

## **The Impact of Practices in Working Capital Management and Supply Chain Management on Corporate Performance**

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### **ABSTRACT**

This study empirically investigates the relationships among the four most common supply chain management practices (supplier partnership, customer relationship, information sharing, and lean system), net trade cycle, and financial performance. It has been found that all the investigated supply chain management practices, apart from customer relationship, that are mediated by the net trade cycle have significant influences on financial performance. Moreover, the three supply chain management practices (supplier partnership, information sharing, and lean system) and net trade cycle are found to have significant influences on the financial performance; consequently, this study's outcomes can be recommended to production managers who may well assign resources to enhance these practices to get the best outcomes.

*JEL Classifications: M11, M41*

*Keywords: supply chain management practices; net trade cycle; financial performance*

\* The authors wish to recognize their appreciation to the anonymous reviewers who gave freely time and effort, constructive recommendations that improved the value of this manuscript.

## I. INTRODUCTION

A supply chain embraces all exertions elaborated in manufacturing a product and transporting it from supplier to customer. Therefore, managing a supply chain is considered to be the watchword for companies (Li, 2002). Moreover, Supply Chain Management (SCM) has turned out to be a crucial research area during the last decade (Abdallah et al., 2014). SCM practices are expected to generate added value in various ways: decreased paperwork, decreased inventory cost, increased customer service (Balsmeier and Voisin, 1996). However, the outcomes of the existing research are characterized by opposing outcomes leading to confusion among researchers. The opposing outcomes are credited to the usage of various practices to gauge supply chain management (Abdallah et al., 2014). Additionally, most of the relevant researches are attentive on organizations in developed countries. In contrast, organizations in developing countries suffer an actual challenge to enhance their operational capabilities, including SCM, in order to be able to compete and survive in today's competitive landscape (Abdallah et al., 2014).

On the other hand, in the field of corporate finance, it is mostly recognized that the key financial objective of a company has to be attentive on the maximisation of shareholders' value. Accordingly, in order to recognize this objective, the management of a company's needs to confirm that the company's capital is invested in creating value and gainful enterprises that will breed positive net present values (Erasmus, 2010).

Consequently, supply chain needs to be properly managed and associated with efficient net trade cycle that may lead to improve financial performance by increasing liquidity and financial performance via eliminating unnecessary costs which is crucial for any successful company (Hsieh and Wu, 2013). The net trade cycle embraces prominence to gauge liquidity and also aids as a dimension linking the procedures of the company (Farris and Hutchison, 2002). However, it is difficult to attain the optimal level of net trade cycle which is balancing between the risks related to a too low level of net trade cycle and investments in current assets (Lyroudi and McCarty, 1993).

## II. LITERATURE REVIEW

This review comprises three sections namely: supply chain management (SCM) practices, net trade cycle (NTC), and financial performance which are discussed in details below. Some studies in literature found significant impact of SCM practices on financial performance (Huo, 2012). Others found significant impact of NTC on financial performance (Karaduman et al., 2010). Moreover, others found significant relationship between SCM and NTC (Hofmann and Kotzab, 2010). Whereas, this empirical study combines all these constructs of SCM practices, NTC, and financial performance in one model. The issue here is how to properly manage supply chain practices that will lead to efficient net trade cycle which will eventually enhance financial performance of companies via eliminating unnecessary costs.

### A. Supply Chain Management Practices

SCM has turned out to be an essential requirement to staying in the competitive global race and to increasing financial performance (Moberg et al., 2002). The concept of

SCM has got increasing attention from academicians, consultants, and business managers (Li et al., 2005). Many studies have been directed to test the impacts of various SCM practices on financial performance (Zhou and Benton, 2007). However, many of the current empirical studies either emphasize on the internal supply chain, the upstream, or downstream of the supply chain (Li et al., 2005).

SCM practices are stated as the set of actions assumed by a company to encourage effective management of its supply chain (Li et al., 2005). Donlon (1996) described the development of SCM practices which include supplier's company, subcontracting, cycle time concentration, continuous process program, and information technology sharing.

Based on the previous literature, SCM practices are depicted from diverse viewpoints with a mutual aim of enhancing financial performance. There are four SCM practices emerge from the relevant literature: namely, supplier partnership, customer relationship, information sharing, and lean system. A more detailed discussion of these practices is provided subsequently. Moreover, there is a need to test the relationships among the four SCM practices as independent variables and NTC as a mediator variable; the impact of the four SCM practices as independent variables on financial performance as a dependent variable; and the impact of NTC as a mediator variable on financial performance as a dependent variable.

### **1. Supplier partnership**

Supplier partnership is stated as the long-term relationship between the company and its suppliers. It is intended to leverage the planned and operational competencies of separate participating companies to aid them attain significant continuing gains (Noble, 1997).

By emerging partnership with suppliers, it is potential to work more effectively with a few vital suppliers who are keen to share responsibility for the achievement of the products (Li, 2002). Supplier's participation in the product design procedure can concentrate more cost effective design collections, advance substitute theoretical explanations, choose the best actions and technologies, and aid in design assessment (Monczka et al., 1994).

Honda of America and Chrysler, mentioned for their leading practice in emerging partnership relationships with suppliers, have attained excessive gains from this closed relationship (Sheridan, 1998).

### **2. Customer relationship**

Customer relationship is stated as the demand management practice through long-term customer relationship, gratification development, and criticism management (Tan et al., 1998). The essential characteristic of customer relationship is the emphasis on vital customers to appreciate their needs and requirements and to satisfy those (Sheth et al., 2000).

Customer relationship is expected to yield diverse benefits to companies (Magretta, 1998). Such aids comprise the capability to distinguish products from competitors, enlarged market share and retention of lucrative customers, enhanced customer loyalty, rapidly resolving possible issues, shared knowledge and expertise

concerning new technologies, deep understanding of customer needs, and fast replies to customers.

### **3. Information sharing**

Information sharing is stated as the degree to which serious and exclusive information is connected to one's supply chain party (Towill, 1997). The progressions of information technology have critically contributed to the development of sharing information during the supply chain (Stein and Sweat, 1998). Regular interactions of information allow supply chain parties to do as a single body.

Numerous researchers have recommended that the main to the whole supply chain is creating obtainable factual and current marketing data at all level within the supply chain (Towill, 1997). By captivating the information obtainable and creating it noticeable to other parties in the supply chain, data on customers can be employed as a basis of competitive advantage (Jones, 1998).

However, there is the reluctance on the part of companies in the supply chain to share information with each other (Vokurka and Lummus, 2000). Information is commonly watched as providing an advantage over competitors and companies struggle sharing with their associates.

### **4. Lean system**

Lean system is stated as the actions of eliminating waste in an industrial system, characterized by decreased set-up times, small lot sizes, and pull-production (Li, 2002). The term lean represents a system that consumed less of all inputs to generate outputs comparable to the mass industrial system, but provide an enlarged choice to the final consumer.

Lean thinking and lean practice have turned out to be a very vital measurement of executing SCM (Handfield and Nichols, 1999). Companies that have not reengineered their full supply chains to force out the unnecessary costs, time, and other wastes, so that they can bring high degree of excellence, best value products at quick speed will risk losing customers. Lean operating practice is the main driver to a highly-integrated and down-sized supply chain, encouraging both cost savings and more creative functioning companion relationships (Burgess, 1998). Plummeting the time essential to advance, production, and allocate products not only decreases costs, but also upturns productivity, permits best prices to be indicted, decreases risks, and upturns flexibility.

### **B. Net Trade Cycle**

Increased competition in recent decades has engaged consideration to the justification of short-term investments, providing working capital management a vital part in company financial performance (Banˆos-Caballero et al., 2011). Yazdanfar and Oˆhman (2014) stated that working capital management contains managing cash, inventory, and account receivable in addition to impact a company financial performance. Several previous studies have dignified the influence of working capital on company financial performance (Garcı´a-Teruel and Martinez-Solano, 2007), and hence, they

recommended more exact gauges of the effectiveness of working capital management where optimal levels of inventory, receivables, and payables are recognized, and total holding and opportunity costs are reduced (Nobanee and AlHajjar, 2014).

Wang (2002) analyzed a sample of 1,555 Japanese companies and 379 Taiwanese companies in several sectors over the period 1985-1996. The outcomes designated from that analysis concluded that the cash conversion cycle-return on assets and cash conversion cycle-return on equity relationships are commonly negative, proposing that managers could upturn company financial performance by decreasing cash conversion cycle. On the other hand, Nobanee and Haddad (2014) detected that the cash conversion cycle and return on investment relationships are commonly significant and negative, and hence the study proposed that the shortening of the cash conversion cycle improves the financial performance. In the context of developing economies, the study of Zariyawati et al. (2009) on Malaysian companies throughout the period 1996 to 2006 disclosed that there is a negative influence of cash conversion cycle on financial performance. However, Yazdanfar and O'hman (2014) confirmed that several studies have found a positive influence of cash conversion cycle on financial performance. Gill et al. (2010) inspected a sample of 88 US industrial companies over the period 2005-2007 and found a significant positive influence of cash conversion cycle on financial performance.

Yazdanfar and O'hman (2014) confirmed that previous empirical outcomes are mixed and suffered from vagueness concerning the form of the influence of cash conversion cycle on company financial performance. The fact that these studies are based on diverse sample choices and contexts rather clarifies the lack of unification among their results.

Shin and Soenen (1998) explored the influence of a company's NTC on its financial performance for a sample of 58,985 companies in USA years covering the period 1975-1994. The computation of the NTC varies from the cash conversion cycle. Unlike the cash conversion cycle, where has different denominators for the computation of the turnover rates of inventory, trade receivable and trade payable; the NTC is computed by expressing them all as a percentage of sales. Consequently the value of a company's NTC designates the number of days of sales that the company has to finance its net working capital investment. It has been stated that even though the weighted cash conversion cycle is a more appropriate gauge to use than the cash conversion cycle, the lack of obtainability of the data required limits its application by external analysts. The outcomes of designated that a statistically significant negative influence exists of a company's NTC on its financial performance. Authors concluded that a reduction in a company's NTC could outcome in the creation of shareholders' value.

Erasmus (2010) stated that the NTC is considered as a gauge of working capital management. In the exploratory phases of the research, the cash conversion cycle was also considered. A number of issues, however, were experienced when considering cash conversion cycle values. Firstly, financial reports do not comprise full information on the cost of sales amount for all companies for the whole period under review. Furthermore, the value of procurements during the year was also unobtainable and had to be estimated. As a consequence of these concerns, additional evaluations are required to consider the cash conversion cycle, the resulting sample would have been considerably smaller than the one based on the NTC. Shin and Soenen (1998) questioned the appropriateness of the cash conversion cycle, since its consideration

involves the addition of ratios with diverse denominators. It has been shown that negative and significant relationship between net trade cycle as an inclusive gauge of the effectiveness in working capital management and liquidity (Nobanee and Abraham, 2015). The working capital management is a representation by NTC, which should be neither too short nor too long, that it varies from time to time and from different sector to another (Karaduman et al., 2010). This study further examines the influence of NTC as a mediator variable on the financial performance as a dependent variable. The NTC components are explained in details below.

**1) Receivable Collection Period (RCP).** Leitch and Lamminmaki, (2011) stated that RCP gauges an average of the number of days it takes for a company's trade debtors to pay their charges. It is advisable that for a company to have an appropriate liquidity position, the RCP must be as lower as possible. RCP also gauges the number of days that is required to collect account receivable in which shorter time is better to increase liquidity (Boardman and Ricci, 1985) on the expense of losing customers who are switching to competitors by imposing aggressive credit policy, which may also lead to lose sales (Nobanee et al., 2011).

**2) Inventory Conversion Period (ICP).** Majanga (2015) stated that ICP is a gauge for how long a company ties its funds to inventory. When a company holds too much inventory for too long, its liquidity position gets compromised. Inventory makes a big part of current assets especially for manufacturing companies and the longer it is held, the more funds are engaged thereby paralyzing the operations. Moreover, ICP can be considered as a gauge for the number of days that is required to sell inventory; in which shorter time is better to increase liquidity (Farris, 1996) on the expense of suffering from stock-out which may lead to lose sales and so; it should be between speeding up and slowing down (Nobanee et al., 2011).

**3) Payable Deferral Period (PDP).** Majanga (2015) stated that this liquidity part gauges the length of time in days the company defers disbursements to its suppliers and other creditors. It is known that a company can enhance its liquidity by delaying disbursements to suppliers and creditors. However, it is advisable that companies should take carefulness for fear of losing its reliable and main suppliers for non-payment. PDP also gauges the number of days that is required to disburse account payable in which longer time is better to invest cash (Boardman and Ricci, 1985) on the expense of losing early payment discounts as well as the chance of receiving bad quality materials from supplier, which would eventually influence the financial performance (Nobanee et al., 2011).

### III. FINANCIAL PERFORMANCE

Organizational performance denotes to how well a company fulfilled its market and financial goals (Yamin et al., 1999). The short-term objectives of SCM are mainly to upturn productivity and decrease inventory and cycle time, while a long-term objective is to upturn financial performance for all associates of the supply chain (Tan et al., 1998). Financial metrics have aided as a technique of comparing companies and assessing their behavior over time and the final effectiveness of SCM should be gauged by such performance (Holmberg, 2000).

The theme of performance remains controversial. Certainly, researchers have struggled to discover a description to this concept by looking for its sources, its relations with the several plans, how to attain it (Azouzi and Jarboui, 2016). The main goal is to recognize the financial performance indicators.

Financial performance is hardly stated clearly in the previous literature, because there is no consistent gauge and scope (Richard et al., 2009). Up till now, it is the most prevalent and widely adopted dependent variable in management research. Financial performance measurements including Return on Assets (ROA), Return on Equity (ROE), and Operational Profit Margin (OPM) are most common financial performance indicators which are explained in details below.

**1) Return on Assets (ROA).** The return on total assets is calculated by dividing the net profit after tax by total assets. This ratio gauges the profitability of the assets engaged in breeding net profit for the company. Because assets are financed by debt or equity or a combination thereof, a high return on assets designates that assets are being employed in the most profitable way to breed net profit and vice versa (Khuong, 2002). ROA exemplifies how effectively the company is using resources to upturn the level of profits earned on total assets invested via properly managing the supply chain. It is a vital dimension, as companies must invest profitably in new capital actions above the company's cost of capital to generate incremental value for the company (Khuong, 2002).

**2) Return on Equity (ROE).** The return on equity measures the amount of net profit made as a percentage of the shareholders' equity that can be achieved through properly managing the supply chain (Ebert et al., 2006). This financial measurement designates a company's profitability status by presenting the profit level a company produced from the money shareholders invested. Net profit as calculated per financial year, is regulated before any dividends are dispersed to common shareholders but after dividends are dispersed to preferred shareholders because shareholders' equity does not comprise preferred stock shares (Ebert et al., 2006).

**3) Operational Profit Margin (OPM).** Operating profit ratio was selected as a performance variable in the questionnaire; because this measurement unit has been stated by strict guidelines of the U.S. generally accepted accounting principles. Operating profit, when expressed as a percentage of total net sales, embodies earnings produced for each sales dollar turned over via properly managing the supply chain (Khuong, 2002). The operating profit percentage also permits for benchmarking against companies within the same sector, irrespective of size, because return is expressed as a percentage rather than absolute dollars (Khuong, 2002). This indicator has been employed by Torghabea et al. (2014) to enlighten its relationship with company value.

#### IV. THEORETICAL BACKGROUND AND CONCEPTUAL MODEL

Some theoretical grounds on the creation of the framework are delivered. A clear theoretical logic is that financial performance depends on the proper management of both intangible and tangible resources (Kumar and Nambirajan, 2013). SCM practices and NTC deal with the tangible and intangible resources; the combined impact of SCM practices and NTC thus form the building blocks of managerial decisions and actions

that regulate the long run performance of a company. Hence, it is reasonable to theorize the framework.

The Resource Based Theory (RBT) is used to explain the increasing in financial performance and gaining a competitive advantage through well utilization of a company' resources including tangible, intangible and human resources via accessing to different technologies and competencies. It explains the influence of the four most common supply chain management practices (supplier partnership, customer relationship, information sharing, and lean system) and net trade cycle on financial performance through well-utilized resources by properly managing supply chain with efficient net trade cycle to eliminate unnecessary costs and consequently increase financial performance. RBT states that companies combine of resources which are varied and imperfectly mobile. These companies function in businesses characterized by imperfect information. Critical to the theory is the creation of market value in products and services expected by customers (Olivo, 2013). The nature of the business landscape, companies have access to technologies, competencies, capabilities and various organizational structures that can be superior to other companies (Hunt and Davis, 2012). RBT is designated as the theory that was directly associated with cooperative, relational marketing. Knowledge acquired, assimilated or transformed from other disciplines enabled competitive advantage (Kessler et al., 2000). Information search accesses asset specific knowledge valuable to the company (Wang et al., 2009).

In addition, market researchers have associated collaboration with value creation and innovation (Tsai, 2002). Collaboration supports competitive advantage by providing access to markets, technologies, decreased cost and risk, enhanced competitiveness, knowledge development, utilization, and enhanced financial performance. Gnyawali and Park (2011) found collaboration to upturn innovation.

RBT is not a theory of competition, rather it is a supporter of collaboration, and it is credited with empowering companies which adopt collaborative management plans to have greater gains and control over competitors by adopting competitive relationships (Chen and Chen, 2011). Hence, in RBT, competitive plans are commonly not a significant means by which competitive advantage is attained. LaCoste (2012) reflected cooperation and competition to exist on a single continuum; however, the author treated cooperation as a relational management plan and competition as a self-indulgent.

There are opposing outcomes in SCM and NTC in general and lack of research thereof in developing countries specifically. Moreover, none of the previous studies combined SCM practices, NTC, and financial performance in one model. Therefore, this study aims to fill this gap in literature through attaining proper SCM practices with efficient NTC in a developing country such as the Kingdom of Bahrain (one of the Gulf Cooperation Council countries) in order to enhance financial performance.

## **A. Theoretical Framework**

To recognize well the backgrounds and magnitudes of supply chain management, a model is created which designates the causal relationships between facilitating constructs for the four most common SCM practices (supplier partnership, customer relationship, information sharing, and lean system) that are mainly used in previous key

studies (Abdallah et al., 2014; Li, 2002), and their relationships with net trade cycle construct, and financial performance construct (Erasmus, 2010; Nobanee et al., 2011). Fundamental to this model is directness: a higher level of supply chain management practices will lead to higher level of net trade cycle construct, and a higher level of net trade cycle will guide to an improved financial performance construct.

Prior empirical studies typically linked certain features of these four most common SCM practices on financial performance which are directly deprived of seeing an intermediate performance gauges net trade cycle (Frohlich and Westbrook, 2001). Since financial performance is an eventual gauge of every action in an association, it may not be a suitable gauge for immediate consequence of those most common supply chain management practices. So, it is likely that SCM practices impact the financial performance construct indirectly through mediation by the net trade cycle construct. In addition to the direct impact of SCM practices on the financial performance construct, the financial performance construct is also indirectly impacted through mediation by the net trade cycle construct.

**Figure 1**  
Proposed latent variable model

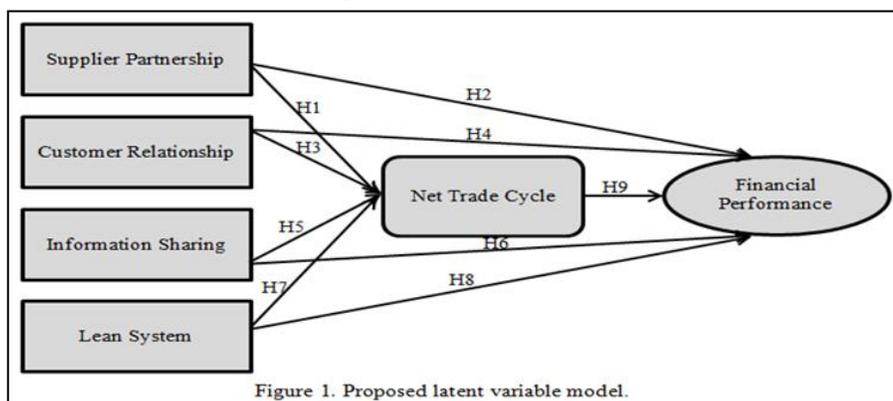


Figure 1 above illustrates all the possible relationships that can affect SCM considered within the model. It shows the indirect influence of the four common SCM practices on financial performance that is mediated by net trade cycle as well as the direct influence of them on financial performance.

Specifically, this study examined the following nine hypotheses:

- H1.** There is an indirect significant influence of supplier partnership on financial performance that is explained through the mediation of net trade cycle.
- H2.** There is a direct significant influence of supplier partnership on financial performance.
- H3.** There is an indirect significant influence of customer relationship on financial performance that is explained through the mediation of net trade cycle.
- H4.** There is a direct significant influence of customer relationship on financial performance.

**H5.** There is an indirect significant influence of information sharing on financial performance that is explained through the mediation of net trade cycle.

**H6.** There is a direct significant influence of information sharing on financial performance.

**H7.** There is an indirect significant influence of lean system on financial performance that is explained through the mediation of net trade cycle.

**H8.** There is a direct significant influence of lean system on financial performance.

**H9.** There is a significant influence of net trade cycle on financial performance.

In other words, this study examined the listed hypotheses which are divided mainly by four indirect relationships and five direct influences. The four indirect relationships of the four most common supply chain management practices (the supplier partnership construct, the customer relationship construct, the information sharing construct, and the lean system construct are as independent variables) have significant relationships with the financial performance construct (as a dependent variable) that are mediated by the net trade cycle construct. Moreover, the five direct influences of the four supply chain management practices (the supplier partnership construct, the customer relationship construct, the information sharing construct, and the lean system construct are as independent variables) and the net trade cycle construct (as a mediator variable) have significant influences on the financial performance construct (as a dependent variable).

## V. DATA COLLECTION

The survey was administered as a questionnaire to all senior employees at the production department and finance department of three manufacturing companies in the Kingdom of Bahrain. The three manufacturing companies are enlisted industrial companies at Bahrain Bourse. The Kingdom of Bahrain is a small country and in fact, the smallest country among the whole Gulf Cooperation Council countries. This is the reason of having small sample size. Measuring finance at a managerial level is of concern, and hence, only senior employees have the capability to answer the questionnaire accurately. Moreover, the total senior employees in the designated departments for the three companies are 147 senior employees distributed as follows: Company 1 has 76 senior employees, Company 2 has 31 senior employees, and Company 3 has 40 senior employees which constitutes a small population especially after exclusion of all junior employees. From the three companies of interest, 112 responds have been obtained (corresponds to response rate of 76%) distributed as follows: 61 responds from Company 1, 21 responds from Company 1, and 30 responds from Company 3. This is the best sample that can be gathered within the boundaries of Bahrain, strengthening one's choice of sample. Moreover, this is a good number of responses, and if it is a significant share of the industry that depends on supply chains, it is a robust sample for Bahrain.

### A. Data Analysis

The Structural Equation Modelling (SEM) was engaged to test the relationships amongst the six constructs (supplier partnership construct, customer relationship construct, information sharing construct, lean system construct, net trade cycle

construct, and financial performance construct). The latent variable model in Figure 2 examines the data taken from senior employees at the three manufacturing companies in the Kingdom of Bahrain. The goodness-of-fit indices for this model are shown in Table 1.

**Table 1**  
Goodness-of-fit indices for the latent variable model

<b>Fit Index</b>	<b>Value</b>
Chi-square	358.225
<i>df</i>	309
<i>p-value</i>	.028
CFI	.981
RMSEA	.038

*Note:* CFI (Comparative Fit Index) and RMEAS (Root Mean Square Error of Approximation)

The chi-square for the model is also known as the discrepancy function. If the chi-square is not significant, the model is stated as acceptable. To be exact, the observed covariance matrix is comparable to the anticipated covariance matrix that is, the matrix anticipated by the model. If the chi-square is significant, the model is stated, at least sometimes, as unacceptable. However, many researchers neglect this index if other indices designate the model is acceptable. The chi-square of 358.225, its degrees of freedom of 309, and its p-value of .028 is smaller than level of significance of .050; which indicates that the model fit is not acceptable. Nevertheless, the model fit is accepted by two other important measurements which are the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA). The CFI contrasts an anticipated model with the null model. It ranges from 0 to 1, where 0 is no model fit and 1 is the ideal. A value for CFI more than .900 points to a suitable fit to the data (Bentler, 1992). Table 1 discloses that the CFI value of the model is .981, which proposes excellent model fit. The RMSEA was employed to assess the residuals. This measure must be smaller than .080 for a sufficient model fit (Hu and Bentler, 1999). Table 1 demonstrates that the RMSEA value of the model is .038 and points to adequate model fit.

Seven of the nine hypothesized paths are significant as revealed in Table 2. The only two insignificant hypotheses are H3 and H4 to indicate no indirect significant influence of the customer relationship construct on the financial performance construct that is explained through the mediation of the net trade cycle construct with the corresponding p-value of .757 which is greater than the level of significance of .050 and no direct significant influence of the customer relationship construct on the financial performance construct with the corresponding p-value of .964 which is greater than the level of significance of .050 are not supported by the previous literature. It is shown that the customer relationship is a more complex area or less predictable than the other constructs. This may be due to the existence of high customers' demand of uncertainty and/or customers are so price sensitive.

**Table 2**  
Statistical relationship of path coefficients for the latent variable model

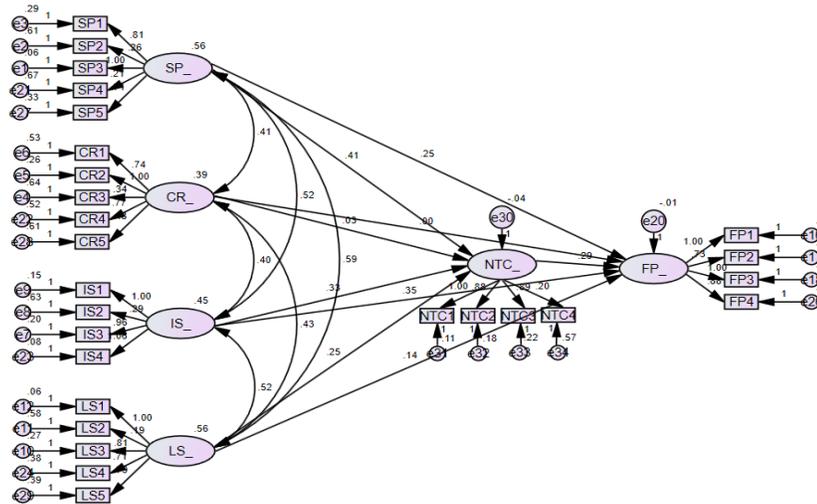
Path	Path Significance
<i>H1</i> . Supplier Partnership ----> Net Trade Cycle	Significant***
<i>H2</i> . Supplier Partnership ----> Financial Performance	Significant*
<i>H3</i> . Customer Relationship ----> Net Trade Cycle	Insignificant
<i>H4</i> . Customer Relationship ----> Financial Performance	Insignificant
<i>H5</i> . Information Sharing ----> Net Trade Cycle	Significant*
<i>H6</i> . Information Sharing ----> Financial Performance	Significant*
<i>H7</i> . Lean System ----> Net Trade Cycle	Significant**
<i>H8</i> . Lean System ----> Financial Performance	Significant*
<i>H9</i> . Net Trade Cycle ----> Financial Performance	Significant**

*Note* \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Moreover, this study showed that the indirect relationships are mediated by the net trade cycle has greater level of significance than the direct relationships with the financial performance. This clearly proves the significant effects of the net trade cycle to explain the relationship between the supply chain management practices and the financial performance for the following hypotheses: H1 (an indirect significant influence of the supplier partnership construct on the financial performance construct that is explained through the mediation of the net trade cycle construct as its p-value of .000), H5 (an indirect significant influence of the information sharing construct on the financial performance construct that is explained through the mediation of the net trade cycle construct as its p-value of .029), H7 (an indirect significant influence of the lean system construct on the financial performance construct that is explained through the mediation of the net trade cycle construct as its p-value of .002), and H9 (a significant influence of the net trade cycle construct on the financial performance construct as its p-value of .008) those are supported by the literature. The net trade cycle construct works as a mediator variable; so, there are still significant direct effects of supply chain management practices on financial performance construct for the following hypotheses: H2 (a direct significant influence of the supplier partnership construct on the financial performance construct as its p-value of .034), H6 (a direct significant influence of the information sharing construct on the financial performance construct as its p-value of .031), and H8 (a direct significant influence of the lean system construct on the financial performance construct as its p-value of .049) those are also supported by the literature (Kim, 2006; Kumar and Nambirajan, 2013). The standardized coefficient paths and the all indicators on their six constructs are revealed in Figure 2.

Finally, Table 3 establishes the fact that there is no significant difference among the three manufacturing companies of the four most common SCM practices and the net trade cycle construct on the financial performance construct as the corresponding p-value is .879 which gives evidence that there is no bias in financial performance construct results based on a company type.

**Figure 2**  
The result of the latent variable model test



**Note:** SP (Supplier Partnership), CR (Customer Relationship), IS (Information Sharing), LS (Lean System), NTC (Net Trade Cycle), and FP (Financial Performance).

**Table 3**  
ANOVA on financial performance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.128	2	.064	.129	.879
Within Groups	53.967	109	.495		
Total	54.094	111			

## VI. CONCLUSION

This study examined critical relationships among supply chain management practices (represented by supplier partnership construct, customer relationship construct, information sharing construct, and lean system construct), net trade cycle construct, and financial performance. To this end, the study considered these variables in one model.

Significant relationships have been reported between net trade cycle and supplier partnership, information sharing construct, as well as lean system. Moreover, these three most common supply chain management practices have significant influences on the financial performance construct that are explained through mediation of the net trade cycle construct. Interestingly, a consistent between the study findings and the results reported by previous key studies has been realized.

However, this study didn't find neither significant relationship between the customer relationship construct and the net trade cycle construct; nor significant influence of the customer relationship construct on the financial performance construct that is mediated by the net trade cycle construct. Furthermore, these findings are not supported by previous key studies, an issue that may require further investigations in a future research.

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