

SCENARIO ANALYSIS AS A TOOL FOR COUNTRY RISK ASSESSMENT: A THEORETICAL EXPLORATION

Henk van den Berg

Rotterdam Business School, Holland
e-mail: h.van.den.berg@hr.nl

Abstract

Purpose: This article is an exploration of the applicability of scenario analysis in country risk assessment executed by decision makers in small and medium sized enterprises when they engage in international business.

Approach: The exploration is realized through two assessment. In the first assessment it is presented whether country risks can be classified as highly complex and highly uncertain according to the forecasting methods classified by Schoemaker (2009) and the argumentation whether country risks need to be classified as risk or uncertainty. For the second assessment it is presented whether the assessment of country risks according to the method of scenario analysis assumes the use of judgmental heuristics and the occurrence of bias in accordance with the heuristics and biases approach described by Kahneman and Tversky and identified in country risk assessment by Van den Berg (2013).

Findings: The first conclusion of this exploration is that approaching country risk assessment with the support of scenario analysis supports decision makers in a fundamental manner and hence, contributes to the well-functioning of the company. The second conclusion is that, although the heuristics and biases that occur due to judgment and decision making under uncertainty are not supposed to occur anymore, a different set of biases is to be expected.

Implications: Although scenario analysis seems to be a valid technique to be used in country risk assessment, further research is required to determine how it should be operationalized for small and medium sized enterprises.

Keywords: Country risk assessment, Scenario analysis, Judgment and decision making

Paper type: Conceptual paper

1. Introduction

The on-going process of globalisation (even if slightly interrupted due to the economic crisis) requires more and more and ever smaller companies to become active across borders. However, getting involved in another (economic) context is more complex than in one's own country, resulting in additional risks: country risks. This in turn results in the demand for ways and means of managing these risk.

In his PhD thesis *Country risk assessment; A Behavioral Perspective* Van den Berg (2013) demonstrates that small and medium sized enterprises that engage in international business use an incomplete set of process steps when they assess the country risks that are potentially present in a foreign market under consideration. Hammond, Keeney, and Raiffa (2002) explain that decision processes should be executed completely (all steps should be taken) because it helps to “manage complexity [of the decision] sensibly”. Also, the decision-makers in question use judgmental heuristics in the assessment of country risks, resulting in judgmental bias. An incorrect assessment of country risks in international business decisions, caused by the incomplete execution or the use of judgmental heuristics, may well result in decision errors of type I and II. A type I decision error occurs when a good investment is rejected because based on the assessment the investment looks poor. A type II decision error occurs when a poor investment is accepted because based on the assessment the investment looks good.

This article explores whether the technique of scenario analysis as presented by amongst others Van der Heijden (2011) can be used to improve the assessment of country risks in the evaluation and decision making process in international business engagement. This exploration is initiated based on Schoemakers (2009) categorization of scenario analysis as a means of dealing with an unknown future in an environment of high uncertainty and high complexity. Furthermore, because scenario analysis cannot be considered a forecasting technique (Schoemaker, 2009; Van der Heijden, 2011), the question that will be answered in this article is whether the use of scenario analysis can lead to the minimization or even termination of the use of judgmental heuristics that are used in judgment and decision making under uncertainty.

2. Problem Definition

In the last few years risk management finds itself more and more in the spotlight of both the management literature and the professional field. This development is one of the results of major fraud cases in the beginning of the 21st century (e.g. Enron, Worldcom, Tyco) and the economic crisis from 2008 onwards. Companies are now more and more required to include processes of operational and financial risk management in the execution of the day-to-day business to prevent the unexpected from happening. As a consequence the attention for country risk management has also intensified. Baird and Thomas (1985) already mentioned in 1985 that “...because risk is a significant determinant of foreign investment there is a need for the relevant decision makers to identify, estimate, and assess the relevant risk and to respond to it”. However, scientific research so far did not present a comprehensive framework that is useful for small and medium sized enterprises. This type of enterprises is a specific group because

they normally do not have specialists in (country) risk management, are focussed on entrepreneurial aspects of opportunity seeking, and are always under the pressure of limited time and means (Van den Berg, 2012). The current literature mainly shows extensive methods for political and economic risk assessment and often mentions that they are next to impossible to implement without the help of experts.

In his PhD thesis Van den Berg (2013) studies how decision-makers in small and medium sized enterprises execute the process of country risk assessment, the use of heuristics in the assessment of country risks and whether that leads to judgmental bias. In the execution of the process of country risk assessment a number of limitations were identified like incomplete and unstructured execution of the decision making process, incorrect and bounded risk identification and intuitive risk assessment (Van den Berg, 2013). In order to determine whether the use of scenario analysis may overcome the present limitations in country risk assessment it first needs to be established whether it may be used in country risk assessment. Then the use of scenario analysis to support decision makers in overcoming the above mentioned limitations in the process of country risk assessment will be determined. Thirdly, alternatives to the use of judgmental heuristics will be presented to prevent judgmental bias from occurring.

3. Forecasting and Scenario Analysis

To decide whether scenario analysis can be used in country risk assessment, the conditions for using scenario analysis as a technique for making statements about an unknown future need to be determined. Although scenario analysis cannot be categorized as a forecasting technique because it does not assign probabilities to the different identified possible futures, this article will refer to scenario analysis as a forecasting technique to align with most of the used literature. Schoemaker (2009) defines forecasting as “making predictions about an unknown question or issue” and suggests that the forecasting technique used depends on two variables, complexity and uncertainty. Complexity is defined as “the number of variables and the extent to which they are interrelated” (Schoemaker, 2009) and uncertainty is defined as “the degree of available knowledge about the target variable, whether simple or complex” (Schoemaker, 2009). Based on these two variables Schoemaker presents a table that represent the different forecasting techniques that belong to the different combinations of complexity and uncertainty (Figure 1).

Against this backdrop the question that is answered in this article is whether country risk assessment as the forecasting context can be categorized as highly complex and highly uncertain.

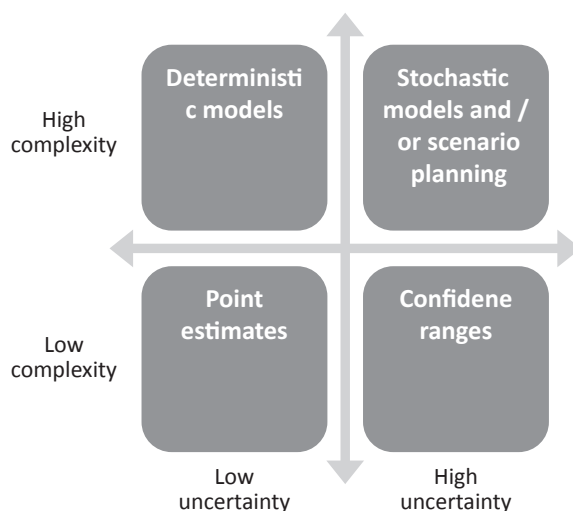


Figure 1.
Complexity and
uncertainty

Source: Schoemaker
(2009).

4. High Complexity: the Taxonomy of Country Risk*

When studying the literature country risk appears an ambiguous concept. Most authors have their own description for the concept and definition of country risk (or the specific words they use for it). Consequently, definitions are often aimed at one or more specific, but not always overlapping areas in international business and hence, do not provide an overall perception.

Bouchet et al. (2003) investigate the different approaches to country risk available from literature by differentiating between the background of country risk and the definitions of country risk. This classification will be used to investigate whether country risk can be categorized as high complex according to the definition of Schoemaker (2009). Next, the different typologies of country risk will be discussed.

4.1. Background

Every SME and entrepreneur that engages in international business assesses the risks that are involved in crossing national borders in one way or the other. Although international business is something that goes back for centuries, the interest of the academic world for international risk management only started after the economic crises of the 20th century. The first signs of academic interest in international risk assessment appeared in the 1960s by academics like Usher (1965) and Root (1968). According to Bouchet et alia (2003) the actual starting

* With the exception of the first supposition presented at the end this paragraph is taken from Van den Berg (2013).

point for the interest in international risk may be found in the expropriation of US firms during the Cuban revolution (1953–1959). However, other crises like the debt crisis of the '80s, the Chilean collapse in 1982, the debacle of the Mexican Peso in 1994 and the Asian crisis of 1997 to name a few, increased the attention of international risk and international risk assessment as part of the decision-making process of international business.

In the early days of academic interest in international risk analysis the object of analysis was called 'political risk'. The aim of the analysis was to determine the foreign investment climate by defining the stability or instability of local political systems and to determine what the effect would be on the enterprise's activities in the host country. White and Fan (2006) show this by presenting the country risk sub-components of research by different theorists in the field of country risk. They also show that in the beginning the focus was on the political part of country risk, whereas later research also incorporates economic and financial variables in the analysis. This is consistent with the description that Bouchet et al. (2003) give on the extension of the scope of international risk assessment. Accordingly, the terminology on international risk changed from 'political risk' to 'country risk'. Bouchet et al.: "the term "country risk" as opposed to "political risk" has been gaining ascendancy because it has a broader meaning in that it can include any risk specific to a given country, whereas "political risk" restricts the risks to those that are exclusively political in nature".

4.2. Definition

Many definitions for country risk may be found in the literature. According to Madura and Fox (2011) the definition of country risk is "the potentially adverse impact of a country's environment on an MNC's cash flows" where MNC is an abbreviation for a 'multinational company'. The question that remains unanswered in this definition is what is meant by 'a country's environment'. Olsson (2002) presents a more specific, but also narrower definition of country risk and defines it as "the risk that a foreign currency will not be available to allow payment due to be paid because of a general lack of foreign currency, or a relevant government rationing what is available". This definition is very narrow because it describes the root cause of country risk as the availability of the local currency. On the other hand White and Fan (2006) give a very broad definition: "country risk is the unanticipated 'downside' variability in a key performance indicator, or significant strategic target, which results from engaging in international business transactions with an inevitable exposure to the performance and policies of a sovereign country other than the home country. It is, therefore, the risk which attaches to international business transactions as a consequence of the existence of national boundaries". With this definition White and Fan (2006) express that country risk is born out of the interaction that an enterprise has with the government and the environment

of the host country. Therefore, the government and the environment of the host country can be considered as part of the strategic environment of the enterprise and the source or the starting point of country risk. Because the definition of White and Fan (2006) is the most complete definition, both concerning the impact country risks can have on the organization as also the sources of country risk, it will be used in the remaining part of this article as the definition for country risk.

4.3. Country risk typology

Madura and Fox (2007) divide country risks into two parts: political risk factors and financial risk factors (Table 1). Madura and Fox (2007) define political risk factors as the influence of country characteristics that are related to the political environment. One of the most extreme forms of political country risk is expropriation, when a host's country government nationalizes companies, sometimes with compensation but often without. The second part of country risk is formed by the financial risk factors. Companies benefit from growing and successful economies as markets for their products or locations for their production facilities.

Political risk factors	Financial risk factors
<ul style="list-style-type: none"> • Attitude of consumers in the host country • Actions of the host government • Blockage of fund transfers • Currency inconvertibility • War • Bureaucracy • Corruption 	<ul style="list-style-type: none"> • Interest rates • Exchange rates • Inflation

Table 1.
Risk factors

Source: Madura and Fox (2007).

Madura and Fox (2007) state that the political and financial risk factors mentioned are the most important ones, but they do not give an exhaustive overview of risk factors. Next to the financial risk factors mentioned for instance, factors like government budget, employment rates, balance of trade, et cetera are not only relevant in determining the economic growth of a country, but also for the foreign direct investment decision.

Bouchet et al. (2003) give a different classification of country risk based on a review of the literature. They identify three different categories of country risk. The first category is natural disaster, which is defined as “the natural phenomena (seismicity, weather) that may negatively impact the business conditions” (Bouchet et al., 2003). For this category they emphasize that the features of the natural phenomena have to be different than they are in the home country. If they are equal, the phenomena cannot be classified as country risk; expectations of occurrence equal those in one's own country. The second category is social-

political risk, which is defined as “all possible damaging actions or factors for the business of foreign firms that emanate from any social group, political authority or governmental body in the host country” (Bouchet et al., 2003). This country risk category is subdivided into social risk, government policy risk and, political risk. The last category is country-specific economic risk and is defined as “the result from political mismanagement but, contrary to the socio-political risk discussed above, it should not be the explicit consequence of a political choice” (Bouchet et al., 2003). This category is subdivided into macro risk and micro risk, which leads to the distinction between risks that influence all foreign enterprises or only specific sectors or activities.

White and Fan (2006) developed a comprehensive overview of country risk (Table 2). They developed a typology of country risk by firstly studying the existing literature in the area of country risk. The literature was reviewed on three criteria: “the theorist aspires to (1) being comprehensive, the analysis is (2) oriented to FDI and not to other decisions, the work has often been (3) cited and

Political Risk sub components

- Change of government including democratic changes through elections, coup d'etats, and revolutions.
- Political instability, resulting from factional rivalries, regional conflicts, imbalances of power within the ruling group, and coercive measures by government directed at certain groups.
- External insecurity, including the danger of wars, invasions, and foreign-inspired disorders.
- Internal insecurity, including a high level of criminal activity and social conflict, sometimes resulting from job insecurity and high unemployment.
- Armed conflicts including internal rebellion and civil war.
- Kidnapping and extortion.
- Breakdown of law and order.
- Acts of terrorism.
- Competing political philosophies, including nationalism, and dependence on an outside major power.
- Policy discontinuity.

Economic risk sub components

- Long-run slowdown of economic growth, including at worst a sustained deterioration in the level of GDP per capita.
 - Deficit in current account of the balance payments.
 - Persistent depreciation of the exchange rate.
 - High inflation rates
 - A significant increase in interest rates.
 - Currency fluctuations.
 - Diminished ability to borrow abroad.
 - Infrastructure deficiencies.
 - Bureaucratic delays.
-

Table 2.

Country risk sub components

Source: White and Fan (2006).

Financial risk sub components

- Restriction/difficulties in access to credit and the capital market.
 - Vulnerability in credit rating.
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Cultural risk sub components

- Ignorance of the patterns of business behaviour.
 - Language barriers.
 - Ethnic/religious tensions.
 - Corruption and nepotism.
 - Differences in negotiating styles
-

Table 2.
continued

continues to be cited” (White and Fan, 2006). The second source for developing a typology of country risk consists of ten rating agencies that use country risk in their ratings. The result of the analysis is an overview of 25 country risks, ordered by political risk, economic risk, financial risk, and cultural risk and contains 26 sub-components.

4.4. First supposition

As mentioned above, the first supposition is whether scenario analysis can be used as a forecasting technique. In this context the definition of complexity by Schoemaker (2009) was mentioned: “the number of variables and the extent to which they are interrelated”. The background of country risk already expresses that due to the decolonisation movement after World War II, the increasing interconnectedness of the financial system, and intensification of globalisation (Van den Berg, 2013), the field evolved from political risk to a much broader concept of country risk. Hence, nowadays within country risk assessment a large number of variables need to be assessed. Specifically the definition of country risk and the typology designed by White and Fan (2006) are very explicit on that score. However, the extent to which the different variables interrelate has not been elaborated on. Although it is not presented in the context of country risk assessment, interrelation can be described by using approaches from the field of international economics. This aligns with the sources presented and the interdependencies of political, economic, and financial policies. For example, one of the recommendations from Van den Berg (2013) on forecasting exchange rate movement shows that the extent to which exchange rates are expected to change can be determined by reviewing different influencing variables, such as expectations concerning inflation and the extent to which government controls will change.

In conclusion, country risk assessment applies to Schoemaker’s (2009) definition of complexity.

5. Risk versus Uncertainty*

The second step in determining the applicability of scenario analysis in country risk assessment is to make a distinction between risk and uncertainty and the determination in which category country risks should be allocated (in particular high complexity and high uncertainty; second supposition). This needs to be done in order to determine whether country risk applies to the precondition of uncertainty that scenario analysis aims at.

Bernstein (1998) argues that concepts of risk and uncertainty can be traced back to the ancient Greeks and the way in which thinking about risk and uncertainty developed from then till modern day Wall Street. Although a large number of people contributed to the development of perceptions of risk and uncertainty in general (Pascal, Fermat, Bernouilli, La Place, Gauss etc.), the main contribution within the scope of this article was made by Knight (1921). In his work *Risk, Uncertainty, and Profit* (1921) he makes a distinction between risk and uncertainty: risks are presented as measurable uncertainties and true uncertainty as the immeasurable part.

5.1. Definitions of risk and uncertainty

In the field of international business, risk is defined by a number of writers. Culp (2001) defines risk as “any source of randomness that may have an adverse impact on a persona or corporation”. Olsson (2002) defines risk as “the uncertainty of future outcomes”. Aven (2003) uses a similar definition: “risk is uncertainty about the world”. White and Fan (2006) define risk as “the possibility of an unanticipated event, or change in behaviour, which has a negative impact on a key performance indicator or on the achievement of some strategic objective, one sufficiently significant to justify a response by relevant decision makers”. An analysis of these definitions shows that the terms ‘risk’ and ‘uncertainty’ are both used when referring to international risks. Miller (1992) points at the use of the term risk with a rather wide connotation. It is used “to refer on the one hand to a general lack of predictability in form performance outcomes, and on the other to the unpredictability of organizational and environmental variables which have an impact on performance predictability, or simply a lack of information concerning these variables”.

As discussed by Frank Knight (1921) a distinction has to be made between risk and uncertainty to determine whether country risk has to be measured from a statistical basis or from a subjective judgment basis; whether it may be calculated or can merely be assessed. From the perspective of scenario analysis, Van der Heijden (2011) uses the concept of uncertainty and identifies three categories.

* This paragraph is taken from Van den Berg (2013) with the exception of the second supposition presented at the end.

- 1) “Risks, where there is enough historical precedent, in the form of similar events, to enable us to estimate probabilities (even if only judgmentally) for various possible outcomes.”
- 2) “Structural uncertainties, where we are looking at the possibility of an event which is unique enough not to provide us with an indication of likelihood. The possibility of the event presents itself by means of a cause/effect chain of reasoning, but we have no evidence for judging how likely it could be.”
- 3) “Unknowables, where we cannot even imagine the event. Looking back in history we know that there have been many of these, and we must assume that his will continue in the future. But we have no clue what these events could be.”

White and Fan (2006) state, “in the literature the distinction between risk and uncertainty is usually made in a simple way. Risk is the set of calculable possible future outcomes for a relevant performance indicator, a known set of probabilities. By contrast, uncertainty relates to what cannot be known because it is in some sense unpredictable and therefore non-quantifiable”. Bouchet et al. (2003) present three possible reasons for the inability to measure uncertainty in a probabilistic manner. “First, the system may be too complex to be measured. [...] Alternatively, it may be because we don’t have a long enough time series to extrapolate the underlying probability law. [...] Lastly, another argument could lie in the permanently changing and inherently unstable nature of the environment.” White and Fan (2006) refer to Graaff (1963) and Miller (1992), who elaborate on the concept of uncertainty. Graaff (1963) states “uncertainty is not to be thought of as a quantitative thing like the chance or numerical probability of a coin showing heads when tossed a large number of times. It refers to something qualitative”. Within the question of quantitative and qualitative measurement of uncertainty, Winterfeldt and Edwards (1986) discuss the difference between probability and real world events, of which the toss of a coin is one example that is very practical. They explain the coin toss as “the textbook example of relative frequency” and discuss “whether a particular relative frequency is an appropriate estimator of probability”. The probabilities of 0.5 that the coin will land on heads and 0.5 that the coin will land on tails is based on conditions that are not to be found in what Winterfeldt and Edwards (1986) call “real life”. There are two arguments for that. First, when the coin is thrown in a frequency under identical circumstances, the result has to be identical after each throw. This means that if conditions are not completely random, the result will never be a probability of 0.5 / 0.5 heads and tails. Next to real life conditions, 0.5 / 0.5 probabilities assume an infinite amount of coin throws, which is also not representative for real life situations. A more realistic frequency is probably 523 times heads out of 1,000 throws, or 5,014 tails out of 10,000 throws.

Knowledge and an opinion about uncertainty are closely linked to each other (more knowledge implies less uncertainty), Winterfeldt and Edwards (1986) write that “although your opinion about the future behaviour of a coin, or about any other uncertain hypothesis, may differ radically from your neighbour’s, your opinion and his or hers will ordinarily be so transformed by a series of relevant observations as to become nearly indistinguishable”. This statement has to lead to the conclusion that when all actors are equally informed, their opinions on uncertainty have to be equal, or at least near equal. Because judgment is not only an opinion based on information presented by the outside world, but is also influenced by mental processes, this conclusion cannot hold. Winterfeldt and Edwards (1986) refer to that situation as the ‘personalistic view’ where all probability assessments are personal and will differ from individual to individual. To which part of the continuum between risk and uncertainty country risk belongs, is elaborated upon by Meldrum (2000). “Many of the individual events investigated by country risk analysis fall closer to uncertainties than well-defined statistical risks. This forces analysts to construct risk measures from theoretical or judgmental rather than probabilistic foundations”. Based on Meldrum (2000) it has to be concluded that, although country risk is presented as a ‘risk’, it needs rather to be treated as an uncertainty. Treating country risks as uncertainties aligns it with the explanation of the ‘personalistic’ view by Winterfeldt and Edwards (1986) and makes human judgment and subjective probabilities or degrees of belief the objects of studying country risk assessment.

5.2. Second supposition

Country risk has to be viewed as an uncertainty. This supposition is based on two arguments related to two categories of country risk. First, a number of country risks that are defined by White and Fan (2006) can be considered risks of which historic information is available. In general economic and financial risk belong to this category. Although these risks vary on a continuous basis, one cannot assume that the variance and direction of movement, observed in the past will repeat itself in the future because the risks observed do not vary and do not move on the basis of historic behaviour but on the basis of fundamental variables. This means that although historic information is available, it is not a reliable predictor of future behaviour.

The second argument concerns the country risks that do not show a large historical trail, but have to be considered as one-time events. The line of reasoning for this category of risk as uncertainty is that when they could be forecasted, they would not occur or the effects would be very small. Examples include the attacks on the World Trade Center in 2001 or the economic crises the world is in today. All these events have a major impact on the stability in specific regions and sometimes the whole world and in hindsight, can be

forecasted. These kinds of events are labelled black swans by Nassim Nicholas Taleb.

6. Final supposition and conclusions

This paper shows that scenario analysis can be used as a tool in country risk assessment because it aligns to the requirements of complexity and uncertainty. What is unclear so far is whether this method will also limit the use of heuristics and consequent judgmental biases, which may be the result of it. Because scenario analysis does not require a process of judgment and decision-making under uncertainty, it can be expected that the biases as identified by Van den Berg (2013) will not occur. Nevertheless, a lot of challenges still need to be overcome, necessarily leading to suggestions for future research. Schoemaker (2009) for instance presents a number of areas that should be studied.

The main challenge to overcome in the field of uncertainty - which Schoemaker (2009) defines as “disagreement among forecasters, or doubts within a single forecaster, as to the correct value of an unknown quantity of interest” – is overconfidence. Schoemaker (2009) mentions three reasons why individuals are overconfident in their judgment. Firstly, he mentions the illusion of control. With the illusion of control people assume causal relationships between their actions and the actual outcome. “A motivational reason why people may be overconfident is that they harbor a deep-seated psychological need to feel in control” (Schoemaker, 2009). The fact that individuals use their beliefs instead of the available information to make judgments about co-variation is in accordance with the research by Winterfeldt and Edwards (1986), who call this the personalistic view in forecasting. Because scenario analysis is in the context of high uncertainty the illusion of control may result in the fallacy of mistaking co-variation for causality.

The second factor, causing overconfidence is information distortion. Information distortion is highly related to the use of the availability heuristic, as described by Tversky and Kahneman (1974). The availability heuristic explains that individuals rely on the extent to which it is easy or hard to remember certain information when it is not possible for them to make judgments based on factual information. Because the degree of difficulty with which memory can retrieve information is not related to for instance statistical data, bias occurs in judgment. For scenario analysis assumed causal relations (fallacy of attribution) need to be supported by statistical data or quantitative methods instead of using the availability heuristic.

The last variable at the root of overconfidence in forecasting situations of high uncertainty is risk perception. Schoemaker presents this as follows: “When it comes to people’s perception of risk, other factors play a role. We seem to dread most those risks we understand poorly (say radon gas in our basement) or those

over which we have no control (such as flying a commercial airplane). And risks that occur in clusters, such as an airplane crash in which all people are killed, instil more fear than far greater risks that hit isolated individuals at random such as automobile accidents”.

Not only in the field of uncertainty is further research required but also in complexity. Four issues are to be considered: combining variables, understanding co-variance, cognitive simplification, and dynamic complexity. In determining the extent to which individuals are able to combine variables the lens model paradigm is developed. Schoemaker (2009) explains that there is not a lot of research available that captures the judgment about complex situations in scenario analysis, other than the conclusion that “when we abstract cues from a complex real-world situation, we inevitably create distortion (i.e., a reduction bias)”.

The second variable, co-variance, is a statistical term and means “a systematic relationship between two variables in which a change in one implies a corresponding change in the other” (Malhotra and Birks, 2007). Within the field of judgment and decision-making, co-variance is described as the relationship between two variables, just as the statistical definition. The relevance of co-variance in judgment can be described as the ability of an individual to predict an outcome based on a certain cause. Hardman (2009) gives an example about a company where older salesmen sell more of the company’s products than younger salesmen do. A layman could easily make the relation that the amount of sales is related to the age of the salesman (the older a salesman gets, the more he is going to sell). However, a number of factors may influence this apparent relation, such as older salesmen have more sales experience than younger ones or customers are more secure to buy from older sales man. Schoemaker (2009) explains: “On the one hand, people tend to underestimate correlations among variables when their perceptions are purely atheoretical, e.g., data presented in spreadsheet form on golf scores between two players after several rounds of match play. On the other hand, humans tend to overestimate correlations when they are primarily based on a presumed causal theory”.

The third issue, cognitive simplification, refers to the simplification of the complex world that humans observe and the way that the brain works. Cognitive simplification theory is the result of the theory about bounded rationality developed by Simon (1955). Although the cognitive structures that the brain uses to cope with the complex world (associative networks, scripts, schemata, frames, et cetera) provide humans with the capacity to make quick decisions, it also simplifies the observed world. With complexity and scenario analysis this simplification leads to the development of stories and assumed relationships. Just imagine that you are looking at a word where the vowels are removed. The brain is still able to construct a word but one can never be sure that the word the mind came up with, is correct.

The last issue is dynamic complexity, which is defined by Schoemaker (2009) as the interrelation between variables over time. Schoemaker (2009) presents studies by Sterman (1989, 1999) about how people learn in complex systems. They show that “in spite of extensive feedback after each period, subjects improved only slowly over time and had difficulty developing sound mental models about the deeper drivers of the simulation”. When this behaviour applies to scenario analysis in country risk assessment, these perceptions suggest that even when a feedback loop is organized, decision makers will have difficulty making the correct inferences.

Although scenario analysis is a technique, which can be used to improve country risk assessment by small and medium sized enterprises when they engage in international business, a number of issues still need to be studied. But, even though the execution of scenario assessment in country risk assessment has some limitations that need to be resolved, it does not mean this approach will not improve judgment. Especially when the conclusions of Van den Berg (2013) are taken into consideration (incomplete process execution and biased judgment) it is very much worthwhile to continue the approach presented in this paper.

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