

Modelling Buying Behaviour for Selling Prefabricated Building Products in EU Markets

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ABSTRACT

The focus of this paper is to analyse the difficulties and requirements to enter new markets. The focus is upon Finnish component manufacturers entering the German market. Evidence from previous attempts at market penetration has demonstrated that the success in market entry is not dependent upon product quality or price, but has more to do with overcoming the buying behaviour decisions of those responsible for buying. Tradition, familiarity and not wishing to take the effort to investigate alternatives are obstacles to entry.

The paper constructs a model of buying behaviour to help those involved in marketing and selling manage the sales effort effectively.

INTRODUCTION

In the 1990s, Finnish suppliers have succeeded in finding new markets for their building products by focusing on client-based marketing. This paper is based on our three export-oriented studies - targeting mainly building markets in Germany and Poland - carried out during the years 1993-1998 in the Construction Economics and Management unit at Helsinki University of Technology (for example Huovinen and Kiiras, 1994; Jäppinen et al., 1996; Wichmann and Lönnrot, 1998).

The *aims* of the paper are as follows:

- To suggest a new selling model that a supplier of building products can utilise for designing a sales rationale and tailoring arguments when trying to make a deal with a targeted potential client in EU markets
- To elaborate the seven constructs of the suggested model as follows:
 - i. buying type
 - ii. buying process
 - iii. buying centre's structure
 - iv. its organisational behaviour
 - v. its members' personal behaviour
 - vi. its (in)formal buying criteria
 - vii. a sales team's rationale that fits the perceived buying situation as a whole
- To review some Finnish-German applications of the suggested model, that is, when a Finnish exporter with his prefabricated building products is approaching potential clients in the German building market
- To conclude by arguing for possible contributions of the suggested model as well as by discussing its validation and new applications (for example, in the UK-EU context).

APPLIED MODEL FOR TAILORING A SUPPLIER'S SALES RATIONALE TO A CLIENT'S BUYING BEHAVIOUR

Underlying assumptions

The starting point of our model building effort was revealed during several rounds of discussions with the representatives of Finnish firms trying to open new segments in the German building markets in the mid-1990s. *Most selling problems* were traced as related to buying behaviour, especially attitudes among the members forming the buying centre in question. How else can we explain the negative outcomes? It is assumed that the prefabricated building products meet the technical requirements of the targeted new markets. Thus, we skip over the technical issues (for example modifications, tests, and certifications) that may in many cases become lengthy and costly. Instead, our emphasis is on understanding the significant factors inherent in a potential client's buying behaviour - and on using these factors as the basis for designing a relevant sales model.

Our search for theoretical bases was limited mainly to *industrial buying behaviour* literature. In line with the representative references (see Table 1), it is assumed that in order to succeed any sales team must be capable of:

- ❑ Distinguishing between realistic and non-realistic buying situations (needs)
- ❑ Creating true relationships with the buying centre which makes the purchasing decisions
- ❑ Anticipating and gradually revealing the buying centre's organisational behaviour (during the buying process; in the case of building products, the process may typically take from one day (for example a repurchase) up to one year (for example a new buy))
- ❑ Interpreting (fairly) accurately the buying rationale of decision-makers, especially their (un)conscious search for personal satisfaction and ego recognition inside the buying organisation
- ❑ Anticipating the process through which the buying centre proceeds towards its final choice by eliminating competing candidates based on their non-satisfactory attributes
- ❑ Ensuring for their part that the obligations of each contract (to be won) will be fulfilled when the building products are actually produced, delivered, installed, and handed over at the site.

Seven constructs of the model

The suggested model is designed along two lines: buyers and buying versus competing sellers and selling. In this paper, the main emphasis is on understanding a *buying centre's behaviour*. Initially, a set of four formal constructs was included in the *preliminary analytical model*:

- ❑ Buying class
- ❑ Buying process
- ❑ Buying centre
- ❑ Choice criteria.

Later, two informal constructs were added in order to capture (ir)rational behaviour of the buying centre:

- ❑ Organisational behaviour
- ❑ Personal behaviour.

The numbers of the constructs refer to the primary causal relationships among the constructs. On the other hand, a *sales team's behaviour* is captured only by one synthetic construct:

- ❑ Sales rationale and arguments.

Business applications are limited to those suppliers (originating from one EU country and) selling their building products to a clientele engaged with construction of new buildings in the other targeted EU countries. A supplier may export (from the home base or a third country)

its products to the target EU market and/or it may manufacture (assemble) them locally. In some cases, the products may be produced at sites using mobile production lines.

The seven constructs of the suggested applied model and their theoretical roots in industrial buying behaviour literature are compiled in Table 1.

Overall logic of the model

Our analytical-synthetic model imitates a buying centre's organisational and personal behaviour. The suggested model is illustrated in Figure 1. The *six analytical constructs* enable the sales team in question to identify and anticipate those factors inherent in a buying centre that influence its successive choices concerning the elimination of alternative competing suppliers and their products during the buying process. The logic of the model lies in identifying the particular states of a buying centre's behaviour, that is, first anticipating the possible ranges of the states of the six constructs and then detecting their causal relations during a buying/selling process. The *seventh construct* is a kind of mirror where the states of the six analytical constructs are projected in terms of a sales team making sense and of a synthetic cognitive process taking place in the salesmen's minds.

Our focus is on the *fit* between a buying centre's rationale and a sales team's rationale, and on the integration of the two processes. In capital investment markets, each buying centre normally first contacts several competing suppliers and their sales teams. Thus, the degree of integration varies between the targeted buying process and each of the competing sales team's processes may vary significantly from one buying situation to another.

Construct	Industrial buying behaviour (representative references)	Applied to selling building products for construction of new buildings
(1) Buying class	Straight re-buy, modified re-buy, and new task (Robinson, Faris and Wind, 1967; for example Kotler and Armstrong, 1994)	Complementary re-buy, straight re-buy, modified re-buy, and new buy
(2) Buying process	Need recognition, setting goals and determinations, product and buying specifications, recognition of alternatives, proposal solicitation, evaluation of proposals, supplier selection, performance review (for example Parkinson and Baker, 1986)	Need recognition, specifications design, selection of purchasing form, proposal solicitation, proposal evaluation, supplier selection, negotiations and agreement, delivery and installation, approval (handover)
(3) Buying centre	Typical roles of members: users, influencers, deciders, approvers, gatekeepers, buyers, starters (Webster and Wind, 1972)	Typical professional roles: owner, project manager, architect, structural engineer, other engineers, contractors, and authorities
4) Organizational and interpersonal behaviour	Organizational influences; risk recognition (for example Hutt and Speh, 1992); uncertainty avoidance (Cyert and March, 1963); loyalty to particular brands, vendors, and products (Webster and Wind, 1972) Interpersonal influences between the members, for example group tasks, social negotiations (Webster and Wind, 1972)	Recognition of risks and avoidance of uncertainties perceived to be inherent in needs, products, approvals, and/or supplier/delivery Loyalty to a particular building product and loyalty to a particular supplier
(5) Personal behaviour	A person's personality, motivation, cognitive structure, learning, preference structure, and decision model (Webster and Wind, 1972); negations (Rinne, 1989); status, safety, recognition, satisfaction (for example Rachman and Romano, 1980)	Professional ego, organisational position/status, recognition and safety Use of negations as the criteria for eliminating alternative competing products and/or suppliers
(6) (In)formal criteria for choosing the product and the supplier	Price and other product attributes, supplier attributes, risks, uncertainties, and negations	A building product's functionality, quality, price, life-cycle aspects, and environmental aspects; a supplier's attributes; recognised risks and negations, perceived uncertainties
(7) Sales rationale and arguments (synthesis)	Buyer-seller relationships (for example Webster Jr., 1984); sales management (e.g. Kotler and Armstrong, 1994)	Soft and hard buyers' segments, argumentation process, order of argument types, professional services for the buying centre

Table 1. The Seven Constructs of the Suggested Model and their Theoretical Roots in industrial Buying Behaviour Literature.

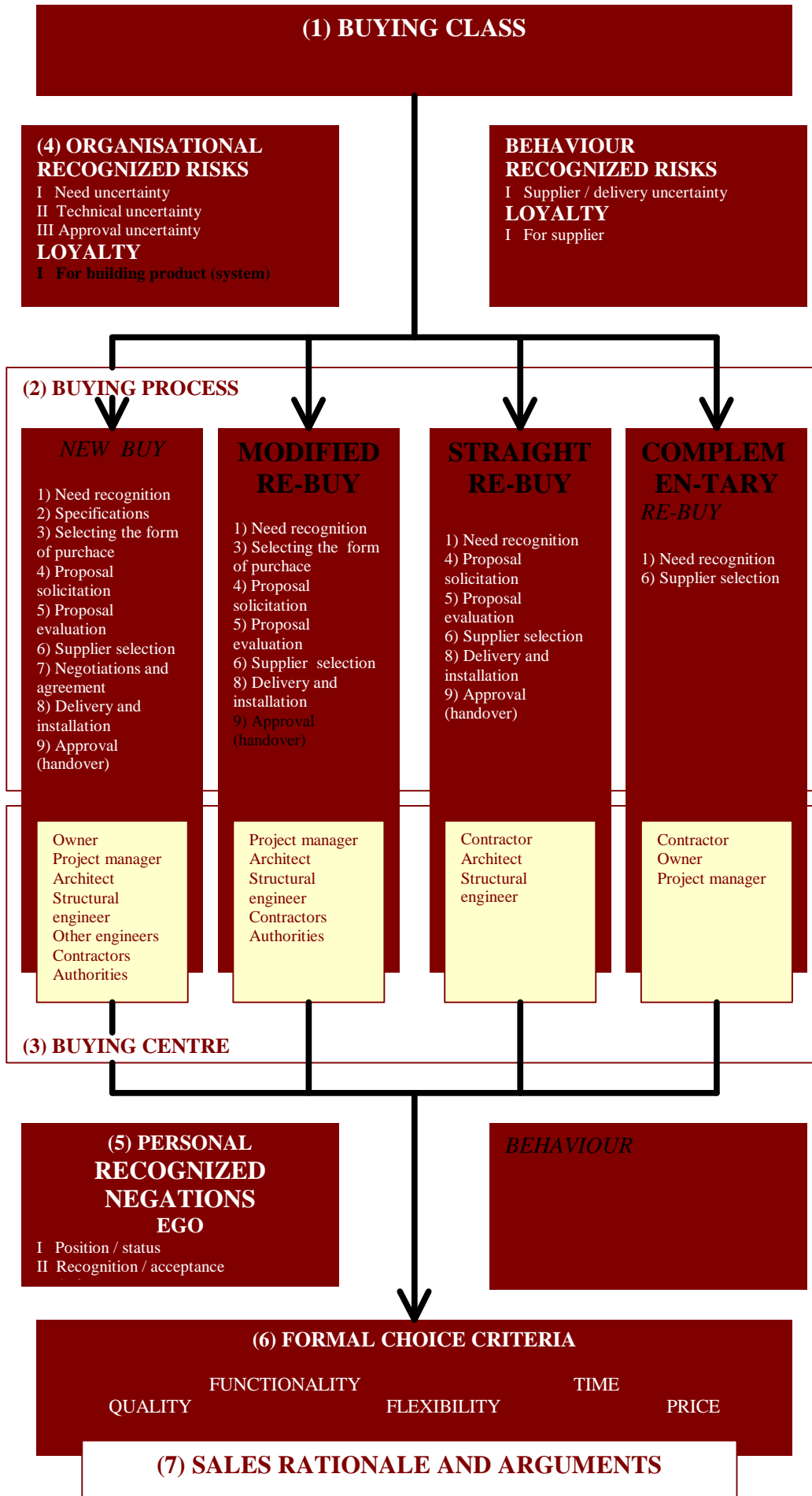


Figure 1. The Suggested Sales Model for Capturing the Rational Behaviour of the Buying Centre in Question.

The model shown in Figure 1 enables a supplier of building products to understand the buying centre's rationale and to tailor its own sales rationale accordingly to achieve the best fit in competition with other suppliers.

A SALES TEAM'S CONCURRENT TASKS IN THE TARGETED BUYING SITUATION

An owner's choices concerning a *new building* as a whole and its *procurement method* for example separate trades create a *joint frame* for tens of buying situations, including building products such as windows. This buying of building products takes place on a quite low level within a building's procurement hierarchy or a chain. Thus, the ways to buy various building products and the behaviour of different buying centres are not determined by the owner's particular method to procure its new building. Instead, it is argued that the buying class related to building products is the decisive factor.

The constructs of the suggested model is elaborated by describing those seven tasks a supplier's sales team must carry out in order to sell its building products successfully. In practice, many tasks are concurrently performed, repeated, or complemented depending on a buying centre's behaviour. In the latter context, the possible states (range) of the six analytical constructs and the synthetic seventh construct are defined and their causal relationships are initially stipulated as follows.

Identifying the buy class

A buying situation may be familiar or new to the buying organisation in question. Here, the *four buy classes* are defined based on the relevant experience of a buying organisation, ranging between the two more familiar and simple ones (complementary re-buy and straight re-buy) and the two more unfamiliar and complicated ones (modified re-buy and new buy).

The buy class is the *most decisive construct* underlying the other analytical constructs. A particular buy class determines the length of a buying process (in terms of learning needed), the structure of a buying centre (expertise needed), the dominance of organisational versus personal buying behaviour as well as the use of (in)formal choice criteria. The buy class frames the buying situation as a whole.

In principle, a supplier is supposed to be capable of focusing its sales efforts on the most attractive buying situations, that is, on those buying classes that the supplier in question masters in the context of its current markets. In practice, many local contracting or buying methods are unknown to an entrant originating from another EU country. In the case of a new buy, both a buying organisation (client) and particular foreign entrants (suppliers) may at the same time face a new buying situation versus new selling situation, which increases the likelihood of mutual ineffective trials-errors-corrections behaviour.

Anticipating the type of the buying process

Among buy classes, a *new buy* is the most comprehensive in terms of the learning required from a buying centre, new information (expertise) needed, viable alternatives considered, professional persons needed, and time consumed. A typical long buying process is illustrated in Figure 2. The longer a buying process is, the more opportunities this offers to several suppliers to compete in promoting themselves and selling their building products. Obviously, a *complementary re-buy* is the most simple buy class. The space to act is very limited in terms of a supplier's promotion, a selling period, and sales arguments.

For example, the need recognition and the design of specifications for the building products (stages 1-2) may take years in the case of architectural design competitions (for example concerning public buildings).

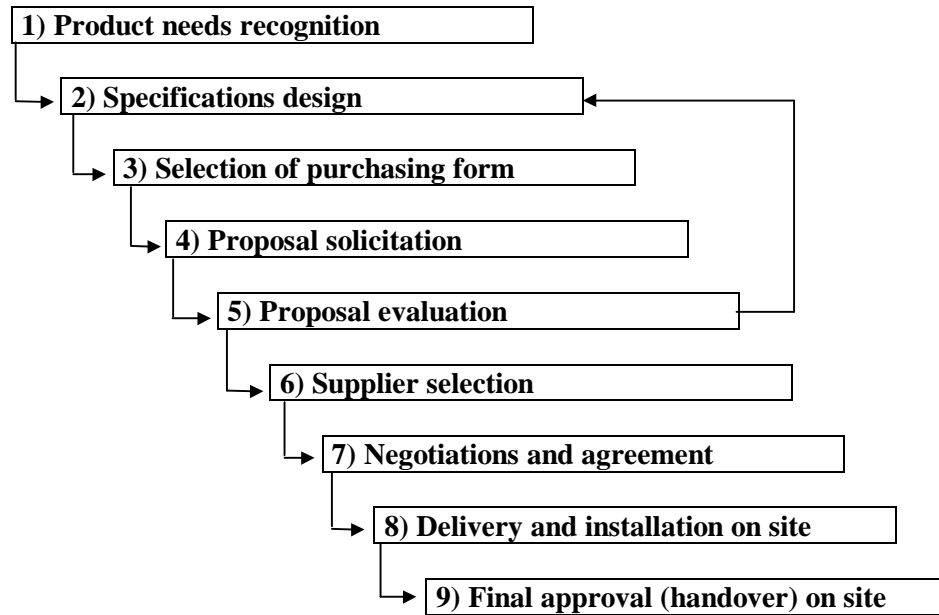


Figure 2. Full-length Buying Process in the Case of Building Products for a New Building.

In any EU country, alternative design proposals may be based on using different primary Materials, for example steel and glass, architectural concrete, wood, or bricks. Even a foreign supplier of these architects' products can try to anticipate the winning proposal and start early promoting its products to the owner and eligible architects.

Getting acquainted with the buying centre

Among buy classes, a *new buy* is the most comprehensive in terms of the size of a buying centre required, expertise and experts needed, number of decisions to be made, number of meetings to be arranged, and number of relationships to be created in and outside the buying centre. Obviously, a complementary re-buy is the simplest one when the buying centre consists only of one purchaser.

A crucial task of a sales team is to identify the *primary decision-makers* and their influencers within a buying centre. A sales manager aims at representing the supplier's expertise and promoting its products. The earlier the true contacts are opened, the more time a particular sales team has to act. Often, a sales team must first get around the gate-keeper(s) in order to establish the relationship with, or just to enter into the awareness of, the primary decision-maker. For this purpose, various building products are here classified into the following four categories (Table 2):

- *Architects' products* that are needed for the envelop of a building, or example facades, roofs, outer walls, windows, and in its surroundings, for example courtyard, fences, garage. The primary decision-makers are architects who are especially concerned with the products that give to the building its architectural appearance, its aesthetics.
- *Contractors' products* that are typically hidden (out of sight) in the foundations, frame and load-bearing structures of a building, for example prefabricated concrete elements, wooden structures, or structural steel products. The primary decision-makers are purchasing managers, teams, and purchasers employed by main contractors, subcontractors, and CM contractors. Their emphasis is on purchasing these products at the lowest prices possible that still meet the standards and regulations.

- *Retailers' products* that are typically used in the interiors, outer and inner finishings of a building as well as the standardised bulk products, for example sawn wooden materials for joinery works, bricks, and HEVAC products. There are two candidates for the primary decision-maker, that is, contractors' purchasers or owner's representatives (including owner). Of course, a particular foreign supplier and its products must first pass the wholesalers' and/or retailers' choice processes in each of the segments to be served in the targeted EU countries.
- *Building systems*, that is, a modular, synergistic, and integrated group of products that form a building as a whole, for example prefabricated family houses, or its envelop or its frame or its HEVAC and control systems. Typically, the primary decision-makers are project management teams, project managers and purchasing managers belonging to owners' buying centres. Their emphasis is on the integrated design, deliveries, and construction of the building system or its subsystem in question.

Type	Architects' products	Contractors' products	Retailers' products	Building systems
Attributes				
Primary decision-maker within the buying centre	Architect (owner's buying centre)	Purchasing team (contractor's buying centre)	Purchasers (contractor's buying centre) Owners (themselves)	Project management team or purchasing manager (owner's buying centre)
Typical complementary decision-makers	Owner Project manager Engineers	Project manager Engineers	Engineers	Architect Engineers Authorities
Typical procurement method of a building as a whole	Separate trades Design & build	Main contractor CM contractor	Separate trades Main contractor CM contractor Do-it-yourself	Design-and-build Turnkey Performance-based

Table 2. Four Building Product Categories Based on the Primary Decision-maker within the Related Buying Centres).

Understanding Organisational Behaviour of the Buying Centre

It is assumed that organisational behaviour of a buying centre is explained to a satisfactory extent by two internal factors: risk recognition and loyalty. Among buying classes, a *new buy* is the most comprehensive in terms of various environmental, organisational, and interpersonal factors influencing the buying centre. Thus, it is likely that, inside a buying centre, *various risks* are identified and *uncertainties* anticipated extensively related to the particular products needs, technical viability, and final quality of the installed product. Consequently, a building centre's *loyalty* is at its strongest towards the familiar building products, even if their application area may be new. From an EU entrant's view, its sales team must be capable of convincing the buying centre in question about its product's technical viability, functionality, and delivered quality.

In the case of a *straight re-buy* or a *complementary re-buy*, a buying centre is likely to perceive only low risks inherent in the scope, specifications, and product itself. Instead,

higher risks are recognised related to competing suppliers and their competencies to deliver. Similarly, a building centre's loyalty may be at its strongest towards those suppliers that are familiar and share the mutual experiences of the successful deliveries. From an EU entrant's view, its sales team must emphasise the supplier's track-record and current co-operation with similar prominent satisfied clients in order to catch up and pass those suppliers that are already familiar to the buying centre.

Perceiving personal behaviour of decision-makers

It is assumed that personal behaviour of particular decision-makers and other members within a buying centre is explained to a satisfactory extent by two cognitive factors: negation recognition and ego acceptance. Among buy classes, a new buy is the most comprehensive also in terms of the scope and cognitive depth of personal behaviour of the various professionals forming the buying centre in question. Thus, it is likely that *negations* are randomly employed by individual decision-makers. It is assumed that, in their minds, decision-makers pick up one or two factors (attributes) as the criteria for this elimination process. All those suppliers/products are eliminated whose attributes the decision-maker in question detects (based on a fact) or perceives (based on a fiction) as not eligible. From an EU entrant's view, its sales team must be capable of guessing these negations based on weak signals and by preparing its defence accordingly (based on facts).

In addition, a new buy allows a decision-maker's *ego* and *cognitions* to surface during the longer buying process. Normally, each decision-maker desires to end up with a higher formal position or acquire a higher professional status in the eyes of fellow-buyers. For many decision-makers, the need for professional recognition also concerns relationships outside the buying centre, for instance, contacts with competing suppliers, their sales managers. In addition, the need for high professional safety is often felt and may be articulated in order to avoid major professional risks. From an EU entrant's view, its sales team must be capable of dealing with these personal, ego-centric relationships as well (still sticking to ethics).

In the case of a *straight re-buy* or a *complementary re-buy*, decision-makers are less likely to improvise. On the other hand, negations and ego-centrism can play a decisive role in all the four buying classes depending on the persons involved.

Integrating Formal and Informal Choice Criteria

It is assumed that any buying centre applies both formal and informal criteria for eliminating the competing suppliers and their products as well as for announcing formally the final choice. Among the *formal criteria*, functionality, delivered quality, price, and other attributes of a building product as well as fast, reliable deliveries and other attributes of a supplier are applied frequently by buying centres across the EU markets. Among buy classes, a *new buy* is the most comprehensive also in terms of a set of the formal (and informal) choice criteria. However, here most buying centres prioritise the product functionality more or as much as the price. This is understandable when a buying centre's primary task is to ensure the technical viability of the chosen product and supplier. The lowest price is no insurance against actual risks or emerging uncertainties.

In the case of a new buy, it is argued that the formal buying criteria are only the tip of an iceberg. The more unfamiliar and complicated a new buying task is, the bigger the number of *various informal criteria* to be applied by the buying centre in question. From an EU entrant's view, its sales team must be capable of identifying and perceiving possible behaviouristic criteria, dealing with these in ways that are elaborated here (as the analytical constructs 1-5) as well as quantifying and integrating these informal criteria with the formal ones.

In the case of a *straight re-buy* or a *complementary re-buy*, this integration of the formal and informal buying criteria means less work for a sales team. But it is recommended that a team or salesman takes into account all the six constructs when designing the sales rationale.

Otherwise, one or two hidden criteria that a particular buying centre applies may come as an unpleasant surprise causing the loss of the targeted deal.

Choosing Sales Rationale and Designing Sales Arguments: Synthesis

It is argued, a *supplier's sales rationale* must be chosen and designed in a way that creates and ensures the *best fit* between a supplier's sales team and a buying centre. In competition with other suppliers, in terms of a need-product fit, a buyer-seller fit, a buying-selling process fit, and a criteria-arguments fit. The first three fits form the basis for the fourth one – designing the *sales rationale* and *arguments* as well as timing their presentations.

Among buy classes, a *new buy* is the most comprehensive one in terms of the scope of sales rationale, the amount and types of sales arguments, the amount of sales work, and the sales expertise which are all required for a particular supplier to win the deal. Thus, a *winning sales rationale* may be designed for cross-border exports or the local manufacturing and selling of building products in the targeted EU market as follows:

- A *need-product fit* is likely to excel when a particular supplier can assist a buying centre to perform the needs recognition and specifications design (stages 1-2) so that the specified product's functionality exceeds the users' expectations, and the inherent risks are recognised (uncertainties are anticipated) and managed.
- A *buyer-seller fit* is likely to excel when a particular supplier can anticipate, localise and tailor its sales team to match the targeted buying centre so that both decision-makers (on both sides) and key experts establish true relationships.
- A *buying-selling process fit* is likely to excel when a particular supplier can anticipate the likely stages of the buying process and their timing as well as, consequently, its sales team being prepared to sell their products and to co-operate with the buying centre in the proper stages during the integrated processes.
- A *criteria-arguments fit* is likely to excel when a particular supplier's sales team can comprehend both the formal and informal buying criteria and can tailor its counter-arguments to meet the criteria and add such core arguments that increase the professional recognition of the buying centre in question (in the eyes of the buying organisation as a whole, or even among their colleagues in that society).

In the case of a *straight re-buy* or a *complementary re-buy*, a sales rationale can be chosen and designed with fewer analyses and less synthesis. But it is recommended that a supplier trains its sales force to become capable of making the elaborated analyses (perceptions) through the constructs 1-7.

SOME FINNISH-GERMAN APPLICATIONS

The preliminary model was tested in the context of the five Finnish firms trying to sell their prefabricated building systems and products in the German market. It turned out that the three Finnish prefabricated systems - a structural steel-based system for constructing new multi-storey apartment buildings, another system for adding new spaces, for example bathrooms, balconies, elevators, to existing apartment buildings, and customised bathrooms made ready at the factory line - are different from the existing products and ways to build in Germany. Thus, an unknown Finnish product/system implies that potential German clients, that is, owners and their buying centres, face a new buying task which they want to, and normally also can, avoid.

The two other products - the prefabricated concrete hollow-core slabs and the expert services for roofing works for flat roofs - are similar to the competing ones in the targeted German market segments.

Among these five Finnish-German applications, **the same primary outcome** was that German buying centres try their utmost to avoid recognised risks. The members of a buying centre start behaving in this risk averse way from the very beginning of the buying-selling

contacts. Typically, a Finnish (or any foreign) supplier must be capable of overcoming such negotiations as a non-viable technical product (or structural design) and an incompetent supplier. A single negotiation perceived by one member influences the decision-making of the entire buying centre when that member whom a Finnish entrant contacts wants to maintain (or even to increase) professional status in the eyes of fellow-members.

5. CONCLUSIONS

It is argued that, in the EU building products markets, procurement decisions are still mostly made by buying centres whose decision-making processes are to a large extent influenced by the familiarity of the technical attributes of a building product and the loyalty towards familiar suppliers. The members of a buying centre make their decisions by eliminating alternative competing products/suppliers on the basis of a few negative attributes. This practice seems to be too one-sided. It hinders product transfers. Thus, it prevents the local building sectors from making many technological progress and then performance-based advancements.

The major contribution of the suggested model may lie in the fact that it reveals the difficulties that firms originating from a EU country) will meet when trying to enter new EU markets. *Validity* of any model explaining industrial buying behaviour seems to be at its weakest when dealing with informal factors of this buying phenomenon to be explained. Moreover, differences among dozens of cultures forming the EU societies produce the reality which will be extremely difficult to capture with any modelling effort.

However, we are considering developing a set of four versions our of the base model presented here by differentiating its constructs by buyer segments, that is, according to the four groups of the primary decision-makers (see Table 2). In addition, we are looking forward to initiating some new applications in the UK-EU context together with an interested UK partner.

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