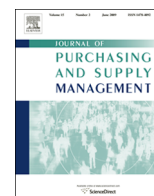




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## The role of critical incidents in the development of global sourcing—results of an in-depth case study

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### ARTICLE INFO

#### Article history:

Received 4 January 2016

Received in revised form

25 May 2016

Accepted 25 May 2016

Available online 7 June 2016

#### Keywords:

Global sourcing

Critical incidents

Global sourcing level

Case study

### ABSTRACT

Since the early 1980s companies have tried to implement coherent global sourcing strategies. Research has identified many benefits and motives for global sourcing. However, it remains unclear how companies are reaching higher levels of global sourcing. We employed a single embedded case study at Royal Brinkman (leader in the Dutch horticulture industry) to explore the role of critical incidents in the development of global sourcing strategies. Company documents and interviews revealed which critical incident had a substantial impact on the development of global sourcing strategies. Apparently, critical incidents can initiate and further stimulate global sourcing. Global sourcing decisions were mainly an opportunistic response to unforeseen events. Reactive strategies appear to govern global sourcing despite stated intended strategies. A proactive strategy does not appear to be a requirement to make progress in the global sourcing stages model.

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## 1. Introduction

Today's business environment is characterized by globalization, which refers to reduced trading barriers, and better connecting between production, communication, and technology across the world (Hanna and Jackson, 2015). Globalization is opening up new markets and possibilities (Schneider et al., 2013) and is facing purchasing and supply chain managers with new strategic challenges (Quintens et al., 2006). Companies have applied global sourcing, since the early 1980s (Nordigarden et al., 2015). The procurement of products across the globe is an increasing trend due to economic developments (Christopher et al., 2011). Purchasing strategies are increasingly taking place within a global perspective (Grossman and Helpman, 2005) and global sourcing is emerging due to the competitive advantages it may create for a company (Quintens et al., 2006). In a pursuit of competitive advantage, companies prefer to source globally rather than regionally (Gualandris et al., 2014). Many practitioners seem to believe that global sourcing is either inevitable and/or beneficial for firms (Horn et al., 2014).

It is widely recognized that, in many of today's globalizing industries, purchasing is one of the strategic functions with the highest potential to impact the long term profitability of a

company (Quintens et al., 2006). Surprisingly, many companies redefined their productions and marketing strategies to cope with the increasing globalization and chose to somehow neglect their global purchasing strategies and activities leaving attractive improvement opportunities largely unrealized (Quintens et al., 2006; Trent and Monczka, 2003a). Due to the strategic benefits and risks of global sourcing this is something that must be planned and organized at the highest corporate level (Samli et al., 1998).

Even though it is widely recognized that global sourcing is a way to gain new competitive advantages, several studies have failed to show any significant business results due to the implementation of global sourcing (Steinle and Schiele, 2008). It is therefore not to be said that global sourcing will always deliver clear results. Global sourcing strategies may have unintended consequences, such as incompetent suppliers (Nordigander et al., 2015) and increased exposure to quality risks from reduced control and visibility in the supply chain (Steven et al., 2014). Global sourcing is difficult and companies regularly underestimate its complexity (Hultman et al., 2012). Perhaps for this reason global sourcing is one of the most widely discussed topics within firms and has received extensive academic attention (Schneider et al., 2013; Steinle and Schiele, 2008).

Andersen and Christensen (2005) argue that the process of global sourcing is influenced by decisions of other supply chain actors. Hultman et al. (2012) suggests that global sourcing is governed by interactions among supply network actors. This implies that the process of global sourcing is not a rational decision by one firm only. Mintzberg and Waters (1985) acknowledged that

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a distinction should be made between a deliberate strategy and an emergent strategy. An emergent strategy is gradually shaped during an iterative process of ‘thinking’ and ‘doing’. A deliberate strategy is based on a plan, on an intended course of action. Realized strategies (pattern of actions) are the result of either a deliberate strategy, or an emergent strategy, or a mix between the two (De Wit and Meyer, 2014). The well-known Trent and Monczka (2003a, 2003b) stage model implies that companies should adopt a strategically consistent approach and should try and reach more advanced stages. It remains unclear if such advancements can be the result of a deliberate and/or emergent strategy. A study of Agndal (2006) found that the attitude of SMEs towards global sourcing was generally reactive and need-driven, or opportunistic spurred on by customers. With Hultman et al. (2012) we question the deliberate nature of decision-making concerning global sourcing strategies. Many firms are likely to benefit from a more proactive approach to global sourcing. However, it remains unclear to what degree companies make proactive choices to implement global sourcing strategies.

Despite a growing body of literature on global sourcing, it seems there is still a gap between theory and practice (Christopher et al., 2011). Spina et al. (2015) most recently pointed at the need for wider and more substantive use of theory in purchasing and supply management research. The stage model, as outlined by Trent and Monczka (2003b, 2005) is widely seen as a prominent theory when describing and predicting the development of global sourcing activities within companies. However, there are questions and doubts concerning the normative and deliberate nature of the stages’ approach (e.g. Hultman et al., 2012). For instance, the stage model says little about why and how to reach another stage. Each phase is a function of a company’s competitive environment (Bozarth et al., 1998), while other contingent factors may also influence the transition from one stage to another (Nassimbeni, 2006). In general, little is known about managerial thinking and practices regarding global sourcing (e.g. Quintens et al., 2006). An important stream of research is focused on the motives and benefits of global sourcing. Often, lower cost is the most important motive for global sourcing efforts (e.g. Christopher et al., 2011), although other benefits are related to quality, delivery, service, technology (e.g. Guanasekaran et al., 2015; Bozarth et al., 1998; Christopher et al., 2011), and more in general to safeguarding or increasing the competitive strength of the firm (e.g. Quintens et al., 2006). However, recognizing such motives will not automatically result in decisions about global sourcing. A motive to enter a foreign supply market may be to reduce costs, while the trigger may be an accidental meeting at a trade fair (Agndal, 2006). The extant literature on global sourcing rarely makes the distinction between motives and triggers. Hultman et al. (2012) recommends investigating the role of crises and critical events in global sourcing development and the impacts of these events.

This study is aimed at shedding light on the unknown impact of critical incidents in the (global sourcing) stage model. The purpose of the study is to clarify the importance and role of critical incidents in global sourcing decisions. Related research questions are: to what degree do companies make proactive choices to implement global sourcing strategies? Are advancements through the Trent and Monczka stage model triggered by crises and critical incidents or do they require a more formal, deliberate planning approach? Are critical incidents the starting point for companies to acknowledge that global sourcing is needed or is recognizing the benefits sufficient to engage in global sourcing?

The study is set up as a single embedded case study focusing on the Dutch based company Royal Brinkman. Royal Brinkman is the leading supplier, installer and consultant for the horticulture industries in The Netherlands. Established in 1885 and with over 250 employees, Royal Brinkman provides their services to customers in

more than 100 countries from their main office in or one of their nine sales office all over the world. Royal Brinkman has a broad base of suppliers as they supply over 30,000 different products, of which 10,000 can be supplied from stock. The study takes an in-depth look in the global sourcing development of the top product categories of Royal Brinkman. We determined current global sourcing levels and investigated what drove the company to this level of global sourcing. In addition, we specifically identified the role of critical incidents in the development of global sourcing.

## 2. Literature review

### 2.1. Global sourcing

The publications of Monczka and Trent (1991, 2003a, 2003b, 2005) make a clear distinction between ‘international purchasing’ and ‘global sourcing’. Monczka and Trent consider ‘international purchasing’ as the mere act of procuring goods or services in a commercial transaction from a supplier located in a different country. ‘International purchasing’ is therefore performed rather opportunistically without a strategic view. Global sourcing however, implies an integration and coordination of purchasing strategies (Gelderman and Semeijn, 2006) and an integration of engineering, operations, logistics, procurement and marketing within a company’s supply chain (Trent and Monczka, 2003a, 2003b). Horn et al. (2014) found that internal integration is a precondition for external integration, which in its turn has a strong positive influence on global sourcing success.

The definition and surrounding terminology of global sourcing, however, tend to vary widely (Hultman et al., 2012; Quintens et al., 2006). Monczka and Trent (1991) considered global sourcing as proactively integrating and coordinating common items and materials, processes, designs, technologies, and suppliers across worldwide purchasing, engineering, and operating locations. This definition is used widely in parts (e.g. Gelderman et al., 2006; Hultman et al., 2012; Jia et al., 2014; Quintens et al., 2006) or complete (e.g. Christopher et al., 2011; Holweg et al., 2011; Schneider et al., 2013; Trautmann et al., 2009) by other researchers. Kotabe and Murray (1990) define global sourcing as a combination of international and domestic sourcing used to achieve a competitive advantage. Although this definition is not as widely accepted as the one provided by Monczka and Trent (1991), it has been used in a number of publications (e.g. Bozarth et al., 1998; Quintens et al., 2006; Van Weele, 2014). Competitive advantages might be reached without good integration and coordination within a firm. However coordination and integration are key to get results from global sourcing (Quintens et al., 2006; Samli et al., 1998; Trent and Monczka, 2003b).

In this study, global sourcing is considered an integration and coordination of global purchasing strategies (cf. Gelderman et al., 2006; Monczka et al., 1991; Hultman et al., 2012). Integration and coordination imply that global sourcing should be part of the corporate strategy and planned and organized from the highest corporate level. This view is widely supported in many publications on global sourcing (Quintens et al., 2006). Although global sourcing is widely seen as a way to create a competitive advantage this study recognizes global sourcing as somewhat of a necessity. Where competitive advantages are used and required to outperform the competition (Porter, 1988) one can argue that substantial gains can be accomplished without gaining a true competitive advantage.

Despite the pressure for companies to source globally, research on global sourcing is still playing catch-up. In their literature study Hultman et al. (2012) found three streams of research that seem to be of scholarly interest to the academic world. A first stream deals

with the development of global sourcing within companies, more specifically with stages models on the internationalization process. The original stages model of Trent and Monczka (2003a, 2003b) appears to dominate this research stream. A second stream focuses on the drivers of, or motivations for global sourcing. Although strategic considerations are often linked to global sourcing, the economic recession has increased the pressure to reduce costs and shift sourcing from local to low-cost country suppliers (e.g. Hultman et al., 2012). The third stream of research is focused on the organizational design and management of global sourcing, especially the development of global sourcing strategies. Many studies have explored and described the development and implementation of strategies for global sourcing as a rather deliberate course of action. Managers typically sketch a coherent picture of the strategy development within their company, which can be seen as the result of a sensemaking process (Weick, 1995) or even story telling (Bakker and Kamann, 2007). The Critical Incident Technique could be used to elicit contextual circumstances and responses to these incidents (Bakker and Kamann, 2007) in order to reveal the actual pattern of global sourcing development. This study aims to employ this tool and to contribute to the understanding of drivers for global sourcing and the development of global sourcing strategies.

## 2.2. The 5-stage model for global sourcing

The views of Monczka and Trent (1991, 2003a, 2003b, 2005) have found support in the academic world (e.g. Bozarth et al., 1998; Hultman et al., 2012; Schneider et al., 2013). Their views laid the foundations for their well-known 5 stage model. Other authors have presented variations on this 5 stage model for global sourcing (e.g. Reichel, 1988; Fagan, 1991). However, these models are quite similar to the original model of Monczka and Trent (Quintens et al., 2006). The model describes a stepwise gradual implementation of global sourcing differentiating five different levels of global sourcing (Quintens et al., 2006; Trent and Monczka, 2002, 2003a, 2003b).

### 2.2.1. Level I: domestic purchasing only

Companies classified as a Level I company do not source products, goods or services globally. Their purchasing activities are strictly domestic. Reasons for sticking with domestic sourcing can be the lack of need to source globally or the lack of expertise to source on a global market. This does however not imply that Level I companies do not use foreign goods, as they can acquire them through their local suppliers and dealers (Trent and Monczka, 2002). Level I companies can be driven toward the second level due to triggering events in their supply chain (Trent and Monczka, 2003a).

### 2.2.2. Level II: international purchasing only as needed

Trent and Monczka (2002) describe the second level of global sourcing as a state in which companies will purchase on a global scale only when needed. The progression towards this phase is (again according to Trent and Monczka) usually reactive, our literature study however reveals no empirical evidence to suggest this step cannot be made proactively. The scale on which international purchasing is done is mostly very limited and done on an ad hoc basis (Trent and Monczka, 2005).

### 2.2.3. Level III: international purchasing as part of sourcing strategy

Firms can progress from level II by adding international purchasing to their sourcing strategy. Level III companies will approach the supply market with a global view. The companies in level III have recognized the added value of global sourcing, however strategies are not yet well coordinated and integrated throughout the entire company (Trent and Monczka, 2002, 2005).

### 2.2.4. Level IV: global sourcing strategies integrated across worldwide locations

Progressing toward Level IV in the global sourcing model requires (cross-locational) integration. This Level requires that the company has worldwide information systems, personnel with the knowledge and skills to coordinate the global sourcing process, organizational structure and communication systems that can coordinate and integrate the global sourcing activities from one central location, and executive management that supports the global integrated sourcing strategy (Jia et al., 2014; Trent and Monczka, 2002, 2005).

### 2.2.5. Level V: global sourcing strategies integrated across worldwide locations and function groups

In the final level, level V, the global sourcing strategies are not only integrated across worldwide locations but also across function groups. Relatively few companies operate on this level of global sourcing. Different from level IV are the integration and coordination of common processes across worldwide purchasing centers and other functional groups within the company. In level V the global sourcing strategy is linked horizontally with other functional groups (Trent and Monczka, 2002).

The influential Trent and Monczka-stage model has received much criticism. For instance, the model seems to assume that the ultimate goal for every company should be reaching level V. The need or the desirability to attain this final stage is likely to depend on many factors among which a number of company specific circumstances (e.g. Quintens et al., 2006). In addition, the explanatory power of the model has been questioned, which can be said of many stage models (Fig. 1).

Although Trent and Monczka (2002) suggest that companies will need a proactive approach to move from levels II to V in the 5 level model, the findings of both Bakker et al. (2007) and

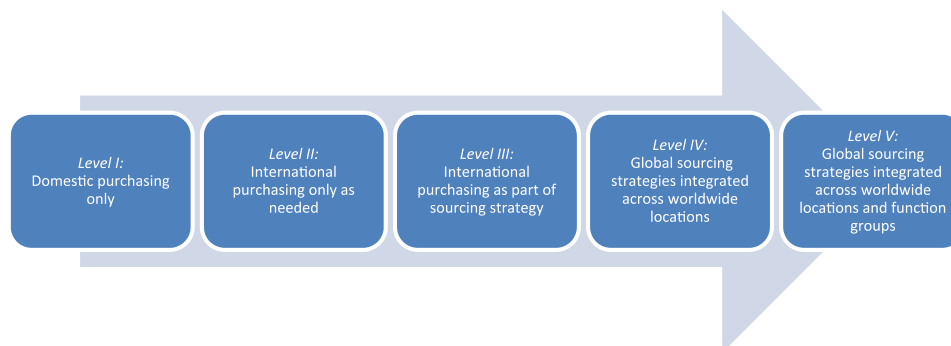


Fig. 1. The 5 level model of global sourcing. Source: Trent and Monczka (2002).

Hultman et al. (2012) suggest that a reactive approach can also lead to a strategic change, enabling a shift from one level of global purchasing to the next. The Trent and Monczka approach does not indicate how companies could or should advance their global sourcing activities to a higher stage level. In the empirical part of our study we intend to investigate and understand the ways in which a company actually brings their global sourcing activities to new and higher levels in the stage model.

### 2.3. Strategy development and critical incidents in global sourcing

The global sourcing strategy of a company is most commonly embedded within the overall business strategy on internationalization. Purchasing strategies of course should be linked to the business strategy, although this is not a sufficient condition for the deployment of such purchasing strategies (Bozarth et al., 1998). In that line of reasoning, global sourcing must be seen as part of a more extensive international strategy. Strategy development in purchasing is often presented as a composition of a series of plans (Hesping and Schiele, 2015), since it is very difficult to formulate an overall strategy for the purchasing function, i.e. the business strategy must be disaggregated into executable activities on the level of the firm strategy, the functional purchasing strategy, category strategies, tactical sourcing levers, and supplier strategies.

The development of a global sourcing strategy can be considered from a formal planning perspective. Advocates of this perspective argue that strategies should be deliberately planned and executed (De Wit and Meyer, 2014). Kotula et al. (2015) point at the problems of misalignment between an organization's sourcing strategy and its execution practices. Since global sourcing should be considered a source of sustainable competitive advantage, Nassimbeni (2006) advocates planned solutions instead of fortuitous solutions within organizations. The planning perspective runs counter to the strategic incrementalism perspective in which new strategies largely emerge over time. The strategy formation process is not about firmly setting the course of action in advance, but it is all about gradually shaping the strategy with flexibility and adaptability (De Wit and Meyer, 2014). Scholars acknowledge the role of individuals and the impact of their (subjective) perceptions on purchasing and supply management (Bakker and Kamann, 2007). We agree with Agndal (2006) that the extant research on global sourcing rarely makes the distinction between motives and triggers. It is expected that motives (for global sourcing) are likely to play a decisive role from a planning perspective, while triggers and critical incidents are important from a less formal, incrementalism perspective.

The literature shows limited knowledge on the role of critical incidents in the development of global sourcing. Bakker and Kamann (2007) found critical incidents to be one of the most referred reasons as to why people managed their supply chain in a specific way. They identified critical incidents that affected the supply chains and global sourcing: sudden bankruptcy of a supplier, natural disasters, failure of partnership, failure to supply products by a supplier. This short list of possible critical incidents is however not inclusive and a wider variety of critical incidents throughout various businesses and companies is expected. The way in which a company handles a critical incident may become the accepted way of managing supply relationships, as long as the response to the incident turns out to be successful (Bakker and Kamann, 2007). Apparently, critical incidents have strategic impact.

## 3. Research method

### 3.1. Case study

The empirical part of this study consists of a single embedded case study aimed at explaining the role of critical incidents in the development of global sourcing strategies. A qualitative study design was chosen since little is known about the impact of critical incidents on the development of global sourcing (Steinle and Schiele, 2008). The rationale for a single case study is the representative or typical case (cf. Yin, 2013). The objective is to capture the circumstances and conditions of typical decisions within the realm of global sourcing. The outcomes are intended to be informative about the experiences of the average purchasing professional.

For the selection of a case company the following criteria were set up in line with recent global sourcing research (e.g. Jia et al., 2014; Trautmann et al., 2009): the company should be in an industry moving towards a global structure; the company should qualify as a multinational; the company should currently implement global sourcing. The Royal Brinkman company was seen a good fit for this single case study. Royal Brinkman is the leading supplier, installer and consultant for the horticulture industry in The Netherlands. The case company (Royal Brinkman) is currently and actively engaged in developing global sourcing activities. The case study involved more than one unit of analysis (i.e. global sourcing for six different product groups). The embedded design provides a control for many factors and is considered the strongest version of a most-similar case design (George and Bennett, 2004). We aim to isolate the differences in the observed outcomes (levels of global sourcing) due to the influence of variance in the single independent variable (critical incidents).

### 3.2. The critical incidents technique (CIT)

The critical incident technique (CIT) was introduced to the social sciences by Flanagan (1954). The technique was initially used in studies on work behaviors. Flanagan (1954, p. 327) defined an incident as "any observable human activity that is sufficiently complete in itself to permit interference and predictions to be made about the person performing the act". Flanagan (1954) published his seminal paper in the Psychological Bulletin, initially reporting on observed events and over time on the results of interviews. The method first relied on observation as primary data collecting method, later its focus shifted towards interviews. To be critical, an incident should make a significant contribution, either positively or negatively, to an activity or phenomenon (Bitner et al., 1990).

CIT is used to investigate significant occurrences (events, incidents, processes, or issues) identified by respondents, the way they are managed and the perceived effects. A key advantage of CIT is that it asks for unprompted information that deemed to be important for respondents (e.g. Oldenburger et al., 2008). The technique is believed to be effective in explorative studies, aimed at gaining understanding of the perceived impact of incidents (Chell and Pittaway, 1998) and ultimately at solving practical problems (Flanagan, 1954). The roots of the CIT method can be traced back to studies in the Aviation Psychology Program of the United States Army Air Forces. After World War II the critical incident technique found its way in psychological research programs, aimed at describing and understanding human behavior, especially in the area of human resource management. Many studies were aimed at the determination of critical requirements for various professions and occupational groups (Flanagan, 1954). CIT has been used in a wide range of disciplines (Gremier, 2004), notably in studies on (dis)satisfaction, experience, and service

**Table 1**  
Operationalization of global sourcing concept.

Theoretical concept	Indicator	Data
<b>Global Sourcing</b>		
International sourcing volume	<ul style="list-style-type: none"> <li>• Purchasing from non-domestic supplier</li> </ul>	Purchasing data
Integration of global sourcing into strategy	<ul style="list-style-type: none"> <li>• Approach of supply market from a global view</li> </ul>	Purchasing strategies, procedures, interviews
Integration of global sourcing into worldwide locations	<ul style="list-style-type: none"> <li>• Integrated sourcing strategy</li> <li>• Worldwide information systems</li> <li>• Personnel with the knowledge and skills to coordinate the global sourcing process</li> <li>• Organizational structure and communication systems that can coordinate and integrate the global sourcing activities from one central location and executive management that supports the global</li> </ul>	Procedures, interviews, ERP-systems
Integration of global sourcing into function groups	<ul style="list-style-type: none"> <li>• Integration and coordination of common processes across worldwide purchasing centers and other functional groups</li> </ul>	Procedures, interviews

switching in service encounters (e.g. Bitner et al., 1990). One of the factors that makes CIT such a broadly used tool is that it can be altered in many aspects and still be successful (Schurr, 2007). However, CIT is not a commonly used method in research on purchasing and supply management. An exception is the study of Bakker and Kamann (2007, p. 311) who reported that “critical incidents disrupted the normal ways of working, requiring a change in behavior”. Our study is one of the few that explicitly investigates critical incidents and their impact on decisions on global sourcing strategies. This study aims to obtain insights in the way that critical incidents contribute to the development and implementation of global sourcing practices.

Prior to the CIT interviews, each respondent was informed in writing on the purpose of the study and what was meant by certain key terms that would be used (cf. Hamlin et al., 2011). Terms such as ‘critical’, ‘incident’ and ‘critical incident’ were defined and explained. In addition, the letter gave information about the 5 stage model for global sourcing. Respondents were also informed about the questions asked and how to prepare for the interview. Typically, interviews lasted 60–90 min.

The overarching theme of the interview protocol concerned the question “what caused you/your company to transit from one level of global sourcing to another in the Trent and Monzcka stage model?” The most important themes of the interview protocol are on the level of product groups: the level of global sourcing (in the Trent and Monzcka stage model), the transitions from one stage to another level in the stage model, causes for these transitions in the stage model (including critical incidents and/or deliberate purchasing strategies), other events/occurrences with an impact on transitions in the stage model, the companies involved in supplying the items, the current global sourcing activities and strategies, and the level of integration of global sourcing in the purchasing strategy, coordination and integration across worldwide purchasing centers and functional groups. To enable full and accurate answers, respondents were requested to focus on incidents that they experienced or observed first-hand. Respondents were also encouraged to provide factual reports, rather than interpretations (cf. Hughes et al., 2007). On each occasion, the recorded data were reflected back to the respondents in order to check and recheck interim reports, to improve the match with the intended information, and to explore issues in more detail.

### 3.3. Data collection and data analysis

Product groups were selected based on turnover, focusing on the product groups with the highest turnover. Royal Brinkman uses a structure in which product groups and suppliers are linked to specific buyers and product managers, serving as key informants. A semi-structured interview protocol has been used for interviewing lead buyers and product managers. The Chief

Procurement Officer, and the director of Royal Brinkman International (RBI), a subsidiary of Royal Brinkman focusing on the non-domestic activities of Royal Brinkman, were also interviewed. The Royal Brinkman's ERP systems and management information systems have been used to collect data regarding the suppliers and product groups. We have also used reports made on sourcing for cross reference purposes. The general strategic purchasing plans were reviewed and used as a cross reference. Purchasing plans were investigated for information about planned strategies. In the interviews respondents were also asked to elaborate on the intended purchasing strategies for each product group. Purchasing data were extracted from the ERP systems.

Firstly, the current level of global sourcing for the individual product groups were identified, using the 5 stage model. The interviews with key informants were then used to reveal the process of the development of global sourcing, and the impact of critical incidents on this process. Key informants were the procurement director, the director international, the product manager fertilizer and crop protection, the lead buyer mechanical, the lead buyer fertilizers and crop protection, and the lead buyer trading goods. Interview protocols were used for all interview, although respondents were prompted to determine which incidents were relevant for the actual decisions on global sourcing (strategies). The critical incident technique should allow respondents as free a range of responses as possible within the overall research framework (cf. Gabbott and Hogg, 1996).

For the operationalization of the proposed research model we used the 5 level global sourcing model to determine the level of global sourcing. During the interviews and the data collection and review phase particular attention was paid to the type of supplier used, either *domestic*, *European* or *other*, as well as to the integration of global sourcing in various (worldwide) locations and the integration across worldwide function groups (Table 1).

The data were analyzed using different tools and techniques, following the three concurrent flows of activity: data reduction, data display and conclusion drawing/verification (cf. Miles and Huberman, 1994). Data reduction was done to extract the relevant information from the interviews with key informants for all suppliers and product groups. Data reduction, being part of the analysis, begins with writing summaries, making clusters and writing memos. In order to draw conclusion, we have been using data display for qualitative data. Data display and pattern matching were used to create and strengthen the results of the research. Interviews with both management and key informant were cross referenced with data collected for the purchasing reports and the ERP system. After the stories (‘critical incidents’) were collected, the incidents must be classified in data categories that summarize and describe these incidents (Grove and Fisk, 1997). The main categories can either be deduced from theories or formed on the basis of inductive interpretation (Stauss, 1993). In line with

the explorative nature of our study, the critical incidents have been described using inductive logic. A set of analytic categories is required in order to describe and analyze patterns of relationships (Miles and Huberman, 1994). The classification of stages in the 5 level model of global sourcing guided the gathering of data and it provided a framework for the research protocol.

#### 4. Results

In this section we first provide a short summary of Royal Brinkman, its key product groups and current levels of global sourcing. These levels are then coupled with the critical incidents as identified by the interviewees. We also report on the strategic intentions and plans to engage in global sourcing.

##### 4.1. The case company

Royal Brinkman is the leading supplier, installer and consultant for the horticulture industry in The Netherlands. The horticulture industry has strong roots in The Netherlands, but finds itself more recently spreading to other parts of the world. While Royal Brinkman was established in 1885, the challenges they face are from recent times. The Dutch based suppliers of the horticulture industry find themselves more and more competing on the global business scene. With a product range of over 30,000 products, Royal Brinkman's customers include vegetable, flower, pot plant and tree nurseries. The company has a local representation in the most important horticultural countries in the world. Other parts of the world are covered through agents, dealers are directly managed from the Dutch head office. Royal Brinkman has a broad base of suppliers, both domestic and global and is currently rethinking its global sourcing efforts.

Table 2 shows the purchasing volumes, summed up for each product group and corresponding suppliers. Suppliers are classified to be either *domestic* or *non-domestic* based on the contact and distribution information. No particular attention is paid to identify the production location of the sourced goods. All but one of the product groups utilizes a sourcing strategy which involves at least a small level of non-domestic sourcing. Rock wool slabs were solely sourced from the domestic market. Some product groups are sourced domestically (e.g. rock wool slabs), while other product groups are predominantly sourced in other countries (e.g. tomato hooks). Also, there is variation in the number of suppliers for the different product groups.

While the domestic market is currently shrinking, Royal Brinkman is experiencing a steady growth due to increasing export markets. Although Royal Brinkman historically sources a very large portion of their procurement volume from the domestic market, this is slowly changing. The sourcing efforts in- and outside of Europe are slowly increasing. Royal Brinkman's management has expressed their commitment to utilize global sourcing and

increase coordination between various offices and regions. These commitments were first expressed in the beginning of 2013. Table 3 shows the levels of global sourcing for the different product products. The global sourcing level in column 6 is determined by using the observed integration in columns 4 and 5. Global sourcing level IV is attained when worldwide locations actually coordinate their purchasing activities (cf. Trent and Monczka, 2002). Level V implies the integration and coordination across both worldwide locations and functions. Such integration has not been attained for any of Royal Brinkman's product groups. Centralization of procurement across worldwide locations was observed for two product groups, indicating a global sourcing level IV. Coordination and integration are considered necessary in order to benefit from the opportunities of global sourcing. Royal Brinkman has eleven offices around the globe that operate rather independently from the main office. Needs and products differ from location to location. The offices have all some sort of their own procurement function. There is integration for some product groups, however, in general there is a lack of integration between communication systems, processes and function groups worldwide. The company is open for change and acknowledges the need for more coordination and integration. Global sourcing is labeled as critical to the future success of Royal Brinkman and its ability to compete on global markets.

##### 4.2. Critical incidents and global sourcing levels

All interviewees identified at least one critical incident with an impact on the development of global sourcing. We summarized the incidents by product group. It appeared that four out of six product groups first started global sourcing after being confronted with a critical incident. One other product group did not source globally and was never presented with a critical incident. The remaining product group was always sourced from the European market. The impact of these critical incidents are highlighted in Table 4.

###### 4.2.1. Fertilizers

Many fertilizers are sourced domestically. This, according to one of the interviewees, is because "the bottle deposit is more expensive than the product itself". One of the main suppliers is located less than twenty kilometers from the office of the company. The high volume of the product and the low value make it difficult to get products from abroad for the same total price as the domestic products as transport costs have a significant impact on the total price of the product. The interviewees noted that when the products do get more valuable the products indeed tend to get sourced globally. The company uses a multiple supplier strategy to ensure product availability at all times. Availability is key for customers who try to maximize the production of vegetables, decorative plants and flowers. There is little to no purchasing cooperation between different locations of the company for fertilizers. All locations tend to source for their own needs and other functions are also not integrated within the various locations of the company. A telling quote in that respect was "There is a lack of cooperation between offices. One of the strategic goals is to get the offices in line and at least share knowledge about suppliers and markets". Other companies tend to have a higher proportion of global sourcing in the fertilizer product group. However, the company has chosen a strategy that focusses more on brand and quality recognition instead of pricing. Fertilizers are sourced from well-known and well-branded suppliers. Suppliers are selected on a strategic basis if exclusive selling rights can be obtained. Otherwise, supplier selection relies largely on price and quality. Low prices are associated with foreign suppliers.

Two critical incidents that had an impact in the development of

**Table 2**  
Key product groups.

Product groups	Number of suppliers	Total spend 2013 (Mio €)	Domestic (in percentages)
Fertilizers	4	10.6	92%
Crop protection	7	7.7	65%
Tomato hooks	1	7.0	0%
Pots and containers	3	5.4	37%
Rock wool slabs	1	4.1	100%
Sleeves for agro products	1	1.4	0%
<b>Total</b>	<b>17</b>	<b>36.2</b>	<b>57%</b>

**Table 3**  
Levels of global sourcing.

Product group	Type of supplier	Global sourcing strategy	Integration across world-wide locations	Integration across world-wide functions	Global sourcing level <sup>a</sup>
Fertilizers	Domestic/ European	As needed and to spread supply risks	Low	None	III
Crop protection	Domestic/ European	As needed	None	None	II
Tomato Hooks	European/Global	As part of strategy	Centralized procurement	Partial	IV
Pots and containers	Domestic/ European	Originally as needed (now somewhat part of strategy)	None	None	II
Rock wool	Domestic	No global sourcing	None	None	I
Sleeves for Agro products	Global	Originally as needed (now somewhat part of strategy)	Centralized procurement	Partial	IV

<sup>a</sup> According to Trent and Monczka (2002).

global sourcing were identified for the fertilizer product group. On one account the company was first contacted by an Israeli supplier in an attempt to sell products in the Dutch market. The company showed no particular interest in procuring from this supplier at the time. However, when local suppliers tried to create scarcity by shutting down mines and production facilities, the company was forced to look elsewhere, thus ending up with the Israeli supplier. The other critical incident arose during the interviews was the increase in rules and regulations for the transportation of chemicals. This resulted in the company advancing on international purchasing of this particular product, to make sure regulations were being met. When the local supplier was able to comply with the stricter rules and regulations, this supplier was used again. In addition, the cooperation between different offices of the company increased to ensure rules and regulations are met worldwide.

#### 4.2.2. Crop protection

Crop protection is a very specific product group with extensive rules and regulations. As the name implies, crop protection is designed to shield crops from pests. Crop protection products can be biological (insects) or chemical in nature. These specific (chemical) products need to be certified for a specific use in a specific country. There is a very strong push market where suppliers sell the products that are allowed, and customers have few other choices. The products are sourced from both domestic and European markets. There is no cooperation and integration between the various locations of the company as these products are highly market/country specific.

One critical incident that had an impact in the development of global sourcing was identified. Due to strict rules and regulations in this product group, the company was forced to use one of only a few available international suppliers, licensed to produce or supply a particular product. According to the interviewee the rules are followed very strictly, because, as he recalls: “people were actually put in jail for having the wrong, unapproved products in stock”.

**Table 4.**  
Critical incidents with impact on global sourcing.

Product Group	Critical incident	Result
Fertilizers	Temporary shut down by supplier Additional laws and regulations for transportation of chemicals Additional laws and regulations for transportation of chemicals	From domestic supplier to global supplier Additional cooperation and integration between various offices of RB From global supplier to local supplier to be in accordance with new laws and regulations
Crop protections	Rules and regulations only allow very specific products to certain markets	Procurement is forced to use suppliers that are allowed to the markets
Tomato Hooks and twine	Bankruptcy of competitor Relocation of supplier due to high production costs	Addition of global supplier who used to do business with competitor From domestic supplier to global supplier (although no change in supplier is made)
Sleeves for Agro products	Competitors source from abroad for lower prices	From domestic global supplier to match price levels of competitor

#### 4.2.3. Tomato hooks and twine

The tomato hooks and twine have a long history of global sourcing. The product has been purchased outside the domestic market for over twenty years, when the company first engaged in a ‘Best Cost Country’ European partnership. Recently this market is shifting from a European produced market to a more global market. The procurement function for this product group is highly centralized and some of the other functions are also integrated across worldwide locations.

Two critical incidents were identified for the tomato hooks and twine product group. The bankruptcy of a competitor opened up the market enabling a partnership with a global supplier which used to work more or less exclusively with the competitor of the company, shifting the global sourcing from the European market, towards the global market. Crop growers have a strong preference for products that have proven themselves in the past. The company saw an opportunity to take over the market share of a former competitor by securing the distribution channel of a patented product produced outside Europe. One other incident that affected global sourcing was the shutting down of domestic plants where twine for the tomato hooks was produced. The interviewees speculated that due to high production costs the twine manufacturers moved away from the domestic market and settled in countries with lower production costs. Although the company did not change suppliers, it did affect the level of global sourcing, as international purchasing was now required.

#### 4.2.4. Pots and containers

Pots and containers is a product group that has a long history of sourcing outside of the domestic markets. When approximately 30 years ago a factory in Germany first started producing plastic pots and containers, they had no real competition and according to the interviewee they still do not. At least not in the domestic market of the company. There is no cooperation and integration between the various locations of the company. All worldwide locations source for their own needs, although occasionally a product is procured

through the main office and shipped from the central warehouse towards the other offices. In the past 30 years, no critical incidents appeared to have an impact on the development of global sourcing. Perhaps there are opportunities to procure these products outside Germany. However, the procurement department of the company is not actively searching for such opportunities.

#### 4.2.5. Rock wool fertilizer slabs

Rock wool slabs is a product group that tends to be made to specific customer order. Besides that the volume of the product tends to be very high in relation to the value of the product. One of the interviewees said “there is no use to source this product from abroad since you are just transporting air”. This product group is the only product group that is solely sourced from the domestic market. The rock wool factory located in the domestic market is also one of just a few factories in the European Union producing rock wool for agricultural use. Since this product group is completely domestically sourced, no critical incidents were mentioned with a potential impact on global sourcing activities. Due to a high cost percentage of transportation, the company is not actively looking for non-domestic opportunities.

#### 4.2.6. Sleeves for packaging of agro products

The packaging sleeves used by growers is the only product group investigated that is sourced completely outside of the European Union. The procurement function is centralized and comparable to the centralization of the tomato hook product group.

One critical incident was identified for the packaging sleeves product group. Unable to keep up with the pricing levels of the other local competitors, the company decided that (in order to stay competitive) they would also source from countries with lower product(ion) costs. The company therefore also established an additional sourcing channel in China, similar to one of the main domestic competitors. The interviewee noted that this seemed highly beneficial at first, and the company benefited for several years after the initial effort. As time progressed, all competitors started to source from China and in the end Royal Brinkman found itself again facing severe competition based on price. The interviewee stated: “at the end, we regret the effort of the first competitor, starting to source in China. Lead times and quality were a lot better when the products were still sourced domestically”. At this point he sees no way back as all production sites have moved to low cost countries.

In our study critical incidents appear to be the starting point for a company to acknowledge that global purchasing is needed. However, the impact of critical incidents is not limited to the initial stages of the model. Critical incidents can also trigger the transition to a next stage of global sourcing. For instance, additional laws and regulations in the fertilizer product groups started a closer and more coordinated cooperation between worldwide functions and locations. In terms of [Monczka and Trent \(1991, 2003a, 2003b, 2005\)](#) this is a move from stage II or III towards stage IV or V of the model.

### 4.3. Strategic intentions

Strategic planning starts with intentions, most commonly from the top management (strategist) of the firm ([Mintzberg and Waters, 1985](#)). These strategic intentions indicate what the firm is planning ([McGee et al., 2010](#)). In this study, strategic documents have been reviewed at three different levels: top level management, procurement/product management level, and on the level of specific product groups. The documents revealed one common strategic focus: “Increase the cooperation between the company and its strategic partners abroad”. This view was mainly expressed at the level of top management. Surprisingly, these strategic plans

at the procurement/product management level included no further details on how to implement global sourcing. Plans did focus on centralization of procurement and product management functions. While these plans were approved and published, no actions could be identified that would improve centralization. As one interviewee explained: “purchasing strategies” are on the edge of empty statements. The “what” is vaguely answered and the “how” is left very unclear. In short, our search of company documents revealed a lack of commitment to actually implement the strategic intentions. However, in a few instances, the top level strategic intentions on global sourcing appear to have reached the level of the product groups:

#### 4.3.1. Fertilizers

One example of strategy effecting global sourcing could be found in the fertilizers product group. It was a strategic choice to spread the supply risk and use more than one supplier. The result of this strategy is that for some products, beside domestic suppliers, new international suppliers were sourced and contracted.

#### 4.3.2. Tomato hooks and sleeves for agro products

In both the tomato hooks and in the sleeves for agro products product groups the interviewees identified similar effects from strategic choices. In these products group the procurement function has been centralized at the main office of the company. Interviewees indicated that this is mostly due to the somewhat more complex process of procuring from these supplier abroad and that over time the best way to work was established, resulting in one central contact point for procurement and coordination.

## 5. Discussion

Our study contributes to the field of global sourcing by identifying the impact of critical incidents on the stages of global sourcing. While [Monczka and Trent \(1991, 2003a, 2003b, 2005\)](#) emphasize generic motives and benefits of global sourcing efforts, we find critical incidents to be the main reason why companies may take on global sourcing. Simply recognizing the benefits of global sourcing is not enough to bring companies to the next stage of global sourcing. Our study shows that a “spark” is needed to light the global sourcing fire. Critical incidents are apparently still helpful to prompt purchasing managers to show initiative on global sourcing.

Global sourcing initiatives are typically presented as a way forward to implement a corporate strategy. Developing purchasing strategy can then be considered a concerted series of plans ([Hesping and Schiele, 2015](#)). This approach is in line with the formal planning perspective on strategy development ([De Wit and Meyer, 2014](#)). Strategic intentions define the purpose in performing strategic actions. Planning also involves deliberation which includes analyzing the purpose for action and evaluating different courses of action ([McGee et al., 2010](#)). A deliberate strategy covers the parts of an intended strategy that the firm continues to pursue over time, while an intended strategy indicates what a firm plans to do. The realized strategy is the product of an intended strategy, of an emergent strategy or a combination of the two ([Mintzberg and Waters, 1985](#), see [Fig. 2a](#)). An emergent strategy is gradually shaped during an iterative process of ‘thinking’ and ‘doing’ ([De Wit and Meyer, 2014](#)). The intended strategy of the case company clearly stated that global sourcing should be brought to a higher level, strengthening the cooperation with foreign strategic partners and strengthening the internal cooperation by centralization of procurement functions. However, these intentions were not elaborated upon in any other document or plan. In addition, we were not able to find any iterative process of thinking and doing



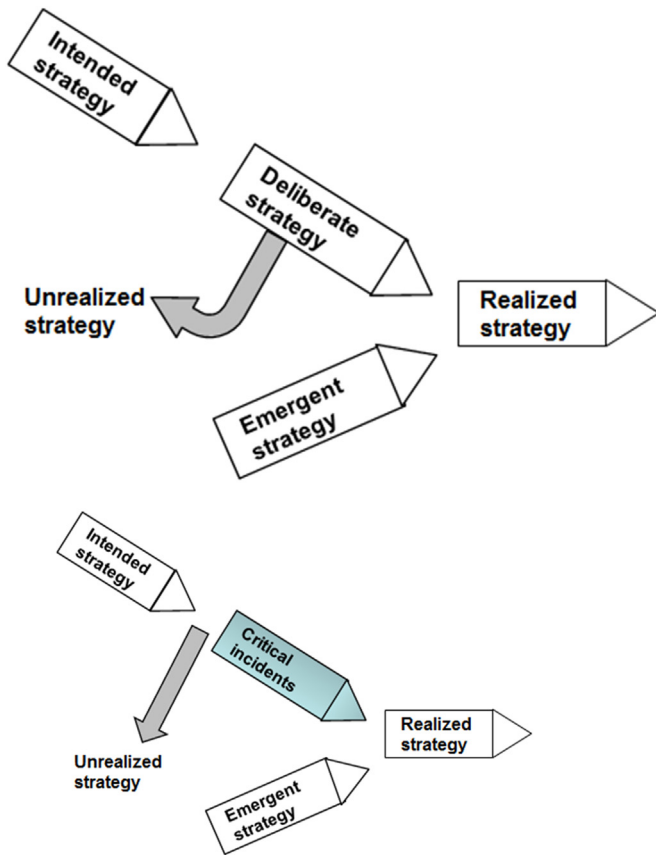


Fig. 2. (a) Deliberate and emergent strategy, according to Mintzberg and Waters (1985). (b) The decisive role of critical incidents in realized (global sourcing) strategy.

that gradually resulted in some sort of emergent strategy. Nevertheless, on the product group level decisions were made and actions were undertaken that constituted and led to a realized strategy on global sourcing. This realized strategy was found to be in response to unforeseen changes of (especially) the behavior and decisions of suppliers. The global sourcing strategy was therefore reactive and rather opportunistic by nature, spurred on and initiated by critical incidents (Fig. 2b).

The stage model as proposed by Monczka and Trent was originally intended to assess the level of global sourcing within a company. Our study clearly revealed different levels of global sourcing throughout the various product groups. This finding is in line with Hultman et al. (2012) who also determined global sourcing levels on product levels instead of company level. Companies should consider global sourcing at the product level while taking account of company plans.

Trent and Monczka (2002) suggest that companies need a proactive approach to move from levels II to V in the 5 level model. However, the findings of our study suggest that critical incidents can also cause this shift. A reactive approach can lead to strategic implications, pushing the global sourcing level of a company.

## 6. Conclusions and recommendations

### 6.1. Conclusions

The purpose of this study was to investigate the role of critical incidents in the development of global sourcing and to explore and model the patterns and processes of proactive and reactive global sourcing. The literature is unclear if global sourcing advancements

are the result of a deliberate and/or an emergent strategy. In addition, the well-known Monczka and Trent-model says little about why and how to reach other stages of global sourcing. Based on a single embedded case study we found that critical incidents are instrumental in causing the next level of global sourcing. Only in exceptional cases, did top level strategic intentions affect global sourcing on the level of product groups. The realized global sourcing strategy was mainly a reactive and opportunistic response to unforeseen circumstances and decisions of suppliers. Apparently, an intended strategy is not a requirement to make progress in the global sourcing stages model. While lower cost is often mentioned as the most important motive for global sourcing efforts, our case study revealed that other factors triggered advancements in global sourcing. A change in laws and regulations were acknowledged as critical incidents, inducing global sourcing decisions. It appeared having a corporate strategy and recognizing the benefits of global sourcing is not sufficient to bring about global sourcing. Triggers, such as critical incidents, can prompt companies to act.

### 6.2. Recommendations for practitioners

This study provides insights into the role of critical incidents in the development of global sourcing. This case study revealed that the decision making process and the implementation of global sourcing activities were initiated and spurred by critical incidents. Management should value critical incidents for their potential positive role in the development of global sourcing. Proactive, deliberate strategies do not appear to be a requirement to progress within the global sourcing stages model. Companies should recognize critical incidents and try to capitalize on the opportunities they provide. Purchasing management should make an effort to positively frame critical incidents, acknowledging the constructive impact on, for instance, global sourcing strategies. Although this case study shows positive results from dealing with critical incidents, there is no indication that waiting for critical incidents to happen should be preferred to a more proactive approach to global sourcing.

Top management should be aware that many decisions on global sourcing are taken in response to unforeseen changes in the supply market. These unexpected changes present themselves as critical incidents. These incidents trigger a process of rapid decision making which appeared to be not within the range of possibilities in cases of 'business as usual'. Top management might be inclined to label such reactive strategy formation as less desirable or as opportunistically driven. However, our study indicates that critical incidents can initiate and further stimulate the development and implementation of global sourcing strategies. The notion that companywide levels of global sourcing at Royal Brinkman at a relatively low level supports the idea that a proactive approach could stimulate the further development of global sourcing within the company. Obviously, merely formulating an intended strategy will not result in a realized strategy.

### 6.3. Recommendations for further research

We employed a single case study aimed at investigating and exploring the role of critical incidents in the development of global sourcing. The Critical Incident Technique is a retrospective research method which implies that the findings might be flawed by recall bias. The method relies on events being remembered by respondents who might have misinterpreted or reinterpreted the incidents (Gremier, 2004). We acknowledge these limitations, although respondent bias was controlled by providing clear descriptions and contextual information to the respondents and by allowing respondents ample time and opportunity to determine

and describe relevant critical incidents. The data were reflected back to the respondents in order to check and recheck interim reports and to improve the match with intended information. Our study focused on the perspective and experiences of the buyer. Additional insights might be gathered with a dyadic research design including the perceptions of local and global suppliers. Another limitation is that the critical incidents are treated as dichotomous factors (yes/no), while ignoring the magnitude or seriousness of these incidents. Future research could try to capture the “criticality of critical incidents” that may differ over time and differ over different circumstances (cf. Edvardsson and Strandvik, 2000). In addition, which factors influence the criticality of a critical incident? (cf. Oldenburger et al., 2008).

The organizational change literature discusses how managers may implement major organizational changes to prevent or overcome resistance to change (e.g. Kotter, 2007). Decisions in the area of global sourcing are likely to be challenged or hampered by organizational resistance. In the organizational behavior literature, risk aversion (or a lack of risk willingness) is considered an important part of organizational resistance to change (Ørberg Jensen and Petersen, 2013). Future studies on global sourcing could draw on organizational behavior research, focusing on issues like change management, (organizational) resistance, and risk aversion/willingness. Another promising theoretical perspective is the contingency theory (Hofer, 1975). Research could identify elements in the environment to which purchasing professionals adjust global sourcing efforts (cf. Bakker and Kamann, 2007). Will companies have better performance when adopting global sourcing decisions to these contingency variables? Studies could also take an interaction approach to global sourcing and focus on the interactions among supply network actors (Hultman et al., 2012).

This study used the Monczka and Trent's 5 level stage model of global sourcing. The model is normative in the sense that it prescribes a linear pathway from one stage to another. It pretends to provide a steady roadmap for (global) purchasing sophistication. The model suggests that the ultimate goal for every company should be reaching the final level of “global sourcing strategies integrated across worldwide locations and function groups”. However, it remains unclear which level is most appropriate for specific companies and specific product groups. The case company of this study was simultaneously involved in four different levels of global sourcing development. Future research could identify specific circumstances that determine the most appropriate global sourcing levels. Moreover, future research is needed to link global sourcing levels to company and purchasing performance. The model can be used to assess the maturity and development of global sourcing activities (cf. Hespings and Schiele, 2015). However, there is a lack of knowledge on performance measures than can be associated with global sourcing stages.

Future research could be conducted in different contexts and countries. It would be especially recommended to explore and investigate a company with an excellent record in the area of global sourcing. The experience of such a leading edge company would give additional insight in the role of critical incidents in the advancements to stages IV and V of the global sourcing model. A vignette study might be used to assess whether there are ‘best practices’ as a response to certain critical incidents (cf. Bakker and Kamann, 2007). Analyzing the impact of global sourcing efforts on risks, innovation, and responsiveness of international supply chains (cf. Guanasekaran et al., 2015), is also a promising avenue to pursue.

This paper provides new insights into the actual decision-making at a company that is actively engaged in the implementation of global sourcing. While it is widely recognized that global sourcing is very important and should be guided by formal, deliberate planning, this study found that strategic global sourcing

decisions were mainly made as a reaction to a critical incident in the environment. Supplier behavior and changing rules and regulations were identified as sources of critical incidents. Only in exceptional cases were global sourcing decisions affected and spurred on by top management planning and strategic intentions. The well-known Monczka and Trent stage model is normative, providing a roadmap for global sourcing development. What the case study highlight is another, a less clear-cut reality of global sourcing advancements. Top management may easily get a false sense of control, when failing to understand the significance and impact of critical incidents.

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