ISSN:2229- 6247

Yarong Chen et al | International Journal of Business Management and Economic Research(IJBMER), Vol 11(4),2020, 1861-1868

Working Capital Management and Quality Management Systems: evidence from an emerging economy

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Abstract

The research aimed to investigate the impact of quality management systems on working capital management of manufacturing SMEs. The companies analyzed were headquartered in the province of Buenos Aires and they were selected based on a stratified sampling logic based on economic criteria, such as size, number of employees and turnover. The data were collected using a questionnaire divided into two sections and refer to a time horizon of three years (2016-2018). Overall, 325 companies participated in the research. To carry out the analysis we used quantitative tools of the statistical and business-economic matrix.

The findings of the analysis showed that companies using quality management systems have more efficient management of working capital, collect credits faster and pay debts faster. The results were statistically significant.

The results of this research contribute to the literature, providing empirical evidence of the positive impact that quality management systems have on working capital management in the context of an emerging economy. Furthermore, the findings can raise awareness among SME entrepreneurs and managers of the financial benefits of introducing and implementing quality management systems.

Keywords: working capital, management, quality, SMEs, emerging economy

1. INTRODUCTION

After Smith's seminal paper (1980), the corporate finance literature, previously focused mainly on long-term decisions, has progressively recognized the importance of short-term financing decisions.

In this perspective, several scholars have demonstrated the significant impact these decisions have on business survival, profitability and risk (Kim & Chung, 1990; Shin & Soenen L., 1998; Khoury et al., 1999; Deloof, 2003; Howorth & Westhead, 2003; Filbeck & Krueger, 2005; Chen & Sensini., 2014; Ukaegbu, 2014; Aktas et al., 2015; among others).

Working capital management, that concerns current assets and current liabilities, affect liquidity (Ki, et al., 1998; Opler et al., 1999; Ding et al., 2013) and therefore must be adequate to the operating characteristics of the company and the reference environment (Mannetta et al., 2014; Sensini, 2020).

Therefore, the working capital management process plays a crucial role in companies of all sizes. However, identifying the optimal level of working capital is not easy, as it is influenced by the characteristics of the company and the dynamics of the market and the sector. Besides, given the high environmental variability, the optimal level of working capital may require continuous adjustments necessary to adapt the policies used up to that time by the company to the changed context conditions (Chen et al., 2014; Bello & Sensini, 2020).

In the context briefly outlined, the strategies and policies adopted for adequate management of working capital are fundamental above all for small and medium-sized enterprises. These companies, in fact, are often characterized by financial constraints that significantly affect their conditions of survival and development (Stiglitz & Weiss A., 1981; Nayak and Greenfield, 1994; Khoury et al., 1999; Peel et al., 2000; Cohen et al., 2013; Alvarez et al., 2014; Chen et al., 2014; Sanchez and Sensini, 2017; Chalmers et al., 2020; Sensini, 2020)

Such constraints are even stronger in emerging economies, where companies have greater difficulties in accessing the capital market (Mannetta et al. 2014; Amendola et al., 2018; Chauhan and Banerjee, 2018), also due to the limited development of financial markets and the high asymmetry informative. As a result, firms in these economies are often forced to use internal sources to finance their operations and associated working capital (Allen et al., 2012; Chalmers et al, 2014; Sensini, 2017; Alvarez et al., 2019; Chalmers et al., 2020).

In the current complex scenario (Chalmers et al., 2020), SMEs in emerging economies face competition from stronger companies belonging to stable economies, with strong constraints linked to the context conditions, characterized by strong instability and uncertainty (Das et al., 2000; Nair, 2006; Amendola et al., 2020; Chalmers e al., 2020).

Furthermore, the lack of managerial skills and the lack of adequately qualified human resources can amplify the constraints just mentioned, leading to a strategic approach that is inconsistent with the dynamism of the competitive context (Diaz & Sensini, 2020).

For these reasons, it is important that these companies effectively manage all the variables that can influence competitiveness and performance. In this perspective, as anticipated, the management of working capital plays a crucial role.

Some SMEs have introduced quality management tools and techniques, also to continually plan and monitor the various variables that affect the level of working capital.

Quality management systems can favour the empowerment of human resources, the improvement of business processes and the optimization of resources (Dosi, 1988; Flynn et al., 1995; Kumar & Antony, 2008; Bayraktar et al., 2009; Kureshi & Mann, 2009; Majumdar & Manohar, 2014; Fonseca & Domingues, 2018; Dellana et al. 2019; Hong et al., 2019; Chiarini et al. 2020).

However, such systems require specialized skills which are often not present in SMEs. Therefore, the introduction of these systems results in additional costs being incurred (Chountalas et al. 2020).

The literature has extensively examined the issues of working capital management and quality management systems regarding different dimensions of analysis.

However, the impact that quality management systems can have on working capital has rarely been explored.

Given this lack of literature, this research aims to study the relationship between quality management systems and the management of working capital in the context of an emerging economy.

To achieve our research objectives, we used a sample of Argentine manufacturing SMEs selected with a stratified random sampling technique. This approach allowed to improve the efficiency of the estimates and the representativeness of the extracted sample (Amendola et al., 2020). The data was collected through a questionnaire. Overall, 325 companies participated in the research.

The companies in the sample were divided into two categories, depending on whether or not they used quality management systems.

The results of the analysis showed that companies using quality management systems have more efficient management of working capital.

The findings of this research contribute to the literature, providing empirical evidence of the positive impact that quality management systems have on the management of working capital in the context of an emerging economy.

Furthermore, the results can be useful in raising awareness among SME entrepreneurs and managers of the financial benefits of introducing and implementing quality management systems.

The paper is organized as follows. The second section analyzes the reference literature. The next section illustrates the main characteristics of the sample. The fourth section describes the design of the research and the methodology followed. The fifth section shows the results. Finally, the last section contains the concluding remarks.

2. Literature Review

The intense and controversial debate in the literature on this issue confirms the difficulties associated with identifying an optimal level of working capital valid in every context and for every purpose.

In this regard, scholars have suggested several approaches.

According to some authors, a large investment in working capital can have a positive effect on the profitability and value of the company. In this perspective, the investment in working capital makes it possible to increase sales (Deloof, 2003), reduce procurement costs and obtain discounts on purchases (Blinder and Maccini, 1991; Aktas et al., 2015), increase sales and improve customer relationships (Smith, 1987; Brennan et al., 1988; Lee & Stowe, 1993; Petersen and Rajan, 1997; Ng et al., 1999; Wilner, 2000; Zariyawati et al., 2009; Erasmus, 2010). Furthermore, such an investment reduce the company's dependence on price fluctuations related to the inputs of the production process (Fazzari and Petersen, 1993).

According to other authors, however, excessive investment in working capital can harm the profitability and value of the company (Aktas et al., 2015). In this perspective, the high investment in working capital increases the financial needs of the company, as it determines the need to resort to further financing. In this perspective, excessive investments in working capital increase the rigidity (Kim and Chung, 1990; Sanchez & Sensini, 2013) and riskiness of the firm, risk conditioning the possibility of carrying out new investment projects in the short term (Ek and Guerin, 2011). Furthermore, these investments increase the probability of bankruptcy (Kieschnick et al., 2011; Campos et al., 2014; Sensini L., 2015).

Finally, other authors have highlighted that optimal capital management requires a trade-off between risk and efficiency (Shin & Soenen, 1998; Garcia-Teruel & Martinez-Solano, 2007), while other scholars have suggested a non-linear relationship between working capital management and performance (Howorth & Westhead, 2003; Wasiuzzaman, 2015; Chauhan and Banerjee, 2018).

In the context briefly outlined, several authors have highlighted that the introduction of quality management systems can improve the efficiency of financial management (Boisjoly et al., 2020), allowing to optimize the management of the individual elements that make up working capital (Yang et al. 2017; Blair and Durrance 2014; Nollet et al. 2017).

However, several studies have shown that the introduction of quality management systems and practices is more difficult for SMEs in emerging economies, also due to the constraints associated with the reference environmental context (Ihua, 2009; Ratnawati et. Al, 2019; among others).

3. Research Design And Sample

The study aims to investigate the impact that quality management systems have on working capital management practices, focusing on SMEs in an emerging economy.

For this purpose, we selected a sample of manufacturing firms headquartered in the province of Buenos Aires, using a stratified sampling logic based on economic criteria.

This approach has the advantage of improving the efficiency of the estimates and guaranteeing the representativeness of the extracted sample (Amendola et al., 2020). The use of the economic criteria favoured the inclusion in the sample of several SMEs with different characteristics in terms of size, number of employees and turnover.

The sample was fixed in n. 1000 enterprises, with the aim of guarantee an error | d | ≤ 0.055 with a probability of 0.95 based on the following:

$$n = \frac{n_0}{1 + \frac{n_0}{N}}$$

where N is the population size and n_0 is given by:

$$n_o = \frac{z^2(0.975)p(1-p)}{\varepsilon^2}.$$

Furthermore, we hypothesized a maximum level for the variability of any hypothetical dichotomous variable, reached for p = 0.5, predicting an error | ε | ≤0.05 with a probability 1-α = 0.095.

All data were collected using a two-section structured questionnaire. The first section was intended to collect general data on the company (year of foundation, governance system, number of employees, etc.) and to verify the possible introduction and implementation of quality management systems. The second section included questions aimed at detecting the book values of the individual elements that make up the working capital.

The period under observation was three years and refers to 2016-2018.

To collect the data, we did face-to-face interviews with entrepreneurs and/or business managers, using properly trained interviewers. This approach allows for higher response rates and improves the quality and reliability of the data collected (Bradburn et al., 2004; Amendola et al., 2020).

Overall, 325 participated in the research within the deadline and were subject to subsequent analysis. The response rate, equal to 32.5%, can be considered satisfactory (Bhuiyan & Alam, 2004; Kumar et al., 2014).

To carry out the analysis we used quantitative tools of the statistical and business-economic matrix.

4. Overview Of Sample Characteristics

Table 1 shows the main characteristics of the sample of SMEs analyzed.

Most manufacturing companies have a shareholder structure made up of a limited number of partners (53.5%) and have been established for more than 10 years (75.7%). Generally, the owner also assumes the role of manager of the company and is male (67.2%) with a non-university culture (69.1%). Most companies have fewer than 50 employees (80.9%), a turnover of less than $ 50 million and have recorded a profit in the last three years. However, over the period observed, the number of profitable firms decreased by around 7%. Probably, this circumstance is attributable to the environmental context that has characterized the Argentine economy in the last few years.

Table 2 shows the companies that have introduced quality management systems, highlighting that only 25.1% of companies use such systems.

Table 3 shows the main reasons for the failure to adopt quality management systems.

The high costs (54.7) and difficulties associated with collecting and organizing data (39.4) are the main obstacles to the introduction and implementation of tools and techniques for quality management.

Tab. 1 - General sample information (N = 325)

Information		%
Company Members/Shareholders	1	14.1
	2	39.4
	3-5	40.9
	6 or more	5.6
Age	> 5 - 10	23.3
	11 - 20	33.4
	> 20	42.3
Gender	Male	67.2
	Female	32.8
Studies	No University	69.1
	University	30.9
Number of employees	≤ 10	19.9
	11 - 20	28.5
	21 - 50	32.5
	51 - 250	19.1
Average Turnover	≤ 2 millions (*)	21.1
	≥ 2 < 10 millions (*)	28.8
	≥ 10 ≤ 50 millions (*)	31.3
	> 50 millions (*)	18.8
Profitable Firms	2018	64.7
	2017	67.3
	2016	71.2

(*) US dollars

Tab. 2 – Quality Management Systems (QMS)

Introduction of QMS	%
Yes	24.9
No	75.1

Tab. 3 - Motivations

Motivations (more than one answer)	%
High consultancy and training costs	54.7
Difficulty collecting and organizing data	39.4
Complex tools	28.5
Unknown tools	18.3
Long time	16.1

Finally, table 4 shows which factors (according to the interviewees) can favour the introduction of quality management systems (Diaz and Sensini, 2020).

Tab. 4 – Factors driving QMS

Factors	Ranking *
Education and training	4.1
Competitive dynamics	3.9
Motivation of team members	3.5
Cultural change	3.4
Customer relationship	3.2
Supplier relationship	3.1
Financial control	2.8

* (scale from 1 to 5; 1 very low; 5 very high)

Training and the increase in competitive dynamics are the main factors that can push companies towards the adoption of tools and techniques for quality management. However, these systems are not considered particularly relevant for financial control purposes.

5. RESULTS AND DISCUSSION

To assess the impact of quality systems on the management of working capital, we have divided the companies into 2 groups.

The first group, indicated in the following analysis with letter A, includes all companies that do not use quality management systems (n=244). The second group, indicated by the letter B, includes all companies that use quality management systems (n=81).

For each group of companies, we measured the main working capital indicators, using a statistical quantitative method. Considering that there were significant deviations from the normal distribution of the indicators, we used the non-parametric Mann-Whitney test.

The following table highlights the ability of companies to meet their short-term commitments (CLR, current liquidity ratio), the level of working capital (WCL), the operating cycle (WCC, accounts receivable collection period + inventory turnover period - accounts payable payment period) and the Cash Conversion Cycle (CCC, Days of inventory outstanding + Days sales outstanding + Days payables outstanding).

Tab. 5 – Main Indicators

Indicators	A			B			*p (*)*
	Mean	Median	Std Dev	Mean	Median	Std Dev	
CLR	3.18	1.91	2.99	2.43	2.28	0.64	0.5173
WCL	24.5	22.3	8.2	12.1	11.6	9.8	0.1445
WCC	156	139	28.3	129	116	21.3	0.1807
CCC	73	62	36.3	58	51	26.9	0.4837

(*) p-value (Mann–Whitney test)

The analysis shows that companies have a liquidity index and positive net working capital. However, the operating cycle results show that firms have short-term assets above their actual financial needs. In particular, the companies in group A, that do not use quality management systems, have short-term assets that are much higher than their real financial needs.

In this regard, the results relating to the Cash Conversion Cycle (CCC) show that companies that use quality management systems (group B) have more efficient management of working capital, highlighting a greater speed in converting their investments into cash flows from sales.

To assess the impact of the individual determinants on the working capital of companies, we calculated (in days) the turnover ratios of account receivable (ART, (account receivable * 365)/turnover); accounts payable (APC, (accounts payable x 365)/cost of sales) and inventories (INV, the average number of days that firms hold their inventory).

Table 6 shows the results of the analysis.

Tab. 6 – Turnover Ratios

Indicators	A			B			*p (*)*
	Mean	Median	Std Dev	Mean	Median	Std Dev	
ART	81.4	79.7	23.1	62.1	59.8	21.2	0.0845
LWC	79.3	77.8	22.7	59.6	57.3	20.9	0.0823
WCC	79.5	70.6	18.7	61.5	58.7	18.1	0.39

(*) p-value (Mann–Whitney test)

Firms that use quality management systems (Group B) have collected receivables faster and paid off debts faster. The results are statistically significant. Finally, regarding inventories, there are differences in the speed of circulation between the two groups of companies.

6. CONCLUDING REMARKS

The research aimed to study the impact of quality management systems on the management of working capital of manufacturing SMEs in an emerging economy such as Argentina.

The companies analyzed were selected based on a stratified sampling logic based on economic criteria, such as size, number of employees and turnover.

The data were collected using a questionnaire divided into two sections and refer to a time horizon of three years (2016-2018).

Given the nature of the information requested, we have conducted face-to-face interviews with entrepreneurs and/or company managers, using properly trained interviewers. This approach made it possible to obtain a satisfactory level of response compared to other similar analyzes and also improved the reliability of the data collected. Overall, 325 companies participated in the research.

The results of the analysis showed that companies that use quality management systems have more efficient management of working capital. More in particular.

All companies show a liquidity index and positive net working capital. However, companies that do not use quality management systems have short-term assets that are oversized compared to their actual financial needs. This circumstance would require a further analysis aimed at investigating the criteria followed for the valuation of the individual items and their reliability. However, this analysis is outside the scope of this paper.

Furthermore, companies that use quality management systems have a greater speed in converting their investments into cash flows.

Finally, the analysis of turnover rates showed that companies using quality management systems have collected receivables faster and paid off debts faster. The results proved to be statistically significant.

The findings of this research contribute to the literature, providing empirical evidence of the positive impact that quality management systems have on working capital management in the context of an emerging economy.

Furthermore, the results can be useful in raising awareness among SME entrepreneurs and managers of the financial benefits of introducing and implementing quality management systems.

However, the research results also have limitations relating to the size, geographic area and sector of the sample of companies analyzed. In this perspective, it might be useful to investigate a larger sample referring to a wider geographical area and evaluate the impact that quality management systems have on companies belonging to different sectors.

Authorship contribution Statement

Enrique Diaz & Luca Sensini: Conceptualization, Methodology; Data curation, Data analysis; Validation; Yarong Chen & Maria Vazquez: Methodology, Data analysis.

Acknowledgments

The authors would like to thank all BELab researchers for their valuable help in administering and processing the questionnaire data.

REFERENCES

Aktas, N., Croci, E., Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments, Journal of Corporate Finance, 30, pp. 98-113.

Allen F., Chakrabarti R., De S., Qian, M. (2012). Financing firms in India", Journal of Financial Intermediation, Vol. 21 (3), pp. 409-445.

Alvarez T., Chalmers D.K., Diaz E., Mannetta E.W. (2019), Evaluating the credit risk of SMEs: an empirical analysis, Diaf, London.

Alvarez T., Diaz E., Sanchez J.A., Sensini L. (2014), Innovation and Performance of SMEs: evidence from an empirical analysis, ICEFR, pp. 518-529.

Amendola A., Boccia M., Mele G., Sensini L (2018) Fiscal Incentives and Firm Performance Evidence from the Dominican Republic Policy Research Working Paper 8382 World Bank Group Macroeconomics, Trade and Investment Global Practice.

Amendola A., Candila V., Sensini L., Storti G. (2020), Corporate Governance, Investment, Profitability and Insolvency Risk: Evidence from Italy, Advances in Management and Applied Economics, Vol. 10 (4), pp. 185-202.

Amendola A., Boccia M., Mele G., Sensini L. (2020), Fiscal Policies and Performance: Evidence from Dominican Republic Firms, Journal of Applied Finance & Banking, 10 (5), pp. 299-313.

Bayraktar E., Demirbag M., Koh S.C., Tatoglu E., Zaim H. (2009), A causal analysis of the impact of information systems and supply chain management practices on operational performance: evidence from manufacturing SMEs in Turkey, International Journal of Production Economics, 122, pp. 133-149.

Bello C., Sensini L. (2020). Financing decisions of SMEs in the Hotel Industry, International Journal of Academic Research in Accounting, Finance and Management Sciences, 10 (2), pp. 9-14.

Blinder, A.S. and Maccini, L.J. (1991). The resurgence of inventory research: what have we learned?, Journal of Economic Surveys, Vol. 5 (4), pp. 291-328.

Bradburn N.M., Sudman S., Wansik B. (2004). Asking Questions: The Definitive Guide to Questionnaire Design – For Market Research, Political Polls, and Social and Health Questionnaires, John Wiley and Sons.

Brennan, M.J., Maksimovics, V. and Zechner, J. (1988). Vendor financing, Journal of Finance, Vol. 43 (5), pp. 1127-1141.

Bhuiyan N., Alam N. (2004). ISO 9001:2000 implementation: The North American experience. International Journal of Productivity and Performance Management, 53 (1), pp. 10–17.

Campos A., Chen J., Ferri G., Parisi M., Sanchez J.A., Sensini L. (2014). Business risk prediction models: an empirical analysis, International Conference on Accounting and Management Research, pp. 426-445.

Chauhan G.S., Banerjee, P. (2018). Financial constraints and optimal working capital – evidence from an emerging market, International Journal of Managerial Finance, Vol. 14 (1), pp. 37-53.

Chalmers D.K., Mannetta E.W., Zhang W. (2014), Impact of Working Capital Management Policies on Corporate Performance, ICEFR.

Chalmers D.K., Sensini L., Shan A. (2020). Working Capital Management (WCM) and Performance of SMEs: Evidence from India, International Journal of Business and Social Science, 11 (7), pp. 57-63.

Chalmers D.K., Mannetta E.W., Sensini L. (2020), R & D and Internationalization: Effect on the Performance of SMEs, International Journal of Advances in Management and Economics, 9 (3), pp. 39-48.

Chalmers D.K., Della Porta M., Sensini L. (2020), Export Intensity and Leverage: an empirical analysis of Spanish SMEs, International Journal of Economics and Financial Issues, 10 (5), pp. 382-386.

Chen, J., Sensini, L. (2014). Net working capital, Cash flow and Performance of SMEs: an exploratory study. Small and Medium Size Enterprises: Governance, Management and Performance, pp. 296-315, Malta Univ. Press.

Chen, J., Hughes C., Sensini, L. (2014). Credit risk measurement of SMEs, International Conference on Economics, Finance and Risk, pp. 139-163.

Chen, J., Sanchez J.A., Sensini, L. (2014). Growth opportunities and ownership structure as determinants of italian firms leverage, ACRMC, pp. 365-386.

Chiarini A., Castellani P., Rossato C. (2020). Factors for improving performance in ISO 9001 certified small- and medium-sized service enterprises. The TQM Journal, 32, pp. 21-37.

Chiou J.R., Cheng L., Wu H.W. (2006). The determinants of working capital management, Journal of American Academy of Business, 10, pp. 149-155.

Chountalas P.T., Magoutas A.I., Zografaki E. (2020). The heterogeneous implementation of ISO 9001 in service-oriented organizations. The TQM Journal 32, pp. 56-77.

Cohen W., Sanchez J.A., Sensini L. (2013), The relevance of tax information in financial statement, International Conference on Accounting Finance and Risk Management Perspective, pp. 141-166.

Das A., Handfield R.B., Calantone R.J., Ghosh S. (2000), A contingent view of quality management-the impact of international competition on quality, Decision Science, 31 (3), pp. 649-690.

Dellana S., Kros J., Falasca M., Rowe W.J. (2019). Risk management integration and supply chain performance in ISO 9001-certified and non-certified firms. International Journal of Productivity and Performance Management, 69, pp. 1205-1225.

Deloof, M. (2003), Does working capital management affect profitability of Belgian firms? Journal of Business Finance & Accounting, 30 (4), pp. 573-587.

Diaz E., Sensini L. (2020), Quality Management Practices, Innovation and Profitability of SMEs: Evidence from Argentina, International Business Management, 14 (9), pp. 328-336.

Ding S., Guariglia A., Knight J. (2013). Investment and financing constraints in China: does working capital management make a difference?, Journal of Banking & Finance, Vol. 37 (5), pp. 1490-1507.

Dosi, G. (1988). Sources, procedures, and microeconomic effects of innovation, Journal of Economic Literature, pp. 1120-1171.

Ek, R., Guerin, S. (2011). Is there a right level of working capital?, Journal of Corporate Treasury Management, Vol. 4 (2), pp. 137-149.

Erasmus, P.D. (2010). Working capital management and profitability: the relationship between the net trade cycle and return on assets, Management Dynamics, Vol. 19 (1), pp. 2-10.

Fazzari S.M., Petersen B. (1993). Working capital and fixed investment: new evidence on financing constraints, The Rand Journal of Economics, Vol. 24 (3), pp. 328-342.

Filbeck, G., Krueger, T. (2005). Industry Related Differences in Working Capital Management, Journal of Business, Vol. 20 (2), pp. 11-18.

Flynn B.B., Schroeder R.G., Sakakibara S. (1995). The impact of quality management practices on performance and competitive advantage, Decision Science, 26 (5), pp. 659-691.

Fonseca L., Domingues P. (2018). Empirical research of the ISO 9001: 2015 transition process in Portugal: Motivations, benefits, and success factors. Quality Innovation Prosperity, 22, pp. 16-45.

Garcia-Teruel P.J., Martinez-Solano P. (2007). Effects of Working Capital Management on SME Performance, International Journal of Managerial Finance 3 (2), pp. 164-177.

Hong J., Liao Y., Zhang Y., Yu Z. (2019). The effect of supply chain quality management practices and capabilities on operational and innovation performance: evidence from Chinese manufacturers, International Journal of Production Economics, 212, pp. 227-235.

Howorth C., Westhead, P. (2003). The focus of working capital management in UK small firms, Management Accounting Research, 14 (2), pp. 94-111.

Kim,Y.H., Chung K.H. (1990). An integrated evaluation of investment in inventory and credit: a cash flow approach, Journal of Business Finance and Accounting, Vol. 17, (3), pp. 381-389.

Kim C.S., Mauer D., Sherman A.E. (1998). The determinants of corporate liquidity: Theory and evidence, Journal Financial Quantitative Analysis, 33, pp. 335-359.

Khoury N.T., Smith K.V., MacKay P.I. (1999). Comparing working capital management practices in Canada, the United States and Australia: a note, Canadian Journal of Administrative Sciences, 16 (1), pp. 53-57.

Kumar M., Antony J. (2008). Comparing the quality management practices in UK SMEs. Industrial Management and Data Systems, 108 (9), pp. 1153–1166.

Kumar M., Khurshid K K., Waddell D, (2014). Status of quality management practices in manufacturing SMEs: A comparative study between Australia and the UK. International Journal of Production Research, 52 (21), pp. 6482–6495.

Kureshi N. I., Mann R. (2009). Quality management practices of SME in developing countries: A survey of manufacturing SME in Pakistan. Journal of Quality and Technology Management, 5 (1), pp. 63-89.

Lee Y.W., Stowe J.D. (1993). Product risk, asymmetric information, and trade credit, Journal of Financial and Quantitative Analysis, Vol. 28 (2), pp. 285-300.

Majumdar J. P., Manohar B. M. (2016). Why Indian manufacturing SMEs are still reluctant in adopting total quality management, International Journal of Productivity and Quality Management, 17 (1), pp. 16-35.

Mannetta E.W., Jordan J.K., Zhang W. (2014). Working capital management and performance: an empirical study, ACRMC.

Mannetta E.W., Sanchez J.A., Wilson K.M. (2014). Working capital and Cost management, ICEFR.

Nair A. (2006), Meta-analysis of the relationship between quality management practices and firm performance - implications for quality management theory development, Journal of Operations Management, 24 (6), pp. 948-975.

Nayak A., Greenfield S. (1994). The use of management accounting information for managing micro businesses. In: Hughes, A., Storey, D.J. (Eds.), Finance and The Small Firm. Routledge, London.

Ng C.K., Smith J.K., Smith, R.L. (1999). Evidence on the determinants of credit terms used in interfirm trade, Journal of Finance, Vol. 54 (3), pp. 1109-1129.

Opler T., Lee P., Stulz R., Williamson R. (1999). The determinants and implications of corporate cash holdings, Journal Financial Economics, 52, pp. 3-46.

Petersen, M.A. and Rajan, R.G. (1997). Trade credit: theories and evidence, Review of Financial Studies, Vol. 10 (3), pp. 661-691.

Sanchez J.A., Sensini L. (2013), Predicting corporate bankruptcy and financial distress: a critical overview, International Conference on Accounting, Finance and Risk Management Perspectives, pp. 508-526.

Sanchez J.A., Sensini L. (2017), Small Firms and Demand for Credit. Evidence from Europe, ICAFR, pp. 124-144.

Sensini L. (2015), Selection of determinants in Corporate Financial Distress, European Journal of Business and Management, Vol. 7 (2), pp. 73-82.

Sensini L. (2017), Capital Structure Determinants in Italian Sme's: An Empirical Study, ICAFR, pp. 124-144.

Sensini L. (2020), Working capital management and performance: evidence from Italian SME's, International Journal of Business Management and Economic Research (IJBMER), Vol 11(2),2020, 1749-1755.

Sensini L. (2020), Factors Driving Capital Structure of Italian Sme's, International Business Management, 14 (7), pp. 217-225.

Smith, K. (1980). Profitability versus liquidity tradeoffs in working capital management. In K. V. Smith (Ed.), Readings on the management of working capital (pp. 549–562). St Paul, MN: West Publishing Company.

Smith, J.K. (1987). Trade credit and informational asymmetry, Journal of Finance, Vol. 42 No. 4, pp. 863-872.

Shin, H.H., Soenen, L. (1998). Efficiency of working capital and corporate profitability, Financial Practice Education, 8 (2) (1998), pp. 37-45.

Stiglitz J., Weiss A. (1981). Credit rationing in markets with imperfect information, American Economic Review, 71, pp. 393-410.

Ukaegbu B. (2014). The significance of working capital management in determining firm profitability: Evidence from developing economies in Africa. Research in International Business and Finance, 31, pp. 1–16.

Wasiuzzaman S. (2015). Working capital and firm value in an emerging market, International Journal of Managerial Finance, Vol. 11 (1), pp. 60-79.

Wilner B.S. (2000). The exploitation of relationship in financial distress: the case of trade credit, The Journal of Finance, Vol. 55 No. 1, pp. 153-178.

Zariyawati M.A., Annuar M.N., Taufiq, H., Rahim A.S.A. (2009). Working capital management and corporate performance: case of Malaysia, Journal of Modern Accounting and Auditing, Vol. 5 (11), pp. 47-54.