

The effect of purchasing strategies on manufacturing performance: the case of Qualifying Industrial Zones in Jordan

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ABSTRACT

Purpose – to identify purchasing strategies which improve the manufacturing performance process by examining Jordanian Qualifying Industrial Zones as examples and demonstrating the function of purchasing strategies as a major managerial key for organizational strategic planning.

Design/methodology/approach –To examine four Jordanian Industrial Estates across the country and test three hypotheses for significant positive impact on manufacturing performance using random sampling. These hypotheses concerned effective strategic use of cost management, relationship between buyer and supplier and negotiation to improve manufacturing performance. These were sent by e-mail to four organizations randomly selected from the QIZ web site; 180 questionnaires containing 22 items covering four topics were to be ranked on a six point Likert scale (strongly agree to strongly disagree range); 103 valid returns were analyzed. Participants from the industrialized firms' purchasing professional specialization personnel were asked to indicate their awareness on purchasing strategies practiced in their organizations and the impact of these on manufacturing performance.

Findings – The independent variables: cost management strategy, relationship between buyer and supplier strategy and negotiation strategy were shown to have significant positive impact in helping navigate to excellent manufacturing performance in a Middle Eastern export manufacturing setting.

Research limitations/implications – The research was carried out in only one Arab country in the present volatile market conditions surrounded by wars in Syria and Iraq but results confirm the importance of applying purchasing strategies of cost management, buyer-supplier relationships and use of positive (win-win) negotiation as previously found in recent USA, Europe and Eastern studies, tested in different cultures and geographical situations.

Originality/value –Purchasing strategies are vital to management strategy and relevant to help manufacturing organizations remain competitive in the present uncertain business environment.

Key words: Purchasing strategy, manufacturing, Jordan, Qualifying Industrial Zones

Introduction:

Three elements characterize modern business environments. They are rapidly and continuously changing markets, brief product lifecycles and an ambiguity about demand increase, particularly in the slow global economy (Almahamid, McAdams and Kalalkeh, 2010; Agarwal, 2007). In an environment of such change and doubt, competition has remained a dominant element within the continuing 21st century business pattern (Tseng and Lin, 2011). Therefore the pattern of manufacturing needs helps in making adjustments appropriate to the shifting world environment by allowing quick changes in product models or among lines of products (Yusuf, 1999). Additionally, fighting doggedly through such dynamic, aggressive and competition-oriented conditions, manufacturers in considering purchasing strategies should focus on recognizing and developing sources for both high quality and low cost raw materials and follow up this action by quickly arranging win-win favorable business deals.

Objective of Study

The focus in earlier research had been on finding the lowest cost materials, neglecting both quality and delivery strategies (Zailani, Amran and Jumadi, 2010). The factor of finding further information about suppliers before awarding contracts is now recognized. In addition to the importance of raw material suppliers, spare parts for tools required in production and services for everyday processing are also recognized. Consequently this study aims to explore and identify strategies that affect improving the manufacturing process.

1. Qualifying Industrial Zones in Jordan

With the aim of assisting Jordanian economic development, in March 1998 the Trade Representative of the United States established the Al-Hassan Industrial

Estate in Irbid, north Jordan as the initial Jordanian Qualifying Industrial Zone (QIZ). These are free trade zone business parks recognized collaboratively by US and Israel. Attached privileges allowed (1) qualified products of specific origin and added value requirements to be free of quotas in the US market (2) exemption from income and social services tax on export earnings (3) no customs tax on imported raw materials, fixed assets and spare parts.

The success of this initial QIZ venture was followed by 12 more designated QIZs across the country owing to investor demand. Among them are: in Al Karak - the Jordan Industrial Estate Corporation owns and operates the Al-Hussain Ibn Abdullah II Industrial Estate; in Irbid – the Jordan Cyber City; in Amman – the privately-owned Al-Tajamouat Industrial Estate and near Zarqa - Ad-Dulayl Industrial Park and El-Zai Ready-wear Manufacturing Company. Upcoming industrial parks include the Gateway QIZ on the northern border with Israel, Aqaba Industrial Estate at Aqaba, and the Mushatta International complex in Amman. In total presently there are three public and 10 private QIZs (Amman Chamber of Industry, 2013). Jordanian exports to US grew from \$15 million (1997) to \$1 billion in 2004, making these areas the strongest engines for growth in employment – estimates show 40 000 jobs in the QIZs, the current investment of \$85 – \$100 million is expected to increase to as much as \$200 million. Additionally, Congress approved a full FTA in 2001 which was to come into effect after a 10 year phase-in period (Bar and Alkobi 2013).

As a result of QIZ investments and productivity Jordan moved up the US trading partner table among Middle-East-North-African entities from 13th in 1998 to 8th in 2005. Trade between the two countries in 2005 totaled approximately \$1.9 million with US exports (est. \$646 million) at 1.8 times those of 1988 and US imports

(est. \$1.3 billion) at 80 times the level of 1998. In spite of the US-Jordanian FTA the QIZ program provides 75% of articles from Jordan entering the US market, dominated by apparel: which comprises 99.9% of all QIZ exports and 86% of all total Jordanian exports to US. QIZ products now enter duty free, but under the US-Jordan FTA, tariffs were not eliminated till 2011 – the 10year phase-in time (QIZ Jordan-Ministry of Industry, Trade & Labor, 2013).The paper looks at QIZs as examples of purchasing strategies affecting manufacturing performance in Jordan.

2. Literature Review

2.1. Cost management. This factor is considered a major part of purchasing strategy affecting performance in manufacturing. Janda and Seshadri (2001) found that each percentage saved in purchasing price can save 0.5% in sales thereby contributing significantly to reducing costs. Thus the costs goal will focus on manufacturing a product which can be sold at an acceptable profit while giving a long-term competitive advantage against the price of the competitor's product. For management strategy in goal-costing there are three elements involved: the primary element is knowing the competitive position of an organization in order to effect further improvement in overall competitiveness (Thrulogachantar&Suhaiza, 2010;Zailani, Amran&Jumadi, Ellram, 2000). The second part focuses on cost driver analysis – the breakdown of cost components so that cost reduction opportunities may be revealed. The third and final essential of goal costing is the value chain breakdown showing involvement of other members in the value chain (Thrulogachantar&Zailani, 2010;Ellram, 2000).

2.1.2 Supply chain in Cost Management. Although purchasing is regularly discussed from the point of view of a single organization, here the concept may be broadened to consider the purchasing impact using supply chain management. Given the present changing market environment, customers may prefer flexibility and swift delivery times (Kaplan & Cooper, 1999). Given the state of the market with a falling level in straight up integration there is a need to manage supply chains. Also the flow of goods, services and information is actively considered from raw materials to the delivery of finished products to enhance the effectiveness of the process (Matthyssens & Vandenbempt, 1998). Cost management plays a vital role in manufacturing performance so successful communication and negotiation can create or improve business relationships to this end.

2.1.3 Negotiation. Ramsay (2004) avers that the key to managing business relationships between sellers and buyers lies in the process of negotiation. Thru logachantar and Suhaiza (2010) demonstrate that cooperative negotiation between parties engaged in the process is believed to create value. Such a negotiating process induces problem solving via understanding and trust (Thru logachantar & Suhaiza, 2010).

Zailani (2010) adds detail on the competitive negotiation process, the second method which is a less pleasant way of reaching an understanding. To gain advantage over the other such tactics as aggressive cost competition, timing difficulties and business inflexibility are enforced for self-gain. Monczka, Robert, Handfield (2004) point out that on the buyer's side negotiation creates value when he gains a better price

than the competitor, receives assistance in technology innovation and has a briefer time frame for order and delivery. In the long run, when both buyer and seller are happy working together, waste is shrunk and possible unknown costs are eliminated by the mutual goodwill established. Therefore superior manufacturing competitive priority should be an important outcome of effective negotiation in purchasing strategy.

2.2 Buyer-Supplier

2.2.1 Relationships. Maloni and Benton (2000) validate the notion that strong buyer-supplier relationships are required in manufacturing performance. It is well documented that purchasing is the key to a manufacturer's competitive advantage and subsequent performance, according to both scholars and in practice. This same proper purchasing process can lead to improved profits, larger market share and technological improvement.

2.2.2 Trust. This element has been found to be fundamental in sustaining networks of business among Chinese firms and is a basic element contributing to the success of Chinese business communities. In western culture such trust exists and is recognized at the level of organisations (Maloni and Benton, 2000). Similar strong buyer-supplier relationships are also found in Jordanian business communities according to personal communication from the management of Al-Hassan Industrial Estate (Irbid, Jordan, 2013) and generally as a cultural and collectivist relationship rather than individualist following a kinship model in

these regions (Livermore, 2013; Hofstede, 1997)

2.3 *Effective Communication.* Yet another important element in business relationship is constructive and successful communication .Anderson and Narus (1990) divided communication into formal and informal sharing of significant and opportune information linking buyer and supplier. Productive contacts among involved parties can enhance levels of members' coordination, satisfaction and performance (Goodman and Dion 2001;Mohr and Nevin, 1990). As well, frequency of communication between buyers and suppliers can speed up accurate responses to a volatile market (Fisher, Gustafson, Sellner et al. (1999). On the other hand, if information flow is restricted, such as occurs,according to Blair &Maron (1985) under unequal power relationships where the less powerful channel individual may tend not to provide feedback and information to more powerful super ordinates; and Arab cultures support high power distances (Kabasakal, Hayat &MuzafferBodur, 2002). But in an atmosphere of support and trustfulness, channel members seem more prone to transfer information upwards thus promoting bidirectional communication. As a result the supply – demand match will improve and provide greater profitability for all channel members (Blair&Maron,1985). To conclude, effective communication is not only important but fundamental to sustain a long-term relationship between buyer and supplier, thereby achieving high performance in manufacturing(Morgan and Hunt, 1994; Mohr and Nevin, 1990).

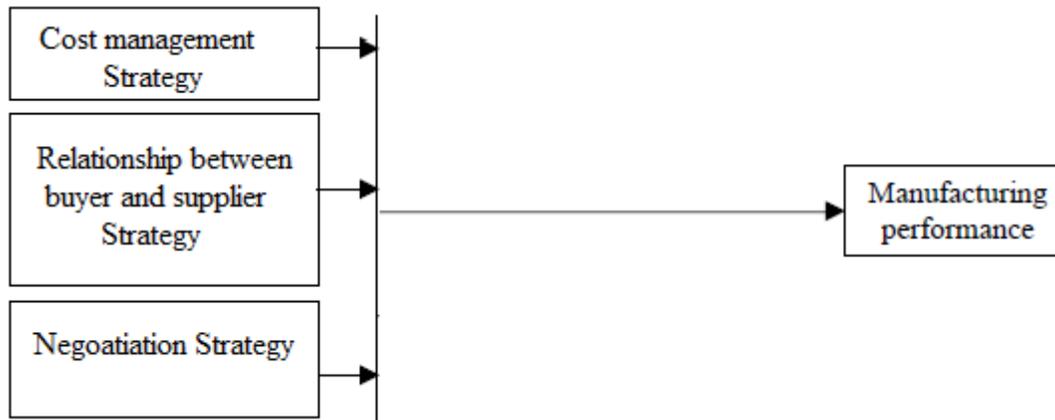
3. Manufacturing Performance

In the global environment of manufacturing business competitive pressures are increasingly compelling those producing goods for sale to re-engineer or often redesign their process, making use of the latest information technology in order to remain competitive in the world market. Response to this environmental change in firms' management performance forms a body of literature with an extensive discussion of issues and facets involved (CarlosF. et al., 2012). Multiple studies have been made concerning relationships among different such aspects as innovation and customization responsiveness to enhance and increase manufacturing performance of firms (Simpson&Belsky, 2008;Bonavia, 2006; Papadopoulo and Ozbayrak, 2005; EPA, 2003; Oliver et al., 1993). These five studies cover (15) years agreeing that the keys for achieving quality in manufacturing cover flexibility in the production system, and involvement and commitment of employees.

3.1. Manufacturing strategies. These stratagems first comprise competitive priorities (often used as an important part of measuring manufacturing strategy performance) involving costs, delivery, flexibility and quality (Thrulogachantaret et al., (2010);Zheng, Leaver &Tocher, (2008). In the nineties, means used by organizations to achieve better manufacturing targets included use of superior technologies and adopting new practices such as empowering employees and re-engineering manufacturing processes. A little later Das and Narasimhan (2000) emphasized supply chain capability as helping manufacturing strategy to raise quality, decrease costs, speed faster delivery and improve supplier flexibility and general flexibility.

Research Model

Figure 1. The theoretical framework



Sources: Thruлогachantar and SuhaizaZailani(2010) and Kiser(1976)

Some scholars indicated four purchasing strategies in their studies like Janda and Seshadri(2001), others suggested six purchasing strategies(Kiser, 1976). These are: “negotiation, sourcing, developing and maintaining good relations with suppliers, developing suppliers, protecting the cost structure of company and minimizing costs” (Jandra&Seshadri, 2001, p. 294). In this current study three elements of Purchasing strategies are examined: Cost Management, Negotiation, Relationship between Buyer and Supplier, as the most relevant given these specific cases. “Sourcing” is included in all three elements, “developing suppliers” comes under Relationship..., and Cost management embraces Kiser’s last two strategies.

Ellram (2001) indicated that understanding supplier costs are costing tools which are competent and essential ones to assist firms in reducing overall manufacturing costs. Using these, buyers should be able to figure, plan and set up a strategic association with suppliers to focus on cost reduction. Thereby the supplier is able to

create competitive pricing through out to reduce production costs. To this end the three hypotheses proposed are:

H1. Effective Cost Management strategy has significant positive impact on Jordanian QIZ manufacturing performance.

Good relationships with suppliers add to firm's financial performance (Thruogachantar and Zailani, 2010), the relationship between buyer and supplier builds up effective communication on information sharing, and trust (Janda & Seshadri, 2001) which lead to improved manufacturing performance. The following hypotheses are proposed to test this relationship in Jordan:

H2. Effective Relationship strategy between Buyer and Supplier has a positive impact on manufacturing performance.

To attain Supplier loyalty there should be cooperation negotiation build up a win-win formula whereby both buyer and supplier are satisfied with the result of the negotiation process and believe their interests in the negotiation process are well protected (Janda and Seshadri, 2001). The hypotheses proposed is:

H3. Effective Negotiation Strategy has a significant positive impact on performance in manufacturing.

3. Methodology

The population of the current study covers manufacturing firms in four Jordanian industrial estates, mainly QIZs across the country. These are: 1-The Jordan Industrial Estate Corporation 2- Al-Hussain Ibn Abdullah II Industrial Estate; 3 – Jordan Cyber City; 4- Al-Hassan Industrial Zone. It is an important indication that

Jordan is one of the important industrialized countries among the Middle East Countries which managed to attract many foreign investors from the outside world to establish their businesses in Jordan. The sampling method used to collect the data is random sampling in order to avoid bias with the opinions. Samples were randomly drawn from the list from the QIZ web site, 180 questionnaires were distributed to the industrialized firms' purchasing professional specialization personnel involved in sourcing in company purchasing. Organizations returned 121, and the researcher found 103 valid for analysis (Das and Narasimhan, 2000).

3.1 Development of questionnaires

The questionnaires are designed to measure the dependent and independent variables to find the effects of purchasing strategies on manufacturing performance. All questions in the questionnaire are based on the three hypotheses generated for this study. The questions were designed in such a way that the respondents were able to understand and answer the questions quickly.

The model of questionnaire for purchasing strategies was adapted from Thrulogachantar and Zailani (2010) as it was referring to three important variables which affected purchasing performance through effectiveness and efficiency and finally leads to improved manufacturing performance. There were **seven** items used to measure the effectiveness of Cost Management:

- 1- Decrease inventory level by engaging supplier with JIT (a business inventory strategy), Vendor Managed Inventory and consignment,
- 2- Observe reduced deliver performance by suppliers,
- 3- Control within the order processing costs,
- 4- Reduce the storage and transport cost,
- 5- Observe bad quality performance by suppliers,

- 6- Control of suppliers' on price increases,
- 7- Provide objective costing for suppliers to be met.

Six Items measured the Effective relationship between buyer and supplier:

- 1- Feels our supplier is a business partner in this relationship,
- 2- Care for suppliers as our customers,
- 3- Supplier ready to share classified information,
- 4- Perceives that our supplier is completely honest,
- 5- Know the strong points and weak points of our supplier,
- 6- Place orders on existing supplier(s) for an item.

Five items measured Effective Negotiation:

- 1- Pay out longtime on negotiation process,
- 2- Authority enough to ask supplier to readjust their pricing strategy,
- 3- Discover supplier-oriented solutions
- 4- Search for win-win outcome,
- 5- Arrive at a shared agreement on discussed issues.

The questionnaire for manufacturing performance was adapted from Das and Narasimhan (2000). There were 4 items to measure the manufacturing performance:

- 1-The extent to which the company has been able to meet its cost reduction goals,
- 2-The extent to which the company has been able to meet its quality improvement goals,
- 3-The extent to which the company has been able to meet its customization responsiveness goals,

4-The extent to which the company has been able to meet its manufacturing cycle time-reduction goals.

The questionnaires consist of two sections: Section A was designed to measure the independent variables and Section B measured the dependent variables.

Participants were asked to indicate their awareness on purchasing strategies practice in their organization and the impact of these on manufacturing performance. A six-point Likert scale ranging from strongly disagree (1) to strongly agree (6) was used.

4. Findings

Table 1

Dependent and independent Variables

	Variables	NO. OF ITEMS
INDEPENDENT	Cost Management Strategy	6
	Relationship between buyers and supplier Strategy	7
	Negotiation Strategy	5
	TOTAL	18
DEPENDENT	Manufacturing Performance	4

The study used three Independent Variables on strategies: Cost Management, the Relationship between buyers and suppliers, and Negotiation and one Dependent Variables for Manufacturing performance: the items measured in the questionnaire for both dependent and independent variables number 22 questions are shown in Table 1 above.

Table 2
Rotated component matrix for dependent variables

	ITEMS	LOADING
Cost Management Strategy	K.M.O=0.823 TOTAL VARIANCE=64.11 Cronbach's Alpha=0.80	
	Q 1 decrease inventory level by engaging supplier with JIT, VMI and consignment	.801
	Q 2 observe reduced deliver performance by suppliers	.759
	Q 3 control within the order processing costs	.772
	Q 4 reduce the storage and transport cost,	.539
	Q 5 observe bad quality performance by suppliers,	.564
	Q 6 control of suppliers on price increases	.833
	Q 7 provide objective costing for suppliers to be meet	.813
Relationship between buyer and supplier Strategy	K.M.O=0.776 TOTAL VARIANCE=54.38 Cronbach's Alpha=0.85	
	Q 8 feels our supplier as a business partner in this relationship	.635
	Q 9 care for suppliers as our customers	.522
	Q 10 supplier ready to share classified information	.774
	Q 11 perceives that our supplier is completely honest	.813
	Q 12 know the strong point and weak point of our supplier	.795
	Q 13 place orders on existing supplier(s) for an item.	.834
Negotiation Strategy	K.M.O=0.779 TOTAL VARIANCE=57.47 Cronbach's Alpha=0.81	
	Q 14 pay out long time on negotiation process	.808
	Q 15 authority enough to ask supplier to readjust their pricing strategy	.779
	Q 16 discover supplier-oriented solutions	.629
	Q 17 search for win-win outcome	.728
	Q 18 reach shared agreement on issue discussed.	.830
Manufacturing Performance	K.M.O=0.763 TOTAL VARIANCE=59.05 Cronbach's Alpha=0.76	

	Q19the extent to which the company has been able to meet its cost reduction goals	.778
	Q20the extent to which the company has been able to meet its quality improvement goals	.758
	Q 21the extent to which the company has been able to meet its customization responsiveness goals	.827
	Q22the extent to which the companyhas been able to meet its manufacturing cycle time reduction goals	.705

The inter-item consistency reliability or the Cronbach's alpha reliability coefficients of the independent and dependent variables was obtained (column 3 above). The range between 0 and 1 for Cronbach's alpha coefficients is reflecting the reliability of the data. A Cronbach's alpha coefficient is acceptable here; Sekaran (2003) stated that a level of 0.60 is still acceptable. However, the values obtained for all the four variables were above 0.70 and meets the standard requirement which is considered very reliable. The highest overall reliability was scored by **Relationship between buyer and supplier Strategy** at 0.85 Cronbach's alpha value, while **Manufacturing Performance** overall scored the lowest reliability value at 0.76. In general, the reliability of all the variables in this study is used to ensure consistent measurement on respondent answers to all items in a measure that indicates stability and consistency of the model development. The results of this analysis and others are shown in Table 2 above.

Table 3

Descriptive analysis of study variables

	Mean	Std. Deviation
Q1 decrease inventory level by engaging supplier with JIT, VMI and consignment	3.55	1.10
Q2 observe reduced deliver performance by suppliers	3.75	1.17
Q3 control within the order processing costs	3.51	1.04
Q4 reduce the storage and transport cost	3.73	1.03
Q5 observe bad quality performance by suppliers,	3.85	1.21
Q6 control of suppliers' on price increases	3.98	1.16
Q7 provide objective costing for suppliers to be meet	3.73	.79
Cost management Strategy	3.75	1.21
Q8 feels our supplier as a business partner in this relationship	3.95	1.08
Q9 care for suppliers as our customers	3.00	1.18
Q10 supplier ready to share classified information	3.91	.95
Q11 perceives that our supplier is completely honest	3.83	1.26
Q12 know the strong and weak points of our supplier	4.11	1.14
Q13 Place orders on existing supplier(s) for an item	4.00	1.05
Relationship between buyer and supplier Strategy	3.79	.82
Q14 pay out long time on negotiation process	3.82	1.18
Q15 authority enough to ask supplier to readjust their pricing strategy	3.70	1.11
Q16 discover supplier-oriented solutions	3.04	1.22
Q17 search for win-win outcome	3.62	1.25
Q18 arrive at shared agreement on discussed issue	3.72	1.22
Negotiation Strategy	3.58	.90
Q19 extent to which the company has been able to meet its cost reduction goals	3.37	1.37
Q20 extent to which the company has been able to meet its quality improvement goals	3.64	1.20
Q21 extent to which the company has been able to meet its customization responsiveness goals	3.88	1.11
Q22 extent to which the company has been able to meet its manufacturing cycle	3.46	1.19
Manufacturing performance	3.59	.94

Descriptive statistics of the dependent and independent variable were measured based on a six-point Likert scale. The mean and standard deviation of all the variables were summarized in Table 3. From the descriptive analysis results, it

is shown that Cost management **Strategy** and the Relationship between buyer and supplier **Strategy** variables are slightly higher than the medium whereby recorded mean range for the relationship is 3.79 and that for cost management is 3.75. Also the measurement is medium for Negotiation **Strategy** which recorded 3.58 and the dependent manufacturing performance recorded 3.59. Standard deviation ranges between 0.82 and 1.21 of the three independent variables (Relationship between buyer and supplier **Strategy**, Cost management **Strategy**, and Negotiation **Strategy**) while the dependent variables recorded 0.94.

Table 4

Correlations

		the manufacturing performance
effective relationship between buyer and supplier Strategy	Pearson Correlation	.729 ^{**}
	Sig. (2-tailed)	.000
	N	103
effective of Cost management Strategy	Pearson Correlation	.766 ^{**}
	Sig. (2-tailed)	.000
	N	103
effective Negotiation Strategy	Pearson Correlation	.680 ^{**}
	Sig. (2-tailed)	.000
	N	103

As shown in Table 4 there was a positive and statistically significant relationship between all the independent variables (**Cost management Strategy**, **Relationship between buyer and supplier Strategy**, **Negotiation Strategy**) and the dependent variable (**Manufacturing performance**) where it was found that the highest effect positive relationship was between **Cost management Strategy and Manufacturing performance** at 0.766 and the lowest effect positive relationship between **Negotiation Strategy and Manufacturing performance** was 0.680. Based on this, results can be concluded that all the hypotheses were supported. The result proved that all the independent variables (**Cost management Strategy**,

Relationship between buyer and supplier Strategy and Negotiation Strategy) have significant positive impact on manufacturing performance among the Jordanian manufacturing firms in Qualifying Industrial Zones.

Table 5

Regression analysis for factor influencing the manufacturing performance

Model	R	R Square	Adjusted R Square	R Square Change	t-value	Sig.	Standardized coefficients b	Durbin-Watson
the effective of Cost management Strategy	.766 ^a	.587	.583	.587	2.943	0.000	.349	1.621
the effective relationship between buyer and supplier Strategy	.794 ^b	.630	.622	.043	3.394	0.000	.326	
effective Negotiation Strategy	.805 ^c	.648	.637	.018	2.253	0.000	.211	

Above is a multiple regression analysis of the three variables' impact on **Manufacturing performance**. These variables (**Cost management Strategy**, **Relationship between buyer and supplier Strategy** and **Negotiation Strategy**) were retained as predictive of **Manufacturing performance**. The regression model accounted for approximately 64.8% ($r^2 = 0.648$) of variance in **Manufacturing performance**. The results of this analysis are shown in Table 5.

5. Discussion

The test results of the hypotheses as obtained from empirical output in the prior section highlighted that all three independent variables of purchasing strategies had significant positive impact influencing the dependent variable ,manufacturing performance. Therefore these purchasing strategies created significant positive impact on manufacturing performance which comprised the competitive priorities

of the firms in terms of: cost and delivery speed and led to customization responsiveness performance. The results of all these independent variables were similarly supported in studies by Thrulogachantar & Zailani (2010) and Giunipero, Handfield & Eltantawy (2006).

Of the first independent variable in this study, **Cost management strategy** (H1) had positive and strong significant influence on Manufacturing performance goals both internally and externally. This is consistent with previous studies which reported that Cost management in manufacturing plays a significant role in the competitiveness of company's product in the market (Thrulogachantar & Zailani, 2010; Giunipero et al., 2006; Thrulogachantar & Zailani, 2010). Effective cost management firstly increases an organization's investment ability in exploring new product introduction, while secondly creating flexibility to customers which is fundamental in building the core ability of the organization (Giunipero et al., 2006; Thrulogachantar & Zailani, 2010).

The findings on the second independent variable (H2) showed that **good Relationship between buyers and suppliers** had a positive significant impact on manufacturing performance; consistent with findings by Giunipero et al. (2006) and Giunipero and Percy (2000), who reported that a good relationship between suppliers and buyers led to meeting customers' requirements and created a good competitive advantage to the firms; in turn with increased manufacturing performance. Supply chain relationship values interactions are of trust, collaboration, mutuality and commitment (Mark, 2004) plus a willingness to share risks and effective communication (Chandra & Kumar, 2001) reduce uncertainty and establish quality, delivery, quality and timing improvements. Honest information

sharing with effective bilateral communication for chain members creates trust and collaboration in buyer-supplier relationships.

The third independent variable of **effective Negotiation strategy** (H3) had a positive significant impact on manufacturing performance. These can request solutions to be suggested by suppliers to achieve continuous improvements in cost, using raw materials of high quality which give a flexible approach accompanied by shorter delivery time and allowing lower minimum quantity order. Effective negotiation skill development for employees is indicated (for influencing and persuasion, comprehending the related business conditions and costs, being interactive but with the final focus on customer satisfaction). These results are consistent with the prior studies reporting good purchasing staff experience in negotiation with external business partners and internally within the organization which led to mutual understanding and created win-win situations resulting in such elements as more flexible approaches, continuing cost improvement, shorter delivery times, mutual satisfaction, all of which increased manufacturing performance (Thrulogachantar&Zailani, 2010; Janda&Seshadri, 2001).

The dependent variable, manufacturing performance is multi-dimensional and usually includes stakeholders' contribution and satisfaction of customer needs though Zeng et al.'s (2008) list including competing cost, quality, flexibility, delivery, responsiveness and innovation elements. Snell and Deen (1992) added worker empowerment and advanced technology to the supply chain requirements for manufacturing performance. Introducing new products and innovation as a response for customization leading to future growth so purchasing becomes significant in attaining manufacturing goals.

6. Research limitations/implications

The research was carried out in only one Arab country in the present volatile market conditions surrounded by wars in Syria and Iraq but results confirm the importance of applying purchasing strategies of cost management, buyer-supplier relationships and use of positive (win-win) negotiation as previously found in recent USA, Europe and Eastern studies, tested in different cultures and geographical situations.

7. Conclusion/originality/value

In Jordan this case study clearly illustrates the positive effects of purchasing strategies on manufacturing performance reflected by this third world nation. These were: effective strategic use of cost management, relationship between buyer and supplier and negotiation to improve manufacturing performance. Other studies in first world countries were verified in this different geographical milieu, and this gives further validity to them all. [It reinforces for management the strategic value of their purchasing personnel and demonstrates the need for their further training. These purchasing professionals need to be included in strategic planning so they can learn more about their company and the future of their industry, to analyze cost drivers to enable improved cost management, together with considering risks and rewards to improve manufacturing excellence. Negotiation skills enable information sharing, cooperative communication and build trust so the supplier becomes a reliable partner.

In a competitive environment of uncertain demand alert top management could extract an increased advantage from the purchasing functions.

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