PURCHASING SKILLS AND STRATEGY IN ELECTRONICS COMPANIES IN THAILAND

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ABSTRACT

The electronics industry is one of the biggest in Thailand. However, there is the problem of a lack of skilled employees to support the industry's productivity. The objective of this research is to determine the required purchasing skills that affect strategic purchasing in order to gain competitive advantage. Semi-structured interviews were used for qualitative data collection, In the interpretation phase, Nvivo software was used for content analysis. The interviewees were seven purchasing managers from seven electronics companies in Thailand.

The findings were that purchasing skills do affect competitive advantage, and purchasing strategies are used in these seven companies. This research may be of benefit to the electronics industry in Thailand which increasingly has to compete with worldwide competitors.

บทคัดย่อ

อุตสาหกรรมอิเล็กทรอนิกส์เป็นหนึ่งในอุตสาหกรรมที่ใหญ่ที่สุดในประเทศไทย อย่างไรก็ตามมักจะ เกิดปัญหาการขาดพนักงานที่มีทักษะเพื่อสนับสนุนการเพิ่มผลผลิตในอุตสาหกรรม วัตถุประสงค์ของ งานวิจัยนี้คือการกำหนดทักษะที่จำเป็นในการจัดซื้อที่ส่งผลเชิงกลยุทธ์เพื่อให้ได้เปรียบทางการแข่งขัน โดยการเก็บข้อมูลเชิงคุณภาพจากการสัมภาษณ์แบบกึ่งมีโครงสร้าง สำหรับขั้นตอนการตีความนั้นจะใช้ โปรแกรม Nvivo เพื่อการวิเคราะห์เนื้อหาที่ได้จากการสัมภาษณ์ผู้จัดการฝ่ายจัดซื้อ 7 คน จากบริษัท อิเล็กทรอนิกส์ในประเทศไทย 7 แห่ง

ผลการวิจัยพบว่าทักษะในการจัดซื้อมีผลต่อความได้เปรียบทางการแข่งขันและกลยุทธ์การจัดซื้อถูกใช้ใน บริษัททั้ง 7 แห่งนี้ งานวิจัยนี้อาจเป็นประ โยชน์ต่ออุตสาหกรรมอิเล็กทรอนิกส์ในประเทศไทยที่ต้อง แข่งขันกับคู่แข่งในระดับสากลที่เพิ่มมากขึ้น

INTRODUCTION

Previously, strategic purchasing was not implemented and purchasing skills were not valued. Purchasers were seen as unimportant in the organization. However, to improve a company's ranking in the market, the purchasing function has developed from being transactional to strategic. Companies now seek people with excellent purchasing skills who can help their business to improve its competitive advantage, by such strengths as supplier relationships, in order to gain cost saving, better quality, and excellent delivery.

The electronics industry is the biggest in Thailand when considering its export value and its strong production base (Thailand Board of Investment, 2009). However, Thailand now has competition from Singapore, Malaysia, the Philippines and China (Thailand Department of Export Promotion, n.d.). In 2010, Thailand exported electronics and electrical products worth US\$42.48 billion, following 15% annual growth. Imports of electronic and electrical products are also growing: in 2010 their value was US\$ 36.10 billion, an increase of 27% (Thailand Board of Investment, 2010).

Thailand's market in electronics devices such as computing devices, hand phones, and audio and video goods, was approximately US\$ 7.1 billion in 2010 and is predicted to increase at a compound annual growth rate of 15% by 2014, due to the attractions of flat-screen TV sets, low-cost smart phones and other digital lifestyle goods (Business Monitor International, 2010).

The Electrical and Electronics Institute (2010) reported that in 2010 production increased by 22.5 percent compared with 2009, and most of the electronics products are made for export. Attractive are the prefabricated and IT products including HDD, IC, and semiconductors. Foreign investors build manufacturing plants in Thailand because of its moderate manufacturing cost, skilled workforce, and strong economic fundamentals. The electronics and electrical industry represents 30 percent of entire exports, and is one of the major industries that drives Thailand's economy forward (Thailand Board of Investment, 2010).

This research therefore focuses on purchasing skills, strategic purchasing and competitive advantage in the electronics industry in Thailand. It seeks to identify the required purchasing skills that support purchasing strategy effectiveness in order to gain competitive advantage. The research methodology is qualitative, using semi-structured interviews with purchasing managers from seven companies.

REVIEW OF RELATED LITERATURE

Purchasing Skills

Monczka, Trent, and Handfield (1998) stated that in order to accomplish the firm's goals, a

variety of purchasing skills are needed from purchasers to manage and deal with different situations, and therefore non-value added purchasing tasks and paperwork are not required from purchasing professionals. Therefore, proprietors now search for diversity of particular skills in the process of recruitment, to fit the specific position in order to enhance efficiency and effectiveness in the purchasing function in their company (Smeltzer, 2000). An organization needs to collect information about its purchasing skills and what it needs, in order to improve the supply chain with efficiency and effectiveness (Giunipero et al., 2006).

There has been much research published on purchasing skills, therefore only a selection has been chosen for this paper. Killen and Kamauff (1995) found factor analysis results classified into seven groups, with a short explanation of each:

- (a) Strategic Skills. The requirement for proficiency in outstanding purchasing is composed of five factors are: (1) strategic thinking, (2) supply base research, (3) structuring supplier relationships, (4) technology planning, and (5) supplier cost targeting.
- (b) Process Management Skills. There are five main proficiencies needed to be accomplish in this part: (1) organization/time management, (2) tactfulness, (3) written communications, (4) problem solving, and (5) conflict resolution.
- (c) Team Skills. This factor includes teamwork, leadership, managing change, managing internal customers, and salesmanship.
- (d) Decision-making Skills. This is the significant first of three proficiencies as it is related to interpersonal exchange which includes the competence to make decisions and computer literacy.
- (e) Behavioral Skills. This skill is comprised of interpersonal communication, risk taking/entrepreneurial, creativity, and curiosity.
- (f) Negotiation Skills. The importance of these to the purchaser is to engage with many parties, and the four main proficiencies are: (1) negotiation, (2) customer focus, (3) influencing and persuasion, and (4) understanding commerce positions.
- (g) Quantitative Skills. The quantitative part includes four proficiencies: (1) computational, (2) technical, (3) blueprint reading, and (4) specification development.

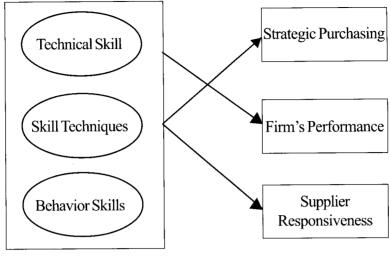


Figure 1: Significant Relationships between Purchasing Skills

Source: Carr and Smeltzer (2000)

This Figure shows that skill techniques correlated positively to supplier's responsiveness and strategic purchasing, whereas technical skills correlated positively to the firm's performance (Feisel et al., n.d.).

Smeltzer (2000) pointed out that many companies emphasize behavioral skills when they recruit a purchaser because they believe that the people who have behavioral skills and technical skills can become accomplished purchasers. However, the purchaser should have awareness and skills to improve the supplier's responsiveness to the company's purpose.

In summary, the improvement and implementation of purchasing skills can be conducted through many different methods of company practice, to their competitive advantage. The company needs to realize which purchasing skills are suitable for them in order to gain the highest profitability.

Purchasing Strategy

To succeed in a highly competitive market, a business needs to improve its purchasing function to become more strategic (Giunipero et al., 2006). Strategic purchasing refers to the method of planning, implementing, controlling, and evaluating, which is substantially significant in purchasing decisions in order to attempt to accomplish an organization's purposes (Carr & Smeltzer, 1997). Also, strategic purchasing is the first critical part concerning a supplier in order to improve the process for new products, for excellence in communication, and for assessment of the supplier's performance (Carr & Pearson, 2002).

Strategic purchasing is considered as an important competitive tool and needs to be agreed with suppliers and clients along the supply chain (Geraint, 2001). The traditional purchasing function, which only emphasizes price, delivery, and quality, has to upgrade to strategic purchasing which is concerned with more complicated contracts between an organization and its suppliers (Faes, Knight, & Matthyssens, 2001). The value-added operations in such a strategy involve negotiation, all cost considerations, and supplier assessment (Pearcy, 2000).

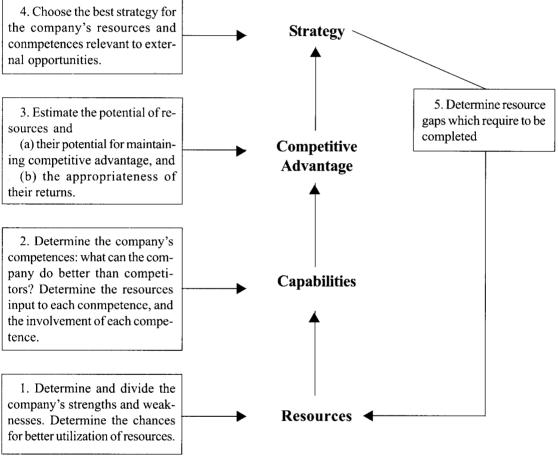
Dominick (2006) pointed out that purchasing strategy can be classified into 10 types, which are:

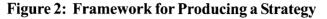
- (a) Spend Analysis: Explore the total spending in each division of goods and services. This sort of analysis can be applied in order to determine possibility for development.
- (b) Supplier Relationship Management: Determining supplier performance and work with the top suppliers in order to develop the operation.
- (c) Technology Implementation: Continuously update and increase technologies which help the organization to decrease costs, shorten cycle time, and increase purchasing operation efficiency.
- (d) Developing Project Plans: Train for project management to map out both regular activities and one-time plan.
- (e) Enterprise-wide Contracts: Combine the spending of the organization as a whole and form contracts with a limited supply base to respond to the requirements of the entire organization.
- (f) Forecasting: Purchasing department forecast the material price, availability, and markets trend, to ensure that their organization will gain competitive advantage.
- (g) Involvement in Spec Development: The base level is that purchasing department is concerned about item improvement, adding specialized formation on material availability, cost, major parts, and trustability of contributors.
- (h) Developme\nt of Productivity Tools: Improve tools so the regular work can be finished rapidly without mistakes.
- (i) Supplier Development: The suppliers will not be simply selected but they need to have proper qualifications so that the organization can improve their competence or products which will affect cost or quality.
- (j) Work Responsibility Refinement: Non-value added tasks must be expelled from the purchasing department.

Carr and Pearson (2002) explained that there are strong points of strategic purchasing that benefit the organization in a competitive market, which are: (1) Cost can be controllable. (2) Precious information related to supply will support the company to make better decisions. (3) When the proper relationship is built with suppliers, better quality and delivery of the products are provided.

Linkage of Purchasing Skills, Purchasing Strategy, and Competitive Advantage

Smeltzer (2000) said that organization which want to develop their strategic purchasing should search how to improve purchasing skills in their purchasers. The next Figure links skill and strategy with its aim of competitive advantage.





Source: Grant (2001)

This shows the relationship of the five steps for creating a strategy, consisting of resources and capabilities which will lead to competitive advantage.

RESEARCH METHODOLOGY

Qualitative methodology has been chosen for this research, through semi-structured interviews. In qualitative research words are data, not numbers. It focuses on statements and disclosures for which hypotheses testing and verification are not important (Rudestam & Newton, 1992). Polkinghorne (1991) explained that qualitative methods are particularly valuable in the creation of concepts for understanding human phenomena and for the examination of explanation and meaning from individuals who share their experience. Qualitative research offers an in-depth insight and flexibility from a small-scale investigation, and the outcomes obtained can be real-lifelike and full of ideas (Ruyter & Scholl, 1998).

The result of qualitative research cannot be measured numerically. Methodological issues in qualitative research are classified into the following two groups. The individual interview in a qualitative study can ensure reliability in terms of an accurate statement of the procedures that have been followed in the process of data collection and data analysis (Ruyter & Scholl, 1998).

The purposive sampling method in this research chose seven purchasing managers who work in the electronics industry in Thailand. Only seven were selected as the key informants, according to Ruyter and Scholl (1998) who explained that a small sample can be used because the value of qualitative research does not derive from the number of research participants but the words they say. How they explore their experience, the way they think and why they think, are important data.

The main data collection used is the in-depth semi-structured interview. The interviewer prepares specific questions, plus open-ended questions, and can use unprepared probing questions to explore what an interviewee has said (Rubin & Rubin, 1995).

Individual interviews help the researcher to gather more data and detail. Qualitative research does not expect standardised answers, so the participants can freely answer, explain or share their ideas (Ruyter & Scholl, 1998). To record the interviews, a tape recorder was used (with the interviewee's permission) thus recording all answers and information, without distorting any data (Ritchie & Lewis, 2003).

The two prepared interview questions were:

- 1: What is the purchasing strategy that you use in order to achieve the company's competitive advantage?
- 2: What are the important purchasing skills that your purchasing staffs need in order to support the purchasing strategy?

Content analysis of interview data was used. It is a method of organizing the content to create various classifications of replies based on selected criteria (Weber, 1988). Regarding reliability of content analysis, it can be searched to confirm that the coded data is dependable. Also, reliability is associated with he coding tools themselves, by creating reliable specific coding tools against a large range of data sets (Milne & Adler, 1999). Nvivo software is used as a coding tool in content analysis. This software can absorb many different documents and is able to link them together to create a model. Graphics are provided to illustrate the presentation (Walsh, 2003).

PRESENTATION AND DISCUSSION OF RESULTS

The findings relate first to the interviewees' comments on the link between purchasing strategy competitive advantage, and secondly to the link between purchasing skills and strategy. Some actual comments are used, as is common in qualitative research.

The Link between purchasing strategy and competitive advantage

The scatter of responses is summarized below. This must not be interpreted in a quantitative manner; total ticks are irrelevant and unjustified in qualitative research. The sixteen issues in the left column are illustrated afterwards with interviewees' comments.

	Table 1: Purchasing strategy										
	Purchasing Strategy										
	Purchasing	Purchasing	Purchasing	Purchasing	Purchasing	Purchasing	Purchasing	Total			
	Manager 1	Manager 2	Manager 3	Manager 4	Manager 5	Manager 6	Manager 7				
1.Supplier											
Evaluation	1	~	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	7			
2.Technology											
Implementation	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	6			
3.Supplier Relation-				-							
shipManagement	\checkmark	\checkmark		\checkmark	\checkmark		\checkmark	5			
4.Involvement in											
Spec Development								4			
4.1. Early Supplier											
Involvement	\checkmark	\checkmark		✓	✓						
5.Supplier											
Development	\checkmark	\checkmark		\checkmark	\checkmark			4			
6.Multiple Sources		\checkmark	\checkmark		\checkmark		\checkmark	4			
7.Forecasting	\checkmark	\checkmark		\checkmark	\checkmark			4			
8.Bargaining											
Power of Buyer		\checkmark			\checkmark	\checkmark		3			
9.Supplier Selection			\checkmark	\checkmark		\checkmark		3			
10.Cost Break											
Down		\checkmark			\checkmark			2			
11.Price Contract					\checkmark		\checkmark	2			
12.Cross-											
Functional Team		×		 ✓ 				2			
13.Company											
Positioning			1								
Analysis		\checkmark						1			
14.Purchasing				1							
Department								1			
Evaluation		✓						1			
15.Supply Base		\checkmark						1			
16.Value											
Engineering		 ✓ 					1	1			

Table 1: Purchasing strategy

Supplier Relationship Management

Some of the interviewee statements about supplier relationship management follow.

Purchasing manager 1:

"Mostly we have good relationships with each supplier for over 10 years, so when we decide to innovate our product we will discuss with them in order to design the product specification and price. We have very strong relationships with our suppliers."

Purchasing manager 5:

"We do business with our long time supplier as a partnership. We will discuss the business plan, problems and solutions, together, how can we reduce the production cost to make a win-win deal for both sides."

Technology Implementation

Purchasing manager 2:

"At present, we send our forecast through e-mail called ESMI - Electronic Supplier Management Inventory which is an Excel file. This program will suggest product quantity and we need to maintain the particular level. The benefit of ESMI is we can keep forecast history in order to forecast the order quantity in response to need."

Purchasing manager 7:

"At present, we use SAP system in order to work efficiently and we use internet to send Purchasing Orders and communicate with our suppliers. We gain the benefit from the technology as it helps us to save time, and gives more accurate information."

Forecasting

Purchasing manager 1:

"Because the raw material that we use, such as gold, copper, etc. The world price of these materials is fluctuating all the time so that we can't plan and keep them in stock six months or one year. We need to forecast month by month, if not we may lose. For the forecasting, we will tell our vendor or supplier about the quantity that we're going to order each month of the next three months so they have to prepare the raw material. We will send the forecast every month but we will forecast three months in advance."

Involvement in Specification Development

Purchasing manager 2:

"Yes, because we can't just simply bargain or look at each other and bargain, this is not the way. We should do BOQ of the product so we will know how much is the labor cost, raw material cost and how much administration cost the supplier should get. We have to do our homework to search for the cost of each part so when we know we can talk to supplier. By doing this, we will know if they take advantage of us. The way that just asks for a total discount is not negotiation."

Purchasing manager 4:

"Here we call it NPI, New Product Innovation. After the customer gives NPI to our team, the purchasing department need to see what is the spec of new raw material that we need to purchase. Then purchasing staff will send the inquiry to suppliers to quote their price; this is called early involvement before the production begins."

Supplier Development

Purchasing manager 1:

"We have very strong relationships with our suppliers and we develop them along with us by measuring and rating their performance in quality and service once a year. Measurement of their performance will develop them in the way that they'll know their strength and weakness from their customer's perspective, so that they can improve their weakness."

Purchasing manager 5:

"We're at the developing stage now and we plan to develop our top 25 suppliers first, because we have hundreds of suppliers on hand so we can't develop them at the same time. Not every supplier can support high technology so we will go step by step but we will try to develop as many as possible."

Multiple Sources

Purchasing manager 2:

"For spare parts, we will use alternative sources or a second source to get the better price."

Purchasing manager 5:

"Sourcing. We always look for the new supplier as well because we are in a competitive market. Even though we have good relationships with our current suppliers, we must keep searching for new sources in order to compare and negotiate with current suppliers in case we have better alternatives."

Cross-Functional Team

Purchasing manager 2:

"We have a team to control the quality of purchasing department which is one of the stakeholders of the team. We are called WCS team, world class supplier team which is the group of people that work together to take care of suppliers. WCS consists of people from engineering, quality control, purchasing, and material control departments. They have a meeting once a month and rank the suppliers once a quarter. The topics of ranking are called TQCFS, time, delivery, quality, flexibility and service. Each supplier's performance is evaluated in each quarter. This process will push the supplier to improve and work harder so that we can get better quality."

Purchasing manager 4:

"We have a meeting with all involved departments and discuss what the new product is and the product trend."

Supplier Evaluation

All interviewees use supplier evaluation as part of their purchasing strategy.

"We use KPI to measure our supplier performance in quality, on-time delivery, service, reliability. We will rate them and consider if it is under or over our standard. If over is good but in case that their rating is under our standard, we will inform them to let them improve."

Purchasing Department Evaluation

Purchasing manager 2:

"We rate our customer satisfaction twice a year by using KPI. Then we estimate in the first half and second half what makes customer satisfaction and what doesn't so that we can improve further. Mostly we measure price, quality and delivery for which we set the standard clearly - what percentages will be accepted. We ask a third party to rate it to protect unfaithfulness."

Supplier Selection

Purchasing manager 4:

"If we talk about innovation, purchasing people need to check with our suppliers if they have the standard to support our innovation. We need to check in advance which suppliers are in this list for innovation. For the current suppliers that are not in the list, we will inform them that we're going to have product innovation. If they're interested they may have to improve their standard to support our innovation."

Purchasing manager 6:

"We have a supplier selection system which we call "evaluation of supplier". At the sourcing process, we will consider first if that supplier can support the quality that we require, such as ISO certificate, their environment policy, and what kind of system that they are using."

Supply Base

Purchasing manager 2:

"We will avoid single source because it's risky. So we will search for more than one supplier but not many. We also control the supplier base because having too many suppliers or only one supplier is bad."

Value Engineering

Purchasing manager 2:

"Sometimes if you bargain to one point, you may not able to bargain anymore because it may reach breakdown of the supplier's unit cost which means they can't give more discount. They also need profit from their business, so one thing that we should do is to involve value engineering. We should work together to see the product design in case we can reduce the cost."

Company Positioning Analysis

Purchasing manager 2:

"That's why I say the purchaser must know which position we are standing on so that we can use the right strategy."

Bargaining Power of Buyer

Purchasing manager 2:

"Yes, we have to order big volumes and we also have to earn their trust. So when we take the material from a supplier and pay once we use it, we call it "consignment", but if the material is still held by a supplier and they will deliver to us, we call it VMI. It's different but it's cash cost. VMI is the best because the material is taken care of by the supplier. Another cash cost is extended payment term by which we will not prepay for material but we will try to use credit. 30/40 is a standard credit term but an extended term such as 60/90 is longer and we can contain our cash cost longer."

Cost Break Down

Purchasing manager 2:

"We should do BOQ of the product then we will know how much their labor cost, raw material cost is and how much administration cost the supplier should get."

Purchasing manager 5:

"We will ask a supplier to discuss their break down cost. By doing this; we will know how much is their labor cost, profit, etc. then we will negotiate again."

Price Contract

Purchasing manager 5:

"There are so many raw materials that the price keeps changing everyday according to the world market. Our company has the price contract with suppliers; at least a 1 year contract, which means that for 1 year the price will remain the same."

Purchasing manager 7:

"The price is up and down all the time such as copper, gold, etc., so we will make a contract with a supplier."

Purchasing skills that support the purchasing strategy

The next Table show the scatter of responses. Again, the total number of ticks is irrelevant.

	Purchasing Skill									
	Purchasing	Purchasing	Purchasing	Purchasing	Purchasing	Purchasing	Purchasing	Total		
	Manager 1	Manager 2	Manager 3	Manager 4	Manager 5	Manager 6	Manager 7]		
1.Communication										
Skill	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	?	7		
2.Negotiation Skill	\checkmark	\checkmark	 ✓ 	\checkmark	\checkmark		~	6		
3.Computer Skill		\checkmark		\checkmark	\checkmark	\checkmark		4		
4. Analytical Skill	$\overline{}$		~				V	3		
5. Planning Skill	\checkmark				\checkmark			2		
6.Team Work										
Ability	\checkmark	\checkmark						2		
7.Structuring		_								
Supplier										
Relationship		 ✓ 			✓			2		
8.Product										
Knowledge	\checkmark						\checkmark	2		
9.Purchasing										
Fundamental										
Knowledge				\checkmark			\checkmark	2		
10.Problem										
Solving Skill							\checkmark	1		
11.Human								·		
Relation Skill							×	1		
12.Language Skill								- <u>i</u>		
13.Organization										
Skill	✓							1		
14.Understanding								· ····		
Commerce										
Positions		×						1		

Table 2: Purchasing skills

Planning Skill

Purchasing manager 1:

"The important skill of purchasing staffs is to be honest in the purchasing job. Second is to know how to plan, for example, there is more than one supplier for a material so we have to plan who to select and negotiate with in order to avoid delivery problems."

Purchasing manager 5:

"Planning skill because we have to plan when purchasing oil, gold, exchange rate, etc. because the price of these materials is fluctuating everyday so purchasing staff need to keep tracking the news. Suppose that gold price is down, so we have to decide if we have to buy to keep in stock or not, what is the quantity we should buy because we can't buy in high quantity as it involve a lot of money."

Analyze Skill

Purchasing manager 1:

"Because of the raw material that we use such as gold, copper. The world price of these materials fluctuates all the time so that we can't plan and keep them in stock 6 months

or 1 year. We need to forecast month by month, if not we may lose. For the forecasting, we will tell our vendor or supplier the quantity that we're going to order in each month of the next three months so they have to prepare the raw material."

Purchasing manager 3:

"The purchasing staffs must be enthusiastic, with negotiation skill, know how to analyze the market, and have communication skill."

Purchasing manager 7:

"They should have problem solving skill because we face problems regularly, and must be able to analyze the problem."

Negotiation Skil

Purchasing manager 1:

"Purchasing staffs need to have negotiation skill to negotiate with suppliers about the material price. It should be to be reasonable, and every time that a supplier gives a quotation, we have to check if the price is right by searching information and comparing with other suppliers together with the market price. Negotiation is also important to negotiate with suppliers about lead-time."

Purchasing manager 2:

"Yes, because we can't just simply bargain or look at each other and bargain, this is not the way. We should do BOQ of the product then we will know how much their labor cost, raw material cost is and how much administration cost the supplier should get. We have to do our homework to search the cost of each part so when we know we can talk to suppliers. By doing this, we will know if they take advantage from us. The way that just asks for a total discount is not negotiation."

Team Work Ability

Purchasing manager 1:

"They need to know how to work with other departments such as the purchaser need to plan with the store department about the proper quantity that should be purchased because if we purchase too much, it will affect our inventory cost."

Purchasing manager 2:

"We have a team to control quality, and purchasing department is one of the stakeholder of the team. Here we are called WCS team, it is a world class supplier team which is the group of people that work together to take care of suppliers. WCS consist of the people from engineering, quality control, purchasing, and material control departments."

Structuring Supplier Relationship

Purchasing manager 1:

"Mostly we have a good relationship with each supplier for over 10 years, so when we decide to innovate our product we will discuss it with them in order to design the product spec and price."

Purchasing manager 5:

"The first thing that a purchaser needs to have is a relationship with suppliers because we don't trade just one time, and some raw materials in the electronics business are rare so we must keep a good relationship with our supplier."

Product Knowledge

Purchasing manager 1:

"The supporting jobs that purchasing department do are that we need to understand about our product, be fast in searching material information and searching new raw material according to engineer's request."

Purchasing manager 7:

"In my opinion; the first thing the purchasing staffs need is to have knowledge about products because our job is against the time. The people, who have knowledge and capability, are able to work faster and more efficiently."

Communication Skill

Purchasing manager 2:

"The communication skill is very important and considered as the heart of purchasing. We must have collaboration with stakeholders because we can't work alone, there must be many departments involved both internal and external. We can use a higher level of communication which is ICT to help the working process such as telephone, computer, e-mail, and internet."

Purchasing manager 4

"They must have the knowledge of purchasing fundamentals, and communication skill which is very important because every day we must contact suppliers and other departments."

Purchasing manager 5:

"The skill that our purchaser needs to have is communication because we are central to logistics and we have to work with many departments such as import, receiving, material control, and finance."

Computer Skill

Purchasing manager 2:

"Currently, ICT-Information communication technology becomes an important part of purchasing department. Our company uses "e" in every operation such as EPO which helps us to reduce using paper and we don't use fax anymore because we use e-mail primarily. At present, technology is involved in a purchasers' life in every activity; the "e" program that we use such as E-auction, ERQ, E-catalog, etc. These technologies can help purchaser to reduce the work load, for example, in the past we spent a long time to type Purchase Orders and send fax, which wastes paper, but now is very easy. We can access and send out PO from anywhere in the world."

Purchasing manager 5:

"We have an e-procurement system; even though the system is not yet complete but we're trying now. We use e-procurement for PR, PO, vendor order management, including sourcing. We use e-catalog for the user to see, so our job will be a faster and shorter process."

Purchasing manager 6:

"We use technology to work with planning and production department, together with sale department. We use the internet system; every department can check right away about the quantity of raw material in stock, quantity of material left during production process, and delivery date so that the planning department will be able to calculate when and what raw material the purchasing department needs to order."

Language Skill

Purchasing manager 4:

"The purchasing staffs need to have language skill because we're an international company."

Problem Solving Skill

Purchasing manager 7: "They should have problem solving skill because we face problems regularly."

Human Relation Skill

Purchasing manager 7:

"They must have good human relation skill because the purchasing job actually is a kind of service."

Purchasing Fundamental Knowledge

Purchasing manager 4: "Good purchasers need to be honest, and other skills are negotiation skill in order to bargain with supplier, and they must have the knowledge of purchasing fundamentals."

Purchasing manager 7:

"Purchasing staffs need to have basic purchasing knowledge, if not we will send them to be trained."

Organization Skill

Purchasing manager 1: "Purchasing staffs need to have purchasing fundamental knowledge in order to support their purchasing strategy."

Understand Commerce Positions

Purchasing manager 2: "That's why I say the purchaser must know which position we're standing in and which quadrant so that you can use the right strategy."

All these factors can be summarized in the model below.

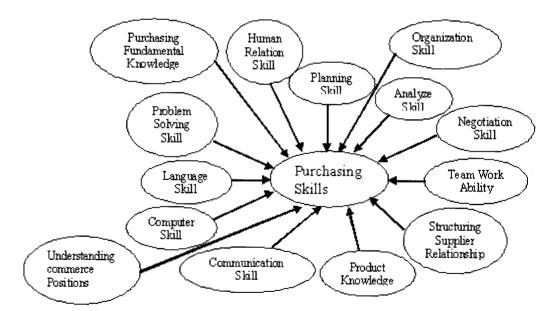


Figure 3: Model of Purchasing Skills

Source: the author

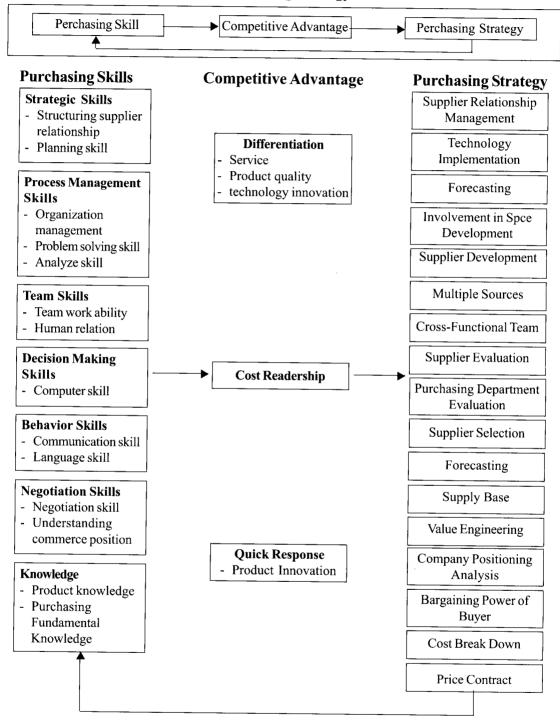
SUMMARY AND CONCLUSIONS

Each company has its competitive advantages and objectives. Accomplishment can only be reached by the coordination of every department in the organization. Purchasing department is an important function, as its activities are concerned with cost of production and productivity.

In the electronics business there is fast changing technology and short life cycles of products, so purchasing department needs to use a purchasing strategy that responds to their competitive advantage such as supplier evaluation, technology implementation, and supplier relationship management. In order to achieve these purchasing strategies, the purchasing staff need to have skills. That is why purchasing manager need to think strategically to lead his department.

The research finding can be presented in a model that shows the relationships, in the Figure below.

Figure 4: Research relationship of Purchasing Skills, Competitive Advantage, and Purchasing Strategy



Source: the author

The purchasing skills mentioned by interviewees can be classified into specific skills and common skills. The specifics skills are communication skill, negotiation skill, computer skill, and analytical skill. The common skills are structuring supplier relationship, planning skill, organization management, problem solving skill, team work ability, human relation skill, language skill, understanding commerce position, product knowledge, and purchasing fundamental knowledge.

It is important for the purchasing manager to select an appropriate purchasing strategy according to the company's desired competitive advantage, and to know the important purchasing skills needed. At present, the electronics business keeps changing very rapidly, therefore the purchasing manager needs to identify the core competitive advantage of the company so as to create an appropriate purchasing strategy.

All research methodologies have their limitations. It is recognized that qualitative research has low generalisability. Although rich in meaning and insights, and providing data and themes for much consequent research, it is not methodologically supported by a large population of respondents, and is heavily dependent on the specific context studied. This means that the findings in this study should be considered as a fruitful base for further investigation and action, but do not necessarily apply to other companies or industries.

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