THE SPECIFIC AND GENERAL NATURE OF LOGISTICS TASKS

Beáta Sz. G. Pató, **Zoltán Kovács**, **László Szabó**
University of Pannonia, Hungary
E-mail: patog@vnet.hu, kovacsz@gtk.uni-pannon.hu, szabo.laszlo@uni-pen.hu

Abstract

There are many ways to define and to describe jobs and assigning to people. This is a key issue in both blue collar and in white collar jobs. This analysis focuses on the work content of jobs in logistics. However, the methodology allows the exploration of closely related issues to determine competence requirements as well. Jobs can be seen to have bearing on many areas including effectiveness, efficiency of individual and organizational level, social and political issues.

The purpose of the research carried out by authors was to identify the necessary competencies in logistics jobs. It included the analysis of the tasks using company document (job description) analysis in order to identify the tasks and required competencies. Researchers extracted and then standardized the verb - noun pairs which described the tasks. The frequency of these pairs gave the weight of the task in a job.

This method allowed the researchers to determine the overlapping rate of activities in different fields (trade, transport, comprehensive activities). It was found that the most different/independent field in the terms of similarities is warehousing.

Results suggest the rethinking of the training content in order to find the right balance between the general and specific competencies. They also help organizations to optimize the composition of cross-functional staff.

Key words: *analysis of the tasks, supply chain, generalist logistics jobs, job descriptions, necessary competencies, cross-functional staff.*

Introduction

Research Premises

As logistics systems are becoming more and more complex, the need has arisen to develop a set of criteria related to job tasks that can be used as guidance in choosing the most suitable person (Garbacanová, 2012) for the given field of logistics.

There exist various sets of criteria which help the employer decide who to choose for certain jobs. This decision, however, is not easy for blue collar jobs, and even more difficult for white collar jobs, which might have a basic influence on the success of the organization. It is nowadays not enough to measure skills, qualifications and general intelligence to find the right person for a logistics job, one has to examine individual competencies, which help predict an excellent level of employee performance in the near future (Hwan□Yann Su at al, 2013). In our study, we focus primarily on describing this task, although our database is also suitable for analyses of competence.

The basic aim of logistics tasks is to satisfy the needs of business partners in an environment of tough competition on the side of sellers, at the highest level possible. (Arnolds et al, 2013; Cetinkaya, 2011; Christopher, 2005; Erturgut, 2012; Monczka, 2010; Pettersson and Segerstedt, 2013; Ruston at al, 2010 & Scott et al, 2011) In order to perform this task optimally, you need to select employees who are trained to the sufficient level (Erturgut & Soysekerci,

2011). This is why we need a proper definition of tasks people employed in the area of logistics must be able to complete. Research of tasks that are associated with logistics functions, with the help of a well-built research model, can help formulate such definitions.

Organizations and companies are also in need of the results of scientific research that can assist HR in clearly defining their requirements and define tasks in certain departments of the company that management considers important from the point of view of competitiveness.

A logistics task means the flow of material or information in the supply chain.

Recognizing that Jobs influence several areas, like effectiveness, efficiency of individual and organizational level, social and political issues, the European Union started programs related to the world of work. Two continuous projects were involved: Novalog and Central. They were run by extensive consortia from countries throughout Europe. These international analyses were completed by local research in Hungary.

Many studies deal with tasks in logistics systems (Pfohl, 1996; Jünemann 1989; Halászné; 1998; Weber, Weise, Kummer,1993; Huising, 1993; Chikán, 2001; Kohut, Nagy, Dobos, 2005).

Weakly- and non-structured documents – like job descriptions (Pató, 2014b, Pató 2014c, Pató, Kovács, Pató, 2006, Kovács, Pató, 2014) – require language-specific solution.

Asimakopoulos et al, (2011) use hierarchical task decomposition (HTA) as a grammar to map actions in context. HTA is used in their application to describe what expert literature has identified as the stages in producing sales forecasts. In order to evaluate this against reported scenarios and observations of actual use, they apply an approach that uses a parallel to the grammar of everyday language to represent user activities.

Abramowicz and Piskorski (2003) investigate the applicability of information extraction techniques in real-world business applications dealing with textual data, since business relevant data is mainly transmitted through free-text documents. They give an overview of the information extraction task, design information extraction systems and provide some examples of existing information extraction systems applied in financial, insurance and legal domains.

There are different ways to assign tasks. Lou et al. (2011) presented a negotiation-based way. While it can be appropriate among organizations in an (open) supply chain, this sample can hardly be followed inside an organization. 'From top to bottom' breakdown is more common. Market mechanisms work better among inter-organization situations than intra-organization ones. Shodi et al. (2008) gave examples to activities that can be performed in the supply chain of manufacturing and entertainment. The authors define the supply chain in this study according to Ballou (2004). According to Ballou (2004), the supply chain comprises every activity that passes and transforms products and services to the final consumer, along with the information flow that accompanies these processes. (Ballou, 2004 in Pettersson-Segerstedt, 2013) "Logistics is the planning, realizing and controlling process of the efficient and cost-effective flow of input materials, semi-manufactured goods, end products and the related information from the provenance to the site of use, all with the aim to satisfy consumer needs." (Szegedi, 1998)

This research is very important not just on a local level but on a global level as well. The organizations, companies require a result of an academic research that can provide help to the human resources rational application through the correct task- need manifestation's phrasing. If the task definition, determination is explicit i.e. the proper scope of work is tied to the proper work tasks and competencies than even inside of an organization the employee satisfaction can increase and lead to more efficient working. Actually the working process becomes self-synchronized with connecting the exact tasks. If the tasks are not accurately defined (e.g. to generalized than the overlaps between the scope of work (the same task belongs to several scope of work); possible 'gaps' (unfinished work) can interfere with the flexible working.

However, with the economy's globalization (Fodor, Jackel, Papp, Csiszárik-Kocsir, Medve, 2015) it is not enough to be aware of this just locally but across organizational borders even though the whole (SCM) Supply Chain Management (Christoher, 2011; Bylka, 2013;

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Iida, 2012; Rosing, Scheel, Scheer, 2015; Neeraja et al, 2014) must direct the working tasks definitions and the total organization's optimum performance. This is especially true – both at the local or global level – for logistics which can be seen as the motivation of the economy. If there is no link, a cooperation between the organization's different departments then we have to consider the emerge of the competition or "territorial egoism", which can lead to the spread of the logistical functions and tasks affecting the companies' competitiveness and their roles in the market.

This research provides an answer about what tasks are necessary and required for the smooth operation of the different functional logistical areas and working. In order to create a flexibly responding scope of work to meet the customer needs, the starting point will be the exact definition of the tasks. The results of the research can only be useful if the logistical scope of work has been created with proper care in the organization. When creating a scope of work not only the task but assigning to it the assumptions and responsibilities will have key importance as well. The results of this research can be a contribution to the definition of the logistical scope of works which can be specified according to the organizations character.

Research Design and Research Questions

The main aim of this research is to focus on the logistical function. It is important to identify the task of the functional logistical fields – such as purchasing, warehousing, production, distribution. The tasks are defined according to the scope of work documentation. The scope of work is a well-known and successful working organizational-management document around Europe, including in Hungary. Therefore, with this research not only the functional logistical fields must be brought into focus but also the importance of the scope of job description too which is used as a manual to inform the scope of work.

This analysis was a part of an extensive study aimed at drawing the competency profile of logistics jobs. Collection of tasks helped us to identify the necessary (and unnecessary) competencies. Research questions related to tasks were:
- What individual/personal tasks are to be performed in order to achieve organizational goals?
- What is the basic nature of these tasks in the terms of goal, task and process orientation?
- What is the level of specialization? How specific and general is the task formulation?

The research also seeks to define recommendation according to the repertory of tasks of the different functional logistical fields. Further aim is to be also a guideline that how much it is a necessity to define specifically the given tasks or rather communicate them universally.

Methodology of Research

The approach began by reviewing basic information sources including the existing job descriptions from companies. These documents are standardized only on company level, if they are at all. The document analysis was designed to:
 a. Gather tasks
 b. Gather competencies
Given that job descriptions are weakly structured, statistical task analysis was rather difficult. Depending on the company, technology, culture, job designers use a wide variety of synonyms when they describe the tasks of employers. Therefore, when we want to process inputs from company documents the first step is to address the simplification and unification of the terms being used in the documents. In the most simplified way tasks can be written using word pairs (verb - noun). Researchers identified verb - noun pairs which could be statistically processed. For example 'order material', 'fill in a form', 'receive material', 'pick goods'.

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This identification requires deep knowledge of the specific domain of activities in this step

Research Model

When creating the research model, the focus was based on Majone and Quade (1986), quoting their thought of (1973): "The most important characteristic of a model is certainly the good organisation thereof. This means that it should take little effort for any potential user to be able to easily understand it" (Lee, 1973, interpreted by Majone and Quade, 1986; Ashby, 1969; and Boulding, 1969).

"The main point of the model is that through it we can see and let others see data on the whole, according to different grouping and aspects." (Pató, 2014a, 63-68)

"In the course of analyses the model ensures possibility to introduce and reveal different connections. Different aspects needed to be taken into consideration while creating different analysis, which can be described by grouping of different data and information received from the connection of them. With the support of this model the connection between data can be introduced." (Pató, 2014a, 63-68)

Using the works of Chaudhuri, (1997) and Abonyi, (2005) a multidimensional data model was prepared to demonstrate the various relationships within the research, which was thereafter handled as an input-output model, as well as also being seen as a model of connections between research elements. Both models can be considered theoretical, providing the framework of the research.
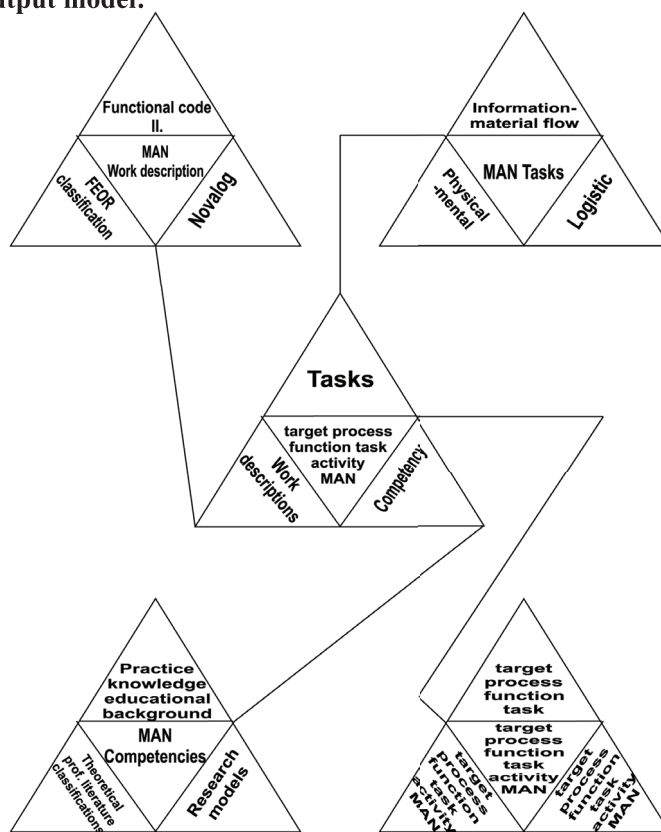
Input-output model:

Figure 1: Input-output model of the research (drawing on Pató, 2014a, Pató-Pató & Kovács, 2006, 2010).

A 3D model was created in order to map the input – output relationships. It is based on the basic relations and interactions of competency-based and knowledge-based expectations of managers.
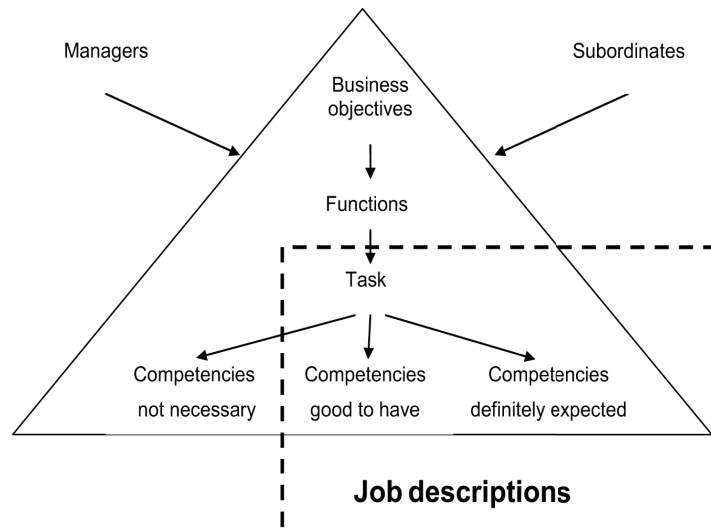

Figure 2. The research model.

In this research, tasks mean *doing things*, with competencies referring to the *abilities to do things*. Tasks are derived from the objectives of the organization. They are mostly written in job descriptions.

The pattern – Source of Data

The following databases were used: "Database of job descriptions" This was based on the job descriptions of domestic and international companies, results of Novalog international research, "questionnaire based database", analyses and introduction of qualitative data of in-depth interviews. Our research and conclusions have focused on the database of the job descriptions, however, we have specified relevant parts from other databases and results where it was required by the more detailed introduction of the results.

The empirical sources that we used can be described using the stages, phases and characteristics summarized in the following table.

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Table 1. Characteristics of the phases of research.

Stages	1. stage		2. stage		
Phases / Characteristics	Set up of the database of job descriptions - work tasks-competencies of logistics	Analysis of the database of job descriptions - work tasks-competencies of logistics	"Secondary analysis", comparison of the results of "Novalog" research	Set up of the questionnaire based database and analysis thereof	Case studies /in-depth interviews
Goal of activity	Determine logistics work tasks and competencies	Statistically analyse the database	Compare the domestic empiric results with the international research results	Confirm the results of the competency research	Confirm the results of the competency research
Source of pattern	Job descriptions 612/349	Processing of 349 job descriptions	International research results of 3 years of 16 countries	80 pcs questionnaires completed validly	In-depth interview conducted at 2 companies
Method of data collection	Documentary analysis of job descriptions	Documentary analysis of job descriptions	Comparison of research results	Getting students to help complete the questionnaires	Interviewing, monitoring
Methods, tools of data analyses	Qualitative and quantitative methods	Preparing of simple and multi-variable statistics	Qualitative methods Preparing of simple and multi-variable statistics	Preparing of simple and multi-variable statistics	Qualitative methods

According to Pfohl (1996) the most important tasks in a logistics system can be seen as (Table 2).

Table 2. Decisions and activities in logistics systems (Pfohl, 1996).

Order processing	Receiving order
	Order processing
	Order analysis by information sources
	Forwarding order information
Inventory control	Giving the number of merchandise to be stored (selective storage, in alphabetical order)
	Quantity of order and order point for loading stock to be stored
	Determine safety stock
	Control of stock to be stored
	Preparation of short-term prognosis of demands
Warehousing	Purchase or lease of storage and storage equipment
	Determination of quantity, place of origin, storage capacity and transport area
	External or own management of the warehouse
	Determination of the requirements of storage technical equipment for storage and takeover
	Definition of storage area of the warehouse
	Method of storage (establishing the loading area)
	Establishing the loading ramp
	Management of the means of transport modes
	Arrangement of takeover
	Productive employment of storage staff
Transport	Type of the means of transport
	External or own operation of the means of transport
	Purchase or lease of the means of transport
	Combination of the modes of transport
	Organization of transport (optimal transport routes, implementation plans, load of the means of transport)
Packaging	Fulfillment of logistics functions of packaging (functions of protection, storage, transport, marketing and information)
	Making logistics units (storing-, box-, and transport units etc.) as prerequisites for rational transport chain

Individual tasks serve to perform these organizational level activities.

Data Analysis

The analysis consisted of the following steps:
- Gathering company work descriptions
- Preliminary overview of tasks (and competencies)
- Identifying the same tasks
- Simplification of original formulation onto verb - noun pairs
- Coding
  o nature of jobs
  o activities
  o competencies
- Formulating conclusions

The collected work descriptions cover logistics material and information flow: trade – purchase, inbound transportation, raw material inventory/warehousing, production, inventory/ warehousing of finished goods, outgoing transport, sales. After two years we had 612 company job descriptions, mostly from the logistics areas mentioned above.

After a preliminary overview we found that 349 of them contained sufficiently detailed data about tasks and competencies.

During the simplification of task descriptions from the original open style to verb-noun pairs we applied the works of Groschedl-Trinkl (2001).
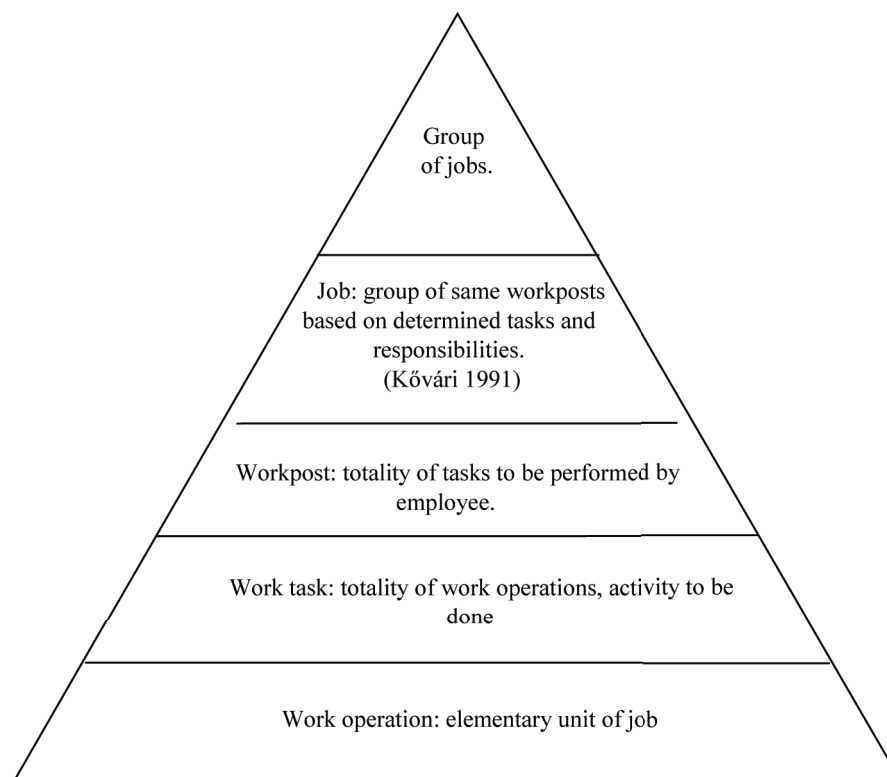

Figure 3. Pyramid of tasks (Tóthné, 2000).

Following the rules of document analysis (Kippendorf, 1995), we created 311 verb-noun pairs in the first round. They were 'raw' pairs. The main objectives at this stage were a high level of standardization and low information loss.

There are distinctions between main and other tasks/activities. As a result of that, three categories emerged:

- Main task/activity
- Additional activity
- Questionable, hard to categorize into the two above.

During a revision of the raw pairs, we combined the similar ones. It was quite challenging because sometimes the word-for-word identity still meant different tasks, while in other cases different words covered the same tasks depending on context. After combining them, we found that 226 noun-verb pairs are enough to describe logistics tasks.

Coding was carried out using the next categories:

Direction of related material flow

1. External relations
    10. External relations, direction cannot be identified
    11. Purchase (incoming)
    12. Sale (outgoing)
2. Transport
    20. Transport direction cannot be identified
    21. Inbound transport
    22. Outgoing transport
3. Inventory/warehousing
4. Production/transformation
    40. Production/transformation
    41. Handling/movement
    42. Transformation
5. Packaging
    50. Packaging in general, no specific information is available
    51. Packing
    52. Unpacking

Nature of activity: physical and/or mental
Content of flow: material and/or information

The competence database was set up with codes in the same way, but that analysis is out of the scope of this study.

Results of Research

During the analysis there were several methodological considerations such as the issue of representativeness of the statistical analyses. The used database cannot be considered as representative data source, so the results of the research are able to define the general thesis to the given sample group. This gives the opportunity for further research to develop the thesis based on a representative sample.

During the research we analysed the scope of work documents. Content analysis is a research technique which uses special applications and protocols to process the data. The aim of content analysis is to lead to new experiences and to forecast the observable which can help the decision making or to articulate the reality and to get results that can be used in practice as well.

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Tasks on Different Areas

The following organizational functions were identified:
- Trade – purchase,
- Transportation – material handling,
- Inventory,
- Sales,
- Company level/comprehensive logistics activities,
- SCM related functions.

Analyses were carried out on every area. However, given the large extent of the research findings, this article presents only the findings from the trade - purchase area.

87 noun-verb pairs were identified in the analysis of trade purchase jobs. 87% of total pairs suggest a large overlapping of tasks with other areas. 11 of those 87 appeared at least 20% in each job description. They can be seen as 'common' tasks/activities.

In the case of both verbs and nouns there are differences between 'key' and 'involved'. 'Key' noun and verb means that the word or its synonyms appeared in the document. 'Involved' means these verbs had different word forms, but the content was close. 'Key' can be seen as category. The logic is similar in the case of nouns and verbs. "Key noun' assigned to 'key verb" and is inherited. Based on this principle, one key verb and one key noun (as a pair) were determined for each group while there were many involved verb and noun pairs. The numbers in brackets show the position of the original (raw) verb-noun pair in the list. To make it clear, we can demonstrate by working through an example:

Key verbs: to identify, to make it identifiable. Related key nouns: product, part, material.

During the overview of the verb-noun pairs in the database we found a verb "to label" at position 32. Considering its content is 'making something identifiable' we have involved this verb under the key verb. Subsequently, it has brought its nouns 'material, goods, finished products' as involved nouns. There were more nouns for the verb 'to label' in job descriptions.

'Key' refers to the task when there is an explicit reference to it in the job description. They are regarded as important, characteristic, typical, main tasks. 'Involved' is the task, when there is a definite reference that they can be performed but not key tasks. 'General' is a task that has no reference for its importance. An example would be a simple task list where there is no distinction between tasks.

'Keeping contact with clients/colleagues/suppliers/haulers' appeared in 37.8% of total job descriptions, in trade-purchase job descriptions. Most frequently mentioned tasks in that area were:
- To keep contact with clients/colleagues/suppliers/haulers.
- To give information / providing data.
- To check activity/work/achievement/execution of tasks.
- To observe work, activity (for example material handling, packaging, loading).

'To keep contact with clients/colleagues/suppliers/haulers' as general task is present in 26.3 % of job descriptions. This proves the importance of communication, smooth and efficient information flow on this area.

Analyses of other areas were carried out in the same way.

Analysis of Specificities

Tasks which are present in at least 20 % of job descriptions from the point of view of specificity were examined.

There are three tasks which are in the jobs of all the four functional areas:
- 'To keep/to make them keep rules'
- 'To control work'
- 'To keep contact with clients'

Tasks which are present in three functional areas:
- 'To give information'
- 'To check activity'

Tasks which are present in two functional areas:
- 'To preserve/to keep in order/to use properly, to save; to preserve; to protect instruments/materials/goods conservation/building and equipment/stocks materials/products; company asset; materials, stocks ; property, asset'
- 'To ensure/to arrange; to pay attention to /to keep/to ensure/to care order in the warehouse, at the work area'
- 'To make identifiable/to identify/to label product, part, material, merchandise/finished good'
- 'To do other task/ ad hoc task/ what the superior orders him/her to do
- 'To do work/ tasks/activity'

Tasks that belong to only one area can be regarded as specific ones. In the case of trade-procurement they are the following:
- 'To control work, operation, activity, process, the completion of tasks, manufacturing, connection with contacts, loading; organization; planning; selection; traffic; transport, forwarding; production'
- 'To evaluate/to qualify; to operate work, activity, employee/supplier, performance, worker, offer, evaluation system'
- 'To provide to satisfy; to serve works, company, user, production, demands, order; works, orders; customers'
- 'To indicate/notify problem, extraordinary affair, mistake, deflection'

There are three tasks on transport- material handling area which occur in at least 20% of job descriptions:
- 'To answer for work, for tasks, for completion of work, for activity'
- 'To consider decision'
- 'To organize work, activity (e.g. warehousing, material supply activity, storing, transport, testing, transfer'

Following the logic above, tasks specific to warehousing:
- 'To check/verify; to monitor order, material, goods, finished goods, quality/ quantity etc.; condition of goods; cargo'
- 'To receive / to accept materials/goods, product, parts, bundle, tools, foreign goods, return goods, pallet, cargo'
- 'To participate/to take up in stock taking, on inventory stocks'

There was only one task that occurred only in the company's overall, comprehensive job description:
- 'To decide, to determine; to set up/to organize stocks, tasks, plans work, tasks

After the analysis of job descriptions we can conclude that the general task formulation is common.

Table 3 shows the result of the analysis. Researchers marked 'YES' where the task is required for certain field (appears at least in 20% of job descriptions related that area). /number tells the rank number in the terms of frequency in the area task list.

For example 'to consider decision' occurs in at least 20% of job descriptions related to

transport-material handling. Looking at the whole task list of transport-material handling 'to consider decision' can be seen in 9th position.

Table 3. Comparison of tasks.

Comparison							
Description of tasks and activities with noun-verb pairs	Comparison of the task demands appearance in at least 20% of job descriptions with the job description samples of the examined area						
	TRADE - PURCHASE	TRANSPORT – MATERIAL HANDLING	WAREHOUSING	COMPREHENSIVE LOGISTICS WITHIN THE COMPANY	number of functional areas related to tasks	Process oriented[1] goal oriented, task oriented, process oriented	Specialist - Generalist[2]
Key verbs	To keep/to make sure they are kept						
Verbs involved	To keep (14,15); to execute/to keep (302)						
Key nouns	regulations e.g. certificate discipline, quality regulations, instructions, safeguarding regulations, health protection rules, environment protection, security, certificate system, stock taking system, rules, cleaning system, description of instruments use, document handling rules, organizational and operational rules, statutory and other authority regulations, ISO standard requirements						
Nouns involved	Labour safety, fire safety, operation regulations; work order, work discipline; instructions, tasks						
	YES/3[3]	YES/1	YES/1	YES/4	4 / C		Á
Key verbs	To check						
Verbs involved	To check/verify (87,88,90, 94); to monitor (133)						
Key nouns	Order, material						
Nouns involved	Materials, goods, finished goods, quality/quantity etc.; condition of goods; cargo						
	NO	NO	YES/2	NO	1 / C		Á
Key verbs	To receive / to accept						
Verbs involved	To accept (140)						
Key nouns	Materials/goods, product, parts, bundle, tool, foreign goods, return goods, pallet						
Nouns involved	Cargo, goods						
	NO	NO	YES/3	NO	1 / F		Á
Key verbs	To preserve/to keep in order/to use properly						
Verbs involved	To save (224); to preserve(225); to protect (301)						
Key nouns	Instruments/materials/goods conservation/building and equipment/stocks						
Nouns involved	Materials/products; company asset; materials, stocks ; property, asset						
	NO	YES/3	YES/4	NO	2 / C		Á
Key verbs	To participate						
Verbs involved	To take up						
Key nouns	In stock taking, on inventory						

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Nouns involved	Stocks						
		NO	NO	YES/5	NO	$\frac{1}{F}$	S
Key verbs	To give						
Verbs involved	To supply (238)						
Key nouns	Information (to inform)						
Nouns involved	Data						
		YES/2	NO	YES/6	YES/6	$\frac{3}{F}$	Á
Key verbs	To control						
Verbs involved							
Key nouns	Work, operation, activity, process, the completion of tasks, manufacturing, contact keeping						
Nouns involved	Loading; organization; planning; selection; traffic; transport, forwarding; production						
		YES/8	YES/4	YES/8	YES/1	$\frac{4}{F}$	Á
Key verbs	To keep contact						
Verbs involved							
Key nouns	With customers/with colleagues/with suppliers/carriers						
Nouns involved							
		YES/1	YES/5	YES/9	YES/5	$\frac{4}{F}$	Á
Key verbs	To ensure						
Verbs involved	To arrange (272); to pay attention to /to keep/to ensure/to care (294)						
Key nouns	Order in the warehouse, at the work area						
Nouns involved	Warehouse; for order, for cleanness						
		NO	YES/6	YES/10	NO	$\frac{2}{C}$	Á
Key verbs	To make it ready for identification, to identify						
Verbs involved	To label (32)						
Key nouns	Product, parts, material						
Nouns involved	Materials; goods, material; finished product						
		YES/7	NO	NO	YES/2	$\frac{2}{C}$	Á
Key verbs	To do						
Verbs involved							
Key nouns	Work/ tasks/activity						
Nouns involved							
		NO	YES/7	NO	YES/3	$\frac{2}{C}$	Á
Key verbs	To decide						
Verbs involved	To decide (42); to determine (230); to set up/to organize (258)						
Key nouns	About stocks, tasks, plans						
Nouns involved	Work, tasks						
		NO	NO	NO	YES/7	$\frac{1}{F}$	Á
Key verbs	To do						

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Verbs involved						
Key nouns	Other task/ ad hoc task/ what the superior orders him/her to do					
Nouns involved						
		YES/6	NO	NO	YES/8	$\frac{2}{C}$ Á
Key verbs	To check/verify					
Verbs involved	To monitor (137)					
Key nouns	Activity/work/performance/the completion, execution of tasks					
Nouns involved	Work, activity; material handling; packaging; loading					
		YES/4	YES/2	NO	YES/9	$\frac{3}{F}$ Á
Key verbs	To answer					
Verbs involved						
Key nouns	For work, for tasks, for completion of work, for activity					
Nouns involved						
		NO	YES/8	NO	NO	$\frac{1}{C}$ Á
Key verbs	To consider					
Verbs involved						
Key nouns	Decision					
Nouns involved						
		NO	YES/9	NO	NO	$\frac{1}{C}$ Á
Key verbs	To organize					
Verbs involved	To organize(235)					
Key nouns	Work, activity (e.g. warehousing, material supply activity, storing, transport, testing)					
Nouns involved	Transfer					
		NO	YES/10	NO	NO	$\frac{1}{F}$ Á
Key verbs	To do					
Verbs involved	To inform (211)					
Key nouns	Improving suggestion (to improve/develop)					
Nouns involved	Critical remarks					
		YES/5	NO	NO	NO	$\frac{1}{F}$ Á
Key verbs	To control					
Verbs involved						
Key nouns	Work, operation, activity, process, completion of tasks, manufacturing, keeping contact					
Nouns involved	Loading; organization; planning ; selection; traffic; transfer, forwarding; production					
		YES/8	NO	NO	NO	$\frac{1}{F}$ Á
Key verbs	To evaluate/to qualify					
Verbs involved	To qualify (241); to operate (243)					
Key nouns	Work, activity, employee/supplier, performance, worker, offer					
Nouns involved	Evaluation system					
		YES/9	NO	NO	NO	$\frac{1}{F}$ Á

Key verbs	To provide					
Verbs involved	To satisfy (198); to serve (205, 206)					
Key nouns	Works, company, user, production					
Nouns involved	Demands, order; works, orders; customers					
		YES/10	NO	NO	NO	1 / C Á
Key verbs	To indicate/notify					
Verbs involved						
Key nouns	problem, extraordinary affair, mistake, deflection					
Nouns involved						
		YES/11	NO	NO	NO	1 / C Á

Analyses of other areas were carried out in the same way.

Discussion

During the analysis of the main characteristics and function specific task of the functional areas we are looking for the answers for the following yes or no questions:

- Is the logistical scope of work aim-, task- or process oriented according to the documentation?
- Is the phrasing in the logistics scope of work specialist or generalist (universal or general)?

Using qualitative approach, we classified the representative (at least 20%) tasks from the point of view orientation. Results show that about the half the representative tasks are goal/task oriented while the other half are process oriented.

Another observation is that there are general (universal) formulations in 90.5 % of total cases and only 9.5 % are area specific.

The task overlapping between areas can be seen in Table 4. It also suggests a low level of specialization.

Table 4. There is a significant common activity in the area of comprehensive logistics within the company and in the functional area of tradepurchase.

	Trade – purchase (%)	Transport – material handling (%)	Warehousing (%)	Comprehensive logistics within the company (%)
Trade - purchase	X	67.6	38.9	70.3
Transport – material handling	X	X	34.0	69.0
Warehousing	X	X	X	30.5
Comprehensive logistics within the company	X	X	X	X

The overlapping is the least (30.5%) between warehousing and comprehensive logistics activities. Next are warehousing – transport, material handling (34%), warehousing – trade, procurement (38.9%), transport, material handling - trade, procurement (67.6%), comprehensive logistics activities - transport, material handling (69%)

It seems that warehousing has the least similarities with others.

Conclusions

The results of this research contain originality both in the experimental and theoretical professionals. These results can be used both in practice and both theoretically. As a result of this research we have an objective picture of the scope of works in logistics which are based on empirical results, which is supplementary to the specialized literature.

An important result of the research is the research input-output multidimensional data model (Figure 1; Pató, 2014a), which can be useful in other researches, to relationship account, exploration and introduction.

In the same time it is possible to articulate recommendations about the logistical scope of works according to the results of the research focusing on task-activity. The results of the research are recommended to use according to the aims of the organization and the possibilities. In the same time the results can be used not only in the work but in the education as well, according to for what they should prepare, and to make able the future's logistical employees.

The researchers are planning the repetition of the research focusing on how the logistical scope of work fields and task requirements are changing i.e. what tendency can be seen in the task's changing, varying, transformation.

The empirical research pointed out some characteristics of jobs on logistics. There are large overlaps in task requirements between areas. This suggests that people's multifunctionality is important. Results can be utilized in training and staffing. It seems that logistics students in different educational systems have to get more general knowledge and competencies. To become a specialist might happen at the employer and can be only temporarily. This allows flexibility in the labour market.

It is important to maintain an optimal ratio of these for an employer too. They are suggested to have efficient specialists and generalists who have the overview of the whole system and in the case of necessity they can substitute or can become specialists.

If the professionals have the correct information about the requirements then according to this research with accurate scope of work documentation the organizations can get a real competitive advantage.

Footnotes

1   „C" indicates the goal-task oriented approach, „F" indicates the process oriented approach in the chart.
2   „S" indicates the special task definition mode, „Á" indicates the general (universalist, generalist) definition mode.
3   „/" mark after „YES" indicates, where the examined task-activity in the given functional area task-list appears, i.e. the significance of its existence.

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Beáta Sz. G., Pató	PhD., Associate Professor, University of Pannonia, Egyetem u. 10, 8200 Veszprém, Hungary. E-mail: patog@vnet.hu Website: http://www.gtk.uni-pannon.hu
Zoltán Kovács	Professor, University of Pannonia, Institute of Management, Department of Supply Chain Management, Egyetem u. 10, Veszprém, 8200, Hungary. E-mail: kovacsz@gtk.uni-pannon.hu
László Szabó	Assistant, University of Pannonia, Hungary. E-mail: szabo.laszlo@uni-pen.hu