

MANAGER'S DECISIONS INFLUENCED BY RISKS IN A PANDEMIC SITUATION- SME'S IN ICT SECTOR

Alexandra Irina Dănciulescu¹

Abstract

People are mainly influenced by emotions in making decisions. A manager or a good leader has to be detached and a little involved in the lives of his employees. This analysis wants to show how managers have made decisions during the Pandemic situation; what factors have influenced them in taking those decisions, and what is the prognosis of the past 2 years. We will analyse the IT sector of SME's and the risks involved and considered in making sound decisions that will allow the companies to thrive and prosper.

Keywords: *risk management, economic environment, SMEs, economic factors, psychological and social factors, ICT sector, the Risk Type Compass*

JEL Classification: D81, D91, G32, M00, M21.

1. Introduction

Because the manifestation of risk within the company can have as an extreme consequence its bankruptcy, it is necessary to define a risk protection instrument with which any company can carry out its activity and achieve its proposed objectives. Hence, the instrument called **risk management** that consists: both in preventing and minimizing the occurrence of events that may affect the company's activity and may alienate it from its mission, and help the process of identifying, evaluating and quantifying those events.²

Therefore, this paper presents in short, the literature available on risk management, the factors that influence risks nowadays, the last instruments that have risen in the last few years that can help managers make objective decisions and why we should take into consideration the personality of the individual.

We will talk about the economic environment of European and Romanian SME's; how natural disasters, like a Pandemic, can influence not only the social environment but also, the economic one; and, at last we will try to conclude in a positive prognosis that will be the starting point for further research.

2. Risk management

Risk management is the way we manage the negative effects of risk manifestation, and the way we exploit potential opportunities. By **risk management**, we mean the process by which we identify, assess, estimate, treat and report risks.

¹ Assistant Lecturer, Romanian-American University, Bucharest,
danciulescu.irina.alexandra@profesor.rau.ro

² Dănciulescu A., *The Role of Risk Management and Treatment Methods applied in Today's Economy*, December 2013, Romanian Economic and Business Review – Special issue.

Although the principles are common, the quantitative techniques and tools used in specific areas must give way to subjective interpretations of the consequences of risk throughout the organization.

Various theories of **risk management** and organizational behaviour differentiate between risk and uncertainty based on an organization's ability to allot a probability to every possible result. From this point of view, organizational risk is the set of all results with calculable frequency distributions, while uncertainty exists either when probabilities cannot be determined for different results or when the set of all possible results is unidentified³. *Literature defines risk as the threat will adversely affect an organization's ability to achieve its objectives and successfully implement its strategies.*⁴. This definition highlights the fact that the risk is obvious and may be an inauspicious event, with a negative outcome.

Causes that can determine the occurrence of **risk**⁵:

- can be foreseen, unforeseen or just random;
- can be internal or external to the company;
- can be identified based on information from research or based on historical records(statistics);
- can be described from the point of view of:
 - *intensity*;
 - *production probability*;
 - *the area / extent on which a hazardous cause may act*;
 - *action span*;
 - **risk management** (keeping risks under control).

ISO 31 000:2009 has been replaced by ISO 31 000:2018 which has been technically revised.

The main changes compared to the previous edition are as follows⁶:

- ✓ principles of risk management, which are the essential reasons for its success;
- ✓ highlighting the leadership by top management and the integration of risk management;
- ✓ putting emphasis on the nature of risk management, detecting that new occurrences, information and analysis can lead to revising process components, measures and controls at every stage of the process;
- ✓ reforming the content with better emphasis on supporting an open system model to fit multiple needs and circumstances.

³ Stephen D. Gantz, Daniel R. Philpott, *FISMA and the Risk Management Framework*, 2013, Syngress, Pages 507-520, ISBN 9781597496414.

⁴ Griffiths Phil, *Risk-Based Auditing*, Gower Publishing Limited, 1998, Aldershot, England, Economist Intelligence Unit, Department of British Government, p. 17.

⁵ Dănciulescu Alexandra Irina, *Managementul riscului în cadrul IMM-urilor în contextul actual al globalizării și internaționalizării firmelor*, 2015, Editura Universitară, pp. 28-29, ISBN 978-606-28-0292-9.

⁶ <https://www.iso.org/obp/ui/#iso:std:iso:31000:ed-2:v1:en>

Today's economic context of a company is subject to risks, determined by certain factors⁷:

- ✓ changes in social environment that can change consumers preferences;
- ✓ expansion of sales place, access to international markets;
- ✓ aggressiveness of competition;
- ✓ changes in economic, fiscal, political and judicial system;
- ✓ state intervention in monetary policies, fluctuations of the inflation rate, fluctuations of exchange rates, changes in interest rates, changes in market prices,
- ✓ organizational and company structure decisions (organization, restructuring, outsourcing, merger, absorption);
- ✓ wrong strategies and erroneously adopted decisions that lead to the invalidation of previous experience;
- ✓ the optimistic or pessimistic attitude of the analysis team;
- ✓ changes in technology (patents and innovation);
- ✓ factors determined by the environment – abnormal variation in climate and temperature, earthquakes, landslides, storms, fires, explosions, **and for the last 3 years Covid-19 Pandemic.**

All of these can lead to the occurrence and manifestation of risk within a company. The problem is that it can slip by unobserved and/or can lead to the bankruptcy of the company and therefor her *demise*.

2.1. Theories and instruments to use in making decisions

The majority of modern theories⁸ on *decision theory* start from the usual idea of risk aversion of individuals, no matter their profession, that the human being trying to obtain a certain result, to the disadvantage of an option that could lead to the same resolution. Furthermore, the expert studies stipulate that the attitude regarding the risk factors is a stable attribute of each individual, linked to the development of the personality, as well as to his culture. On the other hand, because this is a complex phenomenon and because there are several theories present in the field of risk, the opinions of researchers do not always see eye-to-eye regarding the various characteristic aspects involved in this process.

Therefore, regarding the taste for risk, specialists have agreed that it is often associated with certain particular traits of the personality of the decision-maker, in terms of scientifically differentiating risk-takers from others; members of the same culture or profession, the opinions of those investigating this field become divergent.

Dr. Rob Long, an expert in Social Psychology says *that what happens around us influences us when it comes to evaluating and handling risk; that social psychology teaches us that conventionality, docility and social opinion are all tied to context and situation, much more powerfully than to personality. Therefore, he says that people*

⁷ Dănciulescu Alexandra Irina, *Managementul riscului în cadrul IMM-urilor în contextul actual al globalizării și internaționalizării firmelor*, 2015, Editura Universitară, p. 74, ISBN 978-606-28-0292-9.

⁸ Opran C., Paraipan L., *Managementul riscului*, Editura Comunicare.ro, Bucuresti, 2008, p. 37.

tend to misjudge the significance and power of individual personality and undervalue the influence of social conditions⁹.

Even though the theories regarding risk have a few inconsistencies, the predilection for risk is considered a stable attribute of the personality, but the attitude and perception towards risk depends on various characteristics like feelings, humour, perceptions etc.

Every person comes with a personal perception and attitude towards risk that he brings to the table. People are unique and this includes their predisposition towards risk. The research regarding personality identifies two specific characteristics that support this¹⁰:

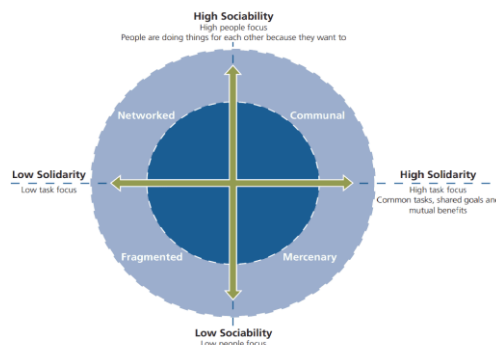
- The degree to which individuals are spontaneous or organized, methodical and obedient;
- The degree to which individuals may be careful, pessimistic and fearful, or optimistic, tough and courageous.

We can measure the predisposition to risk by using personality assessment tools. The fact is that regarding risk taking, people are very different. Organizations need to be more focused on the ethical and psychological profile of those working for them. Every person comes with their own scale of moral values that greatly influence the decisions we make on a day-to-day basis.

In 1998, Goffee and Jones have developed the Double S model, which takes into consideration culture regarding two key aspects¹¹:

- ❖ how well people get on socially and
- ❖ how well people get along with each other and work as a team.

Figure 1: The Double S model¹²



Source: Institute of Risk Management, Protiviti - Risk and Business Consulting. Internal Audit, 2012.
Risk culture-Resources for Practitioners¹³

⁹ Understanding the Social Psychology of Risk and Safety, July 10th 2020, by Dr. Rob Long, <https://safetyrisk.net/understanding-the-social-psychology-of-risk-and-safety/>

¹⁰ Institute of Risk Management. *Risk Culture: Resources for Practitioners*, 2012, London: IRM.

¹¹ Goffee, R. and Jones, G., *The character of a corporation: How your company's culture can make or break your business*. New York: Harper Collins Business, 1998.

¹² <https://www.readkong.com/page/institute-of-risk-management-risk-predictions-2021-9281706>

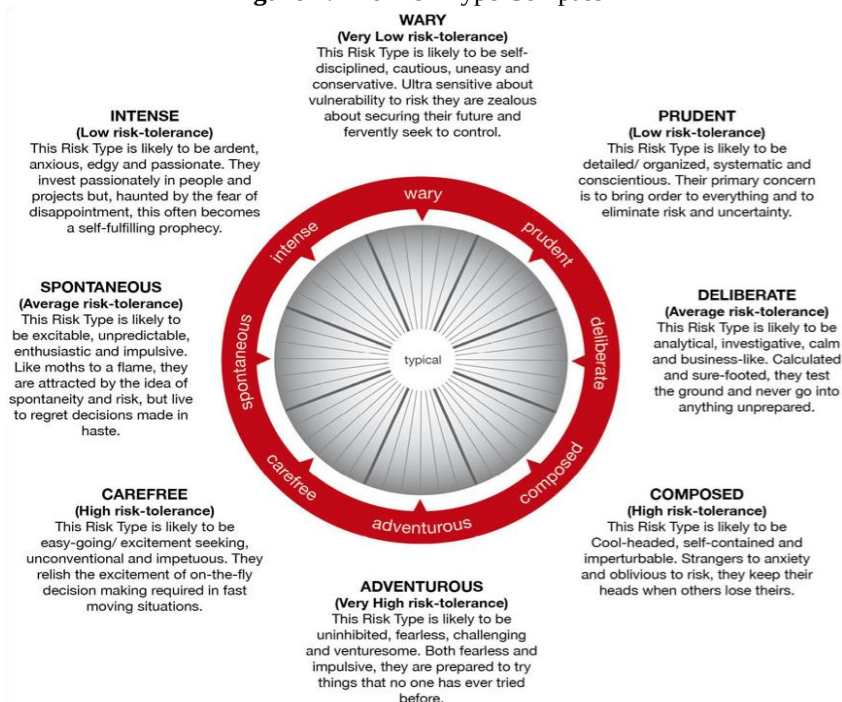
¹³ https://www.treasurers.org/ACTmedia/IRM_riskculture_full_Oct12.pdf

Every single culture in the model has both an advantage and a disadvantage when we think of risk management results. Nonetheless, the research performed out by the Institute of Risk Management in 2012, indicates that companies should look for consolidating both their affability and unity ratings in order to implement risk management more efficiently. Low results on either factor set up a barrier that will not allow an effective management of risk¹⁴.

Two attributes of personality add to the predilection for risk. First, the degree to which they are impulsive or methodical, organized and obedient. On the other hand,¹⁵ they may be careful, pessimistic and fearful, or optimistic, tough and courageous. The Risk Type Compass is a recently developed instrument meant to validate personality assessment procedures, developed by Geoff Trickey licensed **psychologist, CEO of Psychological Consultancy Ltd.**

The Risk Type Compass specifies that there are eight Risk Types, with different levels of risk tolerance. This will have an impact on how an individual reacts to risk and how he makes a decision. Geoff Trickey and Grace Walsh present the eight Risk Types as follows¹⁶:

Figure 2: The Risk Type Compass¹⁷



Source: The IIRP, article The Mosaic of Risk Culture, by Grace Walsh and Geoff Trickey, 10 January 2014

¹⁴ Institute of Risk Management, *Risk culture: Resources for Practitioners*, 2017.

¹⁵ Institute of Risk Management, *Risk culture: Resources for Practitioners*, 2017.

¹⁶ <http://www.theiirp.org/the-mosaic-of-risk-culture>, 10 January 2014, The IIRP, by Grace Walsh and Geoff Trickey.

¹⁷ https://www.prmia.org/Public/Public/Learning/Risk_Type_Compass.aspx

The Risk Type Compass assists companies in achieving their risk management objectives by taking into consideration the human factor or the individual's personal perception of risk. It improves the human factor and makes so much more effective risk management by raising recognition of an individual's predilection to risk and how that might be expressed in a team¹⁸.

3. Economic environment of SME's

3.1. *Economic of European SME's*

EU 2003/361¹⁹ (European Commission, 2013b) defines small and medium-sized enterprises as a *group of micro, small and medium-sized enterprises (SMEs) that are formed of enterprises with less than 250 employees and a turnover of maximum 50 million Euro, and / or the balance sheet does not exceed € 43 million. The SME category includes small businesses with less than 50 employees and a turnover of no more than € 10 million. Micro-enterprises are defined as enterprises with less than 10 employees and a turnover of maximum 2 million Euro.*

The European Union considers small and medium size enterprises as the pillar that sustains Europe's economy because they represent 99% of all businesses in the EU²⁰ and because they employ around 100 million people.

SMEs create ground-breaking resolutions to problems like climate change, resource efficiency and social consistency and help spread out these resolutions throughout Europe's countries. They are therefore vital to the EU's evolution towards a green and digital economy, to competitiveness and prosperity, to industrial ecosystems, economic and technological control, and toughness when facing external shocks.²¹

SMEs are responsible for two out of three jobs in the private sector, they account for far less than half of all exports and imports. When it comes to other types of internationalisation, such as foreign direct investments, the contribution of SME's is even more diminished²².

The Covid-19 Pandemic and the measures taken in response to it substantially altered many SMEs in the European Union. The two most affected sectors were accommodation and food services, the value added dropped by 37.8% and the employment also dropped by 11.1%, transportation and storage decreased with 16.1% and 0.7%.

According to the Annual Report on European SMEs 2018/2019, in 2018²³, approximately 25 million SMEs functioned in the EU-28, from which 93% were

¹⁸ <https://www.psychological-consultancy.com/products/risk-type-compass/>

¹⁹ COMMISSION RECOMMENDATION of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (notified under document number C (2003) 1422), (Text with EEA relevance), (2003/361/EC), 20.05.2003.

²⁰ https://ec.europa.eu/growth/smes_en

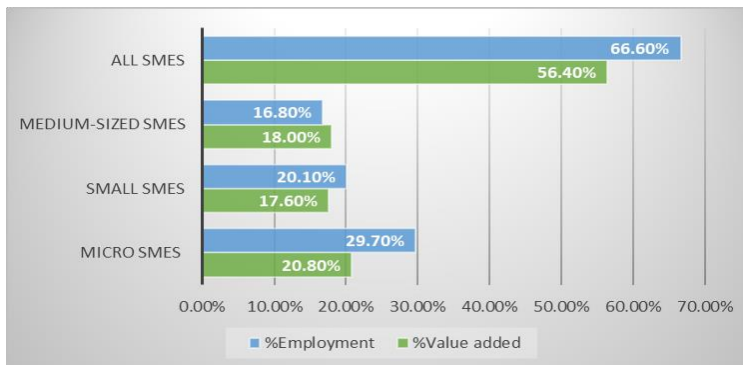
²¹ https://ec.europa.eu/growth/smes_en

²² Internationalization of SME's - A Policy Brief from the Policy Learning Platform on SME's Competitiveness, August 2021, European Regional Development Fund, <https://www.interregeurope.eu/>

²³ Annual Report on European SMEs 2018/2019, November 2019, report prepared for the European Commission.

micro-enterprises. **Figure 3²⁴** presents the percentage of value added and employment created in the non-financial business sector of SMEs.

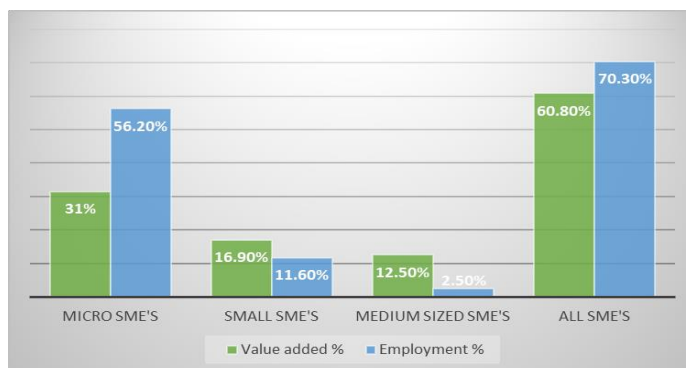
Figure 3: Non-financial business sector of SMEs in 2018



Source: processed by author

Nonetheless, in 2019 micro enterprises have had a major contribution to value added and employment development because the greatest evolution happened in sectors where micro enterprises played an important role. According to the Annual Report on European SMEs 2021/2022, July issue, 330 000²⁵ additional new jobs in constructions were created, while employment in the other size classes came to a stop. Other sectors²⁶, where medium-sized enterprises and large enterprises have a more central role, such as the manufacturing sector, declined or had a relatively modest increase.

Figure 4: Evolution of value added and employment of SMEs in NFBS in 2019²⁷



Source: processed by author

²⁴ <https://blogs.ec.europa.eu/promotingenterprise/files/2018/11/SME-Annual-report-2017-2018.pdf>

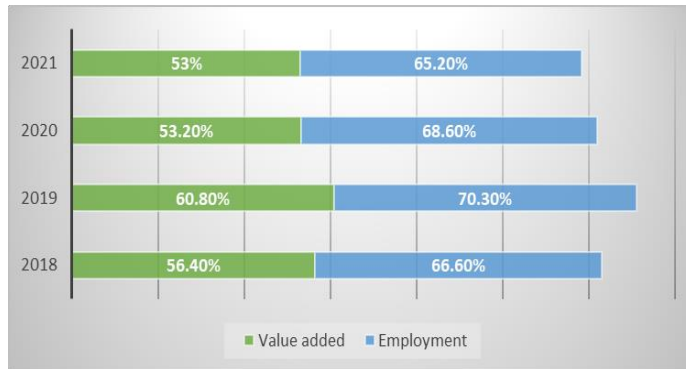
²⁵ Annual Report on European SME's 2020/2021, July 2021, report prepared for the European Commission.

²⁶ <https://www.ggb.gr/sites/default/files/basic-page-files/SME%20Annual%20Report%20-%202021.pdf>

²⁷ Annual Report on European SME's 2020/2021, July 2021, report prepared for the European Commission, <https://www.ggb.gr/sites/default/files/basic-page-files/SME%20Annual%20Report%20-%202021.pdf>

The global economic growth in 2019 was especially strong in industries like construction, hospitality and tourism, where micro enterprises are at the top. Furthermore, in 2019²⁸, the SMEs active in the IT&C sector displayed a robust value added and employment performance than SMEs from other sectors.

Figure 5: SME's in NFBS during 2018-2021



Source: processed by author

The Pandemic affected all the Member States in particular the *Accommodation and food service, Transport and storage, Administrative and support service activities* and Manufacturing sectors.

European small and medium size enterprises from IT&C sector performed much better in 2020 than other European small and medium enterprises from the others sectors²⁹.

In 2020³⁰, according to The Annual Report on European SMEs 2020/2021, the number of SMEs active decreased from 25 million to 21 million summing up 99.8% of all enterprises in the non-financial business sector (NFBS) of the European Union, from these 93% were micro enterprises. We have to take into consideration that EU-27 SMEs have generated 53% of the total value added and 65% of total employment.

The pandemic had a major impact on EU-27 SMEs in 2020, because it hit many businesses, especially those who were not prepared to deal with change. In addition, the pandemic exposed weak aspects of global value chains. A repositioning of some activities in Europe might happen and reveal new opportunities for European SMEs. Similar repositioning trends in other regions of the world might - on the other hand - have a negative impact on the internationalization of European SMEs.³¹

²⁸ Annual Report on European SME's 2020/2021, July 2021, report prepared for the European Commission, <https://www.ggb.gr/sites/default/files/basic-page-files/SME%20Annual%20Report%20-%202021.pdf>

²⁹ <https://www.ggb.gr/sites/default/files/basic-page-files/SME%20Annual%20Report%20-%202021.pdf>

³⁰ *Idem*, 22.

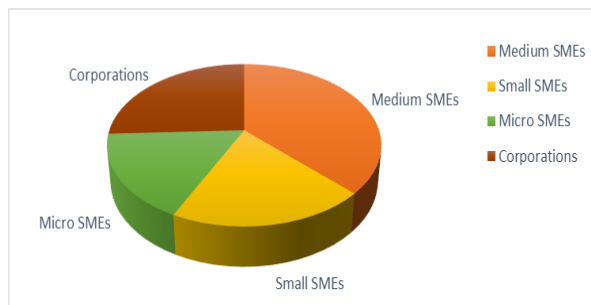
³¹ Internationalization of SME's- A Policy Brief from the Policy Learning Platform on SME's Competiveness, August 2021, European Regional Development Fund, <https://www.interregeurope.eu>

The number of new SMEs registrations in Member States decreased and so did the funding for start-ups and scale-ups, in 2020. The number of bankruptcies also decreased in 2020, reflecting the effect of the different economic support programmes applied by Member States³², tolerance by creditors and supervisory bodies, and reduced operations by legal and administrative authorities ruling on and recording bankruptcies.

3.2. The evolution of IT&C SMEs in Romania

According to an article by Andrei Chirileasa³³, from December 2020, in Romania-Insider, in 2019, more than 24,000 software companies were active in Romania, 6.2% more than in 2018, of which: 22,600 micro, 1,100 small companies, 328 medium companies. As we can see from **Figure 6**, medium companies generated the biggest turnover share with 37.4% from the total SMEs, followed by corporations with 25.7%, small SMEs with 19.8% and micro SMEs with 17.1%³⁴.

Figure 6: Turnover share of Software SMEs in 2019



Source: processed by author

The IC&T sector performed well, with SME value added increasing by 13.0%, although SME employment decreased by 2.6%.³⁵

Romania's economy diminished by 3.9 percent in 2020, one of the lowest cutbacks in the European Union, and came back strongly at 6.5 percent in the first half of 2021.³⁶

Romania's IT market is one of the fastest growing markets in Central and Eastern Europe forecasted to grow reaching a value of RON 9.9 billion (\$2.47 billion) in 2021.

The countries' centre point for IT development is in Bucharest, holding 63% of revenues and other regions like, The North-West with 18%; The West with 5%; Central with 6%; and The North-East with 5%.

³² <https://www.ggb.gr/sites/default/files/basic-page-files/SME%20Annual%20Report%20-%202021.pdf>

³³ <https://www.romania-insider.com/ro-software-industry-dec-2020>

³⁴ https://www.economica.net/analiza-industria-de-software-din-romania-va-creste-la-un-maxim-istoric-de-pest-8-miliarde-de-euro-in-2020-topul-companiilor_193563.html

³⁵ The data for 2020 are estimates produced by DIW Econ, based on 2008-2018 figures from the Structural Business Statistics Database as well as provisional data for 2019-2020 from the National Accounts Database and the Short-Term Business Statistics Database (Eurostat).

³⁶ <https://www.worldbank.org/en/country/romania/overview#1>

Cybersecurity is a key component of the ICT sector in Romania.

Between 2014 and 2020³⁷, Romania received EUR 30.8 billion from the ESIF (European Structural and Investment Fund), supporting SMEs (including support to R&D activities or the ICT sector) through two operational programmes – the *Competitiveness programme and the Regional programme* – approximately EUR 1.64 billion.

An extra 550 million EUR has been mobilised under the European Regional and Development Fund for financial support to SMEs.³⁸

According to the European Commission's Digital Economy and Society Index (DESI), Romania ranks 5th in the EU due to the number of ICT graduates that represent 5.6% of all graduates, a number above the European average of 3.6%.³⁹

Unfortunately, migration and *brain drain* affected the IT&C sector caused by low salaries in the sector (although high for Romanian standards)⁴⁰.

Conclusions

SMEs play an important role in Romania's NFBS sector. In 2020, almost 27,000 software companies functioned in Romania, 9% more than in 2019 and 104% more than in 2010. Of these, 25.3 thousand are micro-enterprises, 1.1 thousand companies small, 353 medium-sized companies and 21 large companies. Their contribution to total value added was 55.9%, meanwhile the contribution to employment was 66.1%⁴¹.

Reaching a historic level in the local software market shows that although the industry as a whole dropped by 8% because of the Pandemic, the IT companies managed to adapt to these circumstances⁴².

To activate the economy, the Romanian government published a National Plan for Investment and Economic Recovery.⁴³

In 2021, expenditures recovered, and total sales of small and medium-sized enterprises increased by 4.5% by August 2021 compared to the same period of the COVID-19 pandemic year. The report⁴⁴ shows that e-commerce sales increased by 31.4% in 2021 for SMEs that responded to the survey. In Romania, 21% of SMEs that closed at the beginning of the pandemic remained closed after 6 months, compared to large enterprises, which remained closed in proportion of 13%⁴⁵.

³⁷ <https://op.europa.eu/en/publication-detail/-/publication/c2958194-0527-11e6-b713-01aa75ed71a1/language-en>.

³⁸ 2021 SME Country Fact Sheet's Background Document-Romania.

³⁹ European Commission (2020), *The Digital Economy and Society Index (DESI)*, available at: <https://ec.europa.eu/digital-single-market/en/digital-economy-and-society-index-desi>.

⁴⁰ Cristea, M., (2020), *Romania has the second largest pool of developers in CEE*, available at: <https://business-review.eu/tech/Romania-has-the-second-largest-pool-of-developers-in-cee-212202>.

⁴¹ 2021 SME Country Fact Sheet-Romania, European Commission, https://ec.europa.eu/growth/smes/sme-strategy/performance-review_en

⁴² https://www.economica.net/estimare-keysfin-piata-romaneasca-de-software-va-depasi-in-acest-an-valoarea-de-92-miliarde-de-euro_546655.html

⁴³ https://ec.europa.eu/info/sites/default/files/factsheet-romania_en.pdf

⁴⁴ <https://www.consilium.europa.eu/en/policies/coronavirus/covid-19-travel-in-the-eu/>

⁴⁵ <https://www.consilium.europa.eu/en/policies/coronavirus/covid-19-travel-in-the-eu/>

The domestic market is underdeveloped, says Gabriela Mechea, ANIS Executive Director⁴⁶. Many of the IT&C companies in the country, whether they offer finished products for sale or cover intermediate activities in the production chain, have to adopt strategies of internationalization, because export activities are the main source of business⁴⁷.

In order to carry out its mission, supporting SMEs and strengthening the single market are still priorities for the European Union, more than 10 years after the launch of the Small Business Act (2008). Although progress has been made in key areas in the Community, only 25% of SMEs in the Member States now benefit from the opportunities offered by the single market in terms of exports (European Commission, 2020)⁴⁸.

The European Commission gave Romania's recovery plan a positive assessment. The financing (€14.2 billion in grants and €14.9 billion in loans) provided by the Recovery and Resilience Facility – at the heart of NextGenerationEU – will support the implementation of crucial investment and reform measures put forward by Romania to emerge stronger from the COVID-19 pandemic until 2026. The Romanian plan is part of an unprecedented coordinated European Union response to the Pandemic, to address common European problems by accepting the sustainable and digital transitions, to support economic and social resistance and the unity of the Single Market.⁴⁹

The contribution of Romania to the digital transition amounts to 21% of its total allocation of €29.2 billion. This exceeds the minimum of 20% required by the RRF Regulation.⁵⁰ The plan contains different measures that will support directly or indirectly private investments, including SMEs, will increase the capacity of the country to attract investment and create new businesses and jobs. The plan also aims to reinforce fiscal sustainability through important reforms of the tax administration, the tax framework, the management of public expenditure and the pension system⁵¹. Romania remains extremely resilient, declaring growth for five consecutive quarters since the third quarter of 2020, with an overall increase of more than 7% expected in 2021. The prognosis for 2022 is also good, the forecast is that the GDP to 4.5-5%.

Furthermore, consumption has been robust in the first 11 months of 2021, recording an increase of 10.5% from a year to another, a tendency that ought to remain constant on the short and medium run, regardless of new restrictions, that might appear in order to confront the spread of the Omicron variant⁵².

⁴⁶ Reștea, K. (2021, 2 septembrie). Topul celor mai puternice companii de IT din România și o radiografie a industriei. ANIS: *Nu avem o piață internă / 75% din venituri sunt realizate din exporturi*. <https://economedia.ro/top-cele-mai-puternice-companii-de-it-din-romania-si-o-radiografie-a-industriei-anis-nu-avem-o-piata-interna-75-din-venituri-sunt-realizate-din-exporturi.html#>. YT8ORp0zY2w

⁴⁷ <https://levelup.facultateademanagement.ro/wp-content/uploads/2021/12/Internationalizarea-IMM-urilor-din-Romania-in-perioada-pandemiei-Insight-uri-din-sectorul-ITC.pdf>

⁴⁸ <https://alientt.com/the-ec-publishes-the-sme-annual-report-2020-2021/>

⁴⁹ <https://www.thediplomat.ro/2021/09/28/romanias-national-recovery-and-resilience-plan-approved-by-the-european-commission/>

⁵⁰ https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_4875

⁵¹ *Idem*, 38.

⁵² <https://www.fairwear.org/covid-19-dossier/worker-engagement-and-monitoring/country-specific-guidance/covid19-romania/>

However, the inflationary wave all across Europe affected also Romania, reaching an increase of 7.8% in November 2021, while the gas & energy prices recorded an increase of almost 50%.⁵³

When we talk about risk management failures (especially when thinking of SMEs), we do not talk about the problems that could have been addressed proactive. That means a risk management programme that included a good leader that uses a proper risk assessment tool, a proper instrument that supports cognitive diversity (***the Risk Type Compass***) to insure a balance between emotions and reasoning, which according to neuroscience characterizes decision-making.⁵⁴

Romania lacks in good decision makers from the top levels of the country's management, so the lack of good decisions happens at every level of entrepreneurship as well. The lack of infrastructure, whether it is transport infrastructure, fiscal burden or digitalisation. In our opinion, Romania has a long way to go regarding risk management, enterprise management and risk assessment. The process of decision-making has the power to influence the future, the triumphs and the ruin of any organization.

References

1. Sapir, A., (2020), *Why has COVID-19 hit different European Union economies so differently?*, Policy Contribution, 18, Bruegel.
2. Dănciulescu A., (2013), *The Role of Risk Management and Treatment Methods applied in Today's Economy*, December, Romanian Economic and Business Review – Special issue.
3. Dănciulescu Alexandra Irina, *2015), *Managementul riscului în cadrul IMM-urilor în contextul actual al globalizării și internaționalizării firmelor*, Editura Universitară, ISBN 978-606-28-0292-9.
4. Cristea, M., (2020), *Romania has the second largest pool of developers in CEE*, available at: <https://business-review.eu/tech/Romania-has-the-second-largest-pool-of-developers-in-cee-212202>.
5. Stephen D. Gantz, Daniel R. Philpott, (2013), *FISMA and the Risk Management Framework*, Syngress, ISBN 9781597496414.
6. Griffiths Phil, (1998), *Risk-Based Auditing*, Gower Publishing Limited, Aldershot, England, Economist Intelligence Unit, Department of British Government.
7. Opran C., Paraipan L., (2008), *Managementul riscului*, Editura Comunicare.ro, Bucuresti.
8. Rob Long, (2020), *Understanding the Social Psychology of Risk and Safety*, July 10th, <https://safetyrisk.net/understanding-the-social-psychology-of-risk-and-safety/>
9. Goffee R. and Jones G., (1998), *The character of a corporation: How your company's culture can make or break your business*. New York: Harper Collins Business.
10. Andreea Mitan, (2021), *Internaționalizarea IMM-urilor din România în perioada pandemiei - Insight-uri din sectorul IT&C*, 15 Decembrie, volum *După COVID-19: provocări de management între digitalizare, sustenabilitate și reziliență*, publicat în cadrul proiectului Academic Advance: dezvoltarea capacității de cercetare interdisciplinară de excelență a SNSPA în domeniul Management CNFIS-FDI-2021-0321, ISBN 978-606-749-571-3.

⁵³ <https://www.fairwear.org/covid-19-dossier/worker-engagement-and-monitoring/country-specific-guidance/covid19-romania/>

⁵⁴ <https://www.psychological-consultancy.com/products/risk-type-compass/>

11. Muntean Bianca, (2021), *IT&C SECTOR IN ROMANIA*, 16 February, Transilvania Digital Innovation Hub, Transilvania IT Cluster.
12. Helmut Kraemer, Antonia Botsari, Salome Gvetadze, Frank Lang, Wouter Torfs, (2021), *The European Small Business Finance Outlook 2021*, EIF Research and Market Analysis - Working Paper75.
13. Grondys, K.; ´Slusarczyk, O.; Hussain, H.I.; Androniceanu, (2021), *A. Risk Assessment of the SME Sector Operations during the COVID-19 Pandemic*, Int. J. Environ. Res. Public Health, 18, 4183. <https://doi.org/10.3390/ijerph18084183>
14. Reștea, K., (2021, 2 septembrie). *Topul celor mai puternice companii de IT din România și o radiografie a industriei. ANIS: „Nu avem o piață internă / 75% din venituri sunt realizate din exporturi”*. <https://economedia.ro/top-cele-mai-puternice-companii-de-it-din-romania-si-o-radiografie-a-industriei-anis-nu-avem-o-piata-interna-75-din-venituri-sunt-realizate-din-exporturi.html#.YT8ORp0zY2w>
15. *Risk Appetite and Tolerance*, (September 2011), Institute of Risk Management.
16. Institute of Risk Management, (2012), *Risk Culture: Resources for Practitioners*, London: IRM.
17. Institute of Risk Management, (2017), *Risk culture: Resources for Practitioners*, London: IRM.
18. Institute of Risk Management, (2021), *Risk Predictions 2021-Resilience, Risk & Recovery*.
19. Institute of Risk Management(2018), *Standard Deviations – A Risk Practitioners Guide to ISO 31000*.
20. COMMISSION RECOMMENDATION of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (notified under document number C (2003) 1422), (Text with EEA relevance), (2003/361/EC), 20.05.2003.
21. *User Guide to the SMEs Definition-Internal Market, Industry, Entrepreneurship and SMEs, finished September 2019*, Luxembourg: Publications Office of the European Union, 2020, report prepared for the European Commission.
22. *Internationalization of SME's- A Policy Brief from the Policy Learning Platform on SME's Competiveness*, August 2021, European Regional Development Fund, <https://www.interregeurope.eu/>
23. *Annual Report on European SMEs 2018/2019 - Research & Development and Innovation by SMEs, SME Performance Review*, November 2019, report prepared for the European Commission.
24. *Annual Report on European SME's 2020/2021*, July 2021, report prepared for the European Commission, <https://www.ggb.gr/sites/default/files/basic-page-files/SME%20Annual%20Report%20-%202021.pdf>
25. *Annual Report on European SME's 2020/2021-Background document*, July 2021, report prepared for the European Commission.
26. *2021 SME Country Fact Sheet-UE27*, European Commission, https://ec.europa.eu/growth/smes/sme-strategy/performance-review_en
27. *The SME Business Climate Index and EU Craft and SME Barometer*, Autumn 2021, SME United- Crafts& SMEs in Europe, www.smeunited.eu
28. OECD, (2021), *SME and Entrepreneurship Outlook*.
29. *Studiu asupra economiei digitale din România: Asociația Patronală a Industriei de Software și Servicii*, 26 Februarie 2021, Studiul a fost elaborat de Ernst & Young Service SRL ("EY") și este furnizat către Asociația Patronală a Industriei de Software și Servicii.
30. <http://www.theiirp.org/the-mosaic-of-risk-culture>, 10 January 2014, The IIRP, by Grace Walsh and Geoff Trickey.

31. European Commission (2020), *The Digital Economy and Society Index (DESI)*, available at: <https://ec.europa.eu/digital-single-market/en/digital-economy-and-society-index-desi>.
32. https://www.economica.net/analiza-industria-de-software-din-romania-va-creste-la-un-maxim-istoric-de-pest-8-miliarde-de-euro-in-2020-topul-companiilor_193563.html
33. <https://www.romania-insider.com/ro-software-industry-dec-2020>
34. <https://safetyrisk.net/understanding-the-social-psychology-of-risk-and-safety/>
35. <https://www.shponline.co.uk/culture-and-behaviours/risk-type-compliance-and-personal-responsibility/>, January 2022.
36. https://www.treasurers.org/ACTmedia/IRM_riskculture_full_Oct12.pdf
37. https://www.prmia.org/Public/Public/Learning/Risk_Type_Compass.aspx
38. <https://www.iso.org/obp/ui/#iso:std:iso:31000:ed-2:v1:en>
39. <https://www.readkong.com/page/institute-of-risk-management-risk-predictions-2021-9281706>
40. https://ec.europa.eu/growth/smes_en
41. OECD (2022), *OECD Economic Surveys: Romania 2022*, OECD Publishing, Paris, <https://doi.org/10.1787/e2174606-en>
42. <https://levelup.facultateademanager.ro/wp-content/uploads/2021/12/Internationalizarea-IMM-urilor-din-Romania-in-perioada-pandemiei-Insight-uri-din-sectorul-ITC.pdf>
43. https://ec.europa.eu/info/sites/default/files/factsheet-romania_en.pdf
44. https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_4875
45. <https://www.fairwear.org/covid-19-dossier/worker-engagement-and-monitoring/country-specific-guidance/covid19-romania/>.
46. <https://www.psychological-consultancy.com/products/risk-type-compass/>
47. <https://blogs.ec.europa.eu/promotingenterprise/files/2018/11/SME-Annual-report-2017-2018.pdf>
48. <https://www.consilium.europa.eu/en/policies/coronavirus/covid-19-travel-in-the-eu/diplomat>
49. <https://www.thediplomat.ro/2021/09/28/romaniyas-national-recovery-and-resilience-plan-approved-by-the-european-commission/>
50. <https://alientt.com/the-ec-publishes-the-sme-annual-report-2020-2021/>
51. <https://www.worldbank.org/en/country/romania/overview#1>
52. <https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/romania-strategy-digital-agenda-romania-2020>.
53. https://ec.europa.eu/info/sites/default/files/communication-sme-strategy-march-2020_en.pdf.
54. <https://www.iso.org/obp/ui/#iso:std:iso:31000:ed-2:v1:en>