



Supply Chain Risk Management

ASHOK KUMAR*, DR. AIJAZ AHMAD KHAN*, PAWAN*

ABSTRACT

This paper does a thorough analysis of the literature on supply chain risk management (SCRM). 133 articles that were published between 2005 and the first quarter of 2018 are examined in this review. Its major goal is to highlight the created solutions that have been employed to reduce risks and enhance supply chain efficiency. It appears that several approaches have been created, and researchers have tended to employ quantitative techniques like simulation and modelling to reduce supply chain risks (SCR). Even though the connections between SCRM and performance or resilience are emphasised, risk avoidance techniques are still underrepresented in the studies that were examined. We also discover that there isn't a single risk management strategy that is superior to another, making it challenging to develop consecutive evolutions.

Keywords

Supply Chain, Risk Management, Performance, Resilience, Mitigation

INTRODUCTION

In its underlying structure, modern creation was secured on a straight graph demonstrated on the single progressions of items going from the stock of unrefined components to the assembling and afterward to the market. Today, the short item life cycle joined with dubious interest makes stream the board more mind boggling while at the same time extending the inventory network. This expects that new imperatives should be considered in the administration framework for data, item and monetary streams. An organizations have started creation to arrange program, others have made upstream as well as downstream incorporation, and some have migrated or even moved to profit from economies of scale and skill. This multitude of procedures have carried enhanced their initiators as well as produced troubles in their administration. While the goal stays to adjust to a profoundly changing and requesting climate, the outcomes of sending of every system are likely wellspring of dangers. These dangers connected with the deficiency of control, adaptability, consent to the prerequisites of value, expenses and cutoff times, either the contortion of data because of specialists advantage.

In a setting where organizations develop inside an immense organization of teammates, the target of diminishing dangers can assist chiefs with working on their productivity.

For instance, without a moment to spare creation to restrict squander, utilization of the Web or ERP to successfully oversee data [1], and the rethinking of part of its creation or transportation exercises, are drives that have enhanced the field of store network risk the executives research [2].

In modern creation chains, this the truth is more clear on the grounds that the stock of millions of items satisfies the need of an extraordinary number of individuals, each with explicit inclinations in various utilization settings. While catastrophic events, fear monger assaults, work force strikes, mishaps, can cause

breaks and stretch postponements [3] , previously mentioned imperatives and wild contest increment carefulness of the chiefs.

After the "Subprime" emergency, which uncovered the weakness of many stockpile chains, analysts' advantage in SCRM issues has expanded. What's more, the quantity of distributions accessible in this field of exploration encounters an exceptional development throughout the years [2] . Their outcomes are not the same as one creator to another. This vouches for the variety of approaches around the comprehension of the peculiarity. It is this reality that it legitimizes the decision to lead a survey of the writing on SCRM.

Others writing surveys have tended to the subject before in various points. For instance [4] who examined about how and why one store network disturbance would be more extreme than another. [3] audited different quantitative models for overseeing production network chances. He additionally related different inventory network risk the executives (SCRM) systems with genuine practices. All the more as of late, [2] recognized and arranged potential dangers connected with various streams. [3] proposed hearty procedures for relieving store network disturbances. Along these lines, [5] have fostered a theoretical structure of SC vigor that might add to expanded SC strength. [6] fostered a system to order SCRM writing, zeroing in on risk-lessening and chance relieving techniques. The distinction of the current article has a place with the way that it plays out an investigation of the effects of various gamble the executives procedures recognized on SC execution. We thusly mean to respond to the accompanying question: what are the effects of dangers alleviation systems recognized on SC execution.

This article gives a survey of the writing of significant distributions on the period around the subprime emergency and plans to 1) evaluate the gamble contemplations and methodologies conveyed by directors 2) grasp the development of examination on modern and scholastic viewpoints, 3) distinguish neglected region of the SCRM writing. This exploration is addressed to scientists and especially doctorate understudies by giving them a refreshed premise of investigates on SCRM. It is likewise to address supervisors, who will find a bunch of strategies accessible to assist with working on their way to deal with risk the board.

This paper is coordinated around four fundamental exercises. As an initial step, it presents a survey of writing on SCRM. Then, it will make a clear investigation of city hall leader distributions recognized utilizing a precise writing survey, covering the time of 2005 to 2018. Likewise, a reference/co-reference investigation is performed. At long last the examination presents the various procedures created by creators to oversee Production network gambles.

2. The Writing Audit of Production network Hazard The executives

2.1. Risk Definition

The idea of chance is a befuddling multi-layered build [7] . Its anxiety through a few works makes it perhaps of the most examined issue in administration science. Dangers can be characterized as a potential variety in the circulation of production network results, their probability and emotional qualities [8] or a break in stream between the parts of the store network. [9] characterizes risk as the likelihood of a misfortune and the significance of this misfortune for the association or the person. Risk is typically connected with the unfortunate results of this occasion [10] . The store network chances are a bunch of obstructions to drives taken with regards to moving items from their place of creation to the last buyer. For [11] , hazard can be considered the likelihood that an unfortunate occasion will happen sooner or later in a store network and the connected results of this occasion on execution of the inventory network. They can consequently be considered as factors of inner or outside natural vulnerabilities which lessen the consistency of results [12] . These dangers are request driven and are a consequence of disturbances rising up out of inventory network tasks [13] . As a matter of fact, these disturbances happen in the actual conveyance of items to the end client,

particularly in transport tasks. Likewise, request related dangers can emerge from the vulnerability brought about by client's erratic orders [14] .

Moreover, the proof of the dangers that emerge during the transportation and capacity of the products upstream of the store network, as well as the subsequent monetary misfortunes is undeniable. The deficiency of merchandise brought about by demonstrations of psychological oppression, robbery and mishaps brings about an extra expense for providers. These incorporate the expenses of transportation, the method involved with supplanting merchandise, and the punishments that providers and clients face. As an immediate consequence of these inadequacies, the clients go to different providers to satisfy their need and keep away from breaks. In a roundabout way, in the event of breakage, the corporate picture of provider can be discolored.

[15] gatherings the SCR into four classes and [16] into three. Universally, they can be isolated into two general gatherings: functional dangers and vital dangers [15] . Their treatment might be considered for of worth creation and a wellspring of cutthroat separation inside the production network. Most importantly, it comprises of diminishing the unfavorable effect of hazard on execution [17] . For [18] there are two general classifications of dangers influencing production network plan and the board: takes a chance with connected with market interest coordination and disturbance gambles with connected with typical business. Table 1 sums up meanings of production network chances.

2.2. Production network Chance Administration (SCRM)

There is no agreement in the meaning of store network the board (SCM) and SCRM on account of their freshness in the administration science writing. A few creators relate the beginning of SCM to the 1990s through crafted by [21] . By 1997, [22] recognized in excess of 50 SCM definitions, classified into five classifications. All the more as of late, [23] distinguished 166 SCM approaches in their endeavor to concoct a one of a kind definition.

SCRM is characterized as the board through coordination or cooperation between channel accomplices to guarantee productivity and congruity [3] . [24] characterizes SCRM as the company's capacity to comprehend and deal with its monetary, ecological and social dangers inside the inventory network. [17] considers the SCRM to be a methodical way to deal with deciding the best strategy in case of vulnerability, which is by recognizing, evaluating, understanding, conveying and tending to risk-related issues. The SCRM can likewise be seen as a cooperative and facilitated administration between the accomplices to guarantee productivity to the individuals from the chain. For [25] , the SCRM helps the organization construct and keep up with its upper hand. As the significance of overseeing store network gambles with increments, research in the field centers around essential issues [26] [27] , and are among those that are gaining an extraordinary headway in this operations field [28] .

[29] contended that SCRM exists as an exceptionally divided process including various entertainers. [30] protected that there are two methods for overseeing risk. It, first and foremost, can be kept away from or diminished; furthermore it can either be moved or shared, or acknowledged with no guarantees. According to this viewpoint, risk-taking drives expect that all partners be coordinated in the chain so the degree of understanding is no different for all. For this situation, admittance to a huge normal data set would increment risk acknowledgment by accomplices.

For [31], organizations embrace two kinds of methodologies before emergency: they could initially answer in the short run by carrying out arrangements that permit them to tackle the issues rapidly. Then they deal with their associations, practices and frameworks through an educational experience that will permit them to adjust all the more effectively to other basic circumstances. For [32], the SCRM is upheld on four key cycles incorporate gamble distinguishing proof, risk appraisal, risk alleviation and chance observing. Prior, [17] laid out five periods of chance administration: advance notice signs recognition, planning anticipation, reaction/decrease, recuperation, and learning. [33] proposed 5 phases: risk distinguishing proof, risk appraisal, risk the board.

Development of SCR The board Models

Creators note a few development of exploration on the SCRM. A few key changes in the gamble the board approach have been distinguished in the field of SC [62]. [63] contended that the 1994 to 2010 distributions on the SCRM assemble various methodologies. They note that the greater part of these improvements address the subject according to a wide point of view, underrating the significance of an exhaustive examination of the connection between SCRM techniques and execution. [2] brought up that "the scholarly construction of the field made measurably critical expanded from 2000-2005 and advanced from latently responding to unclear general issues of disturbances towards more proactively overseeing production network risk according to framework points of view". For [64], the logical underpinnings of chance appraisal and hazard the executives are still fairly delicate on certain issues.

The development of chance fear and the executives models is by and large having a place with a discussion among quantitative and subjective investigation moves toward that rise out of the various papers [65]. However, this discussion is more highlighted by the methodologies that expect to apply risk hypothesis to the SCRM. The creators bring up, in any case, that this exercise is still in its beginning phases and that the SCRM models that have been proposed should be tried observationally. Quantitative models are as yet restricted in their commitment inside SCM. They are reasonable for dealing with specific dangers like functional dangers, however not others, for example, unsettling influences [3]. Thus, few explores utilize quantitative models, which would make sense of the absence of agreement in characterizing SC versatility. Subsequently, [66] inferred that it depends on the activities and SC directors to distinguish what quantitative apparatuses are accessible for various areas of use.

Albeit the discussion on SCRM approaches is overwhelmed by the team of quantitative and subjective models, the reality stays that there are something else or less strong methodologies inside SC writing. For instance, [47] laid out that conventional demonstrating of SCRM examination can be grouped into eight classifications from which they perceive supply vulnerability as a full grown space, and "maintainability risk" as an arising field. The thought of these components is at the beginning of the difference of approaches in the writing. It is in this way hard to consider one of approach as being better than the other or to lay out in a direct stream the progressive developments of the models that would supplant others.

3.3. Takes a chance with Moderation Systems and Flexibility

Risk the executives inside SCs is a continuous action. Albeit many instruments permit today to address them, in any case, they battle to totally annihilate. The vulnerability encompassing the climate is an impetus for their event and there is extensive proof that organizations will encounter expanding choppiness in the future [67]. Organizations searching for adaptability ought to in this way survey their ebb and flow risk the board models that are made in a setting of relative security. Nonetheless, the writing distinguishes a majority of hazard relief draws near. This majority is connected with variety of dangers encompassing each level of the store network.

However, the SCR appraisal comes from the cautious assessment of effects and from the thought of circumstances and logical results connections [68] .

Hence, about forty articles in this survey dissect the effect of disturbances event on the organizations' way of behaving. This exploration points worldwide to set up the SC to adapt to the unforeseen. A few creators recognize procedures created to moderate unsettling influences. [53] characterized viable gamble moderation empowering agents in two gatherings: "empowering agents having a high driving power and low reliance requiring most extreme consideration and of key significance, while one more gathering comprises of those factors which have high reliance and are the resultant activities".

[50] proposes vigorous procedures to moderate disturbances. For the creator, Supply Coalition Organization procedures, Lead Time Decrease, and Recuperation Arranging Frameworks will permit a SC to really oversee inborn variances, no matter what the event of significant interruptions inside SC exercises. Likewise, these equivalent procedures will empower an inventory network to turn out to be stronger to significant interruptions. In this equivalent request, [69] proposes the Production network Hazard The board Cycle (SCRMP) as a powerful administration strategy for the dangers connected with the chain. Additionally, [70] distinguishes strength and flexibility as two critical procedures for overseeing risk. [6] recognizes eight interesting classifications of procedures created by the creators to relieve takes a chance under two primary methodologies: responsive and proactive. She features that the receptive procedure is suitable to address supply and inner gamble, while the proactive ought to be applied to outer dangers and request chances. At last, [55] shows through five adapted models that a firm doesn't have to put resources into a serious level of adaptability to moderate stockpile, interaction and request chances; on the grounds that the advantages are accomplished generally with low degrees of adaptability. From the abovementioned, we note that the dangers evaluation ought to be considered as a conventional action of the supervisor. A successful gamble moderation technique ought to be based on predictable and vigorous interior cycles to set up the business to be proactive despite risk event.

Rethinking is another relief system. It permit firm to finish his center skills to address market issues and work on their presentation through essential coalitions. By pursuing this decision, the organization keeps away from some speculation limitations and mitigates breakages that can emerge inside the SC. [71] , demonstrated that the rethinking choice is equipped for covering two sorts of dangers (creation limit risk, cost variance risk). However, not movements of every sort are arranged to rethink. Firm can benefit to zeroing in on creating complex frameworks inside and reevaluating straightforward frameworks [72] . Information conceded from rethinking can likewise assist with further developing inventory network rehearses. It very well may be utilized to track down most ideal way to oversee risk. Chiefs can utilize particulars information inside from their encounters or outside by making solid associations with specific organizations. Regardless of whether there exists a veering conclusions on the commitment of moving to the SC execution improvement, the advantages of this methodology is perceived by directors. A few specialists tracked down an adverse consequence of rethinking on SC execution while others don't. The creators dread that reevaluating diminishes the limit with regards to development inside the organization, decreases adaptability or prompts the deficiency of control of re-appropriated exercises by supervisors. The re-appropriating procedure should in this manner consider these extra dangers. Regardless of whether, clearly the issue isn't the obliviousness of above gambles by the supervisors, the challenges are innate in their administration [73] .

A few creators advocate a cautious stock control to moderate dangers in a monetary emergency [74] [75] . This procedure is not the same as that started in normal disturbances. For instance [76] found that without monetary limitations, the provider generally lean towards the strategy for recording, by bearing every one of the dangers on the stock. Within the sight of monetary limitations, the provider will offer piece of its stock to pre-requesting retailer, which prompts the sharing of stock gamble in the store network. In any case, [54]

shows that stock control is certainly not an alluring technique in a climate where aggravations are uncommon as huge amounts of stocks must be shipped for significant stretches of time without interference.

The biggest number of the above risk the board models comes from recreation/demonstrating strategies. Subsequently, risk alleviation techniques are not something similar starting with one model then onto the next or from one firm/area to another. Regardless of whether [77] finds that proprietors of little assembling firms embrace similar protective procedures to supply chances.

3.4. Takes a chance with The board and Execution

Around 25 articles dissect the connection between risk the board and execution inside SCs. This exploration tends to different dangers: supply disturbance risk [51] [54] [78] - [84] request and ecological vulnerability [85] [86] [87] , rethinking risk [88] , data bending [89] , maintainability risk [90] , Functional gamble [90] [91] .

The event of dangers impacts business action at various levels. For instance, the effect of fear monger assaults on stock levels in SC can increment by 600% contrasted with ordinary working circumstances because of expanding the safety efforts on global boundaries [82] . By and large, when outcomes are cruel, firms don't recuperate rapidly from the adverse consequences of disturbance [51] . This can take extra interest in new technique to admittance to a specific degree of execution. Chiefs hence need to search for new organization relationship: upstream and downstream. In upstream of the SC, the accessibility of a supplier with explicit capacities and the idea of disturbances are key determinants of the ideal procedure [54] . decision in the single or different obtaining procedure can characterize the degree of chain flexibility. [84] found that different obtaining rules single obtaining for low-effect and high-recurrence disturbances, no matter what the degree of hazard avoidance. Yet, single or double source supply can be successful relying upon the size of the interruption likelihood [80] . Ecological vulnerability must be coordinated in the dynamic cycle. Rehearses that adequately adjust the methodology and ecological vulnerability are probably going to prompt better SC execution [87] .

The intricacy of the stockpile base can increment disturbances recurrence and diminish business execution. Particularly when there are not many options in that frame of mind of supply sources. Hence, an organization's degree of obligation to its provider can decide its level of hazard openness [78] .

CONCLUSIONS

chances were tended to (supply interruption risk, request vulnerability, data bending, Functional gamble, maintainability risk, Monetary Gamble moderation, Stock dangers the board, psychological warfare, Disastrous and natural dangers) as well as their outcomes (loss of benefit, less adaptability, client disappointment, low execution), yet additionally the systems created by the scientists and applied by the directors to confront the dangers (single or different obtaining, reevaluating, provider mix, stock, client relationship, alleviation, versatility, ...). This shows the developing interest of the SCRM inside the business.

Be that as it may, by contrasting the spot of each gathering of dangers in SCM, i.e., physical or educational stream related gambles, a tiny space is conceded to the subsequent gathering. Risk the board connected with actual streams stays the most treated point [2] . In like manner, the vast majority of taken advantage of papers examine the dangers upstream of the chain, explicitly, the relations between the organization and its providers. Not many are addressed to downstream connections. The relations between the organization and its market are nearly overlooked by the specialists. The actual several investigates that examinations request vulnerability don't sincerely look for the beginning of their changeability. Nonetheless, in a setting where

ventures work with wild contest, these boundaries ought to be further extending in view of chance administration examination. Profound market inside vulnerability because of the purchasers' ways of behaving, retailer's power, market heterogeneity, value irregularity and item qualities are further distractions that creators need to coordinate in their SCRM explores. Likewise, they might focus harder on the data stream risk since their administration is execution driver.

The creators gave little consideration to the investigation of calamities, ecological dangers and psychological militant demonstrations. Albeit the event of the previous is uncommon, the green store network development and its necessities as far as discernibility and climate care ought to be considered as hazard factors for SCs. Additionally, psychological warfare with their connected results of new security prerequisites in global exchanges, should progressively coordinate gamble examination models.

It is hard to consider from a few methodologies of dangers the board, one as being better than the others or to lay out in a direct stream, the progressive developments of the models that would supplant others. Be that as it may, prevailing techniques in the broke down papers are quantitative with enhancement approach, multivariate examination, choices contracts model, stochastic programming and recreation or overviews. There are not many calculated breaks down and not very many contextual analyses. This vouches for the development of SCRM idea that was experiencing the demonstrated measures. Be that as it may, the wealth of streamlining approaches makes specific exploration nearer to the designing sciences than the administration sciences. This hole should be filled to enlarge the range of SCRM dread.

There is no agreement in the meaning of SCR and SCRM. The creators propose definitions approaches as per the idea of the gamble and the setting of its event. In spite of the fact that there are a few SCRM approaches, there is a consistent understanding in the last level headed of this movement: to make SCs stronger to the event of dangers. Sadly, there is little gamble avoidance model in the examination investigated .

References

- [1] Narayanan, V.G. and Raman, A. (2004) Aligning Incentives in Supply Chains. *Harvard Business Review*, 82, 94-102.
- [2] Tang, O. and Musa, S.N. (2011) Identifying Risk Issues and Research Advancements in Supply Chain Risk Management. *International Journal of Production Economics*, 133, 25-34. <https://doi.org/10.1016/j.ijpe.2010.06.013>
- [3] Tang, C.S. (2006b) Perspectives in Supply Chain Risk Management. *International Journal of Production Economics*, 103, 451-488. <https://doi.org/10.1016/j.ijpe.2005.12.006>
- [4] Craighead, C.W., Blackhurst, J., Rungtusanatham, M.J. and Handfield, R.B. (2007) The Severity of Supply Chain Disruptions: Design Characteristics and Mitigation Capabilities. *Decision Sciences*, 38, 131-156. <https://doi.org/10.1111/j.1540-5915.2007.00151.x>
- [5] Durach, C.F., Wieland, A. and Machuca, J.A. (2015) Antecedents and Dimensions of Supply Chain Robustness: A Systematic Literature Review. *International Journal of Physical Distribution & Logistics Management*, 45, 118-137. <https://doi.org/10.1108/IJPDLM-05-2013-0133>
- [6] Kilubi, I. (2016) The Strategies of Supply Chain Risk Management—A Synthesis and Classification. *International Journal of Logistics Research and Applications*, 19, 604-629. <https://doi.org/10.1080/13675567.2016.1150440>
- [7] Zsidisin, G.A. (2003) A Grounded Definition of Supply Risk. *Journal of Purchasing and Supply Management*, 9, 217-224. <https://doi.org/10.1016/j.pursup.2003.07.002>
- [8] March, J.G. and Shapira, Z. (1987) Managerial Perspectives on Risk and Risk Taking. *Management Science*, 33, 1404-1418. <https://doi.org/10.1287/mnsc.33.11.1404>
- [9] Lavastre, O. and Spalanzani, A. (2010) Comment gérer les risques liés à la chaîne logistique? Une réponse par les pratiques de SCRM.

- [10] Wagner, S.M. and Bode, C. (2008) An Empirical Examination of Supply Chain Performance along Several Dimensions of Risk. *Journal of Business Logistics*, 29, 307-325. <https://doi.org/10.1002/j.2158-1592.2008.tb00081.x>
- [11] Yu, M.C. and Goh, M. (2014) A Multi-Objective Approach to Supply Chain Visibility and Risk. *European Journal of Operational Research*, 233, 125-130. <https://doi.org/10.1016/j.ejor.2013.08.037>
- [12] Jüttner, U., Peck, H. and Christopher, M. (2003) Supply Chain Risk Management: Outlining an Agenda for Future Research. *International Journal of Logistics: Research and Applications*, 6, 197-210. <https://doi.org/10.1080/13675560310001627016>
- [13] Jüttner, U. (2005) Supply Chain Risk Management: Understanding the Business Requirements from a Practitioner Perspective. *The International Journal of Logistics Management*, 16, 120-141. <https://doi.org/10.1108/09574090510617385>
- [14] Nagurney, A., Cruz, J., Dong, J. and Zhang, D. (2005) Supply Chain Networks, Electronic Commerce, and Supply Side and Demand Side Risk. *European Journal of Operational Research*, 164, 120-142. <https://doi.org/10.1016/j.ejor.2003.11.007>
- [15] Tapiero, C.S. (2008) Analyse des risques et prise de décision dans la chaîne d'approvisionnement. *Revue française de gestion*, 34, 163-182. <https://doi.org/10.3166/rfg.186.163-182>
- [16] El Ouardighi, F. (2008) Le supply chain management: Concilier centralisation et indépendance organisationnelle. *Revue Française de Gestion*, 6, 81-88. <https://doi.org/10.3166/rfg.186.81-88>
- [17] Delesse, C. (2010) Sécurisation de la supply chain: Renseignement et intelligence globale. RIRL 2010 Bordeaux September 30th & October 1st, 2010.
- [18] Kleindorfer, P.R. and Saad, G.H. (2005) Managing Disruption Risks in Supply Chains. *Production and Operations Management*, 14, 53-68. <https://doi.org/10.1111/j.1937-5956.2005.tb00009.x>
- [19] Cheng, S.K. and Kam, B.H. (2008) A Conceptual Framework for Analysing Risk in Supply Networks. *Journal of Enterprise Information Management*, 21, 345-360. <https://doi.org/10.1108/17410390810888642>
- [20] Christopher, M. and Peck, H. (2004) Building the Resilient Supply Chain. *The International Journal of Logistics Management*, 15, 1-14. <https://doi.org/10.1108/09574090410700275>
- [21] Christopher, M. (1992) *Logistics and Supply Chain Management*. Pitman Publishing, London.
- [22] Bechtel, C. and Jayaram, J. (1997) Supply Chain Management: A Strategic Perspective. *The International Journal of Logistics Management*, 8, 15-34. <https://doi.org/10.1108/09574099710805565>
- [23] Stock, J.R. and Boyer, S.L. (2009) Developing a Consensus Definition of Supply Chain Management: A Qualitative Study. *International Journal of Physical Distribution & Logistics Management*, 39, 690-711. <https://doi.org/10.1108/09600030910996323>
- [24] Carter, C.R. and Rogers, D.S. (2008) A Framework of Sustainable Supply Chain Management: Moving toward New Theory. *International Journal of Physical Distribution & Logistics Management*, 38, 360-387. <https://doi.org/10.1108/09600030810882816>
- [25] Lavastre, O., Gunasekaran, A. and Spalanzani, A. (2014) Effect of Firm Characteristics, Supplier Relationships and Techniques Used on Supply Chain Risk Management (SCRM): An Empirical Investigation on French Industrial Firms. *International Journal of Production Research*, 52, 3381-3403. <https://doi.org/10.1080/00207543.2013.878057>
- [26] Ganguly, K.K. and Guin, K.K. (2011) Understanding Supply Risk in Supply Chain: A Fuzzy Framework. *International Journal of Logistics Systems and Management*, 8, 267-283. <https://doi.org/10.1504/IJLSM.2011.038987>
- [27] Ritchie, B. and Brindley, C. (2007) An Emergent Framework for Supply Chain Risk Management and Performance Measurement. *Journal of the Operational Research Society*, 58, 1398-1411. <https://doi.org/10.1057/palgrave.jors.2602412>
- [28] Wieland, A. and Marcus Wallenburg, C. (2012) Dealing with Supply Chain Risks: Linking Risk Management Practices and Strategies to Performance. *International Journal of Physical Distribution & Logistics Management*, 42, 887-905

- <https://doi.org/10.1108/09600031211281411>
- [29] Ritchie, B. and Brindley, C. (2007) Supply Chain Risk Management and Performance: A Guiding Framework for Future Development. *International Journal of Operations & Production Management*, 27,303-322.
<https://doi.org/10.1108/01443570710725563>
- [30] Sudy, I. and Schramm, H.-J. (2010) Risk Response Measures and Their Application from Transportation to Supply Chain Management. RIRL 2010—Bordeaux September 30th & October 1st, 2010.
- [31] Evrard-Samuel, K., Ruel, S. and Spalanzani, A. (2011) Systèmes d'information et résilience des chaînes logistiques globales: Proposition d'un écosystème informationnel.
- [32] Ho, W., Zheng, T., Yildiz, H. and Talluri, S. (2015) Supply Chain Risk Management: A Literature Review. *International Journal of Production Research*, 53, 5031-5069.
<https://doi.org/10.1080/00207543.2015.1030467>
- [33] Rangel, D.A., de Oliveira, T.K. and Leite, M.S.A. (2015) Supply Chain Risk Classification: Discussion and Proposal. *International Journal of Production Research*, 53, 6868-6887.
<https://doi.org/10.1080/00207543.2014.910620>
- [34] Manuj, I. and Mentzer, J.T. (2008) Global Supply Chain Risk Management. *Journal of Business Logistics*, 29, 133-155.
<https://doi.org/10.1002/j.2158-1592.2008.tb00072.x>
- [35] Mattos, M.G. and Vaz de Magalhães, D.J.A. (2010) Brazilian Supply Chain Risk Analysis, RIRL—Bordeaux September 30th & October 1st, 2010.
- [36] Spiliotopoulou, E., Donohue, K. and Gürbüz, M.Ç. (2016) Information Reliability in Supply Chains: The Case of Multiple Retailers. *Production and Operations Management*, 25, 548-567.
<https://doi.org/10.1111/poms.12418>
- [37] Stopford, M. (2002) E-Commerce-Implications, Opportunities and Threats for the Shipping Business. *International Journal of Transport Management*, 1, 55-67.
[https://doi.org/10.1016/S1471-4051\(01\)00006-4](https://doi.org/10.1016/S1471-4051(01)00006-4)
- [38] Triantis, A.J. (2005) Corporate Risk Management: Real Options and Financial Hedging. In: Frenkel, M., Hommel, U. and Rudolf, M., Eds., *Risk Management*, Springer, Berlin, Heidelberg, 591-608.
https://doi.org/10.1007/3-540-26993-2_30
- [39] Norrman, A. and Jansson, U. (2004) Ericsson's Proactive Supply Chain Risk Management Approach after a Serious Sub-Supplier Accident. *International Journal of Physical Distribution & Logistics Management*, 34, 434-456.
<https://doi.org/10.1108/09600030410545463>
- [40] Weiske, A., Vabitsch, A., Olesen, J.E., Schelde, K., Michel, J., Friedrich, R. and Kaltschmitt, M. (2006) Mitigation of Greenhouse Gasemissions in European Conventional and Organic Dairy Farming. *Agriculture, Ecosystems & Environment*, 112, 221-232.
<https://doi.org/10.1016/j.agee.2005.08.023>
- [41] Elockson, C. (2017) Le management des risques de la supply chain et la performance des entreprises agro-industrielles. Doctoral Dissertation, Artois.
- [42] Knemeyer, A.M., Zinn, W. and Eroglu, C. (2009) Proactive Planning for Catastrophic Events in Supply Chains. *Journal of Operations Management*, 27, 141-153.
<https://doi.org/10.1016/j.jom.2008.06.002>
- [43] Lavastre, O., Gunasekaran, A. and Spalanzani, A. (2008) Supply Chain Risk Management in French Companies. *Decision Support Systems*, 52, 828-838.
<https://doi.org/10.1016/j.dss.2011.11.017>
- [44] Williamson, O.E. (1981) The Economics of Organization: The Transaction Cost Approach. *American Journal of Sociology*, 87, 548-577
<https://doi.org/10.1086/227496>
- [45] Dabhilkar, M. and Bengtsson, L. (2008) Invest or Divest? On the Relative Improvement Potential in Outsourcing Manufacturing. *Production Planning and Control*, 19, 212-228.
<https://doi.org/10.1080/09537280701830144>
- [46] Pradabwong, J., Braziotis, C., Tannock, J. and Pawar, K.S. (2017) Business Process Management and Supply Chain Collaboration: Effects on Performance and Competitiveness. *Supply Chain Management*, 22, 107-121.
<https://doi.org/10.1108/SCM-01-2017-0008>

- [47] Charvet, F.F., Cooper, M.C. and Gardner, J.T. (2008) The Intellectual Structure of Supply Chain Management: A Bibliometric Approach. *Journal of Business Logistics*, 29, 47-73. <https://doi.org/10.1002/j.2158-1592.2008.tb00068.x>
- [48] Fahimnia, B., Tang, C.S., Davarzani, H. and Sarkis, J. (2015) Quantitative Models for Managing Supply Chain Risks: A Review. *European Journal of Operational Research*, 247, 1-15. <https://doi.org/10.1016/j.ejor.2015.04.034>
- [49] Franceschet, M. (2010) A Comparison of Bibliometric Indicators for Computer Science Scholars and Journals on Web of Science and Google Scholar. *Scientometrics*, 83, 243-258. <https://doi.org/10.1007/s11192-009-0021-2>
- [50] Tang, C.S. (2006) Robust Strategies for Mitigating Supply Chain Disruptions. *International Journal of Logistics: Research and Applications*, 9, 33-45. <https://doi.org/10.1080/13675560500405584>
- [51] Hendricks, K.B. and Singhal, V.R. (2005) An Empirical Analysis of the Effect of Supply Chain Disruptions on Long-Run Stock Price Performance and Equity Risk of the Firm. *Production and Operations management*, 14, 35-52. <https://doi.org/10.1111/j.1937-5956.2005.tb00008.x>
- [52] Braunscheidel, M.J. and Suresh, N.C. (2009) The Organizational Antecedents of a Firm's Supply Chain Agility for Risk Mitigation and Response. *Journal of Operations Management*, 27, 119-140. <https://doi.org/10.1016/j.jom.2008.09.006>
- [53] Nishat Faisal, M., Banwet, D.K. and Shankar, R. (2006) Supply Chain Risk Mitigation: Modeling the Enablers. *Business Process Management Journal*, 12, 535-552. <https://doi.org/10.1108/14637150610678113>
- [54] Tomlin, B. (2006) On the Value of Mitigation and Contingency Strategies for Managing Supply Chain Disruption Risks. *Management Science*, 52, 639-657. <https://doi.org/10.1287/mnsc.1060.0515>
- [55] Tang, C. and Tomlin, B. (2008) The Power of Flexibility for Mitigating Supply Chain Risks. *International Journal of Production Economics*, 116, 12-27. <https://doi.org/10.1016/j.ijpe.2008.07.008>
- [56] Khan, O., Christopher, M. and Burnes, B. (2008) The Impact of Product Design on Supply Chain Risk: A Case Study. *International Journal of Physical Distribution & Logistics Management*, 38, 412-432. <https://doi.org/10.1108/09600030810882834>
- [57] Rao, S. and Goldsby, T.J. (2009) Supply Chain Risks: A Review and Typology. *The International Journal of Logistics Management*, 20, 97-123. <https://doi.org/10.1108/09574090910954864>
- [58] Oke, A. and Gopalakrishnan, M. (2009) Managing Disruptions in Supply Chains: A Case Study of a Retail Supply Chain. *International Journal of Production Economics*, 118, 168-174. <https://doi.org/10.1016/j.ijpe.2008.08.045>
- [59] Heckmann, I., Comes, T. and Nickel, S. (2015) A Critical Review on Supply Chain risk—Definition, Measure and Modeling. *Omega*, 52, 119-132. <https://doi.org/10.1016/j.omega.2014.10.004>
- [60] Nyoman Pujawan, I. and Geraldin, L.H. (2009) House of Risk: A Model for Proactive Supply Chain Risk Management. *Business Process Management Journal*, 15, 953-967. <https://doi.org/10.1108/14637150911003801>
- [61] Neiger, D., Rotaru, K. and Churilov, L. (2009) Supply Chain Risk Identification with Value-Focused Process Engineering. *Journal of Operations Management*, 27, 154-168. <https://doi.org/10.1016/j.jom.2007.11.003>
- [62] Ghadge, A., Dani, S. and Kalawsky, R. (2012) Supply Chain Risk Management: Present and Future Scope. *The International Journal of Logistics Management*, 23, 313-339. <https://doi.org/10.1108/09574091211289200>
- [63] Colicchia, C. and Strozzi, F. (2012) Supply Chain Risk Management: A New Methodology for a Systematic Literature Review. *Supply Chain Management: An International Journal*, 17, 403-418. <https://doi.org/10.1108/13598541211246558>
- [64] Aven, T. (2016) Risk Assessment and Risk Management: Review of Recent Advances on Their Foundation. *European Journal of Operational Research*, 253, 1-13. <https://doi.org/10.1016/j.ejor.2015.12.023>

- [65] Khan, O. and Burnes, B. (2007) Risk and Supply Chain Management: Creating a Research Agenda. *The International Journal of Logistics Management*, 18, 197-216. <https://doi.org/10.1108/09574090710816931>
- [66] Ivanov, D., Dolgui, A., Sokolov, B. and Ivanova, M. (2017) Literature Review on Disruption Recovery in the Supply Chain. *International Journal of Production Research*, 55, 6158-6174. <https://doi.org/10.1080/00207543.2017.1330572>
- [67] Christopher, M. and Holweg, M. (2011) "Supply Chain 2.0": Managing Supply Chains in the Era of Turbulence. *International Journal of Physical Distribution & Logistics Management*, 41, 63-82. <https://doi.org/10.1108/09600031111101439>
- [68] Gaudenzi, B. and Borghesi, A. (2006) Managing Risks in the Supply Chain Using the AHP Method. *The International Journal of Logistics Management*, 17, 114-136. <https://doi.org/10.1108/09574090610663464>
- [69] Tummala, R. and Schoenherr, T. (2011) Assessing and Managing Risks Using the Supply Chain Risk Management Process (SCRMP). *Supply Chain Management*, 16, 474-483. <https://doi.org/10.1108/13598541111171165>
- [70] Behzadi, G., O'Sullivan, M.J., Olsen, T.L. and Zhang, A. (2017) Agribusiness Supply Chain Risk Management: A Review of Quantitative Decision Models. *Omega*, 79, 21-42. <https://doi.org/10.1016/j.omega.2017.07.005>
- [71] Cucchiella, F. and Gastaldi, M. (2006) Risk Management in Supply Chain: A Real Option Approach. *Journal of Manufacturing Technology Management*, 17, 700-720. <https://doi.org/10.1108/17410380610678756>
- [72] Novak, S. and Eppinger, S.D. (2001) Sourcing by Design: Product Complexity and the Supply Chain. *Management Science*, 47, 189-204. <https://doi.org/10.1287/mnsc.47.1.189.10662>
- [73] Shi, Y. (2007) Today's Solution and Tomorrow's Problem: The Business Process Outsourcing Risk Management Puzzle. *California Management Review*, 49, 27-44. <https://doi.org/10.2307/41166393>
- [74] Trkman, P. and McCormack, K. (2009) Supply Chain Risk in Turbulent Environments—A Conceptual Model for Managing Supply Chain Network Risk. *International Journal of Production Economics*, 119, 247-258. <https://doi.org/10.1016/j.ijpe.2009.03.002>
- [75] Blome, C. and Schoenherr, T. (2011) Supply Chain Risk Management in Financial Crises—A Multiple Case-Study Approach. *International Journal of Production Economics*, 134, 43-57. <https://doi.org/10.1016/j.ijpe.2011.01.002>
- [76] Lai, G., Debo, L.G. and Sycara, K. (2009) Sharing Inventory Risk in Supply Chain: The Implication of Financial Constraint. *Omega*, 37, 811-825. <https://doi.org/10.1016/j.omega.2008.06.003>
- [77] Ellegaard, C. (2008) Supply Risk Management in a Small Company Perspective. *Supply Chain Management*, 13, 425-434. <https://doi.org/10.1108/13598540810905688>
- [78] Swink, M. and Zsidisin, G. (2006) On the Benefits and Risks of Focused Commitment to Suppliers. *International Journal of Production Research*, 44, 4223-4240. <https://doi.org/10.1080/00207540600575761>
- [79] Wilson, M.C. (2007) The Impact of Transportation Disruptions on Supply Chain Performance. *Transportation Research Part E: Logistics and Transportation Review*, 43, 295-320. <https://doi.org/10.1016/j.tre.2005.09.008>
- [80] Yu, H., Zeng, A.Z. and Zhao, L. (2009) Single or Dual Sourcing: Decision-Making in the Presence of Supply Chain Disruption Risks. *Omega*, 37, 788-800. <https://doi.org/10.1016/j.omega.2008.05.006>
- [81] Zhao, L., Huo, B., Sun, L. and Zhao, X. (2013) The Impact of Supply Chain Risk on Supply Chain Integration and Company Performance: A Global Investigation. *Supply Chain Management: An International Journal*, 18, 115-131. <https://doi.org/10.1108/13598541311318773>
- [82] Bueno-Solano, A. and Cedillo-Campos, M.G. (2014) Dynamic Impact on Global Supply Chains Performance of Disruptions Propagation Produced by Terrorist Acts. *Transportation Research Part E: Logistics and Transportation Review*, 61, 1-12. <https://doi.org/10.1016/j.tre.2013.09.005>

- [83] Brandon-Jones, E., Squire, B. and Van Rossenberg, Y.G. (2015) The Impact of Supply Base Complexity on Disruptions and Performance: The Moderating Effects of Slack and Visibility. *International Journal of Production Research*, 53, 6903-6918. <https://doi.org/10.1080/00207543.2014.986296>
- [84] Namdar, J., Li, X., Sawhney, R. and Pradhan, N. (2018) Supply Chain Resilience for Single and Multiple Sourcing in the Presence of Disruption Risks. *International Journal of Production Research*, 56, 2339-2360. <https://doi.org/10.1080/00207543.2017.1370149>
- [85] Boon-Itt, S. and Wong, C.Y. (2011) The Moderating Effects of Technological and Demand Uncertainties on the Relationship between Supply Chain Integration and Customer Delivery Performance. *International Journal of Physical Distribution & Logistics Management*, 41, 253-276. <https://doi.org/10.1108/09600031111123787>
- [86] Cardoso, S.R., Barbosa-Póvoa, A.P., Relvas, S. and Novais, A.Q. (2015) Resilience Metrics in the Assessment of Complex Supply-Chains Performance Operating under Demand Uncertainty. *Omega*, 56, 53-73. <https://doi.org/10.1016/j.omega.2015.03.008>
- [87] Sun, S.Y., Hsu, M.H. and Hwang, W.J. (2009) The Impact of Alignment between Supply Chain Strategy and Environmental Uncertainty on SCM Performance. *Supply Chain Management: An International Journal*, 14, 201-212. <https://doi.org/10.1108/13598540910954548>
- [88] Giri, B.C. and Sarker, B.R. (2017) Improving Performance by Coordinating a Supply Chain with Third Party Logistics Outsourcing under Production Disruption. *Computers & Industrial Engineering*, 103, 168-177. <https://doi.org/10.1016/j.cie.2016.11.022>
- [89] Yang, T. and Fan, W. (2016) Information Management Strategies and Supply Chain Performance under Demand Disruptions. *International Journal of Production Research*, 54, 8-27. <https://doi.org/10.1080/00207543.2014.991456>
- [90] Shafiq, A., Johnson, P.F., Klassen, R.D. and Awaysheh, A. (2017) Exploring the Implications of Supply Risk on Sustainability Performance. *International Journal of Operations & Production Management*, 37, 1386-1407. <https://doi.org/10.1108/IJOPM-01-2016-0029>
- [91] Tazelaar, F. and Snijders, C. (2013) Operational Risk Assessments by Supply Chain Professionals: Process and Performance. *Journal of Operations Management*, 31, 37-51 <https://doi.org/10.1016/j.jom.2012.11.004>
- [92] Cai, X., Chen, J., Xiao, Y., Xu, X. and Yu, G. (2013) Fresh-Product Supply Chain Management with Logistics Outsourcing. *Omega*, 41, 752-765 <https://doi.org/10.1016/j.omega.2012.09.004>
- [93] Kotabe, M., Mol, M.J., Murray, J.Y. and Parente, R. (2012) Outsourcing and Its Implications for Market Success: Negative Curvilinearity, Firm Resources, and Competition. *Journal of the Academy of Marketing Science*, 40, 329-346 <https://doi.org/10.1007/s11747-011-0276-z>
- [94] Solakivi, T., Töyli, J., Engblom, J. and Ojala, L. (2011) Logistics Outsourcing and Company Performance of SMEs: Evidence from 223 Firms Operating in Finland. *Strategic Outsourcing: An International Journal*, 4, 131-151 <https://doi.org/10.1108/17538291111147982>
- [95] Gilley, K.M. and Rasheed, A. (2000) Making More by Doing Less: An Analysis of Outsourcing and Its Effects on Firm Performance. *Journal of Management*, 26, 763-790. <https://doi.org/10.1177/014920630002600408>
- [96] Espino-Rodríguez, T.F. and Padrón-Robaina, V. (2006) A Review of Outsourcing from the Resource-Based View of the Firm. *International Journal of Management Reviews*, 8, 49-70. <https://doi.org/10.1111/j.1468-2370.2006.00120.x>
- [97] Wu, T., Blackhurst, J. and O'Grady, P. (2007) Methodology for Supply Chain Disruption Analysis. *International Journal of Production Research*, 45, 1665-1682. <https://doi.org/10.1080/00207540500362138>
- [98] Hoffmann, P., Schiele, H. and Krabbendam, K. (2013) Uncertainty, Supply Risk Management and Their Impact on Performance. *Journal of Purchasing and Supply Management*, 19, 199-211. <https://doi.org/10.1016/j.pursup.2013.06.002>

- [99] Rao, S.S., Truong, D., Senecal, S. and Le, T.T. (2007) How Buyers' Expected Benefits, Perceived Risks, and E-Business Readiness Influence Their E-Marketplace Usage. *Industrial Marketing Management*, 36, 1035-1045. <https://doi.org/10.1016/j.indmarman.2006.08.001>
- [100] Zsidisin, G.A. and Wagner, S.M. (2010) Do Perceptions Become Reality? The Moderating Role of Supply Chain Resiliency on Disruption Occurrence. *Journal of Business Logistics*, 31, 1-20. <https://doi.org/10.1002/j.2158-1592.2010.tb00140.x>
- [101] Quang, H.T. and Hara, Y. (2018) Risks and Performance in Supply Chain: The Push Effect. *International Journal of Production Research*, 56, 1369-1388. <https://doi.org/10.1080/00207543.2017.1363429>
- [102] Bode, C., Wagner, S.M., Petersen, K.J. and Ellram, L.M. (2011) Understanding Responses to Supply Chain Disruptions: Insights from Information Processing and Resource Dependence Perspectives. *Academy of Management Journal*, 54, 833-856. <https://doi.org/10.5465/amj.2011.64870145>
- [103] Grötsch, V.M., Blome, C. and Schleper, M.C. (2013) Antecedents of Proactive supply Chain Risk Management—A Contingency Theory Perspective. *International Journal of Production Research*, 51, 2842-2867. <https://doi.org/10.1080/00207543.2012.746796>
- [104] Rajesh, R. and Ravi, V. (2015) Modeling Enablers of Supply Chain Risk Mitigation in Electronic Supply Chains: A Grey-Dematel Approach. *Computers & Industrial Engineering*, 87, 126-139. <https://doi.org/10.1016/j.cie.2015.04.028>
- [105] Aqlan, F. and Lam, S.S. (2015) Supply Chain Risk Modelling and Mitigation. *International Journal of Production Research*, 53, 5640-5656. <https://doi.org/10.1080/00207543.2015.1047975>
- [106] Cruz, J.M. (2013) Mitigating Global Supply Chain Risks through Corporate Social Responsibility. *International Journal of Production Research*, 51, 3995-4010. <https://doi.org/10.1080/00207543.2012.762134>
- [107] Chen, J., Sohal, A.S. and Prajogo, D.I. (2013) Supply Chain Operational Risk Mitigation: A Collaborative Approach. *International Journal of Production Research*, 51, 2186-2199. <https://doi.org/10.1080/00207543.2012.727490>
- [108] Daultani, Y., Kumar, S., Vaidya, O.S. and Tiwari, M.K. (2015) A Supply Chain Network Equilibrium Model for Operational and Opportunism Risk Mitigation. *International Journal of Production Research*, 53, 5685-5715. <https://doi.org/10.1080/00207543.2015.1056325>
- [109] Ambulkar, S., Blackhurst, J.V. and Cantor, D.E. (2016) Supply Chain Risk Mitigation Competency: An Individual-Level Knowledge-Based Perspective. *International Journal of Production Research*, 54, 1398-1411. <https://doi.org/10.1080/00207543.2015.1070972>
- [110] Kirilmaz, O. and Erol, S. (2017) A Proactive Approach to Supply Chain Risk Management: Shifting Orders among Suppliers to Mitigate the Supply Side Risks. *Journal of Purchasing and Supply Management*, 23, 54-65. <https://doi.org/10.1016/j.pursup.2016.04.002>
- [111] Kumar, S., Liu, J. and Scutella, J. (2015) The Impact of Supply Chain Disruptions on Stockholder Wealth in India. *International Journal of Physical Distribution & Logistics Management*, 45, 938-958. <https://doi.org/10.1108/IJPDLM-09-2013-0247>
- [112] Micheli, G.J., Mogre, R. and Perego, A. (2014) How to Choose Mitigation Measures for Supply Chain Risks. *International Journal of Production Research*, 52, 117-129. <https://doi.org/10.1080/00207543.2013.828170>
- [113] Rajesh, R., Ravi, V. and Venkata Rao, R. (2015) Selection of Risk Mitigation Strategy in Electronic Supply Chains Using Grey Theory and Digraph-Matrix Approaches. *International Journal of Production Research*, 53, 238-257. <https://doi.org/10.1080/00207543.2014.948579>
- [114] Speier, C., Whipple, J.M., Closs, D.J. and Voss, M.D. (2011) Global Supply Chain Design Considerations: Mitigating Product Safety and Security Risks. *Journal of Operations Management*, 29, 721-736. <https://doi.org/10.1016/j.jom.2011.06.003>
- [115] Talluri, S., Kull, T.J., Yildiz, H. and Yoon, J. (2013) Assessing the Efficiency of Risk Mitigation Strategies in Supply Chains. *Journal of Business Logistics*, 34, 253-269. <https://doi.org/10.1111/jbl.12025>

- [116] Wieland, A. and Marcus Wallenburg, C. (2013) The Influence of Relational Competencies on Supply Chain Resilience: A Relational View. *International Journal of Physical Distribution & Logistics Management*, 43, 300-320 .<https://doi.org/10.1108/IJPDLM-08-2012-0243>
- [117] Diabat, A., Govindan, K. and Panicker, V.V. (2012) Supply Chain Risk Management and Its Mitigation in a Food Industry. *International Journal of Production Research*, 50, 3039-3050. <https://doi.org/10.1080/00207543.2011.588619>
- [118] Li, J. and Chan, F.T. (2012) The Impact of Collaborative Transportation Management on Demand Disruption of Manufacturing Supply Chains. *International Journal of Production Research*, 50, 5635-5650. <https://doi.org/10.1080/00207543.2011.651540>
- [119] Ellis, S.C., Henry, R.M. and Shockley, J. (2010) Buyer Perceptions of Supply Disruption Risk: A Behavioral View and Empirical Assessment. *Journal of Operations Management*, 28, 34-46. <https://doi.org/10.1016/j.jom.2009.07.002>
- [120] Goh, M., Lim, J.Y. and Meng, F. (2007) A Stochastic Model for Risk Management in Global Supply Chain Networks. *European Journal of Operational Research*, 182, 164-173. <https://doi.org/10.1016/j.ejor.2006.08.028>
- [121] Ambulkar, S., Blackhurst, J. and Grawe, S. (2015) Firm's Resilience to Supply Chain Disruptions: Scale Development and Empirical Examination. *Journal of Operations Management*, 33, 111-122. <https://doi.org/10.1016/j.jom.2014.11.002>
- [122] Parajuli, A., Kuzgunkaya, O. and Vidyarthi, N. (2017) Responsive Contingency planning of Capacitated Supply Networks under Disruption Risks. *Transportation Research Part E: Logistics and Transportation Review*, 102, 13-37 <https://doi.org/10.1016/j.tre.2017.03.010>
- [123] Schmitt, A.J. and Singh, M. (2012) A Quantitative Analysis of Disruption Risk in a Multi-Echelon Supply Chain. *International Journal of Production Economics*, 139, 22-32 <https://doi.org/10.1016/j.ijpe.2012.01.004>
- [124] Skipper, J.B. and Hanna, J.B. (2009) Minimizing Supply Chain Disruption Risk through Enhanced Flexibility. *International Journal of Physical Distribution & Logistics Management*, 39, 404-427. <https://doi.org/10.1108/09600030910973742>
- [125] Wakolbinger, T. and Cruz, J.M. (2011) Supply Chain Disruption Risk Management through Strategic Information Acquisition and Sharing and Risk-Sharing Contracts. *International Journal of Production Research*, 49, 4063-4084 <https://doi.org/10.1080/00207543.2010.501550>
- [126] Liu, Z. and Nagurney, A. (2011) Supply Chain Outsourcing under Exchange Rate Risk and Competition. *Omega*, 39, 539-549. <https://doi.org/10.1016/j.omega.2010.11.003>
- [127] Lockamy III, A. and McCormack, K. (2010) Analysing Risks in Supply Networks to Facilitate Outsourcing Decisions. *International Journal of Production Research*, 48, 593-611. <https://doi.org/10.1080/00207540903175152>
- [128] Olson, D.L. and Wu, D. (2011) Risk Management Models for Supply Chain: A Scenario Analysis of Outsourcing to China. *Supply Chain Management: An International Journal*, 16, 401-408. <https://doi.org/10.1108/13598541111171110>
- [129] Tsai, M.C., Liao, C.H. and Han, C.S. (2008) Risk Perception on Logistics Outsourcing of Retail Chains: Model Development and Empirical Verification in Taiwan. *Supply Chain Management: An International Journal*, 13, 415-424. <https://doi.org/10.1108/13598540810905679>
- [130] Berling, P. and Rosling, K. (2005) The Effects of Financial Risks on Inventory Policy. *Management Science*, 51, 1804-1815. <https://doi.org/10.1287/mnsc.1050.0435>
- [131] Jüttner, U. and Maklan, S. (2011) Supply Chain Resilience in the Global Financial Crisis: An Empirical Study. *Supply Chain Management: An International Journal*, 16, 246-259. <https://doi.org/10.1108/13598541111139062>
- [132] Liu, Z. and Cruz, J.M. (2012) Supply Chain Networks with Corporate Financial Risks and Trade Credits under Economic Uncertainty. *International Journal of Production Economics*, 137, 55-67. <https://doi.org/10.1016/j.ijpe.2012.01.012>
- [133] Raghavan, N.S. and Mishra, V.K. (2011) Short-Term Financing in a Cash-Constrained Supply Chain. *International Journal of Production Economics*, 134, 407-412. <https://doi.org/10.1016/j.ijpe.2009.11.014>

- [134] Waller, M.A., Nachtman, H. and Hunter, J. (2006) Measuring the Impact of Inaccurate Inventory Information on a Retail Outlet. *The International Journal of Logistics Management*, 17, 355-376. <https://doi.org/10.1108/09574090610717527>
- [135] Zepeda, E.D., Nyaga, G.N. and Young, G.J. (2016) Supply Chain Risk Management and Hospital Inventory: Effects of System Affiliation. *Journal of Operations Management*, 44, 30-47. <https://doi.org/10.1016/j.jom.2016.04.002>
- [136] Elzarka, S.M. (2013) Supply Chain Risk Management: The Lessons Learned from the Egyptian Revolution 2011. *International Journal of Logistics Research and Applications*, 16, 482-492. <https://doi.org/10.1080/13675567.2013.846307>
- [137] Meena, P.L., Sarmah, S.P. and Sarkar, A. (2011) Sourcing Decisions under Risks of Catastrophic Event Disruptions. *Transportation Research Part E: Logistics and Transportation Review*, 47, 1058-1074. <https://doi.org/10.1016/j.tre.2011.03.003>
- [138] Ramanathan, R. (2010) The Moderating Roles of Risk and Efficiency on the Relationship between Logistics Performance and Customer Loyalty in E-Commerce. *Transportation Research Part E: Logistics and Transportation Review*, 46, 950-962. <https://doi.org/10.1016/j.tre.2010.02.002>
- [139] Fattahi, M., Govindan, K. and Keyvanshokoh, E. (2017) Responsive and Resilient supply Chain Network Design under Operational and Disruption Risks with Delivery Lead-Time Sensitive Customers. *Transportation Research Part E: Logistics and Transportation Review*, 101, 176-200. <https://doi.org/10.1016/j.tre.2017.02.004>
- [140] Li, M. and Petrucci, N.C. (2017) Demand Uncertainty Reduction in Decentralized Supply Chains. *Production and Operations Management*, 26, 156-161. <https://doi.org/10.1111/poms.12626>
- [141] Poojari, C.A., Lucas, C. and Mitra, G. (2008) Robust Solutions and Risk Measures for a Supply Chain Planning Problem under Uncertainty. *Journal of the Operational Research Society*, 59, 2-12. <https://doi.org/10.1057/palgrave.jors.2602381>
- [142] Balan, S., Vrat, P. and Kumar, P. (2009) RETRACTED: Information Distortion in a Supply Chain and Its Mitigation Using Soft Computing Approach. *Omega*, 37, 282-299. <https://doi.org/10.1016/j.omega.2007.01.004>
- [143] Demirkan, H. and Cheng, H.K. (2008) The Risk and Information Sharing of Application Services Supply Chain. *European Journal of Operational Research*, 187, 765-784. <https://doi.org/10.1016/j.ejor.2006.03.060>
- [144] Li, G., Fan, H., Lee, P.K. and Cheng, T.C.E. (2015) Joint Supply Chain Risk Management: An Agency and Collaboration Perspective. *International Journal of Production Economics*, 164, 83-94. <https://doi.org/10.1016/j.ijpe.2015.02.021>
- [145] Towill, D.R. (2005) The Impact of Business Policy on Bullwhip Induced Risk in Supply Chain Management. *International Journal of Physical Distribution & Logistics Management*, 35, 555-575. <https://doi.org/10.1108/09600030510623339>
- [146] Bandyal, D., Satir, A. and Shanker, L. (2014) Integrated Supply Chain Risk Management via Operational Methods and Financial Instruments. *International Journal of Production Research*, 52, 2007-2025. <https://doi.org/10.1080/00207543.2013.844376>
- [147] Bogataj, D. and Bogataj, M. (2007) Measuring the Supply Chain Risk and Vulnerability in Frequency Space. *International Journal of Production Economics*, 108, 291-301. <https://doi.org/10.1016/j.ijpe.2006.12.017>
- [148] Gao, L. (2015) Collaborative Forecasting, Inventory Hedging and Contract Coordination in Dynamic Supply Risk Management. *European Journal of Operational Research*, 24, 133-145. <https://doi.org/10.1016/j.ejor.2015.02.048>
- [149] Kern, D., Moser, R., Hartmann, E. and Moder, M. (2012) Supply Risk Management: Model Development and Empirical Analysis. *International Journal of Physical Distribution & Logistics Management*, 42, 60-82. <https://doi.org/10.1108/09600031211202472>
- [150] Tsai, M.C., Lai, K.H., Lloyd, A.E. and Lin, H.J. (2012) The Dark Side of Logistics Outsourcing—Unraveling the Potential Risks Leading to Failed Relationships. *Transportation Research Part E: Logistics and Transportation Review*, 48, 178-189. <https://doi.org/10.1016/j.tre.2011.07.003>

- [151] Kwak, D.W., Seo, Y.J. and Mason, R. (2018) Investigating the Relationship between Supply Chain Innovation, Risk Management Capabilities and Competitive Advantage in Global Supply Chains. *International Journal of Operations & Production Management*, 38, 2-21. <https://doi.org/10.1108/IJOPM-06-2015-0390>
- [152] Manuj, I., Esper, T.L. and Stank, T.P. (2014) Supply Chain Risk Management Approaches under Different Conditions of Risk. *Journal of Business Logistics*, 35, 241-258. <https://doi.org/10.1111/jbl.12051>
- [153] Nooraie, S.V. and Parast, M.M. (2015) A Multi-Objective Approach to Supply Chain Risk Management: Integrating Visibility with Supply and Demand Risk. *International Journal of Production Economics*, 161, 192-200. <https://doi.org/10.1016/j.ijpe.2014.12.024>
- [154] Pfohl, H.C., Gallus, P. and Thomas, D. (2011) Interpretive Structural Modeling of Supply Chain Risks. *International Journal of Physical Distribution & Logistics Management*, 41, 839-859. <https://doi.org/10.1108/09600031111175816>
- [155] Revilla, E. and Saenz, M.J. (2017) The Impact of Risk Management on the Frequency of Supply Chain Disruptions: A Configurational Approach. *International Journal of Operations & Production Management*, 37, 557-576. <https://doi.org/10.1108/IJOPM-03-2016-0129>
- [156] Schoenherr, T., Tummala, V.R. and Harrison, T.P. (2008) Assessing Supply Chain Risks with the Analytic Hierarchy Process: Providing Decision Support for the Offshoring Decision by a US Manufacturing Company. *Journal of Purchasing and Supply Management*, 14, 100-111. <https://doi.org/10.1016/j.pursup.2008.01.008>
- [157] Sodhi, M.S., Son, B.G. and Tang, C.S. (2012) Researchers' Perspectives on Supply Chain Risk Management. *Production and Operations Management*, 21, 1-13. <https://doi.org/10.1111/j.1937-5956.2011.01251.x>
- [158] Thun, J.H. and Hoenig, D. (2011) An Empirical Analysis of Supply Chain Risk Management in the German Automotive Industry. *International Journal of Production Economics*, 131, 242-249. <https://doi.org/10.1016/j.ijpe.2009.10.010>
- [159] Thun, J.H., Drüke, M. and Hoenig, D. (2011) Managing Uncertainty—An Empirical Analysis of Supply Chain Risk Management in Small and Medium-Sized Enterprises. *International Journal of Production Research*, 49, 5511-5525. <https://doi.org/10.1080/00207543.2011.563901>
- [160] Vilko, J.P. and Hallikas, J.M. (2012) Risk Assessment in Multimodal Supply Chains. *International Journal of Production Economics*, 140, 586-595. <https://doi.org/10.1016/j.ijpe.2011.09.010>
- [161] Wieland, A. (2013) Selecting the Right Supply Chain Based on Risks. *Journal of Manufacturing Technology Management*, 24, 652-668. <https://doi.org/10.1108/17410381311327954>
- [162] Wiengarten, F., Humphreys, P., Gimenez, C. and McIvor, R. (2016) Risk, Risk Management Practices, and the Success of Supply Chain Integration. *International Journal of Production Economics*, 171, 361-370. <https://doi.org/10.1016/j.ijpe.2015.03.020>
- [163] Yang, B. and Yang, Y. (2010) Postponement in Supply Chain Risk Management: A Complexity Perspective. *International Journal of Production Research*, 48, 1901-1912. <https://doi.org/10.1080/00207540902791850>