

ORGANISATIONAL STRUCTURE AND NEW PRODUCT DEVELOPMENT IN THE AUSTRALIAN GROCERY MARKET

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The paper examines the role that organisational structure plays in the new product development process. Various new product development organisational structures are examined and their influence on new product development activities is explained. A review of the literature on organisational structure alternatives for new product development is presented. The research found that the most common organisational structure used for new product development was the product manager and marketing manager.

Introduction

It is necessary to create organisational structures that are compatible with the chosen product development process and supportive of all the various stages in the new product development process. In searching for ways to ensure effective co-ordination of the various stages of the organisation's new product development process, every organisation needs to find the organisational structure most appropriate for its situation

The structure of any organisation affects not only productivity and efficiency, but also the morale and job satisfaction of the workforce. Therefore, organisational structures must be designed in a way that encourages participation and teamwork and also rewards hard working members of the organisation.

The allocation of responsibilities, the grouping of functions, decision-making, co-ordination, control and reward are fundamental requirements for any successful organisation.

The negative effect of a poorly designed organisational structure can be reflected in low motivation levels and staff morale, late decisions, frequent conflicts, lack of co-ordination and a generally poor response to new opportunities.

Background to the Study

Structure provides the framework of an organisation and for its pattern of management. It is by means of structure that the purpose and work of the organisation is carried out.

Rothberg (1981) defines an organisational structure as the particular description of the

organisational roles, the allocation of decision-making power and the placing of responsibility. Thwaites (1992) suggests that the most important element in any organisational structure is the link between the corporate mission, organisation's staff and communication channels.

Robbins (1991) contends that organisational structure must describe the organisation's framework. The overall effectiveness of an organisation, according to Mullins (1994), can be affected both by sound structural design and by the individuals filling various positions within the structure. Any organisation is a social system and people who work within the organisation establish their own norms of behaviour, social groupings and relationships, irrespective of those defined in the formal structure.

The literature suggests that every organisation conducts its product development differently (Mullins 1994, Drucker 1989, Rothberg 1981, Robbins 1991, Thomas 1993). The new product development process chosen will reflect the organisation's size, management styles, organisational resources and staff expertise.

The most common new product development organisation structure is the product manager structure where organisations employ product managers to develop existing and new products. If organisations develop many new products, they tend to establish a new products department that bears the responsibility for product innovations. The main role of the new product development department is to integrate and co-ordinate the organisation's capabilities, balance research and development, marketing and other functions.

Another way to organise new product development is to make use of new product committees and a task force system.

The new product committee is usually

made up of the managers representing different departments. This group sets up the product development priorities, co-ordinates the implementation of product ideas and directs relevant departments involved in the development process. The main advantage of having a committee is that top management becomes involved in the process and has a much better control over new projects.

Urban (1993) argues that the creation of a task force for new product development gives more direct responsibility to the corporate group. The advantage of this kind of structure is that the organisation's most talented staff are assigned to develop new product ideas and meet major challenges.

He suggests that organisations can consider an informal structure when deciding how to structure the new product development process. The informal organisation structure is based on people's interpersonal skills and relationships within the organisation. Normally, individuals assume various roles that can be nurtured and used in a constructive way during the product development process.

Urban concludes that no one organisational structure serves all the necessary requirements. Some are more appropriate for one organisation while other combinations suit other organisations better. Consequently, organisational structure should be designed in a way that meets the organisation's capabilities and the ability of its staff to implement new product development efforts.

Organisations have a variety of structural forms from which to choose when implementing a chosen product development activity. For example, Olson (1995) recommends considering the following organisational structures:

- Bureaucratic control/hierarchical directives
- Individual liaisons

- Temporary task forces
- Integrating managers
- Matrix structures
- Design teams.

A very similar classification of product development organisational structures was suggested by Mullins (1994), Crawford (1997) and Larson (1988). These authors were in favour of the matrix organisational structure adapted to new product development activities when there is a need to develop simultaneously a large volume of projects, and where there is a requirement to share the organisation's resources. These authors agree that matrix organisations offer flexibility, greater security and control of project information, as well as opportunities for staff advancement.

Mullins (1994) warns, however, that there are a number of potential difficulties with matrix organisation structures that must be taken into consideration when deciding on the best kind of organisational structure. These are:

- There may be a limited number of staff reporting directly to the project manager
- Matrix organisation can result in a more complex structure

- There may be a problem of defining the extent of the project manager's authority
- Functional groups may tend to neglect their normal duties and responsibilities
- Dual reporting could lead to conflict and confusion
- Overlapping responsibilities result in a loss of accountability.

Larson (1988) and Crawford (1997) expand the options on matrix organisations. They recommend considering functional, balanced and project team matrixes. These structures are listed in Table 1.

According to Larson, no one structure is superior. The choice of structure depends on the size and complexity of the project. Larson argues that project team, project matrix and balanced matrix share equal success rates in many organisations. On the other hand, functional matrix structures are less effective and are used less often.

An organisational structure should be designed in a way that meets the organisation's capabilities and the ability of its employees to implement all new product development steps. The type of organisational structure depends

Table 1. Matrix Organisational Structures

| Structure | Description |
|-----------------|--|
| Functional | A project manager with limited authority is designated to co-ordinate the project across different functional areas. The functional manager retains responsibility for all projects |
| Balanced matrix | A project manager is assigned to oversee the project and shares the responsibility and authority for completing the project. Project and functional managers are both responsible for the project |
| Project matrix | A project manager is assigned to oversee the project and the primary responsibility lies with him/her to complete the project successfully |
| Project team | A project manager is put in charge of a project team composed of a core group of personnel from several functional areas or groups assigned on a full-time basis. The functional managers do not have any formal involvement |

on the organisation's size, staff competence, financial resources, leadership styles and new product complexity.

Due to product development interdisciplinary nature, it is essential for every organisation to understand the importance of marketing, design and manufacturing functions. Different individuals within these functions often have specific disciplinary training and expertise. Depending on the project's complexity, the availability of resources and deadlines for a product launch, every new product project is organised in a different way and involves staff to a different extent. The more complex a product is, the more staff have to be involved and the more money must be poured into the development process.

Ulrich (1995) contends that in order to meet technological challenges, increasing competition, time pressures and never-ending consumer requests for product improvements, it is critical to have multi-skilled staff that not only have extensive experience, but are also highly motivated and willing to co-operate.

New product organisation structures also depend on the organisation's orientation towards new products, management and leadership styles and communication patterns within the organisation. As Gruenwald (1992) states, "no one type of organisation is an ideal or even highly practicable organisation for any one industry, let alone more than a few companies. Each company will seek its own structure, relying both on its needs and its talent pool" (Gruenwald, 1992, p. 42). Gruenwald argues that in order to develop an effective new product development structure, it is necessary to define "the goals of the organisation along lines that can define the functions of such a new products structure." (Gruenwald, 1992, p. 92)

The selection and development of new products must be the responsibility of top management. However, top management can not carry out this responsibility itself. There is a need for a systematic control of various activities affecting new product development. No single department can be held responsible for any problems in the new product development process. Normally, every department is involved in product development in some way. If a company has too many projects, top management simply does not have time to oversee every single project. Therefore, Berg and Shuchman (1988) suggest that the easiest way to maintain control over new product projects is to put somebody in charge of the new product effort and for that person to be held accountable for it. In addition, companies need to establish 'new products' or 'product planning' departments with the following responsibilities:

- Reporting to top management about the progress of any projects
- Participating in any new products projects
- Assigning responsibilities to other departments involved in new product development (research, development, sales and marketing)
- Selecting specialists so that specific projects can be implemented effectively.

The new product development department would be carrying the following responsibilities:

- Administrative – monitoring schedules, processing forms, maintaining records, preparing product development reports
- Marketing – market research, analysis, liaison with sales personnel, development of new product launch strategies

- Technical – technical research, analysis of technological factors, research and development
- Negotiating negotiations with suppliers, negotiations on pricing, patents, trademarks, planning company's facilities, etc.

To support the idea of a new product development department, Gruenwald (1992) identifies a number of advantages in having this structure:

- Total new product strategy is well established and scheduled to fit long-range plans
- Increased staff motivation due to top management's involvement
- More focused and team oriented efforts
- More new products and more creative ideas
- Better control of new products commercialisation process.

A number of authors (Thomas 1993, Urban 1989, Gruenwald 1992) agree that without an organisational structure that has the specific responsibility to manage new products, few product innovations will result. Organisations involved in developing new products should decide on the kind of organisational structure they need to have. Although most of the authors recommend having a formal organisational structure, some "well structured" organisations fail, while others with informal structures succeed in the marketplace. Urban (1987) provides a comprehensive comparison of the formal and informal organisational structures in relation to new product development.

One of the elements for success in product development is effective co-ordination of all staff involved in planning, research and development, finance, distribution, design and many other functions. To achieve a co-ordinated effort between different departments, it is vital to maintain a constant flow of communication.

The literature findings suggest that organisational structure plays an important role in ensuring effective new product development implementation. It is not surprising that a great number of problems associated with new product development are directly related to the way an organisation is structured. The main management principles (planning, organising, staffing, directing and controlling) are frequently overlooked in many organisations. One of the main reasons for not having efficient new product development structures is the lack of competent personnel, poor reporting systems, ineffective communication and failure to have the support of top management.

Methodology

The research study used a variety of methods to ensure accuracy of data. Initially, secondary data sources, such as the Australian Bureau of Statistics and the Australia Grocery Market Index were used to explore existing information. Qualitative research was then implemented to gain insight into the grocery market. This took the form of informal interviews with major Australian organisations. These interviews helped identify gaps in the existing theory of new product development and clarified the direction of the study.

The major part of the research study was dedicated to the implementation of a comprehensive mail survey of 600 Australian organisations.

The questionnaire consisted of 18 questions that covered a wide range of issues in the new product development field, such as:

- Determining steps involved in each organisation's new product development process
- Identifying interaction levels between various departments within the organisation

- Understanding top management's role in the new product development process
- Determining the success factors in new product development
- Learning about the reasons for new product failures.

The questionnaire was mailed to the senior management of randomly selected businesses. Questions were general, so those research participants did not have to face any potential future ramifications associated with the breaching of the organisation's confidentiality.

Out of 127 usable responses, the following product categories were used when drawing conclusions for this paper:

1. Soft drinks (12)
2. Cereals (7)
3. Dairy (29)
4. Juice (11)
5. Confectionery (25)
6. Bakery (19)
7. Health bars (5)
8. Ice-cream (10)
9. Desserts (9).

Findings

New Product Development Organisational Structure

Of participating organisations in the research, 52.8% had a formal new product development organisational structure. The research findings indicate that 76% of the organisations employed marketing and product development personnel to manage new product development.

Table 2 shows that the new product development process is managed by the marketing managers in 48.8% of cases and 27.6% by the product managers.

During the interview process it was found that marketing managers in many cases played a dual role of marketing and product develop-

ment manager, being responsible for media strategies, promotions, pricing, distribution and new product development.

Table 2. Management of the New Product Development Process

| <i>Manager</i> | <i>Frequency</i> | <i>Percent</i> |
|------------------------|------------------|----------------|
| Designer | 4 | 3.1 |
| Product Manager | 35 | 27.6 |
| Marketing Manager | 62 | 48.8 |
| Product Developer | 9 | 7.1 |
| Research & Development | 17 | 13.4 |

The marketing manager's role was further explored by analysing the integration level between the marketing department and other functional areas within the organisation that directly contributed to the product development process (finance, production, research, sales). The highest integration level was found between marketing and sales teams with 50.4%. The second and third was both with 20.5% for production and research teams. Only 5.5% of respondent believed that integration with all functional departments involved in the new product development process was vital to the success of new products.

Table 3 lists key instigators of new product development ideas and concepts. The key instigators according to the findings are marketing and sales managers.

Table 3. Key Instigators in New Product Development

| <i>Key Instigators</i> | <i>Frequency</i> | <i>Percent</i> |
|--------------------------------|------------------|----------------|
| CEO | 6 | 4.7 |
| Managing Director | 23 | 18.1 |
| Sales Manager | 28 | 22 |
| Marketing Manager | 63 | 49.6 |
| Research & Development Manager | 7 | 5.5 |
| Total: | 127 | 100% |

Managerial Implications

To reduce the rate of failure of new products, the management team should first evaluate the organisation's financial and organisational resources. Based on the qualitative research findings, Australian grocery organisations have limited resources that restrict them to following only some of the more critical new product development steps, such as market research, concept testing and prototype development.

Organisational resources play a critical role in the success of a new product. An effective new product development process involves a broad variety of specialists, such as designers, researchers, operations and logistics staff, marketing and promotions, accountants, information technology and many others. Without an adequate organisational structure and skilled staff dedicated to supporting the new product, the initiative will not succeed.

Senior management's support in the new product development process is critical, as senior managers are ultimately held responsible for ensuring that product development activities are successfully carried out.

To reduce the length of time spent on developing a new product, initial activities can be successfully undertaken simultaneously. Idea generation, screening, evaluation and prototype development can be linked to one development stage. To ensure concurrent processes are being followed, all staff involved in new product development should be fully committed and work as an integrated team with sufficient means of regular communication. As an idea is generated and screened by sales and marketing staff, financial experts should be evaluating the viability of the project while senior management approves the funds required in proceeding with the project.

During this stage, research and development staff can commence on new product prototype development including determining product specifications, features and benefits.

During the final stages of the new product development process, marketing and product managers should begin to explore for further new product ideas. Any staff member should be welcome to present a new product idea, whether it would be a marketing, finance or logistics expert. It is also critical to have a rewards program for the staff constantly thinking and coming up with new product ideas.

Limitations and Future Research

The main limitation of this study was the use of a relatively small sample of respondents ie. 127 out of 600. The data was restricted by its methodology and future research would need to address this area. Although qualitative research was undertaken to test the quantitative findings the sample size was relatively small. In addition the study design was cross sectional with nine different product categories used.

There is a need for a more specific research study to focus on different new product development stages and the role of organisational structure in new product development success.

CONCLUSIONS

The enterprise's organisational chart, if properly used, has proven to have direct effects on the creation and development of new products.

Every enterprise should establish for itself the most advantageous organisational chart capable of facilitating the process of creation

and development of new products. The organisational chart should be sufficiently flexible so as to enable the adaptation to different market situations and changes. One of the key requirements for the enterprise's organisational chart is the approval of senior managers and owners and their involvement in the development of new products. Surveys have shown that the enterprise owner's failure to support the development of new products and to encourage employees with new ideas gives bad results. Employees must participate in the process of development of new products on approval of the enterprise owner.

According to survey data, financial resources are the key factor influencing the development of new products. The development of new products in the enterprise whose financial standing is deteriorating is not successful. Another important factor is the involvement of experienced and qualified staff in the process of development of new products. Employees possessing sufficient experience and high professional competence, good knowledge in finances, accounting, marketing, and production organisation, are capable of speeding up the process of creation, impro-

vement and subsequent development of the products. Influence of senior managers is of paramount importance. When owners do not believe in the process of development of new products and fail to pay adequate attention to it while continuously raising the issue of expenses resulting from the development of new products, such enterprises incur losses. In addition to new products, enterprises cannot move ahead and survive under competitive market environment. If enterprises do not create new products, the market share occupied by their competitors keeps growing and gaining the favour of consumers.

Final conclusion: enterprises should adapt their organisational charts to the development of new products under the most favourable conditions, relying on knowledge of all employees, in particular of senior managers, to eliminate bureaucracy and delay. New products are profitable and competitive when they are developed expeditiously and placed into the market at "right time" and "right place". In the event of delay competitors often copy the ideas and offer to the market very similar products thereby limiting the enterprise's successful development of products in future.

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ĮMONĖS ORGANIZACINĖ STRUKTŪRA IR NAUJŲ PRODUKTŲ KŪRIMAS AUSTRALIJOJE

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Santrauka

Straipsnyje nagrinėjamas įmonės organizacinės struktūros vaidmuo kuriant naujus produktus Australijos įmonėse. Tiriama veiksniai, lemiantys sėkmingą naujų produktų kūrimą. Įrodyta, kad tinkamai panaudota įmonės organizacinė struktūra turi tiesioginę įtaką naujų produktų kūrimui ir jų plėtrai.

Kiekviena įmonė turi nustatyti palankiausią organizacinę struktūrą, kuri galėtų palengvinti naujų produktų kūrimą ir jų plėtrą. Organizacinė struktūra turi būti gana lanksti, kad būtų įmanoma prisiderinti prie įvairių rinkos situacijų ir pokyčių. Vienas iš svarbiausių reikalavimų įmonės organizacinės struktūrai yra vyriausiųjų vadybininkų ir savininkų pritarimas ir dalyvavimas kuriant naujus produktus. Jeigu įmonės savininkas yra neįlinkęs paremti naujų produktų kūrimo ir neskatina savo darbuotojų naujų idėjų, rezultatai, o tai rodo tyrimai, būna

blogi. Darbuotojai turi būti įtraukti į naujų produktų kūrimą įmonės savininko pritarimu.

Tyrimui parinkta 600 Australijos įvairių ūkio šakų įmonių. Nagrinėtos įvairios įmonių organizacinės struktūros, siekiant atskleisti pagrindinius veiksniai, lemiančius sėkmingą naujų produktų kūrimą. Tyrimai įrodė, kad svarbiausias veiksnys, turintis įtakos kurti naujus produktus, yra finansiniai ištekliai. Jeigu įmonės finansinė būklė yra nestabili, naujų produktų kūrimas nėra sėkmingas. Kitas svarbus veiksnys – patyrusių ir kvalifikuotų darbuotojų įtraukimas į naujų produktų kūrimą. Patyrę ir aukštos profesinės kompetencijos darbuotojai, išmanantys finansus, apskaitą, vadybą, marketingą, gamybos organizavimą, gali pagreitinoti naujų produktų kūrimo, jų tobulinimo ir tolesnės plėtros procesą. Vyriausiųjų vadybininkų įtaka yra pati svarbiausia. Jeigu savinink-

kas netiki naujų produktų kūrimo procesu, neskiria tam pakankamai dėmesio, nuolat kelia naujų produktų kūrimo išlaidų problemą, tokios įmonės patiria nuostolius. Be naujų produktų įmonės negali judėti į priekį ir išsilaikyti konkurencinėje rinkoje. Jeigu įmonės nekuria naujų produktų, tai jų konkurentai užima vis didesnę rinkos dalį ir įgyja vartotojų palankumą.

Straipsnyje daroma tokia galutinė išvada: įmonės turėtų pritaikyti savo organizacines struktūras kurti naujus

produktus pačiomis palankiausiomis sąlygomis, panaudoti visų darbuotojų, ypač vyriausiųjų vadybininkų, žinias, išgyvendinti biurokratiją ir delsimą. Nauji produktai būna pelningi ir konkurencingi, jeigu jie kuriami greitai ir pasiūlomi rinkai pačiu geriausiu momentu („right time“, „right place“). Jeigu uždelsiama, dažniausiai konkurentai nukopijuoja idėjas ir rinkai pasiūlo labai panašius produktus, o tai ateityje sumažina įmonės produktų kūrimo sėkmę.

Įteikta 2003 m. spalio mėn.