
Impact of Supply Chain Professionals' Competencies on Performance: A Knowledge-Based View of Supply Chain Competence

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Abstract

Globalization has changed today's supply chains (SC). Highly competent, skilled, and qualified professionals are required by SC to perform transactional, strategic, planning and operational tasks. By providing the training, the level of supply chain competencies can be improved. These competencies constitute of a professional's knowledge, skills, and abilities. Knowledge-sharing culture among the important contributors improves individual competencies and overall SC-performance. Literature and theory on the SC-competencies that allow managers in the SC area to perform their tasks more effectively are at the initial phase. In this paper we seek to identify these competencies and measure their impact on the individual's and the supply chain's performance (SCP). We further show the role of SC-manager's resilience on performance. We use a survey of SC managers in Pakistan to test our hypotheses. Our results highlight the importance of SC Competencies for the SC managers, as well as for SC performance. This study is unique, as no prior researches studied the consequences of SC individual competencies, the mediating role of job-performance, and the manager's resilience together. The results suggest that corporate training may help SC professionals to gain the required skill sets; and knowledge sharing culture will also enhance SC competencies and performance. Job performance is discovered to be a strong and resilience as a weak mediator between supply chain competencies and supply chain performance.

Keywords: Knowledge sharing, manager's resilience, supply chain competencies, supply chain performance

1. Introduction

Globalization, business environment, and technological advancements have changed today's supply chains significantly, and this has led the supply chains to deliver superior operational performance (Sohal, 2013). A number of researchers have studied and concluded that the current supply chains require professionals, who can transform themselves from transactional and clerical tasks to strategic and planning tasks (Carr, 2000; Faes et al., 2001; Giunipero, 2006; Johnson, 1998). The search for competent supply chain professionals for the modern supply chain management firms is intensifying day-by-day, due to globalization, competition, and technology advancement.

Competence is a fuzzy concept, as it is impossible to come up with a single comprehensive definition of competence (Deist, 2005). Several researchers referred that a competent manager is basically a professional having the perfect combination of knowledge, skills and abilities (KSA) (Athey & Orth, 1999; Sanchez, 2004). This blend of knowledge, skills, abilities, capital, and competencies (Athey & Orth, 1999; Sanchez, 2004), when exists perfectly in a person, makes them the right match for the job; however, it has become difficult to discover capable professionals for different kinds of jobs (Maku et al., 2005). Similarly, competencies are key determinants of superior performance and competitiveness in supply chain management (SCM).

Bowersox (2000) concluded that financial and operational improvements in businesses can be made through supply chain competence. So, these competencies (i.e. KSA) are the core reasons for developing organizational goals that seem more relevant to supply chain management, which, when utilized effectively, can strategically add value to the firm's performance (McCarter & Northcraft, 2007). So, competent supply chain professionals do actually form an efficient supply chain that is linked to a firm's performance.

Firms can have an optimum SCP based on the fact that SC professionals have a sufficient level of KSA blend, where *knowledge* is having content or technical information in one's cognition obtained through proper schooling, working (practical) experience, or different information sources (McCormick, 1976); *skills* are developed capacities that facilitate quick learning and airing knowledge (Mumford, 1999); and finally, Fossum (1986) defined *abilities* as the unceasing characteristics that influence individual's performance and they usually do not change.

We use the lens of knowledge-based view (KBV) to form our theoretical model. The KBV considers knowledge as the most important strategic resource for an organization (Grant, 1996). There always exists a continuous thirst in the industry to have a competent supply chain

professional, and this quest is grounded in the firm's KBV (Flöthmann et al., 2018b). KBV suggests that firms can achieve competitive advantage through the knowledge it possesses (Grant, 1996; Zander, 1992). Strategic knowledge resides within an individual, rather than an organization (Grant, 1996). As competencies are a perfect blend of KSA (Athey & Orth, 1999; Sanchez, 2004), and these competencies can be the determinants of a firm's performance (McCarter & Northcraft, 2007), KBV presents the best theoretical support to the idea of this study.

There is a need to study the impact of SC competencies (both individual and organizational) on the performance of SC professionals in the SME sector (Flöthmann et al., 2018b). Flöthmann et al. (2018a) found a significant bias of SCM and human resource management (HRM) literature towards American companies; so, non-American companies needed to be studied. This gap needs to be addressed. As SCM is an emerging field in Pakistan, the needs specific to the SME industry in Pakistan must be addressed. Moreover, analyzing the competency requirements for logistics and SC managers, Derwik (2016) concluded that competence in SCM context "is still in its infancy". There is insufficient discussion and limited empirical investigation available on the professional competencies of logistics professionals in the SCM context. Thus, SCM competencies need to be further explored, due to their multidimensional construct (Derwik and Hellström, 2017).

The purpose of this study is to identify the antecedents and consequents of competencies and skills required of the professionals of SCM that can help in achieving better performance in their supply chain-related role. The study will help in identifying and developing the supply chain competencies that will help the HRM of organizations and individuals equally to prepare themselves to deal with supply chain-related challenges. The study will also help the HR managers to hire the right SCM professionals for the right Job (Flöthmann et al., 2018b). Hence, this study aims to consider and focus on the scarcity of research in the area to dig down the competency requirements for SCM in the industry, and this will help HR managers to define the hiring criteria of SC professionals. This research will answer how SC competencies affect an individual's job performance and overall SCP. So, the first research question is:

RQ1: What are the antecedents and consequents of supply chain competencies?

RQ2: Which skills have the largest contribution towards better job performance of Supply chain professionals?

This study aims to contribute to help create better-performing supply chain individuals by giving the required competence and skill set, which can impact a supply chain professional's performance in a positive way. This is possible by identifying the variable that can help

employees in the development of key SC competencies. This will help organizations to develop competent supply chain professionals. The SCM firms, especially the SME firms which are the backbone of the Pakistani industry, will also benefit from this study.

2. Literature Review

Firms always look to hire a highly competent supply chain professional and their success in this search is anchored in the KBV of the firm. The basic idea with the KBV is that knowledge can become a firm's competitive advantage (Grant, 1996; Zander, 1992). Further, Grant (1996) suggested that individuals or personnel are the sources of strategic knowledge. Proficient personnel, who possess valuable, rare, inimitable and non-substitutable (VRIN) competencies, can lead to a competitive advantage for the organization (Barney, 1991; Grant, 1996; Wernerfelt, 1984). Knowledge-based view (KBV) compels firms to develop competent professionals to sustain their competitive advantage. Knowledge, as a resource for an organization, is very important in SC competitiveness (Hult et al., 2004).

2.1. Supply Chain Professional Competencies

The balance between two types of skills i.e. hard skills, like technical & analytical skills, and soft skills, like behavioral skills, within a supply chain professional is essential to achieve assimilation in the dynamic supply chain business environment (Christopher, 2012; Cottrill, 2010). Mirabile (1997) took individual competencies as a set of personnel's knowledge, skills, and abilities related to an individual's job performance. Ellinger (2002). According to Faes et al. (2001), supply chain professionals should be more flexible when making and working in teams having leadership skills. Good communication skills make employees able to communicate across functions and organizations to promote and coordinate supply chain management, and also as two-way communication inside the organization i.e. upward & downward (Carr, 2000). Campos et al. (2018) studied the supply chain competencies by dividing these competencies into two groups, i.e. general skills and specific skills. Gammelgaard and Larson (2001) researched and grouped 45 skills of logistics and SC professionals. They grouped these skills items as "managerial skills," "SCM core skills" and "quantitative/technical skills". Later Flöthmann et al. (2018a) studied and applied the same model in their study to see the impact of SC competencies on SCP.

A number of authors and researchers have discussed competency requirements for SC professionals, but Giunipero (2006) proposed five key competencies for SC professionals must have following a more strategic approach.

- Team-building skills

- Strategic planning skills
- Communication skills
- Technical skills
- Broader financial skills

These skills were further studied by Campos et al. (2018) using the mid-sized supermarket sector of Brazil, and they reported that these competencies received low attention; but, general competencies were more focused on when compared to SC specific competencies for SC related activities. Literature suggests that McAfee (2002) provided theoretical and empirical evidence to show that employees' skills and improvement affects a company's performance.

2.2. Job Performance

According to Mieke (2016), one of the widely recognized key performance indicators of success in an organization is job performance (JP). This indicator has proved productive towards achieving the strategic goals of the organization (Mieke, 2016).

2.3. Corporate Training

Lawler (1994) suggested, in the light of the KBV, only those skill sets, which are suitable, unique and will result in a competitive advantage for the organization, needed to be developed in the employees. This is possible through training, and this enables firms to align an individual's competencies with the firm's strategies to develop dynamic capabilities in dynamic environments (Flöthmann et al., 2018a). Lawler (1994) also proposed that employees can only deliver critical skills when the employer has developed these individual skills in employees. Several studies have shown that training has a positive effect on a number of SC dimensions, just like quality matrices (Ahmad & Schroeder, 2003; Jayaram, 1999). Flöthmann and Hoberg (2017) reported that competency development is important for SCM, which is a true cross-functional profession. Gowen and Tallon (2003) studied the relationship between different HRM practices and SCM practices, and reported that employee training is a key enhancer of SCM practice success and both are highly co-related.

2.4. Knowledge Sharing

Knowledge sharing (KS) is defined as a process of communication between two or more participants involved in attaining knowledge (knowledge collection *KC*) and giving it away (knowledge donation *KD*) (Lee, 2003). KS is sharing, transferring or exchanging knowledge, including experience, information, expertise or skills, among the members of the organization

(Taegoo et al., 2013). KS is not only important at an individual level, but it has also gained importance at an organizational level, under the resource-based view (Taegoo et al., 2013).

Two different schools of thought about the value creation of knowledge exist among researchers (Flöthmann et al., 2018a). A few like (Grant, 1996; Simon, 1991) advocate that the competencies at the individual level is the locus of value creation. Most of the researchers like (Eisenhardt & Martin, 2000; Kogut & Zander, 1992) are of the view that organizational level knowledge is the locus of value creation. So, organizational SCM knowledge requires separate investigation in SCM (Flöthmann et al., 2018a). Only Schoenherr et al. (2014) studied knowledge management in relation to supply chain management, discussing the role of explicit (intangible) and tacit (tangible) knowledge. They reported that tacit knowledge is a major contributor to achieve competitive advantage. SCM knowledge refers to knowledge in inventory management (warehousing), logistics network design, as well as, sales and operations planning (Flöthmann et al., 2018b).

2.5. SC Manager's Resilience

Resilience started becoming a part of the discussion in mid-seventeenth century; moreover, its origin is a Latin verb “resilire”, which means “to leap back” (Soanes & Stevenson, 2006), and is used (Shafique et al., 2019). Cooper et al. (2013) defined resilience as “the ability to bounce back from hindrances, combined with staying efficient in difficult situations, and continuing to grow stronger in the process”. Resilience is “the capacity to rebound from adversity, strengthened and more resourceful” as defined by (Sutcliffe & Vogus, 2003). Kossek and Perrigino (2016) defined resilience as the ability to accept misfortunes and bear job-related demands. They further discussed that different job tasks and contextual demands have different meanings towards resilience.

Resilience as a characteristic is an accretion of abilities and traits that help a person to fine-tune according to the difficult situation they face (Connor & Davidson, 2003). The following authors defined resilience as an individual's trait. Block and Block (1980) for the very first time presented resilience as an individual's trait and they used the term “ego resilience”, defining it as a set of individual characteristics including creativity, operational flexibility, and chromatic power to cater to environmental needs. Resilience was explained as the ability to “leap back” from adversity by Connor and Davidson (2003), Fletcher and Sarkar (2013) and Fredrickson (2001). Resilient managers seek to develop new ways to rectify adverse scenarios and take risks in uncertain situations, due to their resilient behaviors (Youssef & Luthans, 2007). A team of individuals having high self-efficacy, resilience, hope, and optimism adopt new tactics, they are more successful in the holdup situations and they show positive and innovative behaviors towards success (Gonçalves & Brandão, 2017).

2.6. Hypotheses Formulation

2.6.1. Corporate Training and Individual's SC Competencies and individual Job Performance

Designing and implementing appropriate training for the development of change in the attitudes of employees at an organizational level is one of the primary roles of HRM (Vidal-Salazar et al., 2012). Lawler (1994, p. 7) proposed, in the light of KBV, that “there is a need for the development of skill sets that are appropriate and unique to the organization, and that will provide core competencies and competitive advantage.” Further, employees can only work in teams if their employer has developed such competencies in their employees (Lawler, 1994), and this is possible through training, as training allows firms to align employee competencies and organization's strategic competencies. Ahmad and Schroeder (2003) argued that several studies reported that training has a positive impact on a variety of SCP measures. Skills like problem-solving and working together in teams can be developed and reinforced in employees through adequate training (Gowen & Tallon, 2003). So, we propose the following hypotheses under the given arguments:

H1 (a). Corporate training positively impacts individual SCM competencies.

H1 (b). SC competencies mediate the relationship between corporate training and SCP.

2.6.2. Knowledge Sharing

SCM Knowledge is a strategic resource for an organizations' SCM. A perfect blend of strategy and organizational SCM knowledge can give better SCP to the organization (Hult et al., 2006). They reported that the degree of strategy and SCM knowledge mixed up in an organization has a direct impact on SCP. Previously, Hult et al. (2004) also studied SCM knowledge management's impact on cycle time in strategic supply chain, and the findings showed that substantial variance is explained by knowledge development. SCM knowledge is a VRIN resource explained under the KBV theory. Further, Schoenherr et al. (2014) showed that SCM knowledge has a multi-dimensional positive impact on the performance of supply chains.

H2. Knowledge Sharing positively impacts the development of individual supply chain competencies.

2.6.3. Manager's Resilience, SC Professional's Competencies and SCP

A professional's resilience is linked to the employee's job performance in stressful and adverse situations (Avey et al., 2010). Organizations that have developed their employees' resilient attitudes tend to be more adaptive and successful with the passage of time (Luthans, 2002). Resilience capabilities find references in the knowledge-based view, the resource-based view (RBV), and the dynamic capabilities view (DCV); and these theories link competencies, competitive advantage, and superior performance (Barrales-Molina et al., 2013). As suggested by Hamel and Valikangas (2003), these theoretical approaches can become an appropriate frame to study resilience, as these theories possess dynamic characteristics. Further, resilience capability can be considered the firm's ability to reinvent itself dynamically. So, these approaches can help to study the effect of an individual's resilience on the supply chain's performance. On the basis of these arguments, the following hypotheses are proposed:

H3 (a): SC professional's competencies have a positive relationship with the supply chain manager's resilience.

H3 (b): SC manager's resilience has a positive and direct impact on SCP.

H3 (c): Manager's resilience plays a mediating role in the relationship between SC professional competencies and SCP.

2.6.4. SC competencies and Individual Job Performance

Supply chain management is considered the key to an organization's success, and its main factor is competence, which helps the organization achieve competitiveness and superior performance (Derwik and Hellström, 2017). Supply chain management comprises SC professionals to manage the strategic processes of the firm's supply chain. Supply chain collaboration and integration are done by these SC professionals to generate and maintain the firm's competitive resources and competencies. Supply chain professionals must possess an appropriate range of competencies that can help them prepare to deal with adverse situations effectively, and that can help them manage the supply chains (Sohal, 2013).

H4 (a): SC professional competencies have a positive relationship with Individual's Job performance.

H4(b): Individual Job performance mediates the relationship of SC professional competencies and SCP.

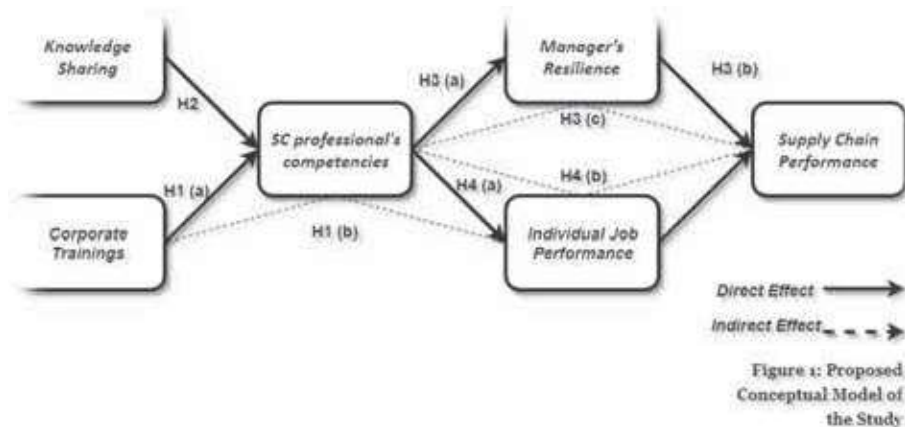


Figure 1: Hypothesized Model

3. Methodology

All of the constructs employed in the study were latent variables and were measured using perceptual measures already developed in previous research. We used survey methodology to collect data from Pakistani SME's. The survey method is considered the best approach, where there is insufficient secondary data available (Kothari, 2004). A cross-sectional survey comprising a single questionnaire was used to study the impact of independent variables on the dependent variables at the same point in time. Pilot testing was done before the survey to assess the readability and understanding of survey items. Quantitative assessment at this stage was limited to the estimation of Cronbach's Alpha coefficients, which were found to be adequate (i.e. $\alpha > 0.7$). No changes to the survey instrument were required at this stage. The final questionnaire was then administered to the target respondents.

The target population was supply chain professionals working in Pakistani SME's. The unit of analysis for the study was professionals working in supply chain management capacities in the industries of Pakistan, from all three management layers. The respondents were required to have knowledge of any of the functions of supply chain management. We collected data from the industry using two different methods. Firstly, a questionnaire was sent to SC professionals using email, linkedIn.com, and WhatsApp android application. Secondly, it was delivered to professionals through personal visits. As a result of our data collection effort, we received 175 completed responses which were then used in the analysis.

3.1. Hypotheses Testing

After successfully testing multivariate assumptions, hypotheses testing was done. The purpose of this was to study the antecedents and consequents of individual supply chain professional

competencies and their impact on the employee's job and SCP. To study this, a hypothesized model was developed. It identified corporate training and knowledge sharing as the main antecedents of supply chain individual competencies contributing towards employee's job performance. Further, this research studies the impact of individual competencies, managerial resilience, and job performance's impact on an organization's SCP.

Using AMOS 21, covariance-based structural equation modeling was done to test the hypotheses developed in this study. To assess model fit, χ^2 coefficient, root mean square approximation (RMSEA), and comparative fit index (CFI) were used. Model fit remained adequate getting high values of CFI (>0.90), and low values for RMSEA (< 0.08), and χ^2 . The structural analysis results provided a satisfactory fit for the hypothesized model: $\chi^2=1.876$ (df = 541, normed $\chi^2 = 7.822$, $p < 0.001$), CFI = 0.883, TLI = 0.872, and RMSEA = 0.071 (0.064, 0.078).

Figure 2 depicts the structural model. The results of the structural equation modeling showed that all of the hypotheses were supported at $p < 0.01$ level, except H3(b), which showed a weak relationship. Path coefficients, shown by the solid lines, indicate significant relationships, while the one with the dotted line indicates an insignificant or a weak relationship.

Results showed that corporate training had a significant positive impact on an individual's supply chain competencies ($\beta = 0.31$, $p < 0.01$), and knowledge sharing also showed a significant impact on individual supply chain competencies ($\beta = 0.78$, $p < 0.01$). Hence, H1 (a) and H2 were supported. Similarly, the impact of supply chain competencies upon the manager's resilience was significant ($\beta = 0.63$, $p < 0.01$); so, H3 (a) was also supported. Moreover, supply chain competencies had a significant positive impact on the employee's job performance ($\beta = 0.57$, $p < 0.01$); hence, H4 (a) was also supported. In contrast, results showed a negative relationship between the manager's resilience and SCP ($\beta = 0.13$, $p < 0.01$); hence, H3(b) was not supported.

We employed Preacher and Hayes (2004, 2008) bootstrapping approach to test the mediation relationships. It is a nonparametric approach involving repeated sampling data-set. Indirect effects calculated in each iteration are subject to significance to infer mediation. H4(b) was found to be supported, due to the significant indirect relationship between supply chain competencies, employee job performance and SCP ($\beta = 0.342$, $p < 0.05$); whereas, H3(c), was not supported due to the insignificant relationship between manager's resilience and SCP ($\beta = 0.79$, $p < 0.05$).

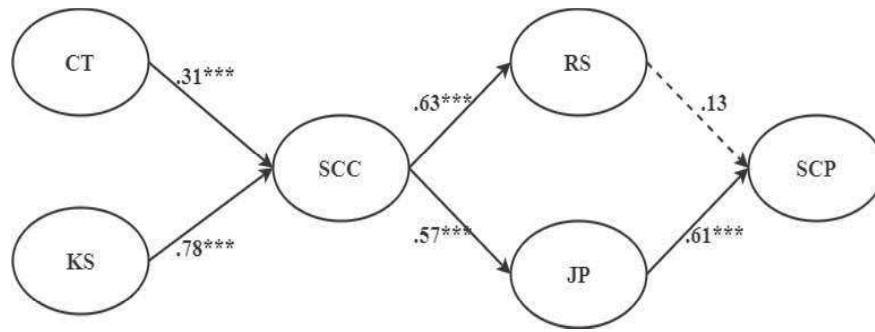


Figure 2: Results of hypotheses tests

4. Discussion

4.1. Theoretical Contributions

This section of the study aims to relate empirical findings back to literature. Empirical results statistically supported all the hypotheses, except for one. This gives support to the idea presented by the study, that corporate training and knowledge sharing are the antecedents of the supply chain professional competencies, and that these competencies help supply chain professionals to achieve better job performance, and in turn better SCP. However, the role of the manager's resilience between job performance and SCP is surprisingly different from the presented idea and requires further investigation.

Based on the empirical results, supply chain competencies showed corporate training as their strong antecedent. This finding supports the idea that corporate training positively relates to an individual's supply chain competencies (H1a). The literature review suggested that no previous study has yet investigated the corporate supply chain training of Pakistani companies in detail, especially as it is an antecedent of SC professional competencies. Gowen and Tallon (2003) reported that employee training is a key enhancer of the success of SCM practice and both are in highly co-related.

Similar to corporate training, knowledge sharing was predicted to be an antecedent of an individual's supply chain competencies. Empirical results of the data supported the idea presented in the study, and the magnitude of knowledge sharing culture among the professionals contributes to their competencies (H2), and hence, to job performance. Schoenherr et al. (2014) reported knowledge sharing as a contributor to the firm's competitive advantage, which is achieved through better job and SCP. Hult et al., (2006) also reported that the degree of strategy and SCM knowledge mixed up in an organization has a direct impact on SCP.

One of the aims of this study was to empirically validate the positive relationship between supply chain competencies and manager's resilience (H3a), and its impact on SCP(H3b). Literature shows a link of manager's resilience to the competencies and skills under the organization's resource-based view (RBV) and dynamic capabilities view (DCV) (Barrales-Molina et al., 2013). Youssef and Luthans (2007)) reported in their study that resilient managers seek to develop new ways to rectify the adverse scenarios and take risks in uncertain situations due to their resilient behaviors; hence, it affects the manager's job performance, and so SCP. Surprisingly, the empirical findings showed a negative relationship between manager's resilience and SCP, which is unexpected and this opens new debates for future researchers.

The mediation analysis gives empirical evidence for the hypothesized indirect contribution of individual's supply chain competencies to SCP (H4a & H4b). This strong indirect relationship suggests managers should focus on hiring and developing competent, skilled, and knowledgeable supply chain professionals to get better SCP.

4.2. Managerial Implications

These results bring out some managerial implications. First, companies, especially SMEs with limited resources and capabilities, should focus on developing and promoting the knowledge sharing culture among people and departments. This will help supply chain oriented organizations to develop SC competencies among employees. Though corporate training also contributes towards developing SC competencies, knowledge sharing requires fewer resources when compared to structured training. Companies that are capable of investing resources, and that already have a strong knowledge-sharing environment should advance their training initiatives, which might improve their employees' competencies, leading to the achievement of supply chain competencies. Hiring competent supply chain professionals can help organizations achieve the required level of employee job performance and supply chain performance.

4.3. Limitations and Future Research

The complexity of the model prevented the study from extending and including other HRM practices in the model. McKinnon (2017) suggested that leveraging e-learning platforms, mobile access to training materials, and virtual classrooms to globally connect knowledgeable resources with people that need training, can help create new digital and technological opportunities for supply chain improvements. Future researchers can extend the current research to examine the above. Companies should explore SCM specialized external resources to improve their training activities. Future researchers can improve the model through cross-sectional studies.

References

- Ahmad, & Schroeder. (2003). The impact of human resource management practices on operational performance: recognizing country and industry differences. *Journal of Operations Management*, 21(1), 24.
- Athey, T. R., & Orth, M. S. (1999). Emerging competency methods for the future. *Human Resource Management*, 38, 215.
- Avey, Nimmicht, & Pigeon. (2010). Two field studies examining the association between positive psychological capital and employee performance. *Leadership & Organizational Development*, 31(5), 17.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 21.
- Barrales-Molina, Bustinza, & Gutiérrez-Gutiérrez. (2013). Explaining the causes and effects of dynamic capabilities generation: a multiple-indicator multiple-cause modelling approach. *British Journal of Management*, 24, 20.
- Block, & Block. (1980). The role of ego-control and ego resiliency in the organization of behavior. *MN Symposium on Child Psychology, Erlbaum, Hillsdale, NJ*, 62.
- Bowersox, D. J. (2000). How supply chain competency leads to business success. *Supply Chain Management Review*, 4(4), 8.
- Campos, Lima, Silva, & Fernandes. (2018). Professional competencies in supply chain management in the mid-sized supermarket sector in Brazil. *Supply Chain Management: An International Journal*. doi: 10.1108/SCM-02-2018-0081
- Carr, A. S. a. S., L.R. . (2000). An empirical study of the relationship among purchasing skills and strategic purchasing, financial performance, and supplier responsiveness. *Journal of Supply Chain Management*, 36(3), 14.
- Christopher, M. (2012). Managing supply chain complexity: identifying requisite skills. *Supply Chain Forum: An International Journal*, 13(2), 6.
- Connor, & Davidson. (2003). Development of a new resilience scale: the Connor-Davidson Resilience Scale. *Depression and Anxiety*, 18(2), 06.

- Cooper, Flint-Taylor, & Pearn. (2013). *Building resilience for success: a resource for managers and organizations*. Basingstoke: Palgrave Macmillan.
- Cottrill, K. (2010). Are you prepared for the supply chain talent crisis? *MIT Center for Transportation and Logistics*, 12.
- Deist, F. D. L. a. W., J. (2005). What is competence? *Human Resource Development International*, 8(1), 19.
- Derwik and Hellström, D. (2017). Competence in supply chain management: a systematic review. *Supply Chain Management: An International Journal*, 22(2), 18.
- Derwik, H. D., Karlsson, S. (2016). Manager competences in logistics and supply chain practice. *Journal of Business Research*, 69(11), 5.
- Eisenhardt, & Martin. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21(6), 16.
- Ellinger, A. E., Ellinger, A.D. and Keller, S.B. (2002). Logistics managers' learning environments and firm performance. *Journal of Business Logistics*, 23(1), 18.
- Faes, W., Knight, L., & Matthyssens, P. (2001). Buyer profiles: an empirical investigation of changing organizational requirements. *European Journal of Purchasing & Supply Management*, 7(3), 11.
- Fletcher, & Sarkar. (2013). Psychological resilience: a review and critique of definitions, concepts and theory. *European Psychologist*, 18(1), 2.
- Flöthmann, & Hoberg. (2017). Career patterns of supply chain executives: an optimal matching analysis. *Journal of Business Logistics*, 38(1), 19.
- Flöthmann, Hoberg, & Gammelgaard. (2018a). Disentangling supply chain management competencies and their impact on performance: a knowledge-based view. *International Journal of Physical Distribution & Logistics Management*, 48(6), 25.
- Flöthmann, Hoberg, & Wieland. (2018b). Competency requirements of supply chain planners and analysts and personal preferences of hiring managers. *Supply Chain Management: An International Journal*, 23(6), 19.

- Fossum, J. a. A., R. (1986). Modeling the skills obsolescence process: a psychological/economic integration. *Academy of Management Review*, 11(2), 12.
- Fredrickson. (2001). The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 10.
- Gammelgaard, & Larson. (2001). Logistics skills and competencies for supply chain management. *Journal of Business Logistics*, 22(2), 23.
- Giunipero, L. C., Handfield, R.B. and Eltantawy, R. (2006). Supply management's evolution: key skill sets for the supply manager of the future. *International Journal of Operations & Production Management*, 26(7), 22.
- Gonçalves, & Brandão. (2017). The relation between leader's humility and team creativity: the mediating effect. *International Journal of Organizational Analysis*, 25(4), 15.
- Gowen, & Tallon. (2003). Enhancing supply chain practices through human resource management. *The Journal of Management Development*, 22(1), 12.
- Grant. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 13.
- Hamel, & Valikangas. (2003). The quest for resilience. *Harvard Business Review*, 81, 13.
- Hult, Ketchen, Cavusgil, & Calantone. (2006). Knowledge as a strategic resource in supply chains. *Journal of Operations Management*, 24(5), 17.
- Hult, Ketchen, & Slater. (2004). Information processing, knowledge development, and strategic supply chain performance. *Academy of Management Journal*, 47(2), 12.
- Jayaram, J., Dröge, C. and Vickery, S. (1999). The impact of human resource management practices on manufacturing performance. *Journal of Operations Management*, 18(1), 20.
- Johnson, P. F., Leenders, M.R. and Fearon, H.E. (1998). Evolving roles and responsibilities of purchasing organizations. *International Journal of Purchasing & Materials Management*, 34(1), 9.
- Kogut, & Zander. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 17.

- Kossek, E. E., & Perrigino, M. B. (2016). Resilience: A Review Using a Grounded Integrated Occupational Approach. *The Academy of Management Annals*, 10(1), 729-797. doi: 10.1080/19416520.2016.1159878
- Kothari, C. R. (2004). Research methodology: methods and techniques:. *New Age International*.
- Lawler, E. E. (1994). From job-based to competency-based organizations. *Journal of Organizational Behavior*, 15(1), 13.
- Lee, H. a. C., B. (2003). Knowledge management enablers, processes, and organizational performance: an integrative view and empirical examination. *Journal of Management Information Systems*, 20(1), 49.
- Luthans. (2002). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Executive*, 16, 15.
- Maku, T. C., Collins, T. R., & Beruvides, M. G. (2005). On the path to excellence: the impact of human interaction on supply chain management practices. *Performance Improvement*, 44(7), 7.
- McAfee, R., Glassmann, M. and Honeycutt, E.D. (2002). The effects of culture and human resource management policies on supply chain management strategy. *Journal of Business Logistics*, 23(1), 18.
- McCarter, M., & Northcraft, G. (2007). Happytogether? insights and implications of viewing managed supply chains as a social dilemma. *JournalofOperations Management*, 25(2), 13.
- McCormick, E. J. (1976). *Job and task analysis*", in *Dunnelle, M.D. (Ed.)*, . Chicago, IL: Rand McNall.
- McKinnon, A. C., Flöthmann, C., Hoberg, K. Busch, C. (2017). Logistics Competencies, Skills, and Training: A Global Overview. *Logistics Competencies, Skills, and Training: A Global Overview*, Washington, DC.
- Mieke, A., Thomas, Alex. (2016). Setting high expectations is not enough: Linkages between expectation climate strength, trust, and employee performance. 37(6), 1024-1041. doi: doi:10.1108/IJM-12-2015-0201

- Mirabile. (1997). Everything you wanted to know about competency modeling. *Training and Development*, 51(8), 5.
- Mumford, M. D., Peterson, N.G. and Childs, R.A. (1999). *Basic and cross-functional skills*. Washington, DC: American Psychological Association.
- Sanchez, R. (2004). Understanding competence-based management: identifying and managing five modes of competence. *Journal of Business Research*, 57(5), 15.
- Schoenherr, Griffith, & Chandra. (2014). Knowledge management in supply chains: the role of explicit and tacit knowledge. *Journal of Business Logistics*, 35(2), 14.
- Shafique, Tabassum, Konstantopoulou, & Arslan. (2019). Antecedents of women managers' resilience: conceptual discussion and implications for HRM. *International Journal of Organizational Analysis*, 27(2), 27.
- Simon. (1991). Bounded rationality and organizational learning. *Organization Science*, 2(1), 9.
- Soanes, & Stevenson. (Eds.). (2006) *Oxford Dictionary of English* (Vols. 2nd). Oxford, UK: Oxford University Press.
- Sohal, D. P. A. (2013). Supply chain professionals: a study of competencies, use of technologies, and future challenges. *International Journal of Operations & Production Management*, 33(11/12), 22.
- Sutcliffe, K., & Vogus, T. (2003). Sutcliffe, K. M. and T. J. Vogus (2003). Organizing for Resilience. *Positive Organizational Scholarship: Foundations of a New Discipline*. K. S. Cameron, J. E. Dutton and R. E. Quinn. San Francisco, CA, Berrett-Koehler: 94-110 (pp. 94-110).
- Taegoo, Gyehee, Soyon, & Seunggil. (2013). Social capital, knowledge sharing and organizational performance: what structural relationship do they have in hotels? *International Journal of Contemporary Hospitality Management*, 25(5), 21.
- Vidal-Salazar, Cordón-Pozo, & Ferrón-Vilchez. (2012). Human resource management and developing proactive environmental strategies: the influence of environmental training and organizational learning. *Human Resource Management*, 51(6), 29.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 9.

Youssef, & Luthans. (2007). Positive organizational behavior in the workplace: the impact of hope, optimism, and resilience. *Journal of Management*, 33(5), 56.

Zander, K. a. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 14.