

Title

Opportunity Mapping: Locating the Upside of Risk Through Visual Mapping

Abstract

The proposed exercise was conceived as an interactive framework to link the known practice of business risk mapping matrices with a novel model of opportunity mapping in an effort to incorporate the upside of risk within a firm's strategic alternatives. The innovative visual mapping exercise assists student strategists as they identify and quantify opportunities given the three variables of impact, prevalence and barriers to adoption whilst considering the resolution of firm risks. The exercise adds clarity to strategic analysis within the context of enterprise risk management and can be used by students during initial conceptualization, post-analysis or as summative metrics.

Keywords

Strategy, Mapping, Risk

Introduction

Risk mapping matrices are a widely used analysis method to identify and prioritize risk given the magnitude of potential impacts and multitude of risk types (see Appendices A and B). The method is a standard practice for many students, decision makers and consultants and its application spans disciplines from business to engineering to medicine given the simplicity and transparency of the process. Risk management, both in practice and in education, is increasing in prevalence given a number of exogenous factors such as the global COVID-19 pandemic, as well as increased public scrutiny and regulation as a result of the global financial crisis of 2007-08, among others. However, in my experience with students in capstone strategy classes and executive education, the discussion of risk can conclude with an ominous tone and lack a clear directive to mitigation techniques while remaining siloed from the integrated strategic analysis. The proposed 5 x 5 opportunity mapping matrix is a novel and visual means to identify and quantify opportunities with a clear link to enterprise risk management in a competitive context (see Appendices C and D).

Opportunity mapping can be very beneficial in the analysis or education of small businesses and/or family enterprises where risk management and strategic analyses may be conducted intuitively or informally, lack comprehensive stakeholder engagement or be absent altogether. In utilizing the mapping method with students, I have found the process to be relatively simple, visual and transparent and can be a catalyst in identifying participant risk tolerance and mitigation methods embedded in the context of overall strategic planning. The three variables of each risk and opportunity enhance orientation and accuracy while accounting for competitive considerations. Concluding the integrated process with prioritized opportunities instills a sense of positivity in the way forward and clear priorities for action.

Opportunity mapping is also versatile in the potential timing of application, prospective audiences and mode of delivery. Students can initiate the process during preliminary conceptualization of their analysis as a brainstorming tool, post-analysis as a means to identify and striate sources of risks with linked opportunities yielding strategic alternatives or as summative metrics to be completed and compared on a reoccurring basis. The process can be implemented with students in late undergraduate strategy courses or courses that integrate multiple functional areas, graduate courses in management and executive education both in person and in a remote setting.

Theoretical Foundation/Teaching Implications

The term risk can be difficult to define (Elmontsri, 2013) and the process of risk management has historically been associated solely with insurance (Garvin, 2007). While the topic of risk management is pervasive in many higher educational institutions across faculties, it remains siloed in study and practice (Dorfman et al., 2006) and falls victim to the interdisciplinary nature of the topic (Acharyya and Brady, 2014). The movement towards enterprise risk management (ERM) (Dickinson, 2001; Gates 2006) has somewhat galvanized the topic though “no genuinely holistic curriculum for risk management exists in learning and teaching” (Acharyya and Brady, 2014). Given the increasing prevalence and variety of emerging risks (Jorion, 2009; Acharyya and Brady, 2014) there is opportunity in the teaching and learning of strategic management to provide a platform for integrated risk management studies.

Risk mapping matrices are not without fault as noted by Cox Jr (2008), among others. For example, risk matrices can only compare a small amount of risks, qualitative vs. quantitative evaluations can create errors, the allocation of resources in mitigation techniques is suboptimal and the categorization of uncertain risks is inherently subjective (Cox Jr, 2008). However, many

believe that risk matrices are useful as approximate tools to qualitatively distinguish between risks and are certainly better than doing nothing at all (Ball and Watt, 2013; Elmontsri, 2013). Furthermore, the proposed method of risk and opportunity mapping are constructed as 5 x 5 matrices consistent with the axioms of weak consistency, betweenness, and consistent coloring as proposed by Cox Jr (2008) (see Appendices A and C).

In conclusion, an opportunity exists in management education to be the grounding point in risk analysis and management. The topic of risk management is complex and siloed and can benefit from a relatively simple and transparent process as in the proposed mapping method. Revisiting the known method of risk mapping, at its very least, acts to identify and prioritize risks and can be accompanied with a discussion of participant risk tolerance and qualification and/or quantification of variables. The novel extension of opportunity mapping is visually powerful and integrates risk management in the strategic process as a means to allocate scarce resources and maintain a competitive advantage.

Learning Objectives

A. Review risk mapping and identify student risk orientation and scoring methods in the context of risk management

Participation in this activity will introduce or review the process of risk mapping as an approachable strategic tool to contribute to the complex task of risk management. The process will be accompanied by a discussion of student risk tolerance, thus helping to self-identify but also create harmony in a group analysis setting. Finally, students will identify qualifying and/or quantifying methods for the variables of impact, probability and risk stability.

- B. Understand the novel method of opportunity mapping in a competitive context with a link to risk management

Upon completing the exercise, students will have a thorough understanding of what opportunity mapping is and how to incorporate it into strategic analysis. When identifying opportunities, a link to risks will highlight the most appropriate mitigation techniques given limited resources and competitive implications. Finally, participants will identify qualifying and/or quantifying methods for the variables of impact, prevalence and barriers to adoption.

- C. Apply the process of opportunity mapping to identify and quantify the risks and opportunities of a focal firm

Upon completion of the review and introduction of risk and opportunity mapping (A. and B.), students will engage in the application of the proposed method of opportunity mapping through the analysis of their focal firm. Students will understand their own risk orientation and that of others, qualifying and/or quantifying values for the risk and opportunity variables and the risks and opportunities of their focal firm. Populating maps and summative tables will be compiled to striate and link risks and opportunities. The focal firm can be substituted for the organization or scenario of choice in teaching practice.

Exercise Overview

The exercise in opportunity mapping is best implemented in an 80 minute strategic management course with a cohort of up to 50 students, to be completed in groups (10 groups of 5). The timing is most appropriate when student groups have completed the analysis portion (ex. internal, external, historical, and financial) of their ongoing company strategic plan course deliverable and are beginning to determine strategic alternatives. Blank risk and opportunity

maps and summative table templates can be shared in advance either electronically or in hard copy (see Appendices A, B, C and D). As aforementioned, the exercise is flexible in terms of timing and can also be used in the analysis of current events or case studies.

Logistical steps include:

- A. Introduce the practice of risk mapping to students in a presentation format as an entire cohort. Visually present a risk matrix and summative table highlighting the axes variables of impact on the operation and the likelihood of the event occurring and introduce the third variable of risk stability. Discuss the importance of identifying individual risk tolerance and axes qualification and/or quantification methods (ex. financial impact, % probability etc.). (10 minutes)
- B. In student strategic analyses groups, complete a risk map for their focal firm. First identifying individual risk orientation, next variable scoring methods and finally identifying and striating risks. Plot the results on the risk map and summative table. (15 minutes)
- C. Debrief risk mapping as an entire cohort. (10 minutes)
- D. Introduce the practice of opportunity mapping to students in a presentation format as an entire cohort. Visually present an opportunity matrix and summative table highlighting the axes variables of impact on the operation and the prevalence of competitor implementation and introduce the third variable of barriers to adoption. Review the importance of identifying individual risk orientation and axes qualification and/or quantification methods (ex. financial impact, % probability etc.). (10 minutes)
- E. In student strategic analyses groups, complete an opportunity map for their focal firm. First identifying variable scoring, next identifying and striating opportunities and finally link risks to opportunities. Plot the results on the opportunity map and summative table. (15 minutes)

F. Debrief opportunity mapping as an entire cohort. (10 minutes)

G. Debrief the entirety of the process by incorporating the following questions. (10 minutes)

Questions:

- What did you learn about your individual risk tolerances?
- How would you qualify and/or quantify the variables of impact, probability and risk stability?
- How would you qualify and/or quantify the variables of impact, prevalence and barriers to adoption?
- What are the most acute risks for your company?
- What are the most viable opportunities for your company?
- Which risks are mitigated by which opportunities?
- Do you have clarity as it relates to strategic alternatives?
- What was challenging in the process? Useful?

Session Description

The session will begin with a brief introduction of the topic and presenter. Following the introduction I will present the theoretical foundations of the exercise and make the educational case for opportunity mapping. Upon setting the foundations of the exercise, I will introduce the overall intent of the exercise and directions for teaching and learning implementation.

From there, the body of the activity will include the presentation and review of risk mapping noting the variables of impact on the operation and the likelihood of the event occurring and introduce a third variable of risk stability. I will solicit participant input on the qualification

and/or quantification of variables as well as individual risk tolerances and note the link to opportunities.

Upon completion of the risk mapping review and discussion, the activity will include the presentation of opportunity mapping noting the variables of impact on the operation and the prevalence of competitor implementation and introduce a third variable of barriers to adoption. I will solicit participant input on the qualification and/or quantification of variables.

Once both of the risk and opportunity mapping frameworks have been introduced, I will present participants with a populated model to exhibit the completed process. I will solicit participant critique of the model.

Finally, all participants in the session will be encouraged to engage in the opportunity mapping process using *remote management education* as a topical example with which to apply the framework. Populated maps and summative tables will be compiled to striate and link risks and opportunities. Upon completion, we will debrief the exercise as an entire cohort and engage in a question period (see Appendices A, B, C and D).

Summative Session Time Table:

Topic	Time (minutes)
Topic and presenter introduction	2
Theoretical foundations and educational case	5
Model intent and directions	3
Risk mapping review and input	10
Opportunity mapping introduction and input	10
Populated model presentation and feedback	5
Remote management education example exercise	15
Exercise debrief	5
Questions and comments	5
Total	60

Appendices

Appendix A: Risk Matrix Template

Impact	Extreme (5)	5	10	15	20	25
	Major (4)	4	8	12	16	20
	Moderate (3)	3	6	9	12	15
	Minor (2)	2	4	6	8	10
	Negligible (1)	1	2	3	4	5
	<i>Risk Stability</i>	Remote (1)	Unlikely (2)	Possible (3)	Likely (4)	Certain (5)

Probability



Appendix B: Risk Table Template

ID	Risk	Impact	Probability	Stability	Risk Score	Opportunity
A						
B						
C						
D						
E						
F						
G						
H						
I						

Appendix C: Opportunity Matrix Template

Impact	Revolutionary (5)	5	10	15	20	25
	Major (4)	4	8	12	16	20
	Moderate (3)	3	6	9	12	15
	Minor (2)	2	4	6	8	10
	Negligible (1)	1	2	3	4	5
	<i>Barriers to Adoption</i>	Standard (1)	Common (2)	Emerging (3)	Uncommon (4)	Exceptional (5)
		Prevalence				

 Significant
  Typical
  Minimal

Appendix D: Opportunity Table Template

ID	Opportunity	Impact	Prevalence	Barriers	Opportunity Score
A					
B					
C					
D					
E					
F					
G					
H					
I					

References

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