

## RISK MANAGEMENT IN POLISH COMPANIES

Gorzeń-Mitka Iwona

*Czestochowa University of Technology, Armii Krajowej 19B, 42-200 Czestochowa, Poland  
Email: iwona.mitka@zim.pcz.pl*

**Abstract.** Considerations about the necessity of the implementation risk management in micro, small and medium enterprises are presented in this article. The change in the business model is the result of the influence of the external conditions. It was extorted through the dynamically changing environment, the globalization process and the dynamic development of the technology. The paper provides a summary of results research from management risk in polish MSMEs. The study focused on an analysis of activities in the field of risk management including risk identification, analysis and response to risks in the organization.

**Keywords:** risk, risk management, risk analysis, micro, small and medium enterprises (MSMEs).

**Jel classification:** D81, F14, G32, O52

### 1. Introduction

Exploring the decision-making mechanisms of micro, small and medium enterprises (MSMEs) is one of the key areas of economic research. MSMEs, which constitute over 90 % of enterprises in all countries, are an important source of manufacturing and employment. They employ 33 % of workers in low-income countries and 62 % of workers in high-income countries (Vandenberg 2009). In Poland, the importance of this sector is even greater. MSMEs constitute over 99 percent of the total number of entities (94 percent of them are micro entities) and participate in the creation of more than 46 percent of gross domestic product (the largest share of this group are micro entities, which in 2008 formed 29.8 percent of GDP) (GUS 2011). At the same time they belong to a group of companies particularly sensitive to changes in market environment. Therefore, research on risk awareness and behaviour in this area among the group appear to be particularly reasonable.

The purpose of this paper is to discuss the results of research on risk management in the Polish MSMEs.

Object analyzes in the paper are MSMEs organizations and their risk management practices.

The study was conducted using a mixed survey-monographic method. During the study obtained qualitative data. The main research technique was use of the questionnaires. The questionnaire included 30 questions.

Therefore, the paper discusses:

1. literature review on risk management, suggesting areas of research among SMEs;

2. identify key risks MSMEs;
3. MSMEs practice indicators in the highlighted elements of the risk management process - risk identification, risk analysis, risk response.

### 2. Literature review

The issue of risk management in organizations, although extensively discussed on the international level (Beasley *et al.* 2005; Chapman 2007; Economist Intelligence Unit 2010; FERMA 2010; Liebenberg *et al.* 2003), is an insufficiently discussed and recognized area in Poland, particularly in economic practice (Gorzeń-Mitka 2007; Gorzeń-Mitka 2011). World practice shows that risk management has now become an integral part of business activities undertaken by the company, builds value to the organization, shaping the effectiveness of undertaken actions (Hopkin 2010; Lam 2003).

It should be noted that the literature clearly indicates that risk management is still in the early stages of development.

Among the recommendations and standards (BSI 2011; COSO 2004; ISO 2009a; ISO 2009b) there are no documents to suggest how to comprehensively manage risk in MSMEs. It is true that some of the standards (ISO 2009a) suggest that the described principles apply to all types of organizations. But there are so general that point the way than the manual procedure. The literature on MSMEs describes a small number of actual implementations of risk management. Therefore

they become the subject of specific studies (ICAEW 2005; O'Hara *et al.* 2005).

Review of research on risk management in the small and medium-sized enterprises leads to the conclusion that they focus on the following topics:

1. financial risk management and insurance for small and medium enterprises (Mikulska 2009; Henschel 2009; Economist Intelligence Unit 2011). This is an area relatively widely discussed;
2. attitudes to risks in small and medium enterprises (Brouthers *et al.* 1998; Alquier *et al.* 2006; Economist Intelligence Unit 2011; Gurau *et al.* 2007; Schaper *et al.* 2009; Klimek 2008);
3. identification and risk assessment (Leopoulos *et al.* 2006; Wu *et al.* 2009);
4. monitoring of changes in risks (Słobosz *et al.* 2009; FERMA 2010; PARP 2010; Economist Intelligence Unit 2011).

It should be noted that the author found no studies on risk management in micro-enterprises. Recognition of risks and methods awareness as well as methods of dealing with it by MSMEs is a major theme of research undertaken by the author. The grounds for assessment of risk management awareness level in the target group of entrepreneurs in this publication are indications of the respondents regarding the perception of risk, its identification, assessment, and ways of responding to the identified group of key risks in the organization.

### 3. Methodology

Study on risk management in micro and small enterprises was carried out in the first half of 2010 (survey I) and in the first half of 2011 (survey II) among the entities operating in the sub-Silesian region of Czeszochowa. Due to the low awareness of risk management proven in previous author's studies, decisions were taken to use purpose-random selection of entities engaging in an area of interest. Statistical material for the study was gathered through partial studies carried out by a purpose-random selection of statistical collective of SME sector from Czeszochowa subregion. Due to the non-random sampling and sample size, the results and conclusions apply only to companies in the study. Although the small number of responses indicates that the sample is not representative, some general conclusions can be drawn, since the purpose was to conduct exploratory research. Low response level was expected due to the nature of the research and constantly low interest in the topic of risk management.

The study was conducted using a mixed survey-monographic method. The main research technique was use of the questionnaires. A questionnaire developed for survey I was used in survey II to diagnose changes in the perception of risk management issues.

The questionnaire included 30 questions. Questions were closed, however respondents could suggest their own answer, deviating from the proposed ones, in the "other, please specify." The obtained information comes from the owners (survey I –71.4 %, survey II –75.2 %) and managers (survey I –28.6 %, survey II –24.8 %). 483 entities were selected for a study. 54 of them expressed consent to participate in survey I, in survey II – 47. The analysis included 49 surveys in study I and in study II - 40 surveys (questionnaires sent by other entities were filled in incorrectly or incompletely). Thus, responsiveness is obtained at the level of 10.1 % (survey I) and 8.3 % (survey II). The structure of respondents presented as follows:

study I:

- micro-entities –41 %;
- small businesses –19 %;
- medium-sized enterprises –33 %;

study II:

- micro-entities –75 %;
- small businesses –10 %;
- medium-sized enterprises –15 %.

In both studies, a leading group of respondents were micro-entities. Surveyed entities carried out their activities in various areas: production, trade and services. The involvement of production often involves activities in the area of trade. Companies participating in the study were mainly manufacturers offering their final products. This is undoubtedly related to the specificity of the Silesian industrial area.

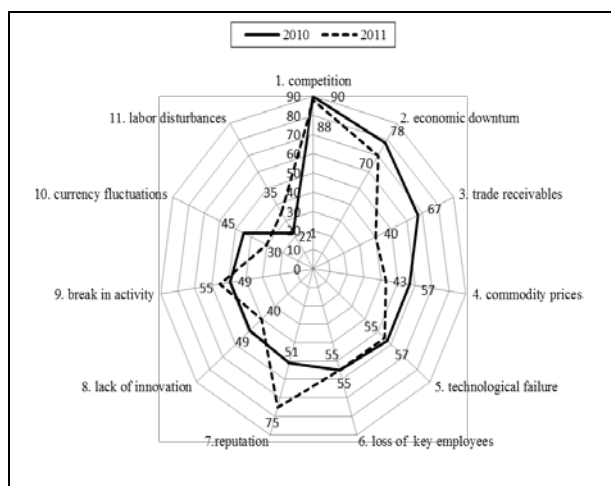
## 4. Risk management practices in MSMEs – research results

### 4.1. Key Risks

Awareness of the factors that may interfere with the carried out activities is an essential element of the approach to the issue of risk in organizations. In the questionnaire presented to companies, the subjects had to indicate the key areas of risk relevant to their businesses. Respondents answered on a broad spectrum of risks relating to their activities. Respondents from the catalogue of potential threats (24 areas of risk), indicated 10, which are crucial for their activities. They have been grouped in five collective categories:

- external factors - fluctuations in commodity prices, climate change, economic downturn, globalization, increasing competition;
- corporate management - loss of reputation, lack of innovation, the increasing demands of corporate governance;
- financial factors - the availability of capital, liquidity risk, trade receivables, currency fluctuations, fluctuations in interest rates;
- operational factors - break in activity, disruption in the supply chain, technological failure;
- human resources – strikes, labor disturbances, loss of key employees.

Factors have helped to identify the registry key risks specific to the business. Catalog of variables was development based on studies conducted by international consulting firm AON (Słobosz *et al.* 2009). Figure 1 presents the key risk factors for MSMEs.



**Fig.1.** Key risk factors for MSMEs (% of responses) (Source: own study)

Increasing competition in the market was identified as a key risk factor in MSMEs. The risk associated with it was identified as crucial for its activity in both –study I and II. The economic difficulties (second generator of risk) observed in recent months in world economy affected primarily micro entities (in 2010, as high as 95 % of micro entities emphasized the importance of this factor, in 2011 it dropped to 83 %. It was also an indication of lower than average for the group). The first two factors imply a third category of risk – trade receivables. These risks identified in 2010, 67 % of respondents MSMEs, when in 2011 only 40 %. Organizations clearly showed the improvement of its activities in this area.

Significant change in the ranking of key risks can be observed in relation to reputation risks. When in 2010, stressed the importance of this factor as the other company, as early as 2011 –

every third. When the first two risk factors can include the external risks, the risk of losing reputation indicates a problem in management.

Among the factors identified in the case until seven MSMEs indicated a reduction in risks. Increase the risks concerned the two factors - the reputation and business interruption. These factors could include the factors that organizations have a significant impact.

Importantly, most of the key risks (both in the survey I and II) obtained an indication of a level equal to or higher than 50 %, and the risks associated with growing competition was indicated by nearly 90 % of respondents.

#### 4.2. Identification of risk

Organizations indicated that they were considering the consequences that may result in the risks they were identifying – 59 % (survey I) (70 % micro and 56 % of small businesses), 28 % (survey II) (30 % micro and 20 % of small businesses). However, only 24 % organizations (survey I) and 18 % (survey II) was considering the causes (sources) of the risks (only every 10<sup>th</sup> micro entity and every 3<sup>rd</sup> small entity). What as a consequence of the key risk ranking, in which a significant group of identified risks are the internal risks, depending on how organizations function, seems to be worrisome.

A similar inconsistency was observed during the research is to identify the extent of the risks relevant to the organization. Respondents in two separate questions had to indicate whether comprehensive and systematic identification of risks is conducted in all areas of their business and whether the company keeps a register of risks.

With regard to the first question 49 % MSMEs (survey I) and in this 50 % micro and 44 % small entities (with respectively 20 % and 11 % answered “no opinion”) emphasized that their companies conducted a systematic and comprehensive review of risks.

When, in answer to the second question, 82 % MSMEs (85 % micro and 89% of small entities) admitted that they did not keep the register of risks occurring.

In study II, making a comprehensive and systematic identification of risks reported 33 % of MSMEs. At the same time, 90 % claimed that they do not register of risks.

This inaccuracy may be due to the lack of basic knowledge on the construction of the risk management process in the organization. Because as stated, among other things in the latest risk management standard, ISO 31000:2009 (ISO 2009a), risk register is a key element of building

an effective risk management system in an organization. Counterweight to the above, however, may be a claim that 65 % (survey I) and 70 % (survey II) of companies declared that their actions in the identification of risks are considered to be effective.

The study showed the intuitiveness of activities related to key areas of uncertainty in the organization. The basic tools used to identify risks were the earlier experience of management, brainstorming and SWOT analysis (respondents were presented 10 tools used in the field of European business practices).

**Table 1.** Risk identification tools and techniques (% of responses, max. 3 answers) (source: own study)

Specification	MSMEs		
	2010	2011	change
previous experience	78	68	-10
documentation review	43	50	+7
Brainstorming	39	28	-11
opinions of experts	31	20	-11
process analysis	31	20	-11
surveys / polls	10	18	+8
SWOT analysis	37	13	-24
interview / discussion	12	10	-2
focus groups	29	5	-24
simple modeling	6	0	-6

Most of the companies surveyed identified several tools used in this area; however, as presented in Table 1, the experience and intuition are the primary way to identify risks. Most often, MSMEs rely on their own experience in identifying risks – 95 % of micro entities. Third of respondents (survey I) indicated the importance of expertise in the areas of threat detection (only ¼ in study II). This result may: lack of knowledge and skills in the use of other tools, beliefs about their low efficiency or conviction of the high cost of application.

For example, a study “FERMA European Risk Management Benchmarking Survey 2010” (FERMA 2010) which involved 782 subjects from 20 countries shows that the main tools for identifying and measuring risks are workshops, internal and external risk registers, scenario analysis, Value at Risk simulation and stochastic models.

### 4.3. Risk analysis

Risk analysis is a central core of the risk management process. Proper risk assessment translates directly into the effectiveness of security and choice of reaction to risk. Consequently it translates to the level of costs and possible losses due to the scale of the risk. Risk analysis in the surveyed enterprises is carried out mainly due to the financial consequences that may occur in the

event of risks and other pejorative consequences of the risk. As a important factor, subjects indicated the impact of risk effects on the reputation of the company.

But when I study for this item to the attention every second enterprise, as in study II already at third Additionally, this is another inconsistency in risk perception by MSMEs, which was in study II underlined the growing importance of reputation risk (Fig. 1).

Interestingly, 47 % of surveyed entities indicated probability of risky events as an objective of carried out analysis. Specific indications are presented in Table 2.

**Table 2.** Purpose of risk analysis (% of responses, all answers significant for the entity) (source: own study)

Specification	MSMEs		
	2010	2011	change
The financial implications of the existence of risk	67	55	-12
Consequences	59	25	-34
Impact on reputation	55	30	-25
Occurrence probability	47	45	-2
Achieving the corporate objectives	45	28	-17

Analysis of the data contained in Table 2 also leads to the conclusion that only a quarter of MSMEs combines risk analysis with the objectives of the organization. This is another confirmation of the lack of awareness of this group of companies in the field of risk management. All processes in the organization should be directly or indirectly related to its objectives.

Methods used in the risk analysis are primarily qualitative methods of analysis. 80 % of surveyed companies reported the use of these methods (though not systematically). There were 80% micro, and only 66 % small entities in this group (survey I) and same 50 %, 90 % (survey II). Entities surveyed also showed relatively frequent use of methods for quantitative analysis (59 % of all companies surveyed, in which 55 % fell on micro enterprises and 33 % for small).

The risk analysis carried out by studied organizations includes short-term perspective. As many as 39 % (survey I) and 50 % (survey II) indicated that the analysis they conducted only considers the present risk (of which 50 % of the responses were made by micro and 33 % by small entities (survey I) and same 53 %, 40 % (survey II). However, in view of the next 1 – 2 years 45 % (survey I) and 40 % (survey II) of all entities, (including 35 % – micro and 67 % – small entities (survey I) and same 40 % (survey II). Consideration of changes that may cause the risk for a

longer period was only declared by every sixth company.

These findings confirm the study of A. Mikulska (Mikulska 2009). It has been shown that the analysis of risk among the SMEs sector entities is a rare practice (on 101 subjects included in the study only 17 performed risk analysis) and the majority (71.29 % of surveyed entities) does not see the need for analysis of the risks specific to their business (only 6 percent. indicated that they did not know what is the risk analysis).

#### 4.4. Response to risk

Organization's reaction to risk can take many forms. Literature distinguishes four main groups of activities in this field, i.e. Acceptance, avoidance (eg. cessation of activities in the area of risk), reduction (eg. through control and monitoring) and risk transfer (eg. an insurer). Practice shows that the last of these forms is the primary way to answer the organization's risk.

Knowledge and application of the above-mentioned ways was declared in the group of surveyed companies. From those four ways to respond, most operators reduce risk through its control – 86 % of all entities, (85 % of micro and 89 % of small entities (survey I)) and same 83 %, 87 % of micro and 70% of small entities (survey II). Key risks insurance applies to 73 % of companies (survey I,II). The purchase of insurance is primarily caused by the awareness of the likelihood of materialisation of a risk and legal responsibility (Mikulska 2009).

Entities declared a higher awareness of the reaction to risk. However, the analysis of earlier stages of the risk management process, and inconsistencies indicated there, appear to give grounds to conclude that these responses are still the result of low entrepreneurs' awareness in this area. Nevertheless, we can say that the issue of risk management is increasingly becoming a part of business thinking and reaction. Although most of these are not systemic actions (not yet part of a mature, overall process of risk management, so-called enterprises risk management) is clearly a positive effort made by companies in the diagnosis of the problem of risk. Awareness of the role of risk in decision-making by the author seems to be the first step to the conscious implementation of ERM in entities of the region.

#### 5. Conclusions

Consideration of risk in decision-making is now becoming an important element influencing the effectiveness of the organization (Bernstein 1996).

Risk management, particularly by the concept of ERM is not yet sufficiently recognized in Poland. This applies to both private and public sectors. However, growing awareness of the role of risk in taking business activities of enterprises leads them to searching for new and effective tools for risk mitigation (especially among the companies forming the core of any economy (MSMEs). Although the findings presented in the study cannot be generalized to the entire population, they seem to indicate a significant area for both theoretical and empirical research. This leads to further in-depth qualitative research in this field. It should be emphasized, moreover, that the data included in hereby analysis represent part of a larger study, and show only the key elements of MSMEs risk management process.

#### References

- Alquier, A. M. B.; Tignol, M. H. L. 2006. Risk management in small – and medium-sized enterprises, *Production Planning & Control*, 17(3): 273–282.  
<http://dx.doi.org/10.1080/0953728050028534>
- Beasley, M. S.; Clune, R.; Hermanson, D. R. 2005, Enterprise risk management: An empirical analysis of factors associated with the extent of implementation, *Journal of Accounting and Public Policy* 24: 521–531.  
<http://dx.doi.org/10.1016/j.jaccpubpol.2005.10.001>
- Bernstein, P. L. 1996, *Against the Gods: The Remarkable Story of Risk*. John Wiley & Sons, Inc. New York-Chichester-Brisbane-Toronto—Singapore.
- Brouthers, K. D.; Andriessen, F.; Nicolaes, I. 1998. Driving Blind: Strategic Decisionmaking in Small Companies, *Long Range Planning* 31(11): 130–138.  
[http://dx.doi.org/10.1016/S0024-6301\(97\)00099-X](http://dx.doi.org/10.1016/S0024-6301(97)00099-X)
- BSI 2011. *BS 31100:2011 Risk management – Code of practice and guidance for the implementation of BS ISO 31000*, British Standards Institution, London.
- Chapman, R. J. 2007. *Simple tools and techniques for enterprise risk management*, John Wiley & Sons, Inc. New York-Chichester- Brisbane-Toronto-Singapore.
- COSO. 2004. *Enterprise Risk Management - Integrated Framework*, The Committee of Sponsoring Organizations of the Treadway Commission.
- Economist Intelligence Unit. 2010. *Fall Guys: Risk Management in the Front Line. Independent Industry and Management Research*. [online] [accessed 15 December 2011], Available from internet: <http://www.businessresearch.eiu.com/fall-guys.html>
- Economist Intelligence Unit. 2011. *Europe's small and medium-sized companies look to emerging markets for growth*, Economist Intelligence Unit, 2011 [online] [accessed 15 December 2011] Available

- from internet:  
<http://www.managementthinking.eu.com/new-horizons.html>
- FERMA. 2010. *European Risk Management Benchmarking Survey*, [online] [accessed 15 December 2011] Available from internet:  
<http://www.ferma.eu/wp-content/uploads/2011/10/ferma-risk-management-benchmarking-survey-2010.pdf>
- Gorzeń-Mitka, I. 2007. *Ryzyko w eksporcie. Metody i sposoby ograniczania*, KeyText, Warszawa.
- Gorzeń-Mitka, I. 2011. Zarządzanie ryzykiem w praktyce mikro i małych przedsiębiorstw, *Zeszyty Naukowe Uniwersytetu Szczecińskiego* 638: 322–329.
- GUS. 2011. *Zmiany strukturalne grup podmiotów gospodarki narodowej wpisanych do rejestru REGON*, Warszawa. [online] [accessed 15 December 2011]. Available from internet:  
[http://www.stat.gov.pl/cps/rde/xbcr/gus/PUBL\\_pgw\\_f\\_zmiany\\_strukturalne\\_grup\\_podmiotow\\_Ipol\\_2011.pdf](http://www.stat.gov.pl/cps/rde/xbcr/gus/PUBL_pgw_f_zmiany_strukturalne_grup_podmiotow_Ipol_2011.pdf)
- Gurau, C.; Ranchhod, A. 2007. Flexible Risk Management in New Product Development: The case of Small–and medium–sized Biopharmaceutical Enterprises, *International Journal of Risk Assessment and Management* 7(4): 474–490.  
<http://dx.doi.org/10.1504/IJRAM.2007.012741>
- Henschel, T. 2009. Typology of Risk Management Practices: An Empirical Investigation into German SMEs, *Journal of International Business and Economic Affairs* 1(1):1–28
- Hopkin, P. 2010. *Fundamentals of Risk Management*, Kogan Page, London, 2010.
- ISO. 2009a. *Risk Management – Principles and Guidelines. ISO 31000:2009*. International Standard, International Organization for Standardization, [online] [accessed 15 December 2011]. Available from Internet: [http://www.lesia.insa-toulouse.fr/~motet/papers/ISO\\_FDIS\\_31000\\_\(E\).pdf](http://www.lesia.insa-toulouse.fr/~motet/papers/ISO_FDIS_31000_(E).pdf)
- ISO. 2009b. *Risk Management – Vocabulary, ISO Guide 73:2009*. International Standard, International Organization for Standardization [online] [Accessed 15 December 2011] Available from internet:  
[http://www.pqm-online.com/assets/files/standards/iso\\_iec\\_guide\\_73-2009.pdf](http://www.pqm-online.com/assets/files/standards/iso_iec_guide_73-2009.pdf)
- ICAEW Consultation & Research Centre. 2005. *Risk management among SMEs – executive report of discovery research*. [online] [accessed 15 December 2011] Available from Internet:  
<http://www.cpaireland.ie/UserFiles/File/Technical%20Resources/SME%20Resource/ICAEW%20Risk%20mgt%20among%20SMEs.pdf>
- Klimek, J. 2008. *Doskonalenie efektywności małych i średnich przedsiębiorstw*, Wydawnictwo Marszałek, Toruń.
- Lam, J. 2003. *Enterprise Risk Management*. John Wiley & Sons, Inc. New York-Chichester-Brisbane-Toronto-Singapore.
- Leopoulos, V.; Kirytopoulos, K.; Malandrakis, C. 2006. Risk Management for SMEs: Tools to use and how, *Production Planning & Control* 17(3): 322–332.  
<http://dx.doi.org/10.1080/09537280500285136>
- Liebenberg, A. P.; Hoyt, R. E. 2003. Determinants of Enterprise Risk Management: Evidence from the Appointment of Chief Risk Officers, *Risk Management and Insurance Review* 6:37–52.  
<http://dx.doi.org/10.1111/1098-1616.00019>
- Mikulska, A. 2009. Świadomość ubezpieczeniowa przedsiębiorców sektora MSP. Wyniki badania praktyk ubezpieczeniowych, *Wiadomości Ubezpieczeniowe* 2: 81–101.
- O’Hara, R.; Dickety, N.; Weyman, A. 2005. Good Practice in Assessing Workplace Risks by Small and Medium-sized Enterprises, *Risk Management. An International Journal* 7(1): 31–41.  
<http://dx.doi.org/10.1057/palgrave.rm.8240203>
- PARP. 2010. *Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2008–2009*, PARP, Warszawa.
- Schaper, M. T.; Dana, L. P.; Anderson, R. B.; Moroz, P. 2009. Distribution of firms by size: observations and evidence from selected countries, *International Journal of Entrepreneurship and Innovation Management* 10(1): 88–96.  
<http://dx.doi.org/10.1504/IJEIM.2009.024676>
- Słobosz, J.; Ziomko, R. 2009. *Zarządzanie ryzykiem i ubezpieczeniami w firmach w Polsce*. Warszawa: AON sp. z o.o. [online] [accessed 15 December 2011] Available from internet:  
[http://www.pid.org.pl/uploads/AON%20Polska\\_Zarzadzanie%20ryzykiem%20i%20ubezpieczeniami.pdf](http://www.pid.org.pl/uploads/AON%20Polska_Zarzadzanie%20ryzykiem%20i%20ubezpieczeniami.pdf)
- Wu, D. D.; Olson, D. L. 2009. Enterprise risk management: small business scorecard analysis, *Production Planning & Control* 20(4): 362–369.  
<http://dx.doi.org/10.1080/09537280902843706>
- Vandenberg, P. 2009. *Micro, small and medium-sized enterprises and the global economic crisis: impacts and policy responses*, International Labour Office, Sustainable Enterprise Programme. - Geneva., p.8. [online] [accessed 15 December 2011] Available from internet: [http://www.ioe-emp.org/fileadmin/user\\_upload/documents\\_pdf/globaljobs\\_crisis/ilorelateddocs/2009\\_June\\_SME\\_crisis\\_sstrategies\\_ILO.pdf](http://www.ioe-emp.org/fileadmin/user_upload/documents_pdf/globaljobs_crisis/ilorelateddocs/2009_June_SME_crisis_sstrategies_ILO.pdf)