effective management of a business unit was mainly the appearance of unfair competition in the form of a “gray zone”, which used various illegal business mechanisms on a large scale (including “disappearing” taxpayer and carousel-chain transactions). The functioning of this criminal practice caused a kind of “earthquake” on the legally operating market and caused multibillion-dollar depletion of obligatory tax revenues to the state budget.

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The commercial sectors that suffered most were liquid fuels, steel, electronics, tobacco and spirits. The 2012 tax gap amounted to PLN 43.1 billion [CASE, Study and Reports, 2018], which was its largest amount. In 2015, however, the largest percentage increase in the lack of potential tax revenues was recorded to 23.9% [www.mf.gov.pl]. To counteract the further development of the shadow economy and extortion of VAT and excise duties, state authorities introduced a number of systemic legislative changes, including transport package, fuel package, VAT sealing package, split payment mechanism, establishment of the National Tax Administration, application of the obligation to send VAT records in the form of a Uniform Control File (JPK) [www.nik.gov.pl]. The legal regulations contained in the transport package imposed the obligation to register and monitor road and rail transport of specific goods (so-called sensitive goods) in a specially created electronic system SENT, via the Electronic Tax and Customs Services Platform (PUESC). These goods are mainly liquid fuels, dried tobacco and alcohol. The use of new control instruments as part of the generally understood state recovery package, implemented in the economic, legal and social sphere, for the obligatory transparency of the activities of transport companies, successively restores the principles of fair competition, where the key task is to eliminate dishonest market players from the economy.

The objectives of the article are: to present the functioning of the SENT recording and monitoring system for road and rail transport as a management tool for energy companies, identification of the gray zone phenomenon in the area and to examine the impact of the implementation and impact of the SENT register on reducing the scale of economic crimes and increasing the state's cash inflows by tax companies. Therefore, the author posed a research question, i.e. how did the implementation of the SENT system affect the way of managing an energy company? The article will verify the hypothesis that the introduced system tools (including SENT) have limited the size of the shadow economy of the fuel industry, which has allowed for more effective management of legally operating enterprises and achieving greater profit. Companies from the fuel industry were subjected to the research analysis.

The achievement of the assumed goals and verification of the thesis were reflected in the structure of the article and based on the research procedure, which included: a critical review of Polish and foreign literature and legal acts, surveys, analysis of the content of internal documents of energy enterprises, methods of inductive and deductive inference, case study, method of analysis and synthesis, reasoning by analogy. The intellectual stimulus to present the subject in this article is the identification of the cognitive gap in the transport of so-called sensitive materials and the author's several years of professional experience in a managerial position in the analyzed research area.

1. ACTIVITIES OF TRANSPORT COMPANIES

Nowadays transport is a basic tool for the functioning of the internal as well as global economy. Moving people or things (loads) from point A to point B is the main activity of transport companies. Continuous technological development of the means of transport used increases and optimizes labor productivity in trade and industry. In the modern economy, transport has a unique role and meaning. In order to deliver goods to different parts of the world, it is necessary to acquire transport as a process [Rogaczewski, 2018, p. 90].

An important feature of transport tasks in road transport is the diversity of working conditions and means. Production in a given workplace (depending on geographical location) is usually carried out under comparable conditions. In transport, however, this activity takes place in various environments in a spatial sense, which means that the course of transport tasks varies almost every time. Their implementation depends on the type of means of transport, transport safety, transport conditions, infrastructure, loading and unloading technology, distance or energy consumption for the provision of services [Zalewski, 2016, p. 55]. One of the important links in the supply chain is transport, which integrates processes by determining their necessary mobility, which is a condition of their functioning [Sanchez-Rodrigues, 2010, p. 61]. Knowledge of the transport system is of fundamental importance for effective and efficient logistics activities in the area of freight transport. Transport is a physical thread that binds geographically dispersed places of such activities [Stank, 2000, 71–77]. A change in the economic situation in a given country and region has a significant impact on transport. When the economic indicators are positive, transport also develops. In the event of a downturn, its negative effects are felt first in the transport department [Rokicki, 2016, p. 50]. An important measure of the increase in the importance of Polish transport companies on the international market in recent years has been their high competitiveness, which resulted not only from the price attractiveness, but also from the high quality of services rendered. The confirmation of this result is the development of a modern park in the structure of vehicles used and high dynamics of the increase in the share in the volume of transport work, EU, international truck transport [Kordel, 2018, p. 160–161].

According to data from the Central Statistical Office of Poland, in 2018 all transport modes transported 2053.3 million tonnes of cargo in Poland, which is 11.8% more than a year ago, and transport performance of 434.9 billion tonne-kilometers was carried out, i.e. by 12.8% higher in compared to 2017 [GUS, Transport, 2019]. There was an increase in the amount of transported goods in road, air, rail and maritime transport, while its decrease occurred in inland waterway transport and pipeline transport. In 2018, road transport was carried out in Poland by 13.0% more than in 2017, i.e. 1,747.2 million tonnes of cargo and 14.8%

more transport work was performed (in tonne-kilometers). The volume of transport performance increased in all transport modes, except for pipeline transport. Table 1 presents the structure and dynamics of freight transport and freight performance in Poland in the years 2011–2018.

Table 1. Structure and dynamics of goods transport and transport performance

Models of transport	2011	2016	2017	2018	2011	2016	2017	2018
	previous year = 100				in %			
In tonnes								
Total (transport)	104,8	98,0	101,8	111,8	100,0	100,0	100,0	100,0
Rail	105,4	98,5	99,2	107,6	13,1	12,4	12,1	11,7
Road	104,7	97,3	102,7	113,0	83,1	83,5	84,2	85,0
Air	111,1	100,2	110,0	125,0	0,0	0,0	0,0	0,0
Pipeline	111,9	110,1	98,6	96,9	3,1	3,0	3,0	2,6
Inland waterway	90,9	156,4	52,1	93,0	0,3	0,7	0,3	0,3
Maritime	89,2	102,7	104,1	113,7	0,4	0,4	0,4	0,4
In tonne-kilometres								
Total (transport)	108,9	103,6	106,9	112,8	100,0	100,0	100,0	100,0
Rail	112,0	101,1	100,1	108,2	15,8	14,0	13,1	12,6
Road	111,9	103,9	111,2	114,8	69,5	75,7	78,7	80,1
Air	134,8	106,5	122,2	135,3	0,1	0,0	0,1	0,1
Pipeline	105,5	106,3	101,7	94,9	7,9	6,1	5,8	4,8
Inland waterway	101,0	280,9	38,1	105,4	0,3	0,6	0,2	0,2
Maritime	82,9	93,5	64,7	113,6	6,4	3,5	2,1	2,2

Source: GUS, Transport – activity results in 2018

The share in the general transport of commercial transport reached the level of 63.2%, and the economic transport 36.8%. In transport performance, the share of commercial transport amounted to 86.7%, while economic transport - 13.3%. Commercial transport carried 15.7% more compared to the previous year - 1,104.2 million tonnes, while transport performance increased by 15.6%. Commercial transport was provided by 8.6% more than in 2017 - 643.0 million tonnes of cargo, and transport performance increased by 10.2%. The volume of road freight transport (in tonne-kilometers) in 2018 accounted for 17.5% of the overall level of transport in the European Union, which places Poland among the 28 EU countries first, before Germany and Spain [Eurostat, 2020]. In international transport, Poland achieved a result (share) of 30.7% and also took the first position, ahead of Spain and Germany. Compared to the previous year, in 2018 domestic transport increased by 12.6% in tonne-kilometers and by 13.6% in tonnes. The volume of international transport also increased - by 16.9% in tonne-kilometers and by 17.3% in tonnes. The share in general international transport increased from 18.5% to 19.0% in tonnes and from 63.3% to 64.2% in tonne-kilometers.

Transport as a sector of the national economy has a significant impact on its development, in every segment of material production and services. All types of business activities are associated with transport - through the distribution of products or services and the necessary raw materials and materials, as well as the transport of people to specific destinations. It affects the dynamics of production development in enterprises and ensures the implementation of trade in goods, which increases national income [Bełch, 2019, p. 18]. Transport is a complex process because it consists of many elements, i.e.: creating the activity of movement, transport, loading, unloading and storage, additional (auxiliary) services [Brach, 2012, p. 23]. For a transport to be viable, the transport company must carry out a continuous cost assessment [Wang, 2009, p. 266–273]. The criteria for their assessment may be costs per order or per unit of weight. Compare the cost of carrying out a given transport process with the expected goals and, if necessary, make the necessary adjustments [Boughton, 2003, p. 36–43]. The position of one of the main freight carriers in Poland is gradually regaining rail transport. In long-distance transport, the transport of bulk goods is again becoming the domain of railways. The factor favoring this phenomenon is the increasing incidence of toll motorways and the slow but systematic increase in fuel prices [Januła, 2011, p. 90].

2. THE ESSENCE OF THE SENT SYSTEM

SENT is an electronic system of registration and monitoring of road and rail transport of goods, operating since April 18, 2017, introduced on the basis of the Act of March 9, 2017 [Ustawa z dn. 9 marca 2017]. It was created in connection with the sealing of the tax system to counteract VAT fraud and excise duty, thus improve their collection to the state budget. It is also called as a transport package, which has become another control tool in the fight against the “gray zone” (in addition to previous legal regulations, such as: fuel package [Ustawa z dn. 7 lipca 2016], energy package [Ustawa z dn. 22 lipca 2016], VAT sealing package [Ustawa z dn. 1 grudnia 2016], establishment of the National Tax Administration [Ustawa z dn. 16 listopada 2016], limit of PLN 15,000 for cash transactions [Ustawa z dn. 13 kwietnia 2016], the obligation to use the JPK Standard Audit File [Ustawa z dn. 11 marca 2004]). The actions taken by the State in the area of limiting criminal proceedings in the tax system assume long-term restoration of order in the economy, protection of capital of economic entities and restoration of “healthy” competition between enterprises on the domestic market [Bełch, 2018, p. 47–55].

SENT was launched by the Ministry of Finance, which has provided the “e-Przewóz” service on its platform. The SENT register applies to the transport of “sensitive” goods (within the meaning of the provisions of the Acts [Ustawa

z dn. 9 marca 2017 i 20 lipca 2018]) on public roads and rail networks, which have been listed in the Act as goods subject to monitoring on the basis of the received CN code (mainly: liquid fuels, denatured alcohol, vegetable oils, dried tobacco). In addition, the provisions of the Transport Act indicate what volume or mass of the consignment with the goods gives rise to the obligation to notify in the monitoring system.

Conducting commercial transactions involving the transport of sensitive goods imposes on its parties (supplier, carrier, recipient) the obligation to report and update such transport in the SENT register, which has been implemented for this purpose in the national administration. Entrepreneurs who fail to comply with this obligation have provided for a fine of up to PLN 20,000. These activities are carried out via an account created on the Platform of Electronic Tax and Customs Services (PUESC) on the website puesc.gov.pl, e-customer service. In the case of transport which begins within the territory of the country (export, intra-Community supply of goods), before the commencement of transport of goods, the sending entity is required to: sending a transport declaration to the SENT system, obtaining a reference number for this application, providing the carrier with the generated reference number.

On October 1, 2018, the Act of June 15, 2018 amending the Act on the monitoring system for the transport of goods entered into force [Ustawa z dn. 15 czerwca 2018], which introduced the obligation to equip a means of transport with a device that will provide geolocation information (data). The National Tax Administration provides software that monitors the routes of transport of goods, which can be installed on a tablet or smartphone. An external location system has also been launched, the so-called ZSL as a free SENT GEO application. The carrier is obliged throughout the entire route of transporting the goods covered by the declaration to ensure the current transmission of precise geolocation data of the means of transport which it covers. Thanks to GPS locators, tax offices control such transport in real time. Failure to comply with this obligation is subject to a penalty (from January 1, 2019) in the form of a fine of PLN 10,000.

The SENT declaration contains information about the sending entity, the goods, the receiving entity, the route of transport (place of loading and place of delivery of the goods, date of departure from the country - optional). Then (after the declaration of transport of the goods and its update), the carrier completes the declaration prior to the commencement of transport with information regarding, among others: its license, means of transport, place of delivery of the goods, planned date of completion of the transport. In the situation of deliveries of goods for domestic sales, the entrepreneur (sending entity) is also obliged to provide the reference number to the receiving entity. The delivery declaration closes the receiving entity. He enters information about the compliance of the received goods and the date of completion of the transport (delivery) - he must do

so no later than on the next business day after the date of delivery of the goods.

In the case of transport which begins in the territory of a Member State of the European Union (intra-Community acquisition of goods) or from the territory of a “third” country on Polish territory (import), before the commencement of transport of goods, the receiving entity is obliged to: sending the transport declaration to the SENT system, which should contain the necessary data about the sending and receiving entity as well as information about the goods and the route of transport (date of entry to the country and place of delivery), obtaining a reference number for this application, provide the carrier with a reference number. At the time of sending the notification by the receiving entity, the carrier assumes the obligation to complete the data indicated in the Act (means of transport, date of entry to Poland, planned date of completion of the transport, place of delivery of the goods, number of transport license) before commencing the transport of goods and updating. The recipient is responsible for closing the declaration, who previously supplements it with data on the compliance of the received goods and the date of completion of the transport. He performs these activities no later than on the next (business) day after the day on which delivery took place. If the transport of goods is carried out through the territory of Poland (transit), and between European Union countries or to a “third” country, then the carrier is responsible for reporting the transport of goods in the system.

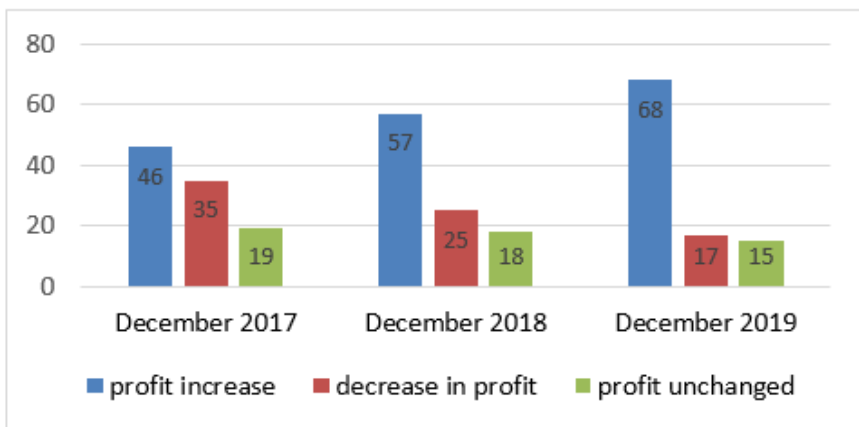
The transport of goods (pursuant to Article 3 of the Transport Act) is not subject to the SENT monitoring register: performed in the excise duty suspension arrangement (using the EMCS system), performed by postal operators in postal parcels, placed under the customs procedure of transit, temporary admission, storage, export or processing, re-export, not related to the performance of activities that are subject to VAT and transport are accompanied by a document issued by the sender of the goods confirming the interbranch transfer, carried out by means of transport of certain state organs (Border Guard, Police, ABW). Transport checks within the SENT system are also carried out during transport - on the road by officers: Police, Border Guard, Customs and Tax Service, Road Transport Inspection.

3. SENT SYSTEM AND ENTERPRISE MANAGEMENT

In order to determine the relationship of the introduced SENT transport monitoring and recording system with company management, surveys were carried out in Polish enterprises from all over the country, prospering in the energy sector, which conduct their business using SENT. The project of empirical research aimed at achieving the assumed goal of the article and verification of the thesis formulated required the use of a variety of research instruments. That is why the questionnaire and case study were used. The first stage is a pilot study, which

was conducted on the basis of a questionnaire survey on a sample of 5 companies. Thanks to this study, the research tool was verified and methodological information was obtained that undoubtedly improved the course of the research process. The next stage included surveys that were crucial to identify research areas of interest to the author. The questionnaire questionnaires were filled by decision-makers in the company (managing) and having knowledge about the functioning of the SENT system in the managed business unit (owner, president, director, manager, manager). Survey questionnaires with cover letters were sent to 52 companies. The finally completed questionnaires were obtained from 16 companies, which gives a response rate of 30.77%. The group (research sample) was selected in a non-random purposeful manner. The results of the study are shown in figure: 1, 2.

Figure 1. Change in the company's profit after the introduction of the SENT system



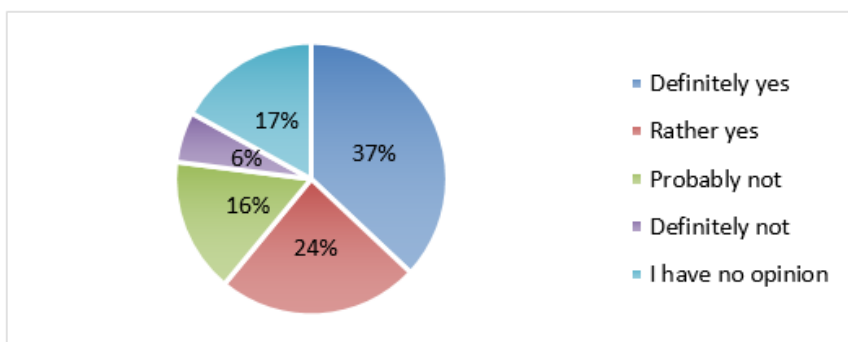
Source: own research

Figure 1 presents Change in the company's profit after the introduction of the SENT system. It shows that at the end of 2017 46% of the surveyed enterprises recorded an increase in profit compared to the previous year 2016, a 35% decrease in profit, while 19% of enterprises remained at a similar level - it did not change significantly. In December 2018 there was a change - 57% of enterprises achieved an increase in profit (11% more compared to the previous year), a 25% decrease in profit (less by 10%) and 18% of companies achieved annual profit at a similar level (less than 1%). In December 2019, the profit growth trend continued. 68% of companies indicated an increase in profit (11% more compared to the previous year and 22% more compared to 2017). Only 17%

of enterprises saw a decrease in profit (less by 8% compared to 2018 and 18 compared to 2017). In 15% of companies, the profit in 2019 did not change. The studied period is the period of operation of the SENT system in enterprises (from April 18, 2017). As a reason for the increase in profit in 2017-2019, the surveyed enterprises indicated an increase in fuel transport control through the use of the SENT system (19%), a reduction in the size of the shadow economy in the liquid fuels industry (57%), and the company's own development (24%).

Another area of research was the aspect of company management after the introduction of the SENT system, as shown in Figure 2.

Figure 2. SENT system - a tool supporting company management



Source: own research

Entrepreneurs answered the question: Is the SENT system also used as a tool supporting company management? 37% of surveyed companies answered "definitely yes", 24% chose "rather yes", 16% indicated "definitely not", 17% of companies selected "I have no opinion". In an in-depth interview, the decision-makers who participated in the study explained why they gave such an answer. Companies use the SENT system as a management tool for: controlling employees - salesmen, dispatchers (28%), making commercial decisions - purchasing, selling goods (26%), monitoring sales (16%), preparing cost calculations (14%), formulating market forecasts (9%), determining the company's development strategy (7%). Enterprises (86%) also indicated a significant increase in the number of new customers in 2019, which is explained by a significant reduction in the activities of illegally operating companies from the gray economy.

SUMMARY

The introduction of the SENT transport monitoring and registration register has significantly reduced the VAT gap, which in 2017 amounted to 14%, which compared to 2015 gives a better result by almost 10%; The system's sealing was

influenced by: effective administration, modern legislation and cooperation with business [PIE report, 2019]. According to NIK data [www.nik.gov.pl], in 2017 VAT revenues were 30 billion higher than in 2016, which was a consequence of the introduced changes and tools that improved its collection and the consequence of a good economic climate, while in 2020 NIK indicates a further improvement in the effectiveness of the tax apparatus in preventing VAT scams.

The Ministry of Finance informs that in 2019 alone the SENT system caused an increase in tax revenues to the budget by about PLN 1.6 billion [MF, Raporty roczne, 2019]. According to the National Tax Administration in a report [KAS, Raport, 2019] regarding detected irregularities in connection with the transport package (SENT), among the fines imposed on entities, it concerned: 36% - the sending, receiving entity or carrier failed to comply with his statutory obligations (e.g. he did not update the data contained in the notification), 8% - the entrepreneur started transport without a reference number or other document that would confirm the declaration in the SENT database, 56% - other revealed irregularities, e.g. violation of road transport regulations (irregularities during the work of drivers or transport licenses, outdated documents); in connection with the transport of goods excluded from the SENT register (e.g. disclosure of illegal waste transport).

In May 2019 (declaration or update of the declaration) and August 2019 (supplementing information on the receipt of goods), there were further legal changes regarding the authentication of the sending or receiving entity - by providing a unique, 17-digit identification number assigned to the user PUESC [Rozporządzenie MF z dn. 1 sierpnia 2018], as an additional authentication requirement, that there is no abuse on the part of the entities carrying out the transport. According to the latest version of the draft amendment to the Act on the monitoring system for road and rail transport of goods (commonly referred to as the oil package), which has entered into force in September 2019, where fuel oil trading was also regulated. It assumes that a carrier who delivers fuel oil to a different address than the one that was reported will pay a fine of PLN 100,000 [Obwieszczenie MS RP z dn. 9 listopada 2019].

The SENT system, despite eight amendments to the Transport Act, is still not perfect, while its previous versions have brought many benefits: an increase in budget revenues, reduction of the “gray zone”, restoration of economic order and market competition.

During almost 3 years of SENT operation, the surveyed enterprises recorded a 22% increase in their profit, of which 19% of companies give the implementation of the SENT system as the reason for increasing profit. Customers often expect transport companies to be very flexible, to serve customers quickly and comprehensively. The fulfillment of these conditions is associated with comprehensive information on the subject of transport processes and their wise planning

and management [Naim, 2006, p. 297]. In the company's surveys, many important scientific and empirical data were obtained. 61% of surveyed companies use SENT on a daily basis as a tool supporting company management.

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ZARZĄDZANIE PRZEDSIĘBIORSTWEM ENERGETYCZNYM Z WYKORZYSTANIEM SYSTEMU REJESTRACJI MONITOROWANIA PRZEWOZU SENT

Z a r y s t r e ś c i: Artykuł stanowi studium przypadku na temat zarządzania przedsiębiorstwem energetycznym z wykorzystaniem systemu rejestracji i monitorowania przewozu SENT - wdrożony i obligatoryjny od kwietnia 2017 roku mechanizm elektronicznej ewidencji przemieszczania towarów, funkcjonujący w transporcie towarów „wrażliwych”. Przedstawiono funkcjonowanie SENT jako narzędzia do wspomagania zarządzania przedsiębiorstwem energetycznym, dokonano identyfikacji zjawiska szarej strefy oraz zbadano wpływ wdrożenia i oddziaływania systemu SENT na zmniejszenie skali przestępstw gospodarczych i zwiększenie wpływów pieniężnych państwa z tytułu odprowadzanych przez przedsiębiorstwa podatków.

S ł o w a k l u c z o w e: zarządzanie, SENT, transport, towary wrażliwe, szara strefa