RISK DETERMINANTS IN E-COMMERCE ENTERPRISE
OPONEO.PL SA

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Abstract: Today, active management of risk is becoming an inseparable element of activities in many enterprises. Risk management is a multi-stage process that begins with specifying the objectives of a given process and identifying the risk determinants. Proper identification enables effective execution of the subsequent stages of the given process, which determines its effectiveness. Recognizing the sources of risk makes it possible to protect the enterprise against the negative events that may be generated by them. The e-commerce industry, due to the character of its activity, should pay particular attention to risk management issues. The aim of this publication is to identify the determinants of risk to which the company Oponeo.pl SA was exposed in 2017. Implementation of the research objective was based on analysis of the management board's report on operations for 2017 of this company.

Keywords: e-commerce industry, risk, enterprise management, risk management

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Introduction

Since the beginning of time, risk management has accompanied every human activity. Entities that encounter risk along their way manage it in a more or less conscious way in order to achieve the greatest possible gains or avoid undesirable events. The process of risk management, i.e. a set of activities aimed at the achieving an acceptable risk level, begins with defining the aims of the whole process and identifying the risk determinants. It is thus not difficult to guess that this identification plays a considerable role in the whole process of risk management, as it influences the effectiveness of the subsequent stages. However, it is worth bearing in mind that identifying all the risk factors is practically impossible as there will always be unidentified determinants in the entity's environment. Having said that, striving to discover as many risk factors as possible will certainly have a positive impact on the whole process of risk management and will maximise its effectiveness. Identifying such factors will enable them to be assessed and appropriate methods as part of risk management can be selected.

As modern enterprises function in a changeable and competitive environment, active risk management is gaining popularity among them. Active risk management means that it is implemented in all the areas of the organisation (Adamska 2009, pp. 15-16). The e-commerce industry is currently one of the fastest growing spheres
of the economy, both in Poland and worldwide. People increasingly more often shop online, leading to an increased number of e-stores. Online traders face many threats on a daily basis, which requires them to actively manage risk. The risk factors in the e-commerce sector are not merely generated by engagement in business activity, but also by the fact that the transactions are performed online.

The aim of this publication is to identify the determinants of risk to which the company Oponeo.pl SA was exposed in 2017 based on analysis of the management board's report on the company's activities for 2017.

What is risk

Risk is a term that does not have a uniform definition. The Dictionary of the Polish Language defines risk as the possibility that something adverse will happen and as an undertaking with uncertain outcomes (https://sjp.pwn.pl/…). Given the etymology of the word risk, one can quickly conclude that it is perceived in a rather negative way. The English risk and hazard mean a dangerous situation, the possibility that an unfortunate event will occur. The French risque is understood as danger, as is the German das Risiko. The Greek rhiza refers, in turn, to a sharp rock, whereas the Italian risico - to a reef that should be avoided. A positive attitude to risk is presented by Middle East countries, where the Arabic risp is interpreted as dispensation of providence, and the Persian rizik refers to a day's pay or bread (Korombel 2013, p. 15). Nations often equate the notion of risk with uncertainty, which is a major mistake, as risk is characterised by measurability, whereas uncertainty cannot be measured. If it is possible to measure uncertainty, then it means that it is risk (Korombel, Bitkowska, Moczydłowska 2016, pp. 10-11). This relationship shows that uncertainty and risk are inseparably connected to each other, but should not be equated.

Risk is a subject of research in numerous scientific fields, including management studies. Modern managers attach an increasing importance to risk in an organisation, and strive to manage it effectively. Examples of the types of risk that accompany an enterprise's activity include (Kucia 2017, p. 91):

- liquidity risk,
- foreign exchange risk,
- competition risk,
- risk of price fluctuation of goods,
- risk of dependence on contractors,
- human resources risk,
- legal risk,
- risk of reputation loss,
- risk associated with buildings and constructions owned by an entity,
- risk of IT system dependence,
- credit risk,
- risk of change in interest rate,
- market risk.
In terms of the time horizon of an organisation’s activities, the following risks are distinguished (Redziak 2015, p. 19):

- operational risk (which refers to routine operations considered at low levels of management),
- tactical risk (for the time perspective of around 1 year, considered at medium levels of management),
- strategic risk (connected with strategic operations, considered by top management).

According to the classification in terms of assessing the outcomes of risk occurrence, there is (Radomska 2017, p. 29):

- pure risk, i.e. one that only leads to loss,
- and speculative risk, i.e. one whose outcomes may be gain or loss.

From the point of view of enterprise management, risk is defined as "an event that may have an (inhibiting, strengthening or doubt generating) impact on the mission, strategy, projects, routine operations, goals, main processes, key relationships and/or the meeting of shareholders' expectations" (Hopkin 2012, p. 12). The current Risk Management Standard defines risk as a combination of the likelihood of an event occurrence and its outcomes (Risk Management Standard 2011, p. 3). The Committee of Sponsoring Organizations of the Treadway Commission (COSO) propagates a pejorative attitude to risk, stating that "an event is a situation caused by internal or external factors that impacts the achievement of objectives. Events may have positive or negative outcomes, or both at the same time. Events with negative outcomes are risk. Risk is the likelihood that an event will occur and will have a negative impact on the achievement of objectives" (Zarządzanie ryzykiem... 2007, p. 25). According to the International Organization for Standardization (ISO), risk is dual in nature, which is manifested in its definition saying that risk is "the impact of uncertainty on objectives. This impact is a positive and/or negative deviation from the defined expectations. Risk is expressed as a combination of the consequences and the likelihood of the occurrence of a potential event" (ISO 2009, p. 1-2).

The e-commerce industry is burdened with its own specific threats due to the specific operational conditions. These threats are generated by sources of risk such as (Jelonek 2006, p. 71):

- data resources,
- transmission of data,
- technical tools,
- payment technology and behavior of buyers and sellers,
- legal norms,
- company activities (production, financial and commercial).

The threats in the sphere of data resources relate mainly to the loss of their confidentiality and truthfulness. The risk associated with the transfer of data entails the risk of their failure to transmit or use illegally. Another risk associated with information technology concerns its tools and may be related to their theft, damage and blocking. An important area seems to be the payment technology and behavior
of customers and sellers. The uncertainties and distortions in this sphere are one of the most common sources of misunderstanding between contractors in the e-commerce sector. Another type of risk that accompanies the industry is the legal conditions on which entrepreneurs have no influence and are not always beneficial. The last specified source of risk may be the cause of various threats related to, among others (Jelonek 2006, p. 71):

- continuous technological progress,
- impact on the natural environment,
- product quality,
- the level of prices and their fluctuations,
- demand and supply for products,
- currency rates,
- competitive environment,
- customs,
- taxes,
- financial liquidity.

**Risk management in a modern organisation**

Nowadays, risk management is a determinant and integral part of organisational culture in many economic entities, and thus translated into operational, tactical and strategic objectives (Wróblewski 2015, p. 26). Risk management is a multi-stage process that is mostly aimed at achieving an acceptable level of risk (Jajuga 2008, p. 15). The stages that are often mentioned in the literature include (Tripp et al. 2004, p. 16):

- defining overarching objectives,
- identifying risk determinants, assessing and measuring risk,
- selecting implementing methods to handle the existing risk, monitoring risk,
- controlling the effects.

This process is also often presented as encompassing four stages such as (Kaczmarek 2008, p. 85): identifying risk, classifying and assessing risk,

- defining risk response,
- controlling the effectiveness.

A quick analysis of the two above-presented views of this process shows that there are little differences between them. The first classification of the stages includes defining overarching objectives and monitoring risk, which the second one lacks. Indeed, both of these sets of activities are focused on achieving the same goal, i.e. a maximally effective system of risk management. It is worth bearing in mind that the priority in managing any process is appropriate integration of all of its stages. This is because only integrated risk management will give satisfactory results of its activities.

As the first division of risk management stages shows, the process starts with defining the main objectives of the undertaking. In order to define the overarching objectives of risk management in an enterprise, it is necessary to take into account
the character of the business, its financial situation, mission, vision and strategy. As already mentioned, risk management focuses on an entity achieving an acceptable level of risk. In order to establish the level of this acceptability, it is worth analysing the overall situation of the enterprise. For that purpose, strategic analysis methods can be used.

The next stage of the process, i.e. identifying the risk factors, enables identification of the threats existing in a company’s micro- and macro-environment. The risk determinants in an external environment usually refer to issues connected with the (Redziak 2015, pp. 40-41):

- economic aspect,
- social aspect,
- international aspect,
- political and legal aspect,
- technical aspect,
- international aspect.

The determinants in an internal environment, in turn, are related to (Redziak 2015, p. 41):

- market competition,
- customers,
- suppliers,
- regulators (bodies that regulate and affect business activity),
- strategic allies,
- enterprise owner,
- management board,
- staff,
- working environment.

It is important to note that identifying all the risk factors is practically impossible. This is due to the fact that several factors are difficult to trace, leading in many cases to the occurrence of unpredicted undesired events. Unawareness of the existence of risk factors makes it impossible to assess them and choose how to handle them, which undoubtedly reduces the effectiveness of the whole system of risk management in an organisation.

In order to identify risk, entities use a variety of methods and tools. The most popular include (Zawarska 2012, p. 68):

- Delphi method,
- brainstorming,
- analysis of past events, nominal group technique,
- analysis of processes,
- check lists,
- risk review request.

The next stage of the risk management process is risk assessment and measurement. The aim of such activities is to determine risk volume based on the likelihood and negative outcome of identified threats. Risk is assessed with the
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objective to estimate the level of its acceptability. Two types of risk assessment methods are distinguished (Redziak 2015, pp. 158-159):

- quantitative methods, which are based on hard figures,
- qualitative methods, which rely on general data, often experience-based assumptions.

The most popular ways assessing risk that are implemented in modern enterprises include (Redziak 2015, p. 191):

- benchmarking,
- probabilistic techniques (value-at-risk analysis, revenues-at-risk analysis and financial flows, etc.),
- non-probabilistic techniques (sensitivity test, scenario analysis, stress test, etc.),
- interviews and workshops.

The next activity carried out as part of the risk management process is selecting and implementing methods to handle existing risk. The steps taken at this stage are mainly determined by conclusions drawn in the previous phases. When implementing new solutions, an enterprise should remember to maintain flexibility with respect to the environment in which it functions. It is important to have a number of scenarios of actions in place to be able to quickly change the approach in case of unpredictable events.

The next phase of risk management, i.e. monitoring risk, is designed to enable an effective reaction in case of unexpected complications. A proper monitoring system may in many cases turn out to be an excellent protection and success determinant in risk management.

The last step of the process under discussion is controlling the results of the whole undertaking. An essential element of this control is comparing the achieved effects against the intended effects (Domański 2014, p. 70). It is worth mentioning that these effects usually differ from each other to a lesser or greater degree, which is not necessarily a negative phenomenon for an enterprise. Quite often, the results of undertaken activities turn out to be better than those set at the beginning of the risk management process.

E-commerce sector in Poland

As the Internet is constantly developing worldwide, people increasingly purchase products and services on the e-commerce market. E-commerce is defined by the World Trade Organisation as producing, advertising, selling and distributing goods via ICT networks. A more simplified definition states that it is purchasing and selling products and/or services through the Internet (Szewczyk 2007, p. 79).

E-commerce is one of the most important areas of e-economy, which handles such spheres as (Wallis 2017, pp. 79-80):

- B2B (business to business),
- B2C (business to consumer),
- B2P (business to public),
- C2P (consumer to public),

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– C2C (consumer to consumer),
– B2E (business to employee),
– B2G (business to government),
– P2P (public to public).

As data published in the specialised magazine Interaktywnie.com shows, in January 2018 the value of sales on the e-commerce market in Poland was 40 billion PLN, an increase of 7 billion compared to January 2016. It is estimated that by the end of 2018 this value will have exceeded PLN 45 billion (Interaktywnie.com 2018, p. 17) The factors that encourage Poles to shop online include mainly (Gemius 2017, p. 66):
– access to a shop's offer at any time,
– possibility of shopping without leaving home,
– unlimited time to make a choice,
– lower prices compared to traditional shops,
– possibility of quick comparison of goods.

Among the most popular e-commerce companies in Poland there are (Gemius 2017, pp. 14-16):
– Allegro,
– Olx,
– Zalando,
– ebay,
– Ceneo.
– Aliexpress,
– Amazon,
– Empik.

Products that are most often purchased on the e-commerce market include (Gemius 2017, p. 139):
– clothes, accessories and add-ons,
– books and CDs,
– household appliances and home electronics,
– smartphones and GSM accessories,
– cinema or theatre tickets,
– footwear,
– cosmetics and perfume.

**Characteristics of the company Oponeo.pl**

Oponeo.pl is a Polish shop that sells automotive products, including in particular tyres and wheels. What distinguishes Oponeo.pl from among other enterprises in its industry is that it mainly uses direct channels of distribution such as a call centre or Internet commerce. The company started its business activity in 2003 under the name Opony.com Sp. z o.o.
In 2007, it changed its legal form to a joint-stock company, and made its debut on the Warsaw Stock Exchange. Since 2008, Oponeo.pl has been a clear leader in the automotive industry category, according to a ranking of e-commerce stores published by Opineo.pl. Currently, the company's products can be purchased in 13 European countries: Belgium, the Czech Republic, Germany, Ireland, Spain, France, Italy, Holland, Austria, Slovakia, Turkey and Great Britain. The company also operates e-stores in the United States. Its business strategy is based on a clearly defined vision, which is to:

- set new trends in the e-commerce sector,
- anticipate market requirements,
- strengthen its leadership in the retail trade in tyres via the Internet in Poland, and achieve leadership in Europe.

The mission of Oponeo.pl is focused on achieving the following objectives:

- exceeding customers’ expectations by providing the highest quality consultancy in selecting products,
- ensuring customer satisfaction by continuously extending the range of products to include a first-class assortment, ensuring transaction safety and on-time delivery,
- improving and creating modern technical solutions, enabling full functionality of practical applications and effective customer relations management control.

The range of products offered by Oponeo.pl includes tyres and wheels. Purchasers of the products can have them fitted in a garage of their choice. Across Poland, the company guarantees this service in over 1100 fitting stations. The products offered by Oponeo.pl come in a variety of brands and prices. The company sells premium, medium class and low-end tyres from a range of manufacturers. Thanks to its extensive offer, the company has customers from various segments of the market. The revenues generated by particular assortment groups are presented in Table 1.

**Table 1. Revenues of Oponeo.pl in 2017**

<table>
<thead>
<tr>
<th></th>
<th>Income in PLN</th>
<th>Share in revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tyres for passenger cars</td>
<td>634 710</td>
<td>93.20%</td>
</tr>
<tr>
<td>Rims</td>
<td>27 931</td>
<td>4.10%</td>
</tr>
<tr>
<td>Motorbike tyres</td>
<td>15 601</td>
<td>2.30%</td>
</tr>
<tr>
<td>Services</td>
<td>14395</td>
<td>2.10%</td>
</tr>
<tr>
<td>Truck tyres</td>
<td>1 565</td>
<td>0.23%</td>
</tr>
<tr>
<td>Others</td>
<td>1 276</td>
<td>0.18%</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td><strong>681 083</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

Source: Author's own compilation based on (Oponeo 2018)
The flagship product of the company is tyres for passenger cars, which contributed to 93.2% of the company's revenues in 2017. Rims appeared in second place in the statement, but the revenue generated by them is significantly lower than in the case of passenger car tyres and constitutes 4.1% of the total revenue.

**Risk determinants in Oponeo.pl in 2017**

All enterprises operating on the market are affected by risk factors existing both in their internal and external environments. Oponeo.pl, as a large enterprise listed on a stock exchange, pays particular attention to identifying risk determinants, which is one of the important elements of risk management in this entity.

**Table 2. Risk determinants in Oponeo.pl in 2017**

<table>
<thead>
<tr>
<th>Risk determinant</th>
<th>Determinant description from the perspective of Oponeo.pl</th>
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<tbody>
<tr>
<td>Currency fluctuations</td>
<td>As the company conducts its business in a number of countries, it is largely dependent on the level of currency fluctuations. In order to protect itself against foreign exchange risk, the company uses forward contracts. Another precaution is defining the volume of currency purchases a month earlier.</td>
</tr>
<tr>
<td>Interest rate change</td>
<td>Oponeo.pl uses lines of credit with variable interest rates. However, it has not implemented any measures to protect itself against the negative effects of this risk factor.</td>
</tr>
<tr>
<td>Contractors' payment situation</td>
<td>Unfavourable macroeconomic conditions may contribute to deterioration of the contractors' payment situation. However, this risk is not very significant as the company usually collects payments on delivery of the goods to the customer.</td>
</tr>
<tr>
<td>Financial liquidity</td>
<td>The company systematically monitors due dates of receivables and payables. In order to maintain financial balance, it uses various sources of financing. A threat to Oponeo.pl may be posed by changes in credit policy, which will reduce the chances to secure external financing.</td>
</tr>
</tbody>
</table>
| Macroeconomic situation in the country and abroad | The company's financial situation depends on the economic situation in Poland and worldwide. The most important issues include:  
  pace of economic growth,  
  contribution of consumption to GDP generation,  
  monetary policy,  
  exchange rates,  
  prices of raw materials,  
  overproduction of tyres,  
  development of competition in the sector. |
| Fast development of the e-commerce industry   | If the pace of the development of e-commerce is faster than expected, the processes responsible for sales may not be adapted to higher market needs, leading to Oponeo.pl losing its leadership. |
| Technological innovations                     | Cutting-edge production technologies or the use of drones to deliver products may require implementing fast and costly changes to avoid losing customers to competitors. |
Changes in customer preferences | Customers may change their preferences at any time. For instance, they may resign from possessing their own car, and use public transport instead.

Maintenance of IT systems | IT risk in the company is mainly connected with ensuring continuity of the operation of applications and with the possibility of the system being hacked. In order to reduce threats in these areas, Oponeo.pl uses modern, the highest quality IT equipment, implements full multiplication of equipment and software, hires data security staff and uses advanced security systems.

Customer service logistics | The company is exposed to problems with availability of goods in the warehouse, proper packaging, collection by and relations with couriers. This factor is typical of every entity in the e-commerce sector.

Inventory planning | Incorrect assessment of conditions, e.g. weather conditions, may lead to a problem of overstocking. Overstocking means additional costs to maintain stocks, with a reduced quality of goods as a result of long storage in the warehouse.

Staff changes | Loss of qualified staff may result in an increase in the number of incorrectly processed orders.

Legal requirements | The company's business activity is largely dependent on legal modifications in such spheres as:
- tax system,
- labour and social insurance laws,
- telecommunication market law,
- environmental protection.

Source: Author's own elaboration based on (Oponeo 2018)

In 2017, Oponeo.pl operated in conditions generating a number of risk factors (Table 2). The determinants of the most severe risk are those connected with financial risk, as they originate from the enterprise's external environment and can impact it directly. In order to minimise financial risk, the company uses a variety of protection tools such as forward contracts, collection of payment for goods on delivery and diversification of financing sources. Another risk factor that is important for the company is the macroeconomic situation, with a special role played by the development of competition in the sector. One more determinant worth paying attention to is the fast development of e-commerce, which may both pose a threat and offer a chance to the company. The factor that to a large extent depends on the company's activities is maintenance of the IT systems. In contrast to the previous determinants, this factor comes from within the organisation, therefore effective protection against its negative consequences depends to a large extent on the company's precautions. Another important determinant is customer service logistics, which is due to online sale. High on-time delivery and correctness rates for order fulfilment are especially important on the e-commerce market. All the listed risk factors are presented in model in Figure 1.
Analyzing the above model, it can be immediately noticed that the external determinants are more numerous than the internal determinants. It is worth bearing in mind, however, that the risk factors disclosed by the company's Board of Directors are probably not all that they have to deal with. Full identification of the risk determinants is considered impossible due to the variability and unpredictability of the environment. Examples of determinants that have not been specified in the Management Board Report, and may be accompanied by activities include, e.g. brand reputation, flows in supply chains, seasonality of sales, quality of management, employee relations, availability of relevant staff on the labor market or the natural environment.

**Conclusions**

Proper identification of risk determinants enables effective protection against possible threats, and seems to be decisive in risk management in a modern organisation. The joint-stock company Oponeo.pl is a large enterprise operating not only in the e-commerce sector, but also in the tyre industry, which means that the risk factors typical of both these sectors apply to it. The demand on the tyre market is mainly determined by the situation of the automotive industry, which increases the importance of the macroeconomic situation for Oponeo.pl. The company conducts its business activity on the e-commerce market, and as such, it is exposed to risk factors specific of this sphere such as the maintenance of IT systems or the fast development of e-commerce. It is worth noting that the risk determinants mainly come from outside the organisation, which means that the company is unable to control their existence. Given Oponeo.pl's significant market power, it can be concluded that the company does well in risk management, which undoubtedly has to do with proper identification of risk factors.
References


Słowa kluczowe: branża e-commerce, ryzyko, zarządzanie przedsiębiorstwem, zarządzanie ryzykiem