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DEVELOPING PRODUCT MANAGEMENT COMPETENCIES IN THE PRODUCTION COMPANY

Summary. This paper aims to explore product management in relation to product manager competences in production companies in the domestic appliance industry. Research recently done in the Slovenian industry reflects the state of development of product management and also reflects the awareness of the product manager. As a starting point in this article we use the competence profile of the product manager, taking into account the integration of managerial and operative activities, and implementing competency concepts into practice. In the paper we define a product manager job description for the domestic appliance industry. In compliance with previous research and the O*Net model, the diversity of product manager competences has been confirmed. We identified key focus areas: tasks, knowledge, skills, abilities, working tasks and working styles. According the O*net model six key competence areas were structured.

Keywords: product management, training, training transfer factors, marketing mix

ROZWÓJ KOMPETENCJI ZARZĄDZANIA PRODUKTEM W PRZEDSIĘBIORSTWIE PRODUKCYJNYM

Streszczenie. Celem niniejszego artykułu jest zbadanie zarządzania produktami w odniesieniu do kompetencji menedżera produktu w firmach produkcyjnych z branży sprzętu gospodarstwa domowego. Badania przeprowadzone w omawianej branży w Słowenii odzwierciedlają stan rozwoju zarządzania produktem, a także świadomość menedżera produktu. Punktem wyjścia w artykule jest określenie profilu kompetencji menedżera produktu, z uwzględnieniem integracji działań zarządczych i operacyjnych, a także wdrażania koncepcji kompetencji w praktyce. W pracy zdefiniowano opis stanowiska pracy menedżera produktu w przemyśle urządzeń gospodarstwa domowego. Zgodnie z wcześniejszymi badaniami i modelem O*Net, potwierdziła się różnorodność kompetencji menedżera produktu. W artykule zidentyfikowano kluczowe obszary kompetencji, do których należą: zadania, wiedza, umiejętności, zdolności, zadania robocze i style pracy.

Keywords: zarządzanie produktem, szkolenia, czynniki transferu szkoleń, marketing mix

1. Introduction

In recent years there has been a growing emphasis within research and in practice on the need to develop and improve the performance of product management in order to meet the increasing demands being placed on the market (Qui et al, 2011). This emphasis stems from a growing recognition of the centrality of the product manager's competency in industry. Such people now operate with a significant degree of power and autonomy in return for increased responsibility for the product success on the market. Notably, the domestic appliance industry has sought to develop evaluative criteria that can be used to measure a product manager's performance, provide a basis for reward, determine training and development needs, provide a basis for successful product planning and related (Meža, 2011). These criteria effectively form competency profiles for occupational roles against which performance can be evaluated and improved. However, although the use of the terms “competence” and “competency” is fairly indistinguishable, there are important conceptual and practical distinctions to be made that fundamentally affect their application within modern organizations (Moore et al., 2002). Competence relates to a person's ability to comply to a range of externally agreed standards, whereas competency refers to personal attributes that a person draws upon as part of their work activities. Thus, whereas competence is a work-related concept that defines the areas of work at which a person needs to be competent (Armstrong, 2001), “competency” is a person-related concept that refers to the dimensions of behaviour underlying competent performance. Thus, displaying competency is not about demonstrating an ability to comply with minimum standards of functional performance, but relates to generic underlying behavioural characteristics that results in effective performance (Mansfield, 1999).

2. The role of product manager competencies

Competence is important in today's business environment. Competence has been associated with a firm's competitiveness (Nylan, 1998), achieving the organization's objectives, successfully dealing with change (Dingle, 1995), improving the firm's competitive advantage (Lei, 1997), and improving the organization's performance. Major components of competencies include abilities, attitudes, behaviour, knowledge, personality and skills. Competence can be defined as a cluster of related knowledge, attitude, skills, and other personal characteristics that affect a major part of one's job, correlates with performance on

the job, can be measured against well accepted standards, and can be improved via training and development (Webster, 2006).

Many disciplines are concerned about competence. The product manager profession is concerned with improving the skills of its graduates as they enter the workforce (Morris, 2000). Business knowledge, technical and integration skills are increasingly important to product managers. Companies are also working toward maintaining and improving the professionalism of their discipline through competency-based qualifications (Lloyd, 1994). The product managers profession has recognized the importance of competency and is very active in its development (Meža, 2012).

Many professional organizations related to product management offer competency certification programs. AIPMM (Association of International Product Marketing and Management) is a good example of a professional organization that has a well-established certification program. The purpose of most professional certification programs is to provide recognition of the capabilities of an individual in a professional area.

Many academics are currently researching competence within the product management context (Meža, 2012). The purpose of the research is to develop a framework that will help direct the professional development of product managers.

3. Development the product manager competency model

Product managers in industry are responsible for the overall product success on the market. Meža (2009) defines product management as a kind of a messenger from a market to a business. It directly transfers clear information about market logic to different departments in a company which need such information to make their business decisions. Nowadays, in times of severe competition and constant price pressures, there should be a permanent activity of product managers to care for cost reduction of product cycles. Product management's core activities are by no means focused on a product and/or on management activities. They are related to direct participation in project development and in the planning of new products. The outcomes of product management work can be judged by the product quality or the level of its success. Certainly, we should note, that there are some products which are more likely to be successful on the market, and there are others, which might be unsuccessful as well.

The domestic appliance industry is facing a crisis nowadays. Some authors (Meža, 2009) suggest a variety of possibilities to solve or even prevent such product crises. Product management and product training could play an important role in avoiding and preventing potential product crises resulting in inefficient market communication, weak

commercialization of novelties/changes (due to poor advertising starts and inadequate advertising strategy). Therefore product training is inherently related to cycle time reduction activities. When considering trainings for new salespeople and customers about a product, the implicit assumption is that the benefits of such training should be improved product sales, better product introduction on market, improved brand image, etc. In our opinion, product managers competencies in the industry of domestic appliances play an important role.

3.1. Methodology

A survey was administered by applying several research instruments, by interview and through a postal option questionnaire. The first instrument was implemented from the O'Net model for a selected group of organisations in the domestic appliance industry in which several interviews were conducted with product managers. This helped us to build a list of relevant competencies and to determine the metrics for various factors identified in the objectives. The second phase of the survey involved the postal option. The main tool employed in collecting the core data for the survey was a structured questionnaire, which was developed by employing the outcome of the interview phase and various other criteria identified from literature.

We conducted empirical research based on the O'NET model (picture 1), which provides a framework that identifies the most important types of information about work and integrates them into a theoretically and empirically sound system. The model was developed using research on job and organizational analysis. It embodies a view that reflects the character of occupations (via job-oriented descriptors) and people (via worker-oriented descriptors). The model also allows occupational information to be applied across jobs, across sectors in the domestic appliance industry and within occupational-specific descriptors in product management. These descriptors are organized into six major domains which enable us to focus on areas of information that specify the key attributes and characteristics of product managers competencies. The population of the survey consisted of 17 product manager participants on the IFA, the world's largest and most important trade fair for consumer electronics and household appliances (7th September 2011).

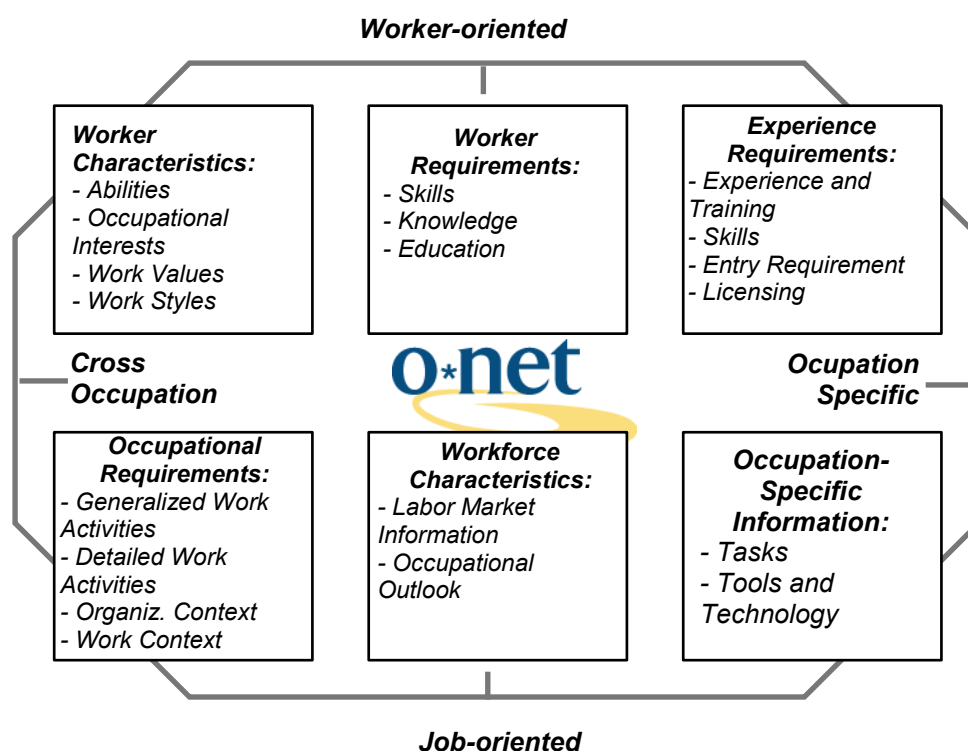


Fig. 1. O*NET. Content Model
 Rys. 1. Składniki Modelu O*NET
 Source: O*NET, 2003.

3.2. Results

As mentioned above, it was difficult to derive competency factors for each job because the items associated with product management ability evaluation were mostly related to company specific factors (brand image, financial conditions, programs, etc). However, by using interview evaluations, we were able to derive general product manager tasks.

Table 1
 Product Manager Function – Product Manager Tasks

<i>Product Manager Tasks</i>	<i>Competency importance</i>	<i>Competency presence</i>
Initiate market research studies or analyze their findings.	4,06	3,65
Use sales forecasting or strategic planning to ensure the sale and profitability of products, lines, or services, analyzing business developments and monitoring market trends.	4,5	3,5
Coordinate or participate in product promotional/education activities or trade shows, working with developers, advertisers, or production managers, to market products or services.	4,5	4,25
Managing new product proposals, product registration and product changes	4	3,25
Demonstrate or explain products, methods, or services to persuade customers to purchase products or use services.	4,25	3,75
Suggest specific product purchases to meet customers' needs.	4,5	4

cont. tab. 1

Collaborate with sales teams to understand customer requirements, to promote the sale of company products, and to provide sales support	5	4,25
Develop, present, or respond to proposals for specific customer requirements, including request for proposal responses and industry-specific solutions	3,25	2,75
Collaborate with sales teams & quality department about product quality issues	4	4,25
Prepare and deliver technical presentations that explain products or services to customers and prospective customers.	3,75	3,25
Provide technical and non-technical support and services to clients or other staff members regarding the use, operation, and maintenance of equipment.	4	4
Direct and coordinate activities involving sales of manufactured products, services, commodities, real estate or other subjects of sale.	3,5	3,25
Confer with potential customers regarding equipment needs and advise customers on types of equipment to purchase.	3,75	3,5

Table 2

Product Manager Function – Product Manager Tools & Technology

<i>Product Manager Tools & Technology</i>	<i>Competency importance</i>	<i>Competency presence</i>
Personal computers & MS Office applications (Mail, Presentation software, Spreadsheet software)	4,5	4
Enterprise resource planning ERP software	4,5	3,75

Table 3

Product Manager Function – Product Manager Knowledge

<i>Product Manager Knowledge</i>	<i>Competency importance</i>	<i>Competency presence</i>
Customer and personal Service - Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.	4,25	3,5
Sales and marketing - Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.	4	3
Engineering and technology - Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.	4,25	3,5
Design - Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.	3	2,75
Communications and media - Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media	3,5	3,25
Project management - Knowledge of principles and methods of product management: coordination in project plans, including project scope, goals, tasks, resources, schedules, costs, contingencies, or other project information, establish and execute a new product commercialization plan.	4,25	4
English language - Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.	4,75	4
Computers and electronics – Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.	3,5	3

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Administration and management - Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modelling, leadership technique, production methods, and coordination of people and resources.	4	4,25
Mathematics - Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.	2,5	3,25
Mechanical - Knowledge of machines and tools, including their designs, uses, repair, and maintenance.	3	3,5
Psychology - Knowledge of human behaviour and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioural and affective disorders.	4	4,25
Education and training - Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.	4,25	4,25

Table 4

Product manager function – Product manager Skills

<i>Product manager Skills</i>	<i>Competency importance</i>	<i>Competency presence</i>
Critical thinking - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.	4	3,75
Writing - Communicating effectively in writing as appropriate for the needs of the audience.	4	3,75
Monitoring - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.	4,75	4,5
Active learning - Understanding the implications of new information for both current and future problem-solving and decision-making.	5	4
Coordination - Adjusting actions in relation to others' actions.	4,25	4
Operations analysis - Analyzing needs and product requirements to create a design.	3	3,25
Complex problem solving - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.	5	4
Service orientation - Actively looking for ways to help people.	4	3,75

Table 5

Product Manager Function – Product Manager Abilities

<i>Product Manager Abilities</i>	<i>Competency importance</i>	<i>Competency presence</i>
Oral expression - The ability to communicate information and ideas in speaking so others will understand.	5	4,5
Oral comprehension - The ability to listen to and understand information and ideas presented through spoken words and sentences.	5	3,75
Speech recognition - The ability to identify and understand the speech of another person.	4,75	4,25
Written Comprehension - The ability to read and understand information and ideas presented in writing.	4,25	4
Speech clarity - The ability to speak clearly so others can understand you.	4	4,25
Deductive reasoning - The ability to apply general rules to specific problems to produce answers that make sense.	4	4,75
Inductive reasoning - The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).	4,5	3,75

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Originality - The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.	5	3,75
Problem sensitivity - The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.	4	3,75
Fluency of ideas - The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).	4,5	3,75
Information ordering - The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).	5	3,75

Table 6

Product Manager Function – Product Manager Work Activities

<i>Product Manager Work Activities</i>	<i>Competency importance</i>	<i>Competency presence</i>
Getting information - Observing, receiving, and otherwise obtaining information from all relevant sources.	5	4,75
Selling or influencing others - Convincing others to buy merchandise/goods or to otherwise change their minds or actions.	4	3,5
Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.	5	4,25
Interacting with computers - Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.	4	3,5
Making decisions and solving problems - Analyzing information and evaluating results to choose the best solution and solve problems.	4,25	3,5
Establishing and maintaining interpersonal relationships - Developing constructive and cooperative working relationships with others, and maintaining them over time.	4	4
Identifying objects, actions, and events - Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.	4,25	4
Monitor processes, materials, or surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.	3,25	3,5
Thinking creatively - Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.	5	4
Developing and building teams - Encouraging and building mutual trust, respect, and cooperation among team members.	4,5	4
Updating and using relevant knowledge - Keeping up-to-date technically and applying new knowledge to your job.	5	3,75
Thinking creatively - Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.	5	4,25
Organizing, planning, and prioritizing work - Developing specific goals and plans to prioritize, organize, and accomplish your work.	4,25	4
Developing objectives and strategies - Establishing long-range objectives and specifying the strategies and actions to achieve them.	5	3,75
Interpreting the meaning of information for others - Translating or explaining what information means and how it can be used.	4	3,5

cont. tab. 6

Communicating with supervisors, peers, or subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.	4,5	4
Training and teaching others - Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.	4,5	4

Table 7

Product Manager Education

<i>Product Manager Education Level Required</i>	<i>Today</i>	<i>Future</i>
Bachelor's degree	64,5	63,8
Master's degree	26,1	29,1
Some college, no degree	9,4	7,1

4. Discussion

For the last decade the domestic appliance industry has been faced with the challenge of explosive demand for new and improved products as well as the availability of new technologies for production and delivery of such products which generate additional demands on the system (O’Connell, 1996). This situation accelerates the rate of a change and it produces an “evolved” system which attempts to respond to changes on the marketplace (Katsanis and Pitta, 1995). Product managers in the domestic appliance industry are responsible for the overall success of delivering the owner's physical development within the constraints of cost, schedule, quality and safety requirements. Product managers find themselves confronted by issues and undertaking additional roles that have traditionally not been part of their responsibility. Professional competency in product management is attained by the combination of knowledge acquired during training, skills developed through experience, and the application of the acquired knowledge.

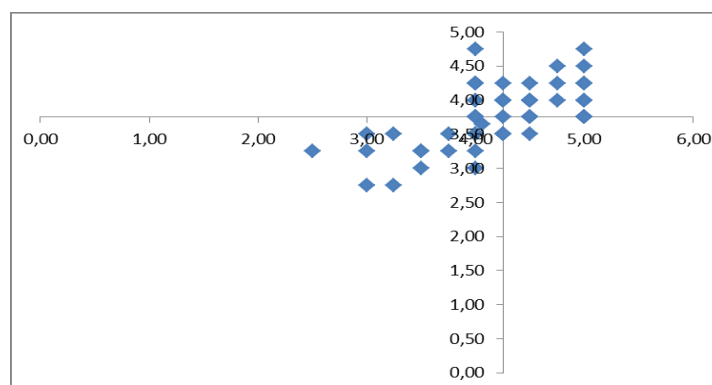


Fig. 2. Distribution of Product management competencies
 Rys. 2. Dystrybucja kompetencji zarządzania produktem

The product and technological complexity which is actually the base for communication with customers, addresses external and internal marketing needs as well. Therefore many companies are of the opinion that product training is a top priority for them (Neff, 2002). Despite the importance of the role product managers have for the marketing function and for new product introduction, there has been little research conducted on the matter of product manager's competencies. Distribution of product management competencies is shown in picture 2. In general, the median of "Competency importance" was 4,25; the median of "Competency presence" was 3,75. This shows the future need for further development of product management competencies and identifying the routes and mechanisms by which these product managers acquire such requisite skills should provide options for addressing the training of future product managers. A more significant aspect of the study, however, is identifying potential lessons for management development policy that the domestic appliance industry may adopt. Therefore, we recommend conducting further research related to product management competencies because the findings may have a significant impact on company strategies and daily business.

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