U.K. INDUSTRIAL BUYER BEHAVIOUR -
THE DEMISE OF THE BUYGRID FRAMEWORK

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The study of “Industrial buying behaviour” is a complex subject which has led to a number of frameworks being developed to explain the industrial process. In order to evaluate these frameworks and identify current trends in industrial purchasing, interviews were held with key personnel in three large buying organisations - BICC, BTR and National Power.

Results from the analysis indicate that the Buygrid Framework though useful in identifying the buying stages for particular purchases did not provide a structure for identifying the key decision makers and their roles. The Interaction Approach, however does and takes into account critical factors which highlight the importance of buyer seller relationships which include individuals from different functions and different levels interacting through the buying process.

The research also comments on the following developments:

The restructuring of a group can cause a major shift in purchasing processes. There is a place for both centralised and decentralised purchasing functions within a group, but inherent conflict must be carefully managed.

Conventional “buying Behaviour” frameworks are difficult to apply in practice due to the blurring of purchasing roles. Most progressive companies appear to be increasingly involved in supplier partnerships.

Good internal relationships between technical and purchasing specialists are essential for effective purchasing in an engineering environment.

The Buygrid Framework

One of the most well known models for understanding the buying process is that outlined by Robinson, Faris and Wind (1967), commonly known as the buyclass or buygrid framework. This model is based on the concept that there are different decision processes adopted under different buying situations, it can be summarised as follows:

a) New task - in which the organisation considering a purchase is for the first time seeking to meet a certain class of need.

b) Modified rebuy - what was once a new task is repeated and the purchase process is standardised without becoming routine or straight rebuy is jolted from its routine by some unusual circumstance.

c) Straight rebuy - in which the company is meeting a need which recurs so often that the process of purchase has become substantially routine.

The names of the buying situations are as originally identified by Robinson, Faris and Wind (1967), with further refinement of the definitions by Webster and Wind (1972) and Fisher (1976). Robinson, Faris and Wind’s (1967) original research proposed a set of eight process stages which stretch from the stages of early recognition of a problem which can be solved through some kind of purchase; to the evaluation and then selection of suppliers. These eight buyphases together with the three buyclasses have been used to form the BUYGRID MATRIX.

This detailed buying model the buygrid matrix has been used extensively by academics and sales practitioners to plot the steps taken by a company for each type of purchase. In the past twenty years the buygrid matrix has become as much an accepted icon of organisational buying behaviour thinking as MaCarthy’s 4p’s and the Product Life Cycle (PLC) concepts have become the most frequently quoted tenets of consumer marketing teaching.

The Purpose of the Study and Methodology

But, how does the buygrid matrix stand up to the test of time? Is it as valid today as it was over twenty five years ago when the fundamental research was carried out? Does it still have such a major role to play in our understanding of organisational buying behaviour? Or is the model past it’s sell buy date?

This paper seeks to explore these questions and look at the buygrid matrix in comparison with current U.K. industrial buying behaviour practice based on research carried out on a study of three major U.K. organisations, BICC, BTR and National Power. The issues arising out of this comparative study are then developed and future areas for research are highlighted and criticisms of the over generalised and non circumspect use of the buygrid matrix made.
The writers set out to look at the validity of current corporate buying behaviour in large U.K. organisations and to establish the current usefulness of the Buygrid matrix. A full literature search was carried out and with the support of Shell Oil a profile of core industrial buying companies was built up who purchased lubricants.

Using Shell Oil’s support, major U.K. users of lubricants were targeted and interviews arranged with a selection of major users’ key management and purchasing staff. These major users represented over 50% of Shell Oil industrial lubricant purchasers and included BICC, BTR, National Power, Nuclear Electric and Turner and Newell amongst others. The interviews were carried out across a focused selection of staff in each major organisation from February to June 1992. From these interviews three companies, BICC, BTR and National Power were selected from the research to give insight into their organisations buying process and recent developments.

The prime limitations of the research are its size, as it only represents one sector within the industrial market - lubricants. Although it can be argued that this is a particularly representative industry showing a cross section of U.K. buying behaviour. Only a limited number of individuals were interviewed within each organisation leaving other possible influences hidden. And finally time was limited against these reservations it must be said that by having the support of Shell it helped us to gain access and time from leading figures in the industrial buying process which would not normally be available to researchers.

CASE STUDIES

NATIONAL POWER

Company Background

National Power is one of the major U.K. recently privatised electricity-generating companies. The company operates 31 individual power stations across England and Wales with each varying in size and technology.

National Power is an interesting case in that privatisation has brought major change to the purchasing function. Prior to privatisation, they employed 240 full time workers in their central purchasing department. This group was given all of the authority for approving sizeable purchases with the individual power stations only able to authorise purchases of up to £2000. The regional offices were responsible for major purchases and were organised into six separate departments, each handling a separate aspect of purchasing such as vendor evaluation, policy contracts, procurement IT, and call off contracts. At this time there were at least 300 common items which were purchased through the central purchasing department.

Since Privatisation, National Power have made significant changes to the purchasing function of the company. The first step taken was to make each power station an individual profit centre for their own spending. The Power Station Manager has been given full authorising power and responsibility for that station’s budget. The number of products purchased centrally has fallen from 300 to 120 and has continued to decline. The rationalisation of power stations together with the move to make them individual profit centres has had a fundamental impact on purchasing. The threat of closure if the station does not perform well has created an atmosphere of intense rivalry between them. To date there are only 20 stations remaining and there are predictions that further shut-downs may be imminent.

Purchasing Structure

The central purchasing department was at one time quite respected within the organisation. National Power’s purchasing group treated suppliers as partners and did not view them as rivals. Their budgets were large and were not very carefully monitored by head office. During prosperous times National Power did not make a lot of demands from their suppliers and they were often taken advantage of being charged inflated prices for many goods.

Central changes as previously mentioned have led to the purchasing function being reduced from 200 to 42 people. The group have been threatened by the reorganisation and are now having to justify their existence and have been asked by senior management to redefine their roles within the organisation. They have recently proposed that they take on the role of procurement monitoring, however the acceptance of this by senior management was not known at the time these interviews took place.

The central purchasing managers based at Harrogate are still responsible for setting up purchasing agreements for items common across the group. They negotiate prices with a supplier leaving power stations to order against these agreements.

Buying Process

(a) Central Purchasing

The central purchasing group generally send out tenders listing their requirements to a short list of suppliers. All specifications for the products are provided by technical personnel (mainly the engineers from the power stations).

Potential suppliers respond with the costs for supplying the total volume necessary to run all power stations. This is proceeded by negotiations with the chosen suppliers and agreements are made for a years supply to National Power. Prices are then circulated to all power stations for their reference. It is then assumed that each power station will contact the vendor and order directly from them at the price agreed in the tender. The reduction in purchasing personnel is reflected in the declining number of products purchased through central agreements. The responsibility of maintaining each of these agreements is currently being transferred to individual power stations.
While the power stations see benefits in purchasing power, the station manager will continue to manage these central purchasing agreements, with no need for a central purchasing function. By using this method it will be possible to phase out the central purchasing function in the short to medium term. This will in turn resolve the centralised/decentralised purchasing conflicts that currently exist. The transfer of power will then be complete with the Power Station Manager holding all power for purchasing decisions.

(b) Central Decision Making Process

For those products which are purchased centrally, the purchasing manager in head office is still the final decision maker. They renew contracts and distribute tenders to individual power stations. Although they inevitably make the decision as to who will be awarded the business, they will generally elicit the opinions of the station managers first. This is seen as a critical step due to the high risk of rejection of contracts if a manager dislikes a particular supplier or their products.

Unfortunately, the central buyer does not have a system in place that allows them to monitor the fulfilment of central contracts. In other words, they have no way of knowing which power stations are honouring the agreement and who are recruiting their own suppliers. This also means they have no means of measuring central purchasing effectiveness as viewed by the station managers. The central buyer will generally have to wait until a supplier highlights that the agreed volumes are lower than agreed, due to a certain power station not sourcing through the central agreement. This problem has only existed since the threat of closure has increased and has led to reduced loyalty from power stations to centrally negotiated agreements with vendors. In fact, the centrally negotiated agreement may actually facilitate a station manager finding a cheaper supplier. The contracted price may be used as a negotiating lever to be beaten by alternative suppliers.

(c) Decentralised Decision Making Process

The power station manager is the final decision maker within a power station site. They must approve any transaction prior to it being delivered. The station manager is under a great deal of pressure from head office to reduce their costs and to increase profitability.

Even though the purchasing operator within each station deals directly with vendors to negotiate a final price, the station manager will have the final say in the decision. Centrally agreed contracts with suppliers are not mandatory on the power stations, they are only recommended to them by central purchasing whose function is to use the leverage of large volumes to drive the price down for the group. Station managers have started to use the price negotiated by the central purchasing agent as a starting point for their negotiations with alternate suppliers. The station manager has no respect for the relationship which the central purchasing manager may be developing with suppliers. They are invariably not interested in the long-term existence of suppliers as they are more interested in their own immediate survival and are being primarily driven by their own bottom line.

Sourcing and Supplier Section

The central buyers tend to source from stable and reputable suppliers who are capable of supplying high quality products. They are very risk adverse and will usually select a major company as a preferred vendor. Prior to the rationalisation of the purchasing department, National Power tended to buy from single sources. This is still the feeling of central purchasing but not necessarily of the power station manager. From our discussions it became evident that there was no single pattern of sourcing policy amongst the power stations. The power stations do not feel the need to develop relationships with their suppliers and are mainly concerned about costs and technical specifications. Their criteria for using one or more suppliers varies significantly from one station to another usually depending upon the managing engineer.

This would indicate that the differing performance measures being applied to central and decentralised buyers are causing a conflict in the selection of suppliers. As power stations are set up as profit centres there is the danger that the central function becomes increasingly redundant, particularly if the power stations feel no benefits from purchasing scale.

(a) Centralised Supplier Selection

National Power have a formal approach to bringing in new suppliers. They have produced a leaflet together with an application form to introduce new suppliers to the company. Within this document they make it clear that they have stringent quality requirements and that it is necessary to have BS 5750. The leaflet instructs new suppliers to submit their applications to the nearest power station, not central purchasing. This suggests that decentralisation is imminent with regards to the purchasing function.

In the past, National Power have been very risk adverse and have set standards above necessary specifications when listing their requirements for suppliers. One of the purchasing managers interviewed stated that this continues to be the case, and that their main criteria for supplier selection is quality. They tend to go with reputable companies who are low risk and can deliver consistently high quality products.

(b) Decentralised Supplier Section

The criteria for selection may vary from that of the central purchasing manager. It was revealed that there are two main supplier criteria which are most important to the Station Managers.

(1) Meeting the technical specifications
(2) The right price

They are not currently interested in value-added service and do not seem interested in building partnerships with suppliers. Their primary concern is their short-term future and avoiding the underlying threat of closure.

This has placed a heavy short term price sensitivity on the purchasing function. The station managers have little interest in what benefits their colleagues are receiving from other suppliers and will rarely meet to discuss purchasing issues. This behaviour is
being driven by competitive rivalry between the stations which may reduce in the medium term as the future becomes more stable. Although recent Government electricity generator fuel procurement policy pronouncements on support for gas, coal and nuclear fired power stations leaves one to suspect this fluid situation could remain for sometime. It is inevitable that many existing suppliers will find their old relationships insufficient to protect their positions and a degree of price competition may be unavoidable.

Future Trends

It is evident that any relationships developed by central purchasing will be short lived unless the power stations start to commit to using the agreements negotiated by central buyers. The central purchasing department has lost the power they once had within the group. There does not seem to be any respect for their position or their capabilities in the organisation.

The future of the central purchasing function at National Power is a vulnerable one. Plans are now in hand to distribute the responsibility of all central purchasing agreements to the power stations. Unfortunately, the time dedicated to these contracts in the past will not be possible in the future. The purchasing operator within each power station is invariably overworked and thus unable to spend large amounts of time seeking alternative suppliers and challenging the current ones.

Many suppliers that have done business with National Power on a regular basis in the past, have had a very comfortable relationship together with very profitable margins. Now that the focus has switched to reducing costs and bringing in profit centres they find these relationships less meaningful.

Local buyers are sourcing elsewhere and there has been a dramatic change in the key success factors necessary for suppliers to maintain the business. Suppliers must be prepared to move away from the warm and cosy relationship that they once had with the central body and move towards developing broader relationships with each of the power stations. They must also become more price competitive and less worried that their centrally agreed contracts are not being fulfilled. There is little point in a supplier threatening to raise their prices because they are not achieving target volumes agreed centrally. Central purchasing may soon be a thing of the past and it is time that these buyers in the operating companies. He felt that if he can dedicate his time to sorting out all of the common products and negotiating the best offer it would leave the buyer time to spend on the purchase of important specialty products. This also fits in nicely with their own supplier selection and payment. They are placing an increasing emphasis on control of expenditure.

Purchasing Structure

There is a central purchasing department for the UK groups which negotiate contracts for common products. Other products are purchased individually by each group but are recorded in a central database allowing analysis of any possible cost savings.

Although central purchasing agreements are made for the group, it is not mandatory for individual groups to order from this list of suppliers. In the majority of cases, these central contracts are honoured, and it is only because of extenuating circumstances that a division would look elsewhere for the product.

In each of the BTR businesses, there is a buyer who handles purchasing for that group within the central purchasing department. There are purchasing managers assigned to buy products in one particular area. These are as follows:

- Engineering
- Energy
- Materials
- Textiles
- Group Materials

These central buyers view the buyers within the operating groups as their customers. Within BTR, purchasing is well respected, and is viewed as a critical element in BTR's profitability. The main reason is that 60% of turnover goes towards the purchase of new equipment, materials and engineering.

The effect of purchasing on profits can be significant and is therefore monitored very carefully. BTR have a computer system which keeps track of all purchases being made for the group and the total cost to the company. This not only allows head office to see where the budget is being spent, but provides information necessary to evaluate alternative purchasing strategies.

Central buyers will analyze the reports and determine which products are common across groups but not currently purchased centrally. They will then set up a team of buyers from those groups to begin looking at suppliers of that product. Although the purchasing criteria may vary from one company to another, it may be possible to find a supplier who most closely fits the needs of the group. Each buyer's contribution is valued, and it is recognised that their opinion is important to central purchasing.

The central buyer is usually very knowledgeable across a variety of fields and may be able to recommend cost saving methods to the operating companies. His view is generally respected among the smaller companies. When interviewed, one of the central materials managers stated that he felt that his job was to save time for the buyers in the operating companies. He felt that if he can dedicate his time to sorting out all of the common products and negotiating the best offer it would leave the buyer time to spend on the purchase of important specialty products. This also fits in nicely with their own supplier selection and payment. They are placing an increasing emphasis on control of expenditure.

BTR INDUSTRIES LIMITED

Company Background

BTR Industries is one of the World's leading industrial manufacturing groups. The company is based in the UK but have 1,000 companies in 40 countries around the world. They have become established mainly through acquisitions with the most recent being Hawker Sidley in 1992.

The group have a very broad product and customer base with diverse products and therefore a wide requirement for supplies. Their product range includes electric motors, transformers, sports footwear, ceramic tiles, and brakes and signals for trains.
with BTR's strategy to reduce the total number of suppliers that they currently deal with.

**Buying Process**

(a) Central Purchasing

For commodity products or those that are purchased centrally, the appropriate central buyer first obtains product requirements from the operating companies. The main participants from the operating companies are as follows:

- "Boffin" Engineer
- Maintenance Engineer
- Lead Buyer (from operating companies)
- Finance

The more familiar the central purchasing manager is with the product the fewer people actually get involved. If it is a highly specialised product, then the engineers would have the majority of the say regarding its specification.

The second stage of the buying process is the search for the supplier. The majority of suppliers are seen by the central buyer on regular occasions. Others may be recommended by the technical group through their own contacts.

Within BTR, technical personnel are often the key decision makers in selecting vendors. Although a final decision may be made in a team environment, the main influencers will be the engineers. The more technical or specialised the product, the greater their influence they will have on the final decision.

Once a short list of suppliers is drawn up they are invited to tender for supplying to BTR. The selection process is completed as a team with the opinions of operating companies counting in the final decision. Due to the varying needs of each group, discussions will take place among the members to agree on the most suitable supplier. If there are major disagreements, the central purchasing manager has the power to make the final decision. He will base his decision on the benefits and costs of each supplier proposal.

At the final stage, the central purchasing manager will then negotiate with the chosen supplier/suppliers for the best contract. However, it should be noted that each group is not bound to use centrally selected suppliers. As a result it is in the central buyers interest to canvas and lobby the opinions of group buyers. The central purchasing department's aim is to deal with as many of the shared requirements across all groups as possible. This part of the group's expenses is approximately 30% of the total spend. The majority of the spend (70%) is on more specialised products like battery boxes and chemicals, requiring a great deal of attention from the group buyers. The trend is to alleviate time spent on shared purchases by group buyers to allow them to concentrate on monitoring the spend in the larger sector.

(b) Central Contract Review

As mentioned in the National Power case study, central contracts can be problematic if individual groups do not order against them. As with most large companies, these contracts are set up as a service to the smaller group's buyers. They should allow the operating companies to save time in selecting suppliers and negotiating prices, for these products. The contracts are not mandatory, but it is the benefits of saving time and money that should encourage the buyers from operating companies to purchase from these contracts.

BTR has set up a monitoring system which lets them measure the success of these contracts. All purchases from all companies are stored on a central computer database. This system provides the information necessary to measure the fulfilments of centrally agreed contracts. For example, a yearly contract with a supplier may be based on annual consumption of 2.5M litres of product. If the central buyer can monitor the quarterly usage against this total they can determine how much of the product is being ordered against the contract, and alternatively, how much is being supplied by other vendors.

There may be other reasons for the amount purchased to be under target, for example a slow down in manufacturing. If the figure is due to groups using other suppliers, the central buyer will usually investigate to seek out the reason. It may be that the supplier has not provided the level of service that the company is looking for or that they have had problems with one of the products. If too many operating companies choose to purchase outside the central contracts it jeopardises the opportunity to get another low price for the product when the agreement comes up for renewal.

(c) Plant and Equipment

The decision to make a large capital investment for the purchase of plant and equipment is a more complex process than that carried out for commodity purchases. The process is more involved and usually requires a greater number of individuals to participate. This is mainly due to the relative capital investment usually required to make such a purchase and the repercussions it may have on maintenance, production and the work force.

The first step to a capital purchase is the recognition of a problem. This is usually brought to attention by an engineer who may be concerned with improving efficiency, or perhaps cost-cutting. Once this problem is acknowledged by the company, a team is formed and usually consists of members from the following levels:

- Director
- Financial Person
- Purchasing Manager
- Engineer (Boffin - theoretical based)
- Maintenance Engineer

All capital investment purchases must meet BTR's stringent payback criteria before they are accepted as a viable proposition. The team will then decide the specifications of the purchase and the estimated costs involved in order to prepare themselves for their presentation to the board. All large capital investments need to gain full board approval for the purchase to go ahead.
Once approval takes place, the team proceeds with supplier selection. Generally it would be the engineer and maintenance engineer who would be most involved at this stage. The other members would be more active in later stages of the buying process. Sales representatives from each supplier would then be called into meet these individuals and to present information on the product and services that they could provide. The purchasing manager is unlikely to effect the choice of supplier but plays a vital role in the negotiation and implementation of the capital purchases.

While the decision process is ongoing, there is an implementation team formed. This team is normally larger than the purchase decision team. The purchasing manager generally manages this committee, setting schedules and making sure every detail is taken into consideration. The complexity of this purchase was emphasized throughout the interview. It was also evident that the purchase of capital equipment takes a significant amount of time and involves a large number of people throughout the organisation.

Sourcing and Supplier Selection

BTR’s strategy is to rationalise their suppliers and reduce the numbers across all groups. Westinghouse Brakes, for example, had 1200 suppliers connected with their production in 1990. By July 1992 their total dropped to 800 with a further drop to 400 in 1993 and 250 by 1994.

BTR tend to multiple source products which are specialised or technically complicated. For example if a product is only in supply from two companies, BTR will set up agreements from both of these firms. The reasons as explained by the materials managers were that it offers security in case one of the suppliers go out of business. It also works in reverse, preventing one firm from going under thus promoting competitiveness. If the product is not specialised or complex in nature, BTR will generally single source. They will complete an analysis of their needs and ideally choose just one supplier to provide all of the orders.

(a) Centralised Supplier Selection

Within the central purchasing function, the purchasing managers expect that any vendor interested in doing business with BTR will arrange an appointment with them. They are not averse to seeing representatives from companies who are not currently supplying BTR. The one criteria which central buyers have regarding new vendors is that if they are interested in providing a product to all groups they must have the capabilities in house to do so. BTR do not wish to commit to a supplier who is only planning to expand their company once they are guaranteed to contract.

There are two main stages which take place in vendor selection. Firstly, the central buyer will decide what products are common amongst the smaller groups. Then a committee consisting of buyers and usually technical specialists (engineers) will be formed. It is this committee that will assess viable suppliers. In some cases it may not be necessary to establish a committee. In this instance, the central purchasing manager would select the most suitable vendor based on the technical specifications submitted by the engineers.

In some instances suppliers have been inherited through acquisitions. Companies joining the BTR group are usually allowed to keep their existing suppliers in the short term. Eventually they are changed over to suppliers with central BTR agreements. During interviews it became evident that for a supplier to do business with BTR, they must be able to provide a high degree of service and quality, an important part of this is that they will be expected to have the facilities to supply and service the entire group if they are interested in a central agreement.

(b) Vendor Review

Within BTR there is a vendor rating system which measures supplier's against the following criteria:

- Delivery
- Quality
- Price Agreements
- Sales Liaison
- Technical Assistance/Problem Solving

Each vendor is scored on each criteria with the results being used to review their performance and to make changes to contracts when they come up for renewal. If a vendor has performed exceptionally well compared to their competitors they may be rewarded with a larger portion of business in any new contract. This shows a fairly sophisticated selection procedure, concerned with performance rather than just being able to provide the lowest price.

BICC CABLES

Company Background

BICC Cables is one of the world’s major cable manufacturers and forms part of the worldwide engineering concern, the BICC Group. BICC Cables, markets, designs, manufactures and installs cables and cabling systems for the transmission of information and energy in a wide variety of markets. These include transport, construction, data and telecommunications, electronics, defence, aerospace and electricity supply.

Purchasing Structure

Purchasing within BICC is structured into two levels. Common products are purchased centrally and specific products are purchased by individual units.

This structure was introduced approximately three and a half years ago when individual groups were given greater autonomy and made responsible for their own profits. As with BTR and National Power the central purchasing group send out tenders to a short list of suppliers to bid for an individual contract. Contracts are then negotiated with selected companies and made available to all sites. Throughout this process there is a significant influence from technical personnel. They will usually provide specifications for the centrally purchased products and will often forward names of suppliers who they feel could compete for the contract.
Central purchasing will also consult buyers within each site before making any final decisions. It is important to gain their approval to avoid any possibility of rejection once the contract has been agreed.

**Buying Process**

BICC have developed formal procedures for the purchase of plant and equipment and are currently developing written procedures for other types of purchases. They feel that it is important to standardise procedures across all groups. They also appreciate that there will be individual purchasing styles within each group but believe that it will be more professional to suppliers if procedures are consistent.

Having a central purchasing department as well as decentralised buyers has often created a degree of conflict. The decentralised buyers like to retain control and do not appreciate interference from central purchasing. If this conflict is not carefully managed, the benefits gained from central contracts will be lost as a result of decentralised buyers seeking alternative suppliers.

For large capital purchases like machinery the procedures are identical to that of BTR Industries. An engineer recognises a need for the purchase and a multi-disciplinary team present to a board for approval. Supplier selection is co-ordinated primarily by engineers or technical personnel, purchasing tends to become more involved once a supplier has been agreed upon. Their main roles are to negotiate prices and contract conditions.

(a) Central Purchasing Decision Making

The main decision maker for centrally purchased products is the central purchasing manager. He has the power to enlist new suppliers if he is unhappy with current service. He does not need the group buyer's authority to make this change. However, to avoid potential conflict, the purchasing manager will normally consult with one or more group buyers to discuss any changes.

Engineers, or those in a technical role are frequently the key influences and often the end decision makers. They are highly influential and if they do not like a particular supplier for whatever reason they can prevent that supplier from doing business with BICC. The relationship between technical and purchasing specialists has developed over the last few years. Previously there was a lack of consultation between the engineering group and purchasing. The view at BICC is that this relationship is crucial to success and should be as close and integrated as a good marriage. The company believes that close collaboration between the two professions maximises the company's purchasing performance.

Purchasing also believe that they can benefit from involvement in the earlier stages of the decision-making process. This could give them the opportunity to gain technical knowledge as well as increase their awareness of the product.

BICC central purchasing feel that it is important for the buyers and purchasing managers to be technically competent so that they can communicate effectively with engineers and operators.

(b) Decentralised Purchasing Decision Process

All companies were made into individual profit centres a short time ago and are now responsible for their own purchasing. As a result they have the power to deal with any suppliers that they choose. Products which are included in centrally negotiated contracts will be ordered from the corresponding suppliers.

Each group will have a different set of influences. Within some groups, the power of the technical managers dominates that of the buyer. These inconsistencies are being looked at by head office to see whether there are advantages of one situation over another.

**Sourcing and Supplier Selection**

Interviewees indicated that BICC prefer to use multiple sourcing and generally have central purchasing agreements with two or, if necessary, three suppliers for the same product. According to the company, multiple sourcing prevents complacency amongst suppliers. There is a feeling that if two companies are supplying the same product, their prices will be highly competitive and they will both provide BICC with adequate levels of service.

(a) Supplier Selection

To select a supplier for a product which is being purchased centrally for the first time, a selection committee is formed. This committee consists of 3 buyers and the central purchasing manager who work together as a team in the selection process.

The buyers will generally consult with their engineers to gain information regarding the leading suppliers in the market and to be briefed on the technical specifications of the product. The engineers tend to gain awareness of suppliers as a result of their regular contact with sales representatives. This reinforces the importance of technical sales contacts in this selling environment.

The main criteria for supplier selection is reputation. BICC are not risk-takers and prefer to deal with other major companies who offer the security of their experience and quality products. Delivery is also felt to be important due to BICC's use of Just in Time operations. The company depends upon their suppliers to produce quality products which do not require in-house quality control checks prior to processing. The central purchasing manager felt that price was an important issue but would never be the company's sole criteria for supplier selection.

For centrally purchased rebuys, the purchasing manager will meet with a variety of suppliers before producing his short list for tender or renewing an existing agreement. BICC do not object to seeing representatives from companies they are not doing business with. They feel it necessary to keep up-to-date with the industry and to be aware of what other suppliers can offer. However, as discussed earlier the company will generally stay with the major companies for their supplies.

BICC are fairly sophisticated in their approach to suppliers. They do not view them as rivals but believe in developing a partnership that benefits both supplier and customer. Before the introduction of this philosophy buyers looked forward to hard negotiations
with all suppliers, however now they will even implement "reverse marketing" and approach suppliers to develop products specially for the company. This "reverse marketing" has increased over the last few years and BICC now believe they have benefited significantly from their close relationship with key suppliers.

All supplier contracts are reviewed regularly to optimise their performance. Open communication is a policy that BICC have with their suppliers.

Updating the Buygrid Framework or is it beyond repair

Information gained from this research has provided insight into a number of different purchasing situations and has highlighted a number of key points that buying and selling organisations should be more aware of. The following is a summary of the key observations:

Corporate Restructuring: the restructuring of a group can cause a major shift in purchasing processes.

Purchasing Structure: there is a place for both centralised and decentralised purchasing functions within a group, but the inherent conflict must be carefully managed.

Models and Frameworks: conventional "buying behaviour" frameworks are difficult to apply in practice due to the blurring of purchasing roles.

Suppliers Partnerships: most progressive companies appear to be increasingly involved in supplier partnerships.

Technical and Purchasing Relationships: good internal relationships between technical and purchasing specialists are essential for effective purchasing in an engineering environment.

Corporate Restructuring: the restructuring of a group can cause a major shift in purchasing processes.

As the competitive environment changes most companies adapt by restructuring which can often be continuous or cyclical in nature. Companies may also experience restructuring through acquisition, privatisation, rationalisation or even through takeover and joint venture. Departments within the organisation may lose or gain responsibilities depending upon the degree of change. This will often result in changes being made regarding company personnel and consequently buying behaviour.

As was outlined in the three case studies, privatisation can cause a change in the value and culture of a company. In order to survive change, companies must adapt to new methods and beliefs. These new methods can have a direct effect on the company's purchasing policies, reward systems and finally their purchasing criteria.

It is important for selling companies to be aware of the implications restructuring can have on the purchasing function within these companies. If suppliers were not monitoring the impact of government policy and the consequent changes in the structure of National Power, they would not be in direct contact with the individual power stations and would lose valuable sales.

When job responsibilities change so may the main contacts of the sales organisation, it is critical for selling organisations to be cautious about becoming over dependent upon relationships within the buying organisation. A purchasing agreement once based on the personal relationship between a buyer and seller may be made redundant through changes in personnel and or restructuring.

Buying criteria may also be affected by a company restructuring. The emphasis may change from purchasing products which may be of medium quality and inexpensive to one that regards quality as the most important buying criteria. Trends in manufacturing plants adopting Japanese operation methods can affect the buying criteria of the purchasing department. If the seller is not aware of these changes, he may find his delivery lead times are now inadequate to meet the demands of the new buying organisation structure.

Restructuring can also have a direct effect upon the way the company structures their purchasing function. Acquisitions may lead to a company buying centrally in order to benefit from discounts available for volume purchases while another company may decide to do the opposite and decentralise their buying function in order for it to be closer to the manufacturing site. From the vendor's perspective, these two types of purchasing functions will require significantly different selling strategies. They may each involve different people from the buying organisation buying processes and may have different buying criteria.

Purchasing Structure: there is a place for both centralised and decentralised purchasing functions within a group, but the inherent conflict must be carefully managed.

The structure of the purchasing function is dependent upon a number of factors.

- company structure
- number of products purchased
- technical nature of the products
- product demand
- importance of purchasing function

If there is only one profit centre within a company, there will generally be a centralised buying function. This allows the organisation to have total control over the purchasing budget with the possibility of discounts if they are buying significant volumes of product. It also provides individuals with the opportunity to specialise in purchasing and allow them to develop expertise in negotiating with suppliers, knowledge of markets and experience in certain buying situations.

Companies who have given their sites the responsibility of becoming individual profit centres may feel that it is appropriate for them to also take on their own buying. There may be benefits for the purchasing function to be close to the operators especially if the products specific to that site are technical in nature. This form of decentralised purchasing allows each profit centre to develop buying criteria which is in line with
their needs and working environment. Buyers can go straight to the supplier if there is a problem instead of going through a central buying department.

In some cases, both centralised and decentralised buying functions may exist within the same company. The organisation will often begin with a centralised purchasing department and through the changes in profit responsibilities will develop decentralised purchasing functions as well. There are advantages of having both types of purchasing functions within an organisation, but at the same time there can be inherent difficulties. If the company in its entirety requires large volumes of products common across the groups, this offers the central purchasing manager significant leverage in his negotiations with the supplier. Their bargaining power may allow significant savings to be made for the entire group which may not have been possible if the negotiations had taken place on an individual site basis. Although the decentralised buyer loses some of his independence, it can be worthwhile for them to gain from the savings such an agreement can bring.

This method of purchasing will only be of benefit to the individual site if the buying criteria used by central purchasing matches their own. If for example their main buying criteria for the product is in the following order;

- meets technical specifications
- delivers on time
- price

and the central purchasing agreement guarantees a low price but it is with a supplier unable to meet delivery requirements, the contract will not be used by the site buyer.

If the central buyer does not consult buyers in each group with regards to their buying criteria, his efforts will be wasted and contracts negotiated centrally will not be honoured. This may lead to fewer decentralised buyers using the suppliers selected by the central buying function.

Another form of conflict may exist if the central buyer interferes with the sites. There is a fine line between the central buyer providing advice that may be useful to the sites and interfering with their responsibilities. The central buyer needs to be sensitive to this situation and work to maintain the trust and respect of each group of buyers.

To highlight any inherent conflicts, it is essential for the central purchasing manager to develop some kind of monitoring system which can indicate how well centrally agreed contracts are being honoured. This will also allow measurement of purchasing effectiveness, although this is a vital tool it can only be used where central buyers have excellent working relationships with decentralised buyers and others involved in the buying process.

Models and Frameworks conventional "buying behaviour" frameworks are difficult to apply in practice due to the blurring of purchasing roles.

The main frameworks applied to buying situations is the Buygrid or sometimes called the Buyclass framework which looks mainly at the stages of the buying process, and the Interaction Approach which looks holistically at the buying process as a series of interactions. These frameworks will now be discussed in terms of their ease of application.

### Buyclass Framework

Ideally, the application of the Buygrid Framework should make it possible for vendors to recognise what steps the buying organisation must take in order to complete a specific type of purchase. By applying the Buygrid Framework to the case studies researched, it is possible to make generalisations regarding the involvement of different functions within the organisation. The following functions emerge:

- Board and General Management
- Technical Personnel (Engineer)
- Purchasing Manager or Buyer
- Financial Personnel

(a) **The Board and General Management**

This level of management is only involved when there is a new purchase situation that has a significant effect upon the company's long-term performance. A new purchase may have been initiated at this level or may be presented to the board for review and approval.

A problem is usually recognised and highlighted by technical personnel within the organisation. They must then defend any capital investment to the board members. They may prepare the case with the help of the purchasing manager and a fellow technical colleague.

(b) **Technical Personnel**

(i) **New Buy**

It seems that the technical personnel have the greatest influence on new purchases. From all three companies it was evident that they are highly influenced by sales representatives visits and the literature that they leave behind. Both design engineers and plant equipment engineers have a clear idea of what is required to increase production or improve performance but they may not have the necessary skill or experience required to follow through to independently make a purchasing decision.

The case studies indicate that the technical personnel have significant influence not only in the early stages of the buying process but also in the final stages of a purchase. They will try to ensure that the preferred supplier has provided them with the greatest amount of assistance and gives them the maximum reassurance that their product is suitable for the task before they are chosen. This can lead to conflict between technical personnel and purchasing if the price being offered by the favoured supplier is not the lowest.
A change in suppliers will generally be approved by technical personnel and may either be initiated by the purchasing manager or an engineer. This process will usually be informal and may not always result in the consultation of technical personnel.

**The Buyer**

**New Purchase**

From the research carried out, buyers were not usually involved in the early stages of the new purchase decision. Engineers felt that it was important for technical requirements to be clarified before any commercial considerations could be made. This correlates with the findings of Brand (1972) who found that buyers began to participate in a new buy during the "acquisition or proposal stage." The buyer tends to become part of the team when it is necessary to defend and gain approval of a purchase. The buyer can influence the outcome of the decision for the selection of a supplier especially when there is more than one which has been approved by the technical team. He/she will base their review on commercial factors like delivery, price and reputation whereas the technical group may look for technical specifications as their main criteria. This will allow the buyer to challenge the technical decision making unit with regards to their choice if he is more expensive than another supplier.

It is evident from the research with BICC Cables, that it is critical that purchasing have a good relationship with the company's technical decision makers, it is therefore important for buyers to develop some degree of technical competence, to enable them to become involved in early stages of the buying process and to gain the respect of technical colleagues.

**Modified Rebuy**

When switching vendors took place, the buyer often became the initiator and the coordinator of the change. They generally have the responsibility of making the final decision in the selection of the supplier but will ask for input from one or more members of the technical group.

**Repeat Purchase Decision**

Although the buyer has the greatest influence in deciding which companies become preferred suppliers, repeat orders are generally processed by clerks within the purchasing department.

**Financial Role**

The financial personnel within each company become involved in the new purchase phase of buying. They usually provide financial approval necessary for the buying process to continue and do not tend to become involved in the decision for supplier selection.

In conclusion these observations can be used as a basis to analyze which members of a customer's buying centre may exert influence at which stage.

**Decision Making Unit**

The identification of the decision-making unit is very complicated and is not always defined by the hierarchical levels in an organisation. It is therefore essential for suppliers to understand the inter-personal communication which goes on within the organisation. This knowledge may reveal how the group interacts and which individuals have the greatest influence or power in making the final decision.

Theories in this area tend to be too general and non-specific. None of the variables are specified in a form that makes them susceptible to and role model dependent upon "rational" decision making with no consideration for the social and emotional factors in buying decisions. Factors like reputation, prestige of supplier, friendship with the supplier and personality of the supplier's sales representative should be given greater weighting.

**Interaction Approach**

The Interaction Approach (Hakansson, 1982) acknowledges individual personality factors as important influences in industrial purchasing decisions. This model takes into account the environment surrounding the relationship and reinforces its importance within the selling strategy. The interaction approach recognises the complexity of relationships in selling to the industrial market and views it as four levels:

- the interaction process
- all individuals involved
- economic and market environment
- atmosphere characterising the relationship

A further complication in identifying the key decision makers is the fact that the decision making unit may change depending upon the buying stages of the purchase. The interaction between members of the decision making unit must also be considered. The interaction approach recognises that personal contacts between the two companies are a frequently used mechanism for initiating developing and maintaining such relationships. One of the most critical elements of the selling process is the role of personal contact in the supplier-buyer interface. Because of the difficulties in identifying the roles within the decision making unit, and the blurring of functions within the Buygrid Framework the interaction model offers a more realistic approach to companies or researchers trying to understand the organisational buying process.

The importance of spreading the technical and financial risk of developing new products and success with suppliers is being recognised by many companies through
their increased use of partnerships on innovative projects. Another important reason for closer relationships with suppliers is the reduction in the amount of uncertainty and improvements in the organisation's ability to control part of its environment. Stable relationships between vendor and purchaser can act as barriers to entry for competing suppliers as well as provide a lock-in situation for existing suppliers.

CONCLUSION

Our initial research we believe shows that the buying process in industrial markets in the U.K. is complex and that a linear model approach like the buygrid matrix is dated and has severe limitations. Privatisation, decentralisation, restructuring and increased cooperation amongst organisations to achieve competitive edge are undermining what has been a useful model but is now looking less than adequate to explain the complexities of an interactive market.

Although this study is limited by time, size and market concentration, we nevertheless feel that it does reflect what is happening and that is that the Buygrid Framework as an effective buying behaviour model has been replaced by an interaction model which more adequately reflects the holistic needs of modern business.

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References


