

The Effect of Supply Chain Management Practices on Financial Performance of Jordanian Pharmaceutical Companies

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Abstract

Rapidly changing business environment forces manufacturing companies in different countries to adapt their operations to meet the requirements of agile manufacturing. Hence, Supply chain management practices are an organization's strength as they are key to enhancing the performance. This study aims to assess the effect of supply chain management practices on financial performance of Jordanian Pharmaceutical Companies using primary and secondary sources of data. The responses recorded from questionnaire were assessed with the financial ratios between 2013 and 2018 when the Syrian crisis prevailed. A relationship between supply chain management practices and financial performance was found implying that profitability was effected during the crisis period with consistent reduction in profits. The results of the study indicated that supply chain management was found to have a direct impact on financial performance of Jordanian pharmaceutical in the industry.

Keywords: Financial Performance, Jordanian Pharmaceutical Companies, Supply Chain Management Practices and Syrian crisis.

Introduction

Recent technological advancement of communication and transportation lead to globalization. Due to globalization customers' needs and requirements have been changed and developed. Customers need a suitable product in suitable place at suitable time with high quality and suitable cost. Any organization would like to compete in recent hyper-market should match with the above mentioned customers' requirements. To fulfill the customers' requirements organizations should improve all their activities and processes. Supply chain management is a system that improves all activities which carried out by organization. Supply chain management is a complex system which covers all supportive activities from suppliers to after sales services. To be able to grow and survive any organization has to identify its strengths and weaknesses, to re-enforce on strengths and overcome weaknesses. Implementing supply chain management can be a source of competitive advantages which lead to better overall organizations' performance.

Supply Chain Management (SCM) is considered as a multidisciplinary field that has been explored from many different perspectives (Papakiriakopoulos&Pramatari, 2010). The practices of SCM are proposed to be a multi-dimensional concept, including downstream and upstream sides of the supply chain. The best supply chain management practices (SCMPs) have become an essential factor for low-performing firms to remain competitive in the global race. The best SCM practices can positively impact on performance. The degree of attention paid to SCM has increased in developing countries since the last two decades; however, Jordan in particular is still behind. The

supply chain practices are implemented to achieve and enhance performance by enabling an internal cross-functional integration within the firm, and external integration with suppliers and customers (Kannan & Choon Tan, 2010).

The collaboration in supply chain plays a dominant role for improving organization's performance and gaining competitive advantage (Vaidya and Hudnurkar, 2012). To utilize the supply chain at its maximum performance level, organizations have to integrate its goals and activities together (Cooper, et al., 1997). Supply-chain partners need to focus on various elements to ensure competitive advantage: price negotiation to increase in margin, and financial collaboration to ensure innovative product design. Supply chain management requires integration and coordination for satisfying and responding to change in consumer demand (Lambert and cooper, 2000). Supply chain integration influences performance (Frohlich and Westbrook, 2001).

Review of Literature

Krishnapriya V and RupashreeBaral (2014) stated that the purpose of the study was to signify the effect of inherent critical competencies on supply chain integration. A theoretical framework was proposed linking managerial, organizational and inter-organizational competencies with supply chain integration and performance. Propositions are posited with suggestions for further research. Simultaneously, the study strategized the different practices involved in successful management of a supply chain emphasizing on intra (internal consistency) and inter-organizational (external consistency) relations. The results provided an integrated (intra and inter-organizational) perspective to academicians looking at studying competencies in the field of supply chain.

Ralston et al. (2015) studied the firm's performance, a firm's strategy, its supply chain integration efforts using a sample size of 220 of USA firms. Corporate strategy was hypothesized to influence both customer and supplier integration and these two variables in turn affect demand. Demand on the other hand influenced performance as well as operations. The study showed that operational performance influenced financial performance. It was found that corporate integration had both customers and suppliers having positive relationship which were also found to influence demand as predicted. This study utilized firm characteristics such variables as market share and control industry size.

Salleh, Nur (2017) stated that the purpose of the study was to theorize and develop three dimension (strategic supplier partnership, level of information sharing and postponement) into a supply chain management practices construct and studies its causal relationship with the conceptualized constructs of Manufacturing Firm's Performance (MFP). The results indicated that level of information sharing had positive effects on manufacturing firm's performance while the other two which was Strategic Supplier Partnership and Postponement was not significant.

Asgarnezhad Nouri Bagher (2018) evaluated the impact of supply chain capabilities on operational and financial performance of food companies. A standard questionnaire was used as the data collection tool which was given to the managers of the companies. The results suggested the significant positive impact of supply chain capabilities on operational and financial performance of food companies. Additionally, the positive impact of operational performance on financial performance of the companies was confirmed.

MiklósPakurár et al. (2019) in their study used a recently developed framework of Supply Chain Integration (SCI) to examine the influence of a set of relationships between SCI and internal control on financial performance in the Jordanian banking sector. SCI consists of external integration and internal integration. External integration includes customer integration and supplier integration. This study utilizes survey data from 249 employees in the Jordanian banking sector and tests the research framework and hypotheses using exploratory factor analysis. The impact of

supply chain internal and external integration and internal control significantly affected financial performance. The study proposed a practical framework for the banks to use, and developed a measurement tool for managers to determine the effects of internal and external integration and internal control on financial performance.

Objectives of the study

- To identify the determinants of financial performance in Supply Chain Management Practices in the Jordanian pharmaceutical companies.
- To examine the relationship between Supply Chain Management Practices and financial performance of pharmaceutical companies in Jordan

Methodology of the Study

Study Approach and Design

The study is considered as a descriptive and cause-and-effect study. It aims at studying the effect of Supply Chain Management Practices on financial performance in Jordanian Pharmaceutical Manufacturing Organizations. Data was collected through means of a questionnaire distributed to managers working in the pharmaceutical companies. The collected data was analyzed using SPSS. Descriptive statistics was used along with financial ratios to assess the impact of Supply Chain Management Practices on financial performance.

Data Collection Methods

The study collected data using both primary and secondary sources. Secondary data was collected from annual reports of companies, company websites, stock exchange website and reports and government reports. Primary data was collected by means of a well-structured questionnaire.

Financial Performance of Jordanian Pharmaceutical Companies

Analysis of financial performance was related to 3 pharmaceutical companies namely Dar al Dawa Development and Investment Co., Hayat Pharmaceutical Industries Co. and Philadelphia Pharmaceuticals listed on Amman Stock Exchange, Jordan. 21 companies were selected for the study but out of 21 companies, secondary data related to 3 companies were chosen from Amman Stock Exchange for the study. Companies that were unlisted from the Stock Exchange did not have their financial data available. Also, the opinions of the respondents from 3 companies are considered for the analysis of financial performance.

Ratio analysis is one of the powerful tools of financial analysis. The analysis of financial performance interprets the financial health of a firm. Financial performance of the company helps the management in decision making and control. Also, the analysis of ratios along with the opinions of respondents in the present study would act as tool for appraisal of efficiency, profitability of the business and financial condition. The ratios considered for analyzing financial performance of the Jordanian pharmaceutical companies are Net Profit Ratio, Return on Equity, Return on Assets, Earnings Per Share Ratio, Return on Capital Employed and Price Earnings Ratio. Market performance, financial performance, price/cost, quality, delivery dependability and product innovation were the factors considered to impact the supply chain management practices on financial performance.

I. Financial Performance of Dar al Dawa Development and Investment Co.

Table 1(a): Perception of the Respondents Pertaining to Financial Performance

Sl. No.	Indicators	Mean	Standard Deviation
1	Market Performance	4.5	0.577
2	Financial performance	4	1.155
3	Price/cost	4	0
4	Quality	4.5	0.577
5	Delivery dependability	4	0
6	Product innovation	4.75	0.5

Market performance, financial performance, price/cost, quality, delivery dependability and product innovation were the factors considered to impact the supply chain management practices on financial performance. The opinions of the respondents pertaining to financial performance were observed in the table. It was observed that the mean is highest for product innovation, i.e., 4.75. The product innovation had a mean and standard deviation of 4.33 and 0.516 respectively. The respondents gave preference to market performance and quality which had a mean of 4.5 and standard deviation of 0.577 respectively. Based on the perceptions of the respondents, price/cost, financial performance and delivery dependability had a mean of 4 respectively. Based on the perceptions of the respondents, the factors related to financial performance were considered to significantly affect the company's profitability.

Table 1(b): Financial Performance Ratios

Ratios	Net Profit Ratio	Return on Equity %	Return on Assets %	EPS Ratio	ROCE	Price Earnings Ratio (Times)
2013	9.35	9.49	6.37	0.19	7.27	9.61
2014	8.73	11.6	6	0.24	9.52	13.32
2015	6.76	7.54	4.58	0.16	7.03	14.14
2016	8.38	8.85	5.01	0.2	7.40	10.72
2017	-18.47	-22.01	-9.62	-0.39	-17.22	-4.82
2018	-7.41	-11.42	-3.74	-0.16	-8.90	-5.53

The financial performance ratios are shown in 1(b). The economic growth in Jordan was slow due to the Arab Spring and Syrian Crisis in 2011 which had a cascading effect on the economy in the subsequent years as well. Positive net profit ratio in all the years under study except 2017 and 2018 states that though sales were increasing over the years, the economy remained burdened with ongoing uncertainty in Syria, slow revival of economic cooperation with Iraq, and an economic slowdown in the Gulf Cooperation Council (GCC). ROE was found to be positive from 2013 to 2016 showing that the company had effectively managed its assets to create profits. But, ROE was found to be negative in 2017 and 2018. The ROA and EPS ratio pertained to be positive for all the years under study which indicated the company made subsequent profits but the respective values were negative for 2017 and 2018. ROCE was positive for all the years under study except 2017 and 2018 showing financial efficiency after factoring in the amount of capital used to create that level of profitability. Price earnings ratio helps the investors determine the market value of a stock

as compared to the company's earnings and the value for the company which was found to be positive except in 2017 and 2018 exhibiting positive earnings. Though the mean values obtained from the opinions of the respondents pertaining to financial performance were high, positive values from 2013 to 2016 and negative values in 2017 and 2018 in financial ratios indicated that the external factors such as the crisis in Jordan led to instability in the company's earnings.

Determinants of Net Profit Ratio

Table 1(c): Regression Results between Net Profit Ratio and ROE
Dependent Variable: Net Profit Ratio

Variable	Coefficients	Standard Error	t-value	Sig.
Constant	-1.287	.266	-4.843	.008
ROE	1.751	.043	40.738	.000
No. of Observations = 5 ; $R^2 = .998$; F value = 1659.567				

The above Table 1(c) shows the result of regression between dependent variable, net profit ratio and independent variable, ROE. R Square is 0.998 indicating the variation in net profit ratio which is explained by the ROE to the extent of 99.8%. The regression coefficient of ROE is 1.751 which indicates a positive effect of ROE on net profit ratio which is statistically significant as the significance value is lesser than 0.05 (5%). It shows that an increase in ROE by one percent leads to increase in net profit margin of the company by 1.751. Though the performance of the company was affected by macro factors such as Syrian Crisis causing significant slowdown in the economy, the company through its efficient production and sales generated profits during the study period. There is a positive relationship between ROE and net profit ratio.

Table 1(d): Regression Results between Net Profit Ratio and ROA
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	.667	.499	1.337	.252
ROA	.824	.039	21.073	.000
No. of Observations = 5 ; $R^2 = .991$; F value = 444.070				

The above Table 1(d) shows the result of regression between dependent variable, net profit ratio and independent variable, ROA. The variation in net profit ratio is explained by the ROA to the extent of 99.1% as the value of R Square is 0.991. The regression coefficient of ROA is 0.824 which is statistically significant as the significance value is lesser than 0.05 (5%). An increase in ROA by one percent leads to increase in net profit margin of the company by 0.824. Though the performance of the company was affected by macro factors such as Syrian Crisis causing significant slowdown in the economy, the company through its efficient production and sales earned positive return on its investment in assets during the study period. There is a positive relationship between ROA and net profit ratio.

Table 1(e): Regression Results between Net Profit Ratio and EPS Ratio
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	-.576	.434	-1.325	.256
EPS	44.974	1.833	24.542	.000
No. of Observations = 5 ; R ² = .993 ; F value = 602.312				

The above Table 1(e) shows the result of regression between dependent variable, net profit ratio and independent variable, EPS. R Square is 0.993 indicating the variation in net profit ratio which is explained by the EPS to the extent of 99.3%. The regression coefficient of EPS is 44.974 which indicates a positive effect of EPS on net profit ratio which is statistically significant as the significance value is lesser than 0.05 (5%). It shows that an increase in EPS Ratio by one percent leads to increase in net profit margin of the company by 44.974. There is a positive relationship between EPS and net profit ratio. Though the performance of the company was affected by macro factors such as Syrian Crisis causing significant slowdown in the economy, the investors invested more as the company generated higher profits.

Table 1(f): Regression Results between Net Profit Ratio and ROCE
Dependent Variable: Net Profit Ratio

Variable	Coefficients	Standard Error	t-value	Sig.
Constant	.347	.591	.587	.589
ROCE	1.031	.058	17.782	.000
No. of Observations = 5 ; R ² = .988 ; F value = 316.204				

The above Table 1(f) shows the result of regression between dependent variable, net profit ratio and independent variable, ROCE. R Square is 0.988 indicating the variation in net profit ratio which is explained by the ROCE to the extent of 98.8%. The regression coefficient of ROCE is 1.031 which indicates a positive effect of ROCE on net profit ratio which is statistically significant as the significance value is lesser than 0.05 (5%). It shows that an increase in ROCE by one percent leads to increase in net profit margin of the company by 1.031. There is a positive relationship between ROCE and net profit ratio. Though the performance of the company was affected by macro factors such as Syrian Crisis causing significant slowdown in the economy, the company generated sufficient profits for the capital employed.

Table 1(g): Regression Results between Net Profit Ratio and Price Earnings Ratio
Dependent Variable: Net Profit Ratio

Variable	Coefficients	Standard Error	t-value	Sig.
Constant	-6.110	2.658	-2.299	.083
Price Earnings Ratio	1.175	.258	4.561	.010
No. of Observations = 5 ; R ² = .839 ; F value = 20.805				

The above Table 1(g) shows the result of regression between dependent variable, net profit ratio and independent variable, Price Earnings Ratio. R Square is 0.839 indicating the variation in net profit ratio which is explained by the Price Earnings Ratio to the extent of 83.9%. The regression coefficient of Price Earnings Ratio is 1.175 which indicates a positive effect of Price Earnings Ratio on net profit ratio which is statistically significant as the significance value is lesser than 0.05 (5%). It shows that an increase in Price Earnings Ratio by one percent leads to increase in net profit margin of the company by 1.175. There is a positive relationship between Price Earnings Ratio and net profit ratio. Though the performance of the company was affected by macro factors such as Syrian Crisis causing significant slowdown in the economy, the company showed positive future performance, and investors had higher expectations for future earnings growth.

Results of Correlation among Factors of Financial Performance

Table 1(h): Results of Correlation among Factors of Financial Performance

		NPR	ROE	ROA	EPS	ROCE	PE Ratio
NPR	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	6					
ROE	Pearson Correlation	.999**	1				
	Sig. (2-tailed)	0					
	N	6	6				
ROA	Pearson Correlation	.996**	.997**	1			
	Sig. (2-tailed)	0	0				
	N	6	6	6			
EPS	Pearson Correlation	.997**	.996**	.999**	1		
	Sig. (2-tailed)	0	0	0			
	N	6	6	6	6		
ROCE	Pearson Correlation	.994**	.994**	.999**	.998**	1	
	Sig. (2-tailed)	0	0	0	0		
	N	6	6	6	6	6	
PE Ratio	Pearson Correlation	.916*	.921**	.942**	.929**	.950**	1
	Sig. (2-tailed)	0.01	0.009	0.005	0.007	0.004	
	N	6	6	6	6	6	6

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The table contains the results of the correlation coefficient for the selected indicators, i.e., Net Profit Ratio, ROE, ROA, ROCE, EPS Ratio, Price Earnings Ratio and its p-value.

The Pearson correlation coefficient for NPR and ROE is 0.999 with a p-value of 0.000 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The estimated Pearson correlation coefficient for NPR and ROA is 0.996 with a p-value of 0.000 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The correlation coefficient for NPR and EPS

is 0.997 with a p-value of 0.000 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The Pearson correlation coefficient for NPR and ROCE is 0.994 with a p-value of 0.000 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The estimated Pearson correlation coefficient for NPR and Price Earnings Ratio is 0.916 with a p-value of 0.000 which is less than 5% level of significance. Hence, correlation between these two variables is significant at 5% level. The results of correlation showed that NPR, ROA, ROE, ROCE, EPS and PE Ratio showed a statistical significance meaning that the factors positively influenced the financial performance of the company.

II. Financial Performance of Hayat Pharmaceutical Industries Co.

Table 2(a): Perception of the Respondents Pertaining to Financial Performance

Sl. No.	Indicators	Mean	Standard Deviation
1	Market Performance	4.25	0.5
2	Financial performance	4.25	0.5
3	Price/cost	4.5	0.577
4	Quality	4.75	0.5
5	Delivery dependability	3.25	0.5
6	Product innovation	4.25	0.5

Market performance, financial performance, price/cost, quality, delivery dependability and product innovation were the factors considered to impact the supply chain management practices on financial performance. The opinions of the respondents pertaining to financial performance were observed in the Table 2(a). It was observed that the mean and standard deviation of quality was 4.75 and 0.5 respectively. Price/cost had a mean and standard deviation of 4.5 and 0.577 respectively. The respondents gave preference to market performance, financial performance and product innovation which had a mean of 4.25 and standard deviation of 0.5 respectively. Based on the perceptions of the respondents, delivery dependability had a mean and standard deviation of 3.25 and 0.5 respectively. Based on the perceptions of the respondents, the factors related to financial performance were considered to significantly affect the company's profitability.

Table 2(b): Financial Performance Ratios

Ratios	Net Profit Ratio	Return On Equity %	Return On Assets %	EPS Ratio	ROCE	Price Earnings Ratio (Times)
2013	20.48	13.79	15.15	0.21	15.15	7
2014	21.79	14.04	16.15	0.25	16.15	9.17
2015	21.77	12.55	14.28	0.24	14.28	8.88
2016	22.30	11.34	12.79	0.25	12.79	7.76
2017	19.41	10.33	12.57	0.26	12.22	7.8
2018	22.26	11.16	14.39	0.33	13.48	5.83

The financial performance ratios are shown in 4.3(b). Positive net profit ratio in all the years under study states that the sales were increasing over the years and the company generated profits. ROE was found to be positive for all the years under study showing that the company had effectively managed its assets to create profits. The ROA and EPS ratio

pertained to be positive for all the years under study which indicated the company made subsequent profits. ROCE was also positive for all the years under study showing financial efficiency after factoring in the amount of capital used to create that level of profitability. Price earnings ratio helps the investors determine the market value of a stock as compared to the company's earnings and the value for the company which was found to be positive exhibiting positive earnings. Though the mean values obtained from the opinions of the respondents pertaining to financial performance were high, positive values in financial ratios indicated that the company made consistent profits implying better financial performance.

Determinants of Net Profit Ratio

Table 2(c): Regression Results between Net Profit Ratio and ROE
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	19.790	4.623	4.281	.013
ROE	.127	.376	.336	.754
No. of Observations = 5 ; $R^2 = .028$; F value = 0.113				

The above Table 2(c) shows the result of regression between dependent variable, net profit ratio and independent variable, ROE. R Square is 0.028 indicating the variation in net profit ratio which is explained by the ROE to the extent of 2.8%. The regression coefficient of ROE is .127 which is statistically insignificant as the significance value is higher than 0.05 (5%). It shows that an increase in ROE by one percent leads to increase in net profit margin of the company by 0.127. There is a positive relationship between ROE and net profit ratio.

Table 2(d): Regression Results between Net Profit Ratio and ROA
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	18.211	5.785	3.148	.035
ROA	.220	.405	.542	.617
No. of Observations = 5 ; $R^2 = .068$; F value = .294				

The above Table 2(d) shows the result of regression between dependent variable, net profit ratio and independent variable, ROA. R Square is 0.068 indicating the variation in net profit ratio which is explained by the ROA to the extent of 6.8%. The regression coefficient of ROA is 0.220 which is statistically insignificant as the significance value is higher than 0.05 (5%). It shows that an increase in ROA by one percent leads to increase in net profit margin of the company by 0.220. There is a positive relationship between ROA and net profit ratio.

Table 2(e): Regression Results between Net Profit Ratio and EPS Ratio
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	18.598	3.480	5.345	.006
EPS Ratio	10.664	13.423	.794	.471
No. of Observations = 5 ; $R^2 = .136$; F value = .631				

The above table shows the result of regression between dependent variable, net profit ratio and independent variable, EPS. R Square is 0.136 indicating the variation in net profit ratio which is explained by the EPS to the extent of 13.6%. The regression coefficient of EPS is 10.664 which is statistically insignificant as the significance value is higher than 0.05 (5%). It shows that an increase in EPS Ratio by one percent leads to increase in net profit margin of the company by 10.664. There is a positive relationship between EPS and net profit ratio.

Table 2(f): Regression Results between Net Profit Ratio and ROCE
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	18.905	5.341	3.540	.024
ROCE	.173	.379	.457	.671
No. of Observations = 5 ; R ² = .050 ; F value = .209				

The above Table 2(f) shows the result of regression between dependent variable, net profit ratio and independent variable, ROCE. R Square is 0.05 indicating the variation in net profit ratio which is explained by the ROCE to the extent of 5%. The regression coefficient of ROCE is .173 which is statistically insignificant as the significance value is higher than 0.05 (5%). It shows that an increase in ROCE by one percent leads to increase in net profit margin of the company by 0.173. There is a positive relationship between ROCE and net profit ratio.

Table 2(g): Regression Results between Net Profit Ratio and Price Earnings Ratio
Dependent Variable: Net Profit Ratio

Variable	Coefficients	Standard Error	t-value	Sig.
Constant	21.421	3.663	5.848	.004
Price Earnings Ratio	-.011	.468	-.024	.982
No. of Observations = 5 ; R ² = .000 ; F value = .001				

The above Table 2(g) shows the result of regression between dependent variable, net profit ratio and independent variable, Price Earnings Ratio. R Square is 0.000 indicating the variation in net profit ratio which is explained by the Price Earnings Ratio to the extent of 0%. The regression coefficient of Price Earnings Ratio is -.011 which indicates a negative effect of Price Earnings Ratio on net profit ratio which is statistically insignificant as the significance value is higher than 0.05 (5%). It shows that an increase in Price Earnings Ratio by one percent leads to decrease in net profit margin of the company by 0.011. There is a negative relationship between Price Earnings Ratio and net profit ratio.

Results of Correlation among Factors of Financial Performance

Table 2(h): Results of Correlation among Factors of Financial Performance

		NPR	ROE	ROA	EPS	ROCE	PE Ratio
NPR	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	6					
ROE	Pearson Correlation	0.166	1				
	Sig. (2-tailed)	0.754					
	N	6	6				
ROA	Pearson Correlation	0.262	.890*	1			
	Sig. (2-tailed)	0.617	0.017				
	N	6	6	6			
EPS	Pearson Correlation	0.369	-0.563	-0.149	1		
	Sig. (2-tailed)	0.471	0.244	0.778			
	N	6	6	6	6		
ROCE	Pearson Correlation	0.223	.969**	.969**	-0.369	1	
	Sig. (2-tailed)	0.671	0.001	0.001	0.471		
	N	6	6	6	6	6	
PE Ratio	Pearson Correlation	-0.012	0.401	0.201	-0.548	0.375	1
	Sig. (2-tailed)	0.982	0.431	0.703	0.261	0.464	
	N	6	6	6	6	6	6
*. Correlation is significant at the 0.05 level (2-tailed).							
**. Correlation is significant at the 0.01 level (2-tailed).							

The table contains the results of the correlation coefficient for the selected indicators, i.e., Net Profit Ratio, ROE, ROA, ROCE, EPS Ratio, Price Earnings Ratio and its p-value.

The estimated Pearson correlation coefficient for NPR and ROE is 0.166 with a p-value of 0.754 which is statistically insignificant as the p-value is higher than 0.05. The Pearson correlation coefficient for NPR and ROA is 0.262 with a p-value of 0.617 which is statistically insignificant as the p-value is higher than 0.05. The correlation coefficient for NPR and EPS is 0.369 with a p-value of 0.471 which is statistically insignificant as the p-value is higher than 0.05. The estimated Pearson correlation coefficient for NPR and ROCE is 0.223 with a p-value of 0.671 which is statistically insignificant as the p-value is higher than 0.05. Pearson correlation coefficient for NPR and Price Earnings Ratio is -0.012 with a p-value of 0.982 statistical insignificance as the p-value is higher than 0.05.

The correlation coefficient for ROA and ROE is 0.890 with a p-value of 0.017 which is less than 5% level of significance. Hence, correlation between these two variables is significant at 5% level. The Pearson correlation coefficient for ROCE and ROE is 0.969 with a p-value of 0.001 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The estimated Pearson correlation coefficient for ROCE and ROA is 0.969 with a p-value of 0.001 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The results of correlation showed that ROE, ROA and ROCE

have a statistical significance which meant that Syrian Crisis influenced the financial performance of the company. The statistical insignificance with NPR reflected negatively on the economic position of Jordan.

III. Financial Performance of Philadelphia Pharmaceuticals

Table 3(a): Perception of the Respondents Pertaining to Financial Performance

Sl. No.	Indicators	Mean	Standard Deviation
1	Market Performance	4.25	0.5
2	Financial performance	4.25	0.5
3	Price/cost	4	0.816
4	Quality	4.5	0.577
5	Delivery dependability	3.75	0.5
6	Product innovation	4	0.816

Market performance, financial performance, price/cost, quality, delivery dependability and product innovation were the factors considered to impact the supply chain management practices on financial performance. The opinions of the respondents pertaining to financial performance were observed in the Table 3(a). It was observed that the mean and standard deviation of quality was 4.5 and 0.577 respectively. The financial performance and market performance had a mean and standard deviation of 4.25 and 0.5 respectively. The respondents gave preference to price/cost and product innovation which had a mean of 4 respectively. The delivery dependability had a mean and standard deviation of 3.75 and 0.5 respectively. Based on the perceptions of the respondents, the factors related to financial performance were considered to significantly affect the company's profitability.

Table 3(b): Financial Performance Ratios

Years	Net Profit Ratio	Return On Equity %	Return On Assets %	EPS Ratio	ROCE	Price Earnings Ratio (Times)
2013	14.49	22.41	15.72	0.22	22.41	7.42
2014	29.01	51.01	38.4	1.01	51.01	8.02
2015	26.31	31.36	26.18	0.54	31.36	8.41
2016	9.64	7.05	5.64	0.09	7.05	25.29
2017	12.36	8.44	6.46	0.11	8.44	13.57
2018	12.61	9.35	7.35	0.13	9.35	11.75

The financial performance ratios are shown in 4.7(b). Positive net profit ratio in all the years under study states that the sales were increasing over the years and the company generated profits. ROE was found to be positive in all the years showing that the company had effectively managed its assets to create profits. The ROA and EPS ratio pertained to be positive for all the years under study which indicated the company made subsequent profits. ROCE was positive for all the years under study showing financial efficiency after factoring in the amount of capital used to create that level of profitability. Price earnings ratio helps the investors determine the market value of a stock as compared to the company's earnings and the value for the company was found to be positive exhibiting positive earnings. The mean

values obtained from the opinions of the respondents pertaining to financial performance were high and positive financial ratios also indicated good financial performance.

Determinants of Net Profit Ratio

Table 3(c): Regression Results between Net Profit Ratio and ROE
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	7.814	2.090	3.739	.020
ROE	.444	.078	5.684	.005
No. of Observations = 5 ; $R^2 = .890$; F value = 32.309				

The above Table 3(c) shows the result of regression between dependent variable, net profit ratio and independent variable, ROE. The variation in net profit ratio which is explained by the ROE to the extent of 89% as R Square value is 0.890. The regression coefficient of ROE is .444 indicating a positive effect of ROE on net profit ratio which is statistically significant as the significance value is lesser than 0.05 (5%). It shows that an increase in ROE by one percent leads to increase in net profit margin of the company by 0.444. There is a positive relationship between ROE and net profit ratio.

Table 3(d): Regression Results between Net Profit Ratio and ROA
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	7.510	1.586	4.734	.009
ROA	.595	.077	7.710	.002
No. of Observations = 5 ; $R^2 = .937$; F value = 59.449				

The above Table 3(d) shows the result of regression between dependent variable, net profit ratio and independent variable, ROA. The value of R Square is 0.937 indicating the variation in net profit ratio which is explained by the ROA to the extent of 93.7%. The regression coefficient of ROA is 0.595 indicating a positive effect of ROA on net profit ratio which is statistically significant as the significance value is lesser than 0.05 (5%). It shows that an increase in ROA by one percent leads to increase in net profit margin of the company by 0.595. There is a positive relationship between ROA and net profit ratio.

Table 3(e): Regression Results between Net Profit Ratio and EPS Ratio
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	9.996	1.744	5.731	.005
EPS Ratio	21.164	3.614	5.856	.004
No. of Observations = 5 ; $R^2 = .896$; F value = 34.288				

The above Table 3(e) shows the result of regression between dependent variable, net profit ratio and independent variable, EPS. R Square is 0.896 indicating the variation in net profit ratio which is explained by the EPS to the extent

of 89.6%. The regression coefficient of EPS is 21.164 indicating a positive effect of EPS on net profit ratio which is statistically significant as the significance value is lesser than 0.05 (5%). It shows that an increase in EPS Ratio by one percent leads to increase in net profit margin of the company by 21.164. There is a positive relationship between EPS and net profit ratio.

Regression Results between Net Profit Ratio and ROCE

Table 3(f): Regression Results between Net Profit Ratio and ROCE
Dependent Variable: Net Profit Ratio

Variable	Coefficient	Standard Error	t-value	Sig.
Constant	7.814	2.090	3.739	.020
ROCE	.444	.078	5.684	.005
No. of Observations = 5 ; $R^2 = .890$; F value = 32.309				

The above Table 3(f) shows the results of regression between dependent variable, net profit ratio and independent variable, ROCE. R Square is 0.890 indicating the variation in net profit ratio which is explained by the ROCE to the extent of 89%. The regression coefficient of ROCE is 0.444 indicating a positive effect of ROCE on net profit ratio which is statistically significant as the significance value is lesser than 0.05 (5%). It shows that an increase in ROCE by one percent leads to increase in net profit margin of the company by 0.444. There is a positive relationship between ROCE and net profit ratio

Regression Results between Net Profit Ratio and Price Earnings Ratio

Table 3(g): Regression Results between Net Profit Ratio and Price Earnings Ratio
Dependent Variable: Net Profit Ratio

Variable	Coefficients	Standard Error	t-value	Sig.
Constant	26.920	6.446	4.176	.014
Price Earnings Ratio	-.767	.465	-1.648	.175
No. of Observations = 5 ; $R^2 = .405$; F value = 2.717				

The above Table 3(g) shows the results of regression between dependent variable, net profit ratio and independent variable, Price Earnings Ratio. R Square is 0.405 indicating the variation in net profit ratio which is explained by the Price Earnings Ratio to the extent of 40.5%. The regression coefficient of Price Earnings Ratio is -0.767 indicating a negative effect of Price Earnings Ratio on net profit ratio which is statistically insignificant as the significance value is higher than 0.05 (5%). It shows that an increase in Price Earnings Ratio by one percent leads to decrease in net profit margin of the company by 0.767. There is a negative relationship between Price Earnings Ratio and net profit ratio.

Test of Correlation between factors of Financial Performance

Table 3(h): Results of Correlation between Factors of Financial Performance

		NPR	ROE	ROA	EPS	ROCE	PE Ratio
NPR	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	6					
ROE	Pearson Correlation	.943**	1				
	Sig. (2-tailed)	0.005					
	N	6	6				
ROA	Pearson Correlation	.968**	.996**	1			
	Sig. (2-tailed)	0.002	0				
	N	6	6	6			
EPS	Pearson Correlation	.946**	.979**	.981**	1		
	Sig. (2-tailed)	0.004	0.001	0.001			
	N	6	6	6	6		
ROCE	Pearson Correlation	.943**	1.000**	.996**	.979**	1	
	Sig. (2-tailed)	0.005	0	0	0.001		
	N	6	6	6	6	6	
PE Ratio	Pearson Correlation	-0.636	-0.628	-0.619	-0.528	-0.628	1
	Sig. (2-tailed)	0.175	0.182	0.19	0.281	0.182	
	N	6	6	6	6	6	6

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The table contains the results of the correlation coefficient for the selected indicators, i.e., Net Profit Ratio, ROE, ROA, ROCE, EPS Ratio, Price Earnings Ratio and its p-value.

The Pearson correlation coefficient for ROA and Net Profit Ratio is 0.968 with a p-value of 0.002 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The correlation coefficient for ROE and Net Profit Ratio is 0.943 with a p value of 0.005 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The correlation coefficient for EPS and Net Profit Ratio is 0.946 with a p value of 0.004 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The correlation coefficient for ROCE and Net Profit Ratio is 0.943 with a p value of 0.005 which is less than 1% level of significance. Hence, correlation between these two variables is significant at 1% level. The estimated Pearson correlation coefficient for Net Profit Ratio and Price Earnings Ratio is -0.636 with a p-value of 0.175 showing negative correlation between these two variables. The results of correlation showed that NPR, ROA, ROE, ROCE and EPS showed a statistical significance meaning that the factors positively influenced the financial performance of the company. Correlation between that NPR and Price earnings ratio showed a statistical insignificance indicating a negative influence on the financial performance of the Jordanian company.

Conclusion

The study found that the pharmaceutical firms chosen for the study were keen to ensure adequate flow of information organizations which would enhance supply chain agility by being responsive to changing needs of end users. The objectives of the study were to examine the relationship between Supply Chain Management Practices with financial performance of pharmaceutical companies in Jordan. The results of the study indicated that supply chain management was found to have a direct impact on financial performance of Jordanian pharmaceutical in the industry. It was found from the study that profitability of Jordanian firms had been deteriorating over time, even before the crisis occurred and after the outbreak of the crisis, the profits and operations of the companies were affected. Even though the selected sample involves a large measure of profit heterogeneity and significant differences in average profitability across the analyzed firms, declining activities led to unsatisfactory sales, revenues and profitability during the crisis period.

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