

The Model of Modern Managerial Skills – an Overview of Selected Procedures for Identifying Managerial Skills over the years 2000-2015

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Abstract

Aim: The main aim of the paper is to present the IO-KM model of individual personality-based skills of managers on the basis of practical experiences stemming from procedures for identifying managerial potential over the period of 2000-2015, as well as conceptual and theoretical output on this subject. The authors focus on devising a model of individual managerial skills produced by such factors as personality and temperament determinants, intellect, intelligence and the context of work situation. Among the secondary aims, one should mention an attempt at shedding more light on the categories involving “skills” and “competencies,” including an attempt made at their systematization, as well as presenting experiences in diagnosing managerial skills in selection procedures.

Research method: The conceptualization of such categories as “skills”, “competencies”, “director” and “manager” was developed on the basis of the analysis of selected literature. The overview of certain recruitment and selection procedures covered only those studies which kept a complete diagnostic documentation. In the systematization of managerial skills, what was applied were the models of desired managerial skills used in diagnostic research, and the frequency of specific personality components of managerial skills. This provided basis for dividing the skills into individual and group skills against the background of a broader skill model “4-KM”. Here a deductive approach was applied. In presenting the discussion, tabular and graphic forms were used.

Findings: The categories including “skills”, “competencies” as well as the specificity of work performed by a “director” and “manager” may be interpreted ambiguously and be in the need of systematization. The discrepancies within this area arise from different positions and opinions espoused in theoretical works as well as in the management practice. The review of the methods used for distinguishing and identifying specific managerial skills reveals certain irregularities. It would be advisable to take them into account while building a model of managerial skills. The analysis of theoretical and practical achievements shows that what is needed is to make a distinction between individual and group managerial skills. In the authors’ view, it is feasible and desirable to build so called detailed module-based models. On the basis of theoretical and practical achievements, the IO-KM model of individual managerial personality-based skills was proposed which was set against the background of personality and temperament determinants, intelligence and intellect, as well as the context of work environment. Moreover, a comprehensive model of perception of managerial skills “4-KM” was proposed. The solutions thus presented require that basic and in-depth qualitative and quantitative studies be conducted.

Originality / value of the paper: The paper contains a review of different positions and interpretations as regards skills and competencies, and the authors’ own proposal within this area. The material, which draws on selected 20 procedures designed to assess managerial potential carried out between 2000-2015, may prove interesting and useful. Of a particular interest is the analysis concerned with how frequently specific components of skills are identified and applied in the assessment of candidates. This was the basis on which a comprehensive model of

managerial skills was proposed, as well as the structure of the first of its components – i.e. the IO-KM model of individual personal managerial skills. A detailed investigation and proposals in this respect were combined with Anna Matczak's general model of social competencies, while seeking to ensure consistency in the perception and examination of managerial skills.

Research implications: The comparison of the findings obtained from the review of 20 selection and recruitment procedures may represent a suitable point of reference for a variety of empirical, psychometric and conceptual studies on the issues surrounding worker skills. The comparisons and models demonstrated constitute a convenient conceptual and information framework for conducting in-depth research, for instance, in the field of executive and leadership skills, with such research already being carried out by the authors of this paper. The model proposal presented in the paper still requires to be further verified through the application of quantitative and qualitative tests.

Limitations of the research: Within the empirical scope, the research used only 20 selected procedures for identifying managerial potential with a considerable focus given to desirable skills used in the evaluation of candidates. That is why the proposals presented are in their nature open, arbitrary, still requiring a number of empirical, statistical and psychometric tests. The model proposed and its components need to be verified quantitatively, too.

Key words: *skills, competence, manager, supervisor, managerial potential, the procedure of managerial potential recognition, model of managerial skills.*

JEL: M12, M51.

1. Introduction

The key issues of contemporary human resources management include shaping, identifying, improving and using effectively the potential of employees. A particular importance is attributed in this respect to managerial staff, since it exerts an immense influence on the functioning and effectiveness of the entire organization. The interests in managerial skills require involvement and cooperation of those who represent theory and practice. With the interdisciplinary nature of the issues surrounding managerial potential and multifaceted research perspectives applied within these issues, close collaboration between representatives of various academic disciplines (economists, psychologists, sociologists, statisticians and others) is needed. What is important in this context is for good practices and concepts to be sorted out, systematized and disseminated. At the same time it is advisable to ensure greater consistency between theoretical and practical achievements. The subject of the paper are personal managerial skills perceived from the perspective of the procedures for evaluating managers over the period of 2000-2015. Within the empirical material collected, the authors concentrated on the analysis of the components which make up personal skills used in candidates' self-assessment, which was also the basis for an attempt at systematizing the skills in question.

The primary objective of the paper is to propose the IO-KM model of individual managerial skills which are personal in character. In the study, a deductive approach was used in that one's own interests were set against the general and available models of social competencies so as to

ensure the coherence of one’s proposals. This is the reason why the research includes personality and temperament determinants, intellect, intelligence and the context of work situation. Among the secondary objectives of the paper, one could mention shedding more light on various opinions pertaining to the interpretation of skills and competencies, as well as an attempt at their systematization. The authors’ intention was also to demonstrate experiences within the scope of the identification of managerial potential in a broader temporal perspective.

2. Conceptualization of the categories of “skills” and “competencies”

In order to achieve a better clarity of the discussion, it is worth starting with the interpretation of the category of skills and competencies, given that the opinions tend to be considerably diverse and different, both in theory and in practice. These doubts refer predominantly to the dilemma whether competencies should be associated with the components of knowledge, skills and experience, or rather with duties, powers and responsibilities. Table 1 presents examples which illustrate the confusion when it comes to interpreting the issues outlined.

Table 1. Examples of selected situations described using the “competence” category

| No. | Formulation | The meaning presumed from the context of the “competence” category |
|-----|--|--|
| 1. | Does the employee have competencies/adequate competencies? | A question referring to the level of employee’s knowledge, skills and experience. |
| 2. | Competence regulation | It pertains to sorting out duties, powers and responsibilities, as well as to modeling and sorting out desirable components of knowledge, skills and experience |
| 3. | An employee with no competencies | It can refer to employee’s duties, powers and responsibilities, as well as to the elements of his knowledge, skills and experience |
| 4. | Delegation of competencies | It implies a process of delegating duties, powers and responsibility (one cannot reallocate knowledge, skills and experiences) |
| 5. | A competent/ incompetent employee | Evaluation of the components of employee’s knowledge, skills and experience |
| 6. | Extension of the scope of competences | In terms of the meaning, it is similar to the situation in which competences are delegated, and as such to extending the scope of duties, powers and responsibility |
| 7. | Development of competencies | It pertains to improvement of components of knowledge, skills and experience |
| 8. | Verification of social competencies | Testing employee’s actual social competencies – most frequently while comparing them to the desirable competencies |
| 9. | The employee exceeded his competences | It means that an employee went beyond the scope of his duties, powers and responsibility |
| 10. | Social competencies | A set of parameters of knowledge, skills and experience pertaining to one’s functioning among people and requiring involvement of other persons. These can also be parameters of |

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| | | knowledge, skills and experience pertaining to the level of familiarity with rules, principles, guidelines and procedures of conduct in various social situations (e.g. being cognizant of ethical and moral conduct in relation to other people) |
| 11. | Updating competencies/ rendering competencies obsolete | Processes associated in general with components of knowledge, skills and experience |

Source: self-reported data.

The confusion in terms of interpretation of concepts is aptly illustrated by a situation in which one wants to include two different aspects in one sentence – e.g. “an employee has competence but he does not have competency” (i.e. an employee has adequate knowledge, skills and experience but he has no duties, powers and responsibility in a particular situation). Academic works do not resolve these issues unambiguously. This is further evidenced by the various interpretations of skills and competencies which one can come across in domestic publications. Bujacz characterizes competencies as “relatively permanent traits” (Bujacz, 2009), while Bagieńska suggests that the employee’s skills involve “his education and professional seniority”, while a competence implies “a combination of one’s command of knowledge in a given area (I know what), skills (I know how and I can do it), attitudes (I want to and I am ready to use my knowledge), and also personality traits” (Bagieńska, 2013). Other Polish scholars as, for instance, Orczyk (2009) Siciński (2003) or Żukowska (2011), have sought to analyze and further define these two constructs by drawing on the Latin root of the terms or a Polish language dictionary. As a result the first of the authors mentioned, defines professional skills as “some more or less identified potential” comprised of “an individual arrangement of knowledge, skills and attitudes which determine the performance of specific professional tasks” developed “through a changing configuration of such factors as: the level of general and vocational education, seniority and psychophysical characteristics”. According to Orczyk, professional skills “are certain more or less measurable traits reflecting the past of a particular person”. Moreover, competencies result from skills; however, they have a different scope in that they specify the way skills will be used to take purposeful and efficient actions. They may be comprised of such characteristics as “personality, including, in particular, motivations, as well as the responsibility for the implementation of specific tasks in compliance with accepted standards or with an agreement”. In an international publication edited by Witkowski, Timothy and Billsberry use the term “worker skills” in the context of the quality of work performed by the employees of an agency providing recruitment consultancy services and its application of psychological tests, while with respect to the issues of decision-making by firms which select and choose suitable method of selection, the term “transfer of competencies”

was used (Witkowski, ed. 2007). In the papers by Bednarczyk, Woźniak and Kwiatkowski dedicated to domestic standards of occupational skills, the definition of the standard of skills was accepted as the “standard for minimum skill requirements according to five skill levels, with the breakdown of skills into those related to typical work positions or tasks, transversal skills, general skills, basic and occupation-specific skills, describing the sets of indispensable abilities, information and psychophysical characteristics corresponding to occupational tasks and skills distinctive for a particular profession and ensuring the quality of the job performed” (Kwiatkowski, Woźniak 2003; Bednarczyk et al. 2007). Moreover, Moczydłowska refers to the fact of skills being identified with competencies and to their interchangeable use. The author has noted that over the last years competencies have been and continue to be associated with “a particular person’s formal right to make decisions, take a stand in some matters on behalf of the organization,” while the term “skills” is mainly considered in terms of “quality, efficiency and effectiveness of professional work,” which are mainly defined “based on one’s formal education, knowledge and abilities” (Moczydłowska, 2008). The researcher emphasizes that the way of understanding skills and competencies has nowadays been changing and expanding, which has contributed to the blurring of boundaries when it comes to the conceptualization of those categories. As one of the reason of this development the author indicates the significant changes on the labor market linked to the shift in the orientation towards intellectual work in relation to routine manual jobs. In another section of the publication, the author observes, however, that despite the disparities in the ways these two terms are defined and further specified, in some situations (e.g. the fact of receiving a school diploma is perceived as being given formal skills) the positions of many scholars appear to be very similar. Żukowska and Stańczyk (2013) have carried out an in-depth review and presentation of the category of competencies.

As Żukowska shows in her publication, OECD – Organization for Economic Co-operation and Development sees key competencies as abilities of which paramount for every job position are the following ones: to cooperate with others, to use information technology and communication, to manage problems, to listen actively to others, to search for and use information, and further to that, synthetic reasoning, a skillful approach to uncertain and complicated situations and self-management, as well as self-assessment of work.¹ Further on in her publication, the author, while referring to other scholars’ works, differentiates between

¹ OECD in Poland modified this list and proposed a set of five key competencies: planning, organizing and evaluating one’s learning, effective communication, smooth team harmonization, solving problems creatively and digital literacy.

occupational skills (“[...] a set of behaviors, attitudes, psycho-physical skills, that is to say, both practical and mental skills which allow for performing tasks in a specific job [...]”) and a broader term of worker skills (encompassing occupational skills, moral and social skills and health skills). The broader scope of worker skills has been justified in that it is possible that there are worker skills in a variety of professions which are not classified as any occupation. Among characteristic relationships between skills and abilities, the author, making references to the works by Kordel, Kornecki and Kowalczyk, has indicated the following: occupational-specialist skills (abilities, activity, being ready to choose one’s career path, learning a vocation followed by further education), skills relating to changes unfolding in a profession (being prepared to adjust, being active at the job, at roles), skills related to worker participation – the ability and willingness to cooperate to shape the structure of one’s work (Kordel et al. 2003; after: Żukowska, 2011). Moreover, the following key competencies sought by enterprises have been listed: communication skills, servicing IT programs, specialist knowledge, availability, driving license, professional education and the ability to work in a team. The competencies of lesser importance have been indicated as follows: acting autonomously, negotiations skills and foreign languages (according to Żukowska, based on the analysis of literature and market reports). In one of Armstrong’s most recent papers there is a division into personal competencies and those of the enterprise (Armstrong, 2011). The personal competencies refer to worker skills in a broad sense (formal, professional, personal or managerial), while the competencies of the enterprise include relatively fixed and general qualities of the entire company which are considered to be its specific strategic resources, distinguishing the company from other companies in its environment (e.g. organizational systems and management methods, sales and/or production network, organizational culture, quality management certificates which the company holds, etc.). Armstrong’s proposals could be complemented by functional competencies. They are associated with the way of arranging and separating the scopes of activity and responsibilities as regards ring-fenced organizational entities of firm (the scope and level of organizational specialization, the scope of duties, powers and responsibility, the scope of business, the competencies tables, etc.). Other interpretations as to the issue discussed are included in Table 2.

Table 2. The comparison of selected approaches to the term “competencies” in scholarly literature

| No | Authors and entities characterizing the “competence” category | The characteristics of the “competence” category |
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| 1. | Boyatzis | Man's potential leading to behavior that is attributable to meeting the requirements imposed by a particular work position within the parameters of the organization's environment, which in turn yields expected results. |
| 2. | Chępa | The scope of organizational powers which have been formally ascribed to a specific job. |
| 3. | Czerpaniak-Walczak | Demonstration of adequate behavior skills which are expected by society and in accordance with social norms, and are accompanied by the awareness as to the consequences of this behavior, and, in particular, taking responsibility for those skills. |
| 4. | Dubois, Rothwell | A set of elements allowing one to obtain desirable outcomes in private and occupational dimensions. An individual's qualities which he uses in a suitable and consistent way in order to achieve expected results. These traits include; knowledge, skills, certain aspects of self-perception, social behaviors, character traits, thinking patterns, attitude and the way of thinking, feeling and acting. |
| 5. | Dudzikowa | The ability to realize tasks which is produced by skills, consciousness and belief in one's possibilities and efficiency. |
| 6. | Dulewicz ; Higgs | An employee's personal traits linked to positive results of the organization. There are four classes of competencies – intellectual, interpersonal, competencies based on the capability to adapt and those orientated towards results. |
| 7. | Dylak | One's immensely complex disposition, which is the resultant of one's knowledge, skills, attitudes, motivations, emotions and priorities. |
| 8. | Furmanek | Competencies are gradual, they allow for performing tasks at a level required, they vary in their content-based scope. Constructed sets of competencies allow for reflecting the level of one's preparedness in the job he performs. |
| 9. | Król | Predisposition in terms of knowledge, skills and attitudes which ensure performance of professional tasks at an efficient and (or) distinguished level, in line with the standards set for a particular job by the organization. |
| 10. | Lévy-Leboyer | A set of qualities – values, knowledge, standards, abilities, motives, personal image and ethics. |
| 11. | Manpower Services Commission | Professional competencies represent the ability to perform tasks within one's occupation to the standards expected in a given position. |
| 12. | Mansfield | A set of an individual's qualities which determine whether he achieves good or above average results. |
| 13. | McClelland | The evaluation based on the analysis of key aspects of an individual's behavior, which determine whether his actions are more or less effective. |
| 14. | National Council for Vocational Qualifications | Occupational competencies are predispositions to perform the functions in work or tasks coincident with the requirements of a particular job. One can distinguish here key competences – a set of crucial competencies without which other competencies cannot be developed. |
| 15. | Oleksyn | Inner motivation, abilities and predispositions, education, knowledge, experience and practical skills, health and condition, other psychophysical characteristics which are important from the perspective of work processes, attitude and behavior expected in the workplace, as well as formal authorization to act. |
| 16. | Sloman | The ability to perform activities within an occupation, seeking to achieve the levels expected from the employed. |
| 17. | Stech | Competencies are of personal scope in their nature. Their social and material scope is not extensive. Competencies show to what they are related and to whom addressed; they can be acquired during the process of learning and through experience, usually in the context that is typical |

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| | | for a particular field. Competencies are dynamic and they evolve over time. Competencies can be transferred to other areas. |
| 18. | Thierry; Sauret | Worker's ability to act which results in the achievement of the intended target using specific resources in particular circumstances |
| 19. | Turner; Möller | Personal competencies: knowledge, abilities, experience, personality. Personal competencies can rotate together with worker. Corporate competencies are integrally linked to organization and work process, and not to workers themselves. Corporate competencies will always stay in the firm. |
| 20. | Winterton; Deist; Stringfellow | All qualities which worker has and acquires and which enable him to be successful through organization. |

Source: Żukowska (2011).

The above considerations prompt the authors to draw several conclusions. Firstly, the researchers' positions presented and referring to the terms of skills and competencies seem to be significantly differentiated, inconsistent and in some cases even contradictory. The authors believe that a relatively clear approach would be to associate competencies with duties, powers and responsibility, while skills with knowledge, abilities and experience. Secondly, even the acceptance of the mentioned interpretation does not solve the problem, considering that there is a variety of specific issues which may raise doubts and require additional explanations. Here are some of them:

- How to systematize skills (personal, social, occupational, formal, real, anti-skills and others?)
- What are the interdependencies between occupational, worker and organizational competencies/ skills
- Should (worker) predispositions be conceived of in the same way as (worker) skills ?
- What are the correlations between skills / competencies and efficiency?
- How exactly should one understand the context of skills/competencies related to the changeability of occupations and skills/competencies linked to the changeability in an occupation? What interdependencies and links exist between these areas?
- Where should one allocate the specific group of some natural abilities and predispositions, such as talents?
- What is the controllability of employees' skills, that is, the possibility of their fast improvement?

The above issues naturally go far beyond the scope of this paper, yet they represent an open field for potential discussions and scholarly investigation on the concepts of skills and competencies. Thirdly, if one were to assume that skills are different from

competencies, then what are the relationships between those concepts (positive and negative)? Which of them are original and which are secondary? This could be considerably relevant for modeling desirable skills. Fourthly, assuming there may be a difference between competencies and skills and the classifications related to them, there immediately arise a number of questions as to the method of their measurement and assessment, as well as the evaluation of their usefulness. Fifthly, is it possible to identify a relatively universal set of the components of skills? Is it possible to indicate a universal single list of skills and/or competencies? Or should one rather attempt at building module-based lists which ensure a greater flexibility in terms of making a choice in a particular situation? Yet another problem are the diverse interpretations of specific components of skills (also in module arrangements) or determining their ranks.

Sixthly, whatever the way adopted for understanding skills or competencies, what is still valid are the questions which refer to the determinants of desirable skills in terms of such factors as, e.g. organizational climate, organizational culture, the political situation in the country and the region, etc.

Considering the various standpoints in science and common language, the authors apply the term **employee skills** to personal competencies broken down into **formal skills** (documented) and **real skills** which are comprised of occupational skills (knowledge, abilities and experience) and personality-based skills (traits, predispositions, socio-psychological abilities and other). Moreover, the authors assume that the category of employee competencies refers to the scope of duties, powers and responsibility. We propose to apply a similar principle with respect to singling out and understanding **leadership skills and competencies**, as well as **managerial skills and competencies**.

3. Conceptualization of the category of “manager” and “director”

In the light of the subject of the paper, the categories of “manager” and “director” need to be further specified. Some scholars, e.g. Tomaszuk or Ornatowicz highlight “diverse meaning of the former of these categories, both in colloquial language and in management literature” (Tomaszuk 2013; Ornatowicz 2008). The context of manager can be very broad and, according to the above researchers, refers to persons managing an organization or its ring-fenced unit irrespective of the organizational level they occupy – as such it refers both to director and executives of various levels. According to Drucker, persons who manage work of others and who are superiors to other employees can be managers – if viewed like this, foremen or heads of offices can also be managers (Drucker, 1994a, 1994b; after Tomaszuk, 2013).

Steinmann and Schreyögg (2001) speak here in a similar vein. Other scholars, like Griffin or Stoner, tend to stress more clearly the management context in the conceptualization of “manager”, in that they note that “the basic purpose of management is to carry out the management process – a set of activities to combine human, financial, physical and information resources efficiently and effectively and to work toward achieving the goals set by organization”. (Griffin 1996, after Tomaszuk ,2013). According to Stoner et al. the manager is responsible for managing activities leading to achieving the goals of the organization and is appointed to management (developing the organization consciously and continually), regardless of the place in the organizational structure (Stoner et al. 1998, after: Tomaszuk, 2013). Kisielnicki in *Business Encyclopedia* (Pomykało, 1995), Penc in *Business Lexicon* (Penc 2000, 2001) adopt a similar perception of the manager. Penc associates the manager with “every person who is responsible in the firm for carrying out the role of management – a person who plans, makes decisions, organizes, motivates people and controls the use of resources and outcomes achieved” (Penc 2007). Also other scholars, such as Doktor (1998), Karpowicz (2003), Szaban (2000) or Kostera (1996) associate the role of the manager with carrying out management activities and processes at every level. Listwan, on the other hand, stresses the context of leading people, defining managers as “all employees who take on the role of supervisors – from master to chairman, who are responsible for shaping and coordinating other employees’ work” (Listwan, 1995). Moreover, Polish scholar Gościński notes that “in the practice of Western managers of lower levels engaged largely in activities involving the supervision of management activities are also referred to as managers in Poland, while in Western countries they are not classified as management staff, and the term that is applied to them is ‘supervisor’ instead of ‘manager’ (Secomski, ed. 1974). A different and a narrower way of conceiving of the category of “manager” (referring predominantly to top management or the board) can be found in Chandler’s works (Chandler Jr. 1997), Šmid (2000), or Tudrej (1986, 1998). Moreover, this approach existed in Poland under the former socio-economic system, where “managerial staff” was often associated with the board of directors – e.g. in *Organization and Management Encyclopedia* from 1982 (Pasieczny, ed. 1982) “managerism” was defined as “a system of performing the role of top management in a capitalist enterprise by a professional manager with the system being accompanied by management theory and ideology”. (Pasieczny, ed. 1982). In the later version of the encyclopedia, the term “manager” was characterized as someone who was a member of top management responsible for general management of an organization: he determines operational policy and manages interactions between the organization and its environment” (Kalisiewicz, ed. 1996).

The examples referring to the “manager” category show a diverse range of exerting influence on people – starting from a situation in which a particular person, who is a manager, may have no influence on people at all, to performing management functions (planning, organizing, motivating, without controlling), as well as co-participating in pursuing tasks, aims and objectives of the organization to situations where the manager belongs to the board of directors. In analyzing Polish achievements in this field, what becomes particularly visible is that initially the category in question tended to be associated with the board of directors (in the 1980s and 1990s), and later on, executives of middle and lower levels were also included in this category. Of significance is also the tendency to “overuse” the manager category. In common language, one can come across situations today in which the previous positions of specialists are being replaced by the “manager” category (training specialist – training manager; development specialist – development manager, etc.). On the other hand, such terms as “director” or “chief” still exist, being well-established in scholarly work and enjoying a wide-spread use. Thus, the present authors believe that it seems well-advised to adopt also in this case the conventional way of perceiving these categories while indicating factors which make them to a certain extent different – see Table 3.

Table 3. The adopted way of perceiving the manager category compared to similar categories

| No. | Category | Adopted interpretation |
|-----|----------|---|
| 1. | Director | The visibility of influence on people, coordination of human resources work, a distinctive superior-subordinate arrangement, most frequently formalized |
| 2. | Chief | A strong influence on people and exerting impact based on one’s personal and temperamental traits within work and non-work areas; it need not be of a formal nature |
| 3. | Leader | He has a formal or informal higher status in relation to other fellow workers, he represents a group of employees; he can be one of the employees who achieves better performance, or he can have real authority. |
| 4. | Manager | Implementing tasks specific for a particular area. Managing a group of objects, tasks, projects or processes; a less visible impact on human resources. |

Source: self-reported data.

Further on in the paper, the authors concentrate on managers associated first and foremost with the context of management. **Managerial skills** are therefore associated with those components of workforce capacity which determine smooth implementation of tasks and goals of the organization, while also finding their reflection in efficiency and effectiveness

within the scope of the job itself, as well as planning, organizing and controlling processes. In some instances manager may have the capacity of “using” human resources, yet it is more of a complementary rather than leading nature. By inference, every director is simultaneously a manager, while the manager starts playing the role of a director when he exerts impact on people, especially when motivating them (using a variety of incentives) becomes an important factor in terms of determining the implementation of goals and tasks set. The issue surrounding the executive and leadership skills appears equally valid; however, it exceeds the topic of this paper.

4. Managerial skills in the light of the procedures of managerial potential diagnosis over the years 2000-2015

In developing the model of personal managerial skills the records of 20 procedures applied in the assessment of candidates for managerial positions were used over the years 2000-2015². The methodology of the assessment was very similar and each time it began with identifying the organizational position examined – first in terms of competencies (the scope of duties, power and responsibility), and then in terms of skills required, which were broken down into formal, professional and personal skills. In diagnosing personality potential self-assessment was employed which was convergent with the components of the skills required. This work was carried out together with the client’s representatives. The list of work positions examined contains Table 4. All the selected procedures referred in fact to managerial positions, in line with the interpretation adopted earlier, with the positions varying in terms of job content and the level of management. In addition, the individual projects were marked with letter symbols, which was later used in the subsequent tabulated comparisons. Considering the subject of the paper, the authors focused on modeling and diagnosing personality skills. In total, 31 various components of personal skills were identified within all the procedures selected, with the skills being then compared and interpreted in Table 5. During the procedures aimed at measuring managerial potential over the period of 2000-2015 diverse methods were used for measuring personality-based skills: psychometric questionnaires, self-assessment questionnaires, observations, interviews, decision-making simulations and exercises, as well as business games. The list illustrating these methods is included in Annex 1.

² Most of the procedures were conducted by St. Witkowski (current Vice-Chairman of the Polish Association of Organizational Psychology) and by Wł. Wudarzewski, with G. Wudarzewski joining the diagnostic works in recent years.

Table 4. The list of selected projects within the area of recruitment, open competition and managerial potential identification

| No. | The project symbol | The name of the institution where the procedure of assessing candidates' skills was carried out | The position examined |
|-----|--------------------|---|---|
| 1. | (A) | Dijo Sp. z o.o. | Chief Accountant |
| 2. | (B) | Elektrownia Bełchatów S.A. | Middle executives |
| 3. | (C) | Góraźdze Cement S.A. | Controlling Specialists |
| 4. | (D) | Hutmen S.A. | Executive of the Center |
| 5. | (E) | Uni-truck Sp. z o.o. | Technical Director |
| 6. | (F) | Dolnośląskie Centrum Hurtu Rolno-Spożywczego S.A. | Members of the Board |
| 7. | (G) | Legmet Sp. z o.o. | Director of Recycling Facility and Specialized Services |
| 8. | (H) | Marczenko K.R., Sp. j. | Sales and Marketing Director |
| 9. | (I) | Marczenko K.R., Sp. j. | Production Director |
| 10. | (J) | Nationwide S.A. | Identification of managerial potential (middle executives) |
| 11. | (K) | Polifarb Wrocław S.A. | Head of Marketing |
| 12. | (L) | Góraźdze Cement S.A. | Chief Accountant |
| 13. | (M) | Góraźdze Beton Sp. z o.o. | Regional Director |
| 14. | (N) | Góraźdze Cement S.A. | Senior Financial Management Specialist |
| 15. | (O) | Góraźdze Cement S.A. | Asisstant to Director |
| 16. | (P) | Teco Sp. z o.o. | Identification of managerial potential (employees) |
| 17. | (R) | Jarocińskie Fabryki Mebli S.A. | Identification of managerial potential (stand-by executive staff) |
| 18. | (S) | Polar S.A. | Open competition for Head of Production |
| 19. | (T) | Przedsiębiorstwo Wodociągów i Kanalizacji Sp. z o.o. w Rybniku | Employees of the Waste Water Treatment Department |
| 20. | (U) | Zakłady Elektrotechniki Motoryzacyjnej Z.E.M. Duszniki Sp. z o.o. | Production Foremen |

Source: self-reported data based on analytical documentation and reports pertaining to the procedures for managerial potential diagnosis by St. Witkowski, W. Wudarzewski and G. Wudarzewski.

Table 5. The list of personal skills used in the diagnosed procedures

| No. | Personal skill | Skill characteristics |
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| | | |
|-----|--|---|
| 1. | Assertiveness with others | The willingness to present overtly one's subjective position and assessment, the willingness to resist and press ahead with one's own solutions, the willingness to confront other people's view and rationale behind it, open criticism, the ability to defend and justify one's own stand, relative emotional independence of other people's judgments. |
| 2. | Sound emotional functioning | Resistance to stress, emotional composure and self-control, the ability to control one's emotions allowing one to exert neutral or positive emotional influence on others (arousing no negative emotions), adequate or neutral response when facing failure, management of emotions in difficult situations, neutrality, composure and objectivity in situations causing strong, either positive or negative emotions, in others. |
| 3. | Flexible behaviors | The ability to adapt quickly and smoothly to current circumstances and determinants; the ability to shift quickly between the ways of analyzing, perceiving and thinking (e.g. from an analytical to a global approach, from to short-term to long-term thinking); the willingness to change one's attitudes and approaches depending on circumstances, th willingness to change one's own point of view. |
| 4. | Energetic behavior | Responding and functioning dynamically in the situations of "constant, continuous movement"; quick response in the manual and temporal context as well as that of physical fitness; a tendency to make decisions taken immediately operational |
| 5. | Conceptual functioning | The ability to discern multidimensionality and complexity of problems, the propensity to reflect on before acting, the propensity to "restrain" oneself and to think things over rather than begin a task immediately. |
| 6. | The willingness to improve one's skills | The willingness to change and improve one's skills, "entering" quickly new areas of knowledge, which results from having a constructive attitude. |
| 7. | Inspiring others | Influencing others skillfully so that they would perform targets and tasks of the organization |
| 8. | Social communication (simplicity and clarity) | Using a simple and clear language in interpersonal communication, being able to predict the effects of messages communicated |
| 9. | Sociability | Being sociable, maintaining good relationships with others, the ability to initiate, conduct and maintain topic-based and social discussion |
| 10. | Creativity | Inventiveness; the propensity to generate quantitatively or/and qualitatively new solutions; intuition and imagination in relation to possible solutions and outcomes; the ability to put together various elements constituting larger wholes; an inquiring mind for identifying and solving problems; a constructive attitude towards solving problems. |
| 11. | Loyalty to the employer | Credibility, the ability to be perceived as a person who is reliable and trustworthy, honest in relation to superiors, showing genuine concern and goodwill |
| 12. | Analytical thinking | Operational, detailed, snapshot and insightful thinking |
| 13. | Global thinking | High predictability of final outcomes; identifying and analyzing key and strategic parameters; making connections between bigger wholes |
| 14. | Being people oriented at professional work | Development of interpersonal relationships with others through establishing contacts and using them effectively while implementing tasks |
| 15. | Autonomous work oriented | The willingness to correct and adjust with respect to action on one's own initiative; the willingness to work out an independent position |
| 16. | Task oriented | Being consistent and self-motivating while implementing plans, goals and targets; aspiring to achieve high performance |
| 17. | Perfectionism | Ensuring that tasks are implemented in a timely, thorough and reliable manner |
| 18. | Intellectual potential | The parameters of intellect, of intelligence quotient |
| 19. | Organizational roles that are preferred in team work | The strongest and weakest preferences in terms of playing organizational roles to be diagnosed |

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| | | |
|-----|---|---|
| 20. | Selective thinking | The ability to identify quickly crucial factors of task implementation which decide whether it will be a success or a failure; “capturing” the most important elements from the overall context. |
| 21. | Decisive behavior | Self-confidence and decisiveness (also in situations when one has only partial information and knowledge); the willingness to put pressure on others so as to “move the situation forward”, to solve the problem, or to accelerate actions; alleged or real confidence as to the content accuracy of the decision which was made over a short period of time. |
| 22. | Management style | Theoretically and conceptually optimal and expected arrangement of the preference intensity in relation to individual styles and ways of behavior and executive response; in relation to assessment criteria and determinants of organizational climate and culture. |
| 23. | Didactic skills at professional work | Abilities and traits that can be used in the adaptation stage of new employees (guardian, moderator, consultant, coach) |
| 24. | Organizational skills | Implementation of tasks according to adopted arrangements and timeframes; selective thinking; translating plans into systematic and consistent activities; the willingness to deal with problems; the willingness to be involved; striving for thorough and precise implementation of tasks |
| 25. | Negotiation skills | Being constructive and optimistic while acting; openness to people and the ability to discern positive aspects in others; ensuring that harmonious interpersonal relationships develop with other people through networking, maintaining networking and using it as help at occupational work |
| 26. | Ability to resolve conflicts (mediation skills) | An open attitude towards other people; the ability to listen to their needs and expectations; being open to constructive criticism and suggestions. |
| 27. | Ability to cooperate with others | The willingness to play down one’s position so as to benefit team work; responsibility for a group process; getting involved in a joint effort. Seeking to have harmonious contacts with other people; avoiding conflicts and tension. A friendly attitude towards others. |
| 28. | The ability to influence others | The ability to persuade others to one’s own solutions and to change one’s mind; the ability to manipulate; the willingness to push one’s own solutions; relative emotional independence of other people’s judgments. |
| 29. | Economic sensibility | Economic intuition |
| 30. | Working with people of different ages | The ability to adjust one’s language to the level of addressees; the ability to listen to others; tolerance for otherness |
| 31. | Work perseverance | Resistance to fatigue |

Source: self-reported data based on analytical documentation and reports pertaining to the procedures for managerial potential diagnosis by St. Witkowski, W. Wudarzewski and G. Wudarzewski.

Against the backdrop of the data contained in Table 5 several important conclusions come to mind:

- the list of components is rather broad and lacks structure (job positions vary in their nature, organizational location and their diagnosis comes from different years),
- the identified personality components encompass individual skills (personal) as well as personality-based skills displaying a group character,
- the components are not uniform, since they comprise personality-based or temperamental traits, as well as pertain to intellect in its broad sense. In addition, while

modeling skills, mutual relationships between the skill components (original skills, secondary skills) were omitted.

- the components also vary in terms of the possibility of their identification and measurement, and in terms of their controllability and whether they can be improved and in what timeframe. Moreover, some of them can be genetically determined to a greater degree than others,
- there is a varying degree of universality of the components, whatever their nature and chain of command, which, for the authors, was a crucial aspect of the analysis
- most of the components are bipolar in their nature, e.g. a positive pole of the “ability to resolve conflicts (mediation skills)” is at the desired high level which should, with a high probability, be reflected in effective cooperation; while the second pole is a potential anti-skill, that is being “controversial and confrontational,” which implies a dysfunction in terms of “the ability to resolve conflicts”.

An important assumption of the methodology with regard to modeling desired skills in the procedures analyzed was ranking used for defining groups of skills (formal, occupational, personal), as well as for defining components of skills within each group. A simplified method of multi-criteria assessment was also employed within this scope. The analysis of the distribution of ranking scores confirmed the significance of personal skills in modeling the desired requirements and palpable differentiation of the ranks of the specific components of personal skills. While developing the model of manager’s personal skills the strand of ranking was disregarded because of the large variation in the distribution of importance of the components that were diagnosed in individual diagnosis procedures (Wudarzewski 2016³).

5. The 4-KM model of managerial skills

5.1 Premises of the model

The material presented in the second section of the paper constituted an important substantive base for further work on the model of managerial skills. The following premises were adopted in this respect:

- managerial skills are modeled, according to the interpretation of those skills given earlier.

³ This is where more information can be found on ranking procedures together with examples of ranking managerial skills using an analytical and comprehensive approach.

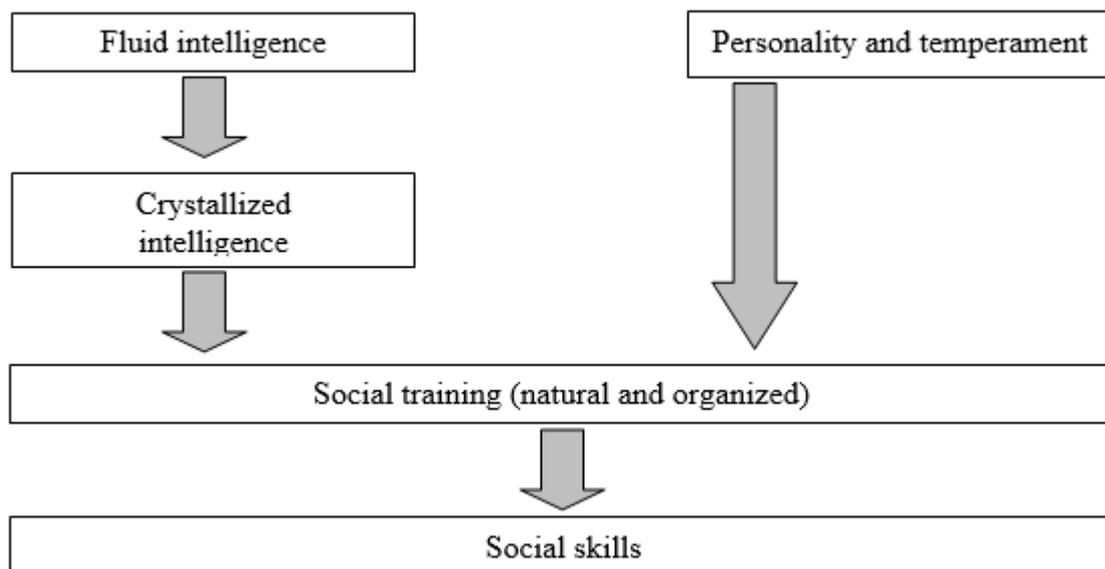
- a division into managerial and executive skills was distinguished (much visible influence on people and with people's participation).
- the proposed system of managerial skills should be relatively "universal" and should represent the outcome of long practical experience in diagnosing managers' abilities. The circumstances which strengthen the reliability of the empirical material are such factors as a close cooperation between experts representing two different but complementary areas – psychology (Witkowski, St.) and economics and management (Wudarczyński, Wł.), as well as a similar diagnosis methodology and the variety of organizations and managerial positions investigated.
- the proposed system of skills should be relatively original (it should not duplicate directly the previous solutions)
- the starting model will be a theoretical (conceptual) model whose validity should be tested in further studies using statistical tools.
- quantitative studies aimed at testing the model statistically and psychometrically will consist of multiple stages and will encompass various techniques of measurement, observation and participation in simulations and exercises which are conceptually similar to those used in the outlined procedures for measuring managerial potential.
- an important system of reference in modeling managerial skills is the model of social skills proposed by professor Anna Matczak, which allows for practical experiences to be combined with the important element of theoretical achievements while systematizing the skills. This measure should ensure a greater consistency while building the model of managerial skills in the context of practical experience and theoretical achievement.
- while modeling managerial skills an important aspect is the context of work environment (workplace, relations with other entities, the standard of tasks that are performed).

5.2 Comprehensive 4-KM model of managerial skills

A suitable system of reference in modeling managerial skills was the general model of social skills devised by professor Matczak, according to which what develops first in humans are such traits as personality-based and temperamental factors, in their broad sense, on the one hand and various aspects of intellect and intelligence on the other (Matczak, Knopp, 2013;

Matczak, 2012) – see Figure 1⁴. The framework of personality and temperament can consist of e.g. the factors of the “Big Five” model (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) or such temperament components like e.g. vigor, perseveration, sensory sensibility, emotional responsiveness, persistence, activity level (cf. McCrae, Costa, 2006; Strelau, 2016). Moreover, on the side of intellect we have fluid and crystallized intelligence (e.g. abstract intelligence, technical intelligence, social intelligence, emotional intelligence). Next, people start interacting with others, and thus participate in natural trainings (an interaction that is “forced upon” people by real-life situations which are relatively spontaneous and autonomous) and organized trainings (conscious, planned and purposeful interactions with other people) which shape social skills and which Matczak further specifies as the abilities determining how effectively people can deal with social situations (in which other people are involved)⁵.

Figure 1. Profesor Matczak’s original model of the social competencies development



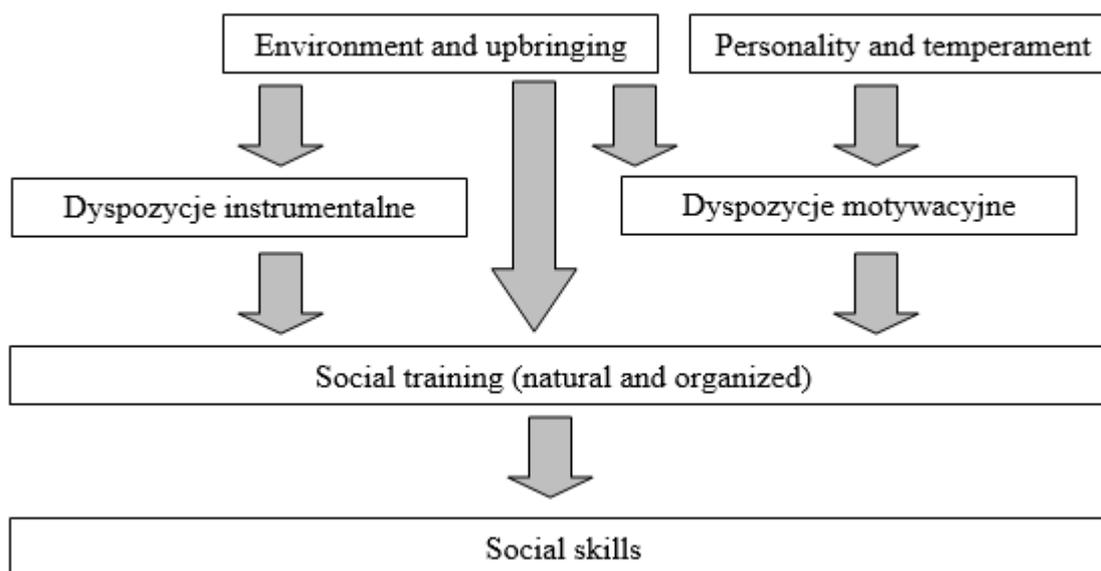
Source: Matczak (2012).

⁴ Professor Anna Matczak is currently Head of the Research and Development Department of the Psychological Test Laboratory based in Warsaw; her considerable achievements are in the psychology of individual and intellectual differences.

⁵ Professor Matczak uses the term “social competencies”, meaning those aspects which the authors of the present paper define as skills.

In scientific literature one can also encounter a modified version of Matczak's model within which human functioning is conditioned by motivational dispositions, social environment factors and instrumental dispositions (Martowska, 2012) – see Figure 2⁶.

Figure 2. Professor Matczak's modified model of social competencies development



Source: Matczak (2016).

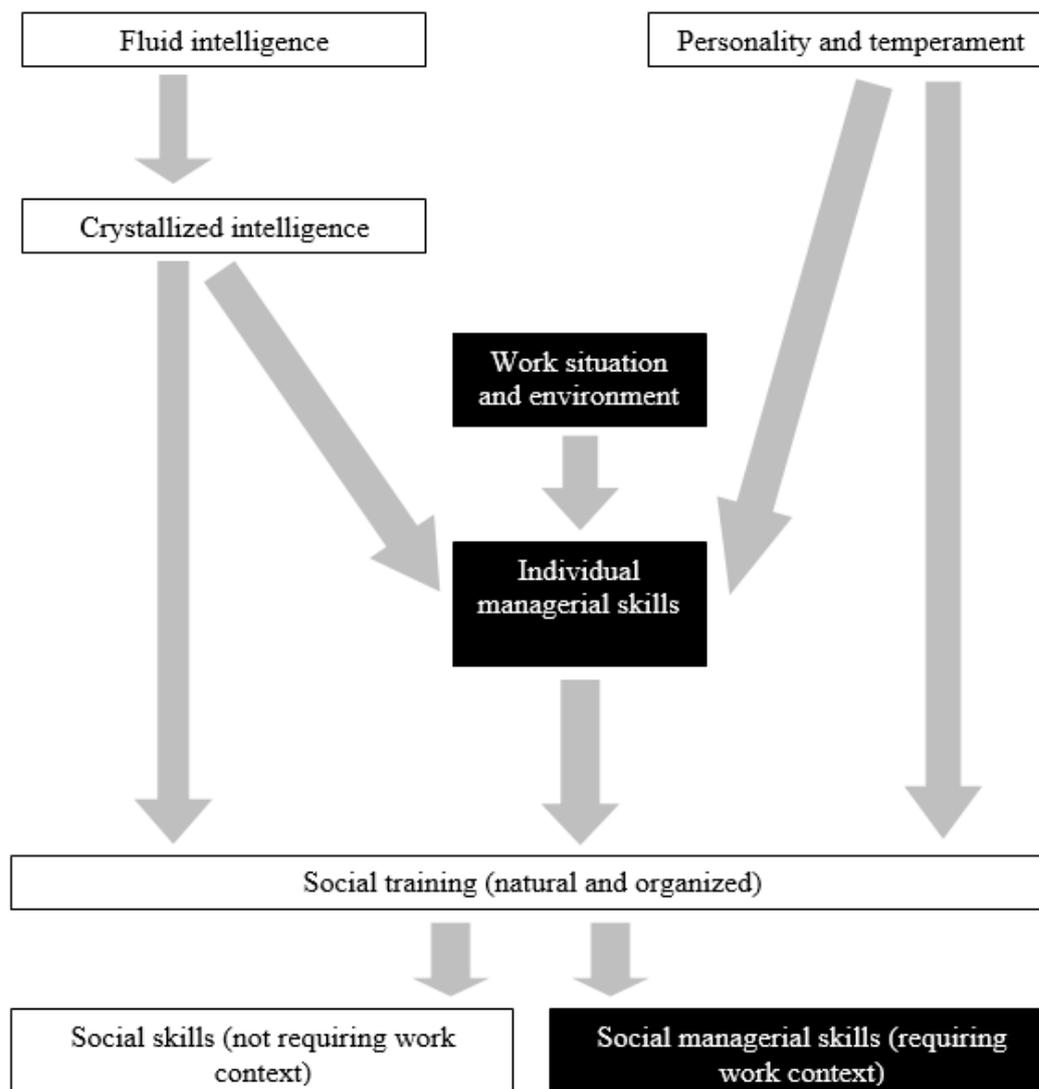
Taking into account the concepts mentioned, the authors made an attempt at systematizing the personality skills identified earlier. What provided inspiration in this context was in particular the introduction of social skills as parameters which are produced by such variables as intelligence, personality and temperament, as well as environmental factors and motivational and instrumental dispositions. In the context of the issues of managerial skills the authors noted that an important criterion for the breakdown of managerial skills may be the personal scope of their examination with their breakdown into individual managerial skills (specifying an individual managerial potential) and social and group managerial skills (specifying the manager's functioning among people in the organizational environment). However, this method of grouping the managerial skills required a certain modification of professor Matczak's model in that another important variable was identified – work situation and environment. Professor Matczak's model, which was thus modified, became the conceptual reference system for the authors in building their own model of managerial skill development.

⁶ On November 11, 2016 professor Matczak gave the authors her formal consent to present the model and to consider it a starting point.

A similar way of dividing skills (competencies) to that indicated by the authors can be found in a variety of publications by, inter alia, the following authors: Zamorska (2013), Kilar et al. (2013), Moczydłowski (2009), Moczydłowska (2008) and Filipowicz (2004). However, the present authors' view is that the relevance of this classification has not been sufficiently explored and analyzed, which brings about situations in which researchers have not fully identified the potential of such research areas as, e.g. management styles, human resources development or the interdependencies between the individual and social potential. The authors based their work on the premises of the original model and assumed that the factors of personality, temperament and fluid intelligence are those that develop as the first, while crystallized intelligence and the work context are of secondary nature. The work context begins to take shape in human consciousness at the moment of one's comprehension of the meaning and value of work and as such a some sort of notion of work may appear before taking up the first job (be it formal, auxiliary or temporary). Still, the work situation itself and its environment are shaped relatively independently of the processes during which intelligence, personality and temperament are created. This shows that the three relatively autonomous components: personality and temperament, intelligence aspects and work environment shape the managerial potential, which may be divided into individual, and social and group factors (which require interactions with other people in the organization and are their result).

Given the breakdown of skills into formal, occupational and personal, the essential features of the managerial skill model are mainly occupational and personal skills (while retaining the breakdown into individual and social skills). The possibilities of developing a relatively "universal" model of managerial occupational skills (associated with specific elements of knowledge, abilities and technical and industry-specific experience) appear to be significantly limited owing to a great diversity in terms of these positions and their determinants. In this respect, what provides broader modeling possibilities are managerial skills with their underlying nature being personality and temperament (individual and social). Due to the alleged primary character as regards the shaping of individual managerial skills in relation to the way the group managerial skills develop, the authors concentrated on modeling individual managerial skills while bearing in mind the possible relationships between different groups of skills indicated in Figure 3.

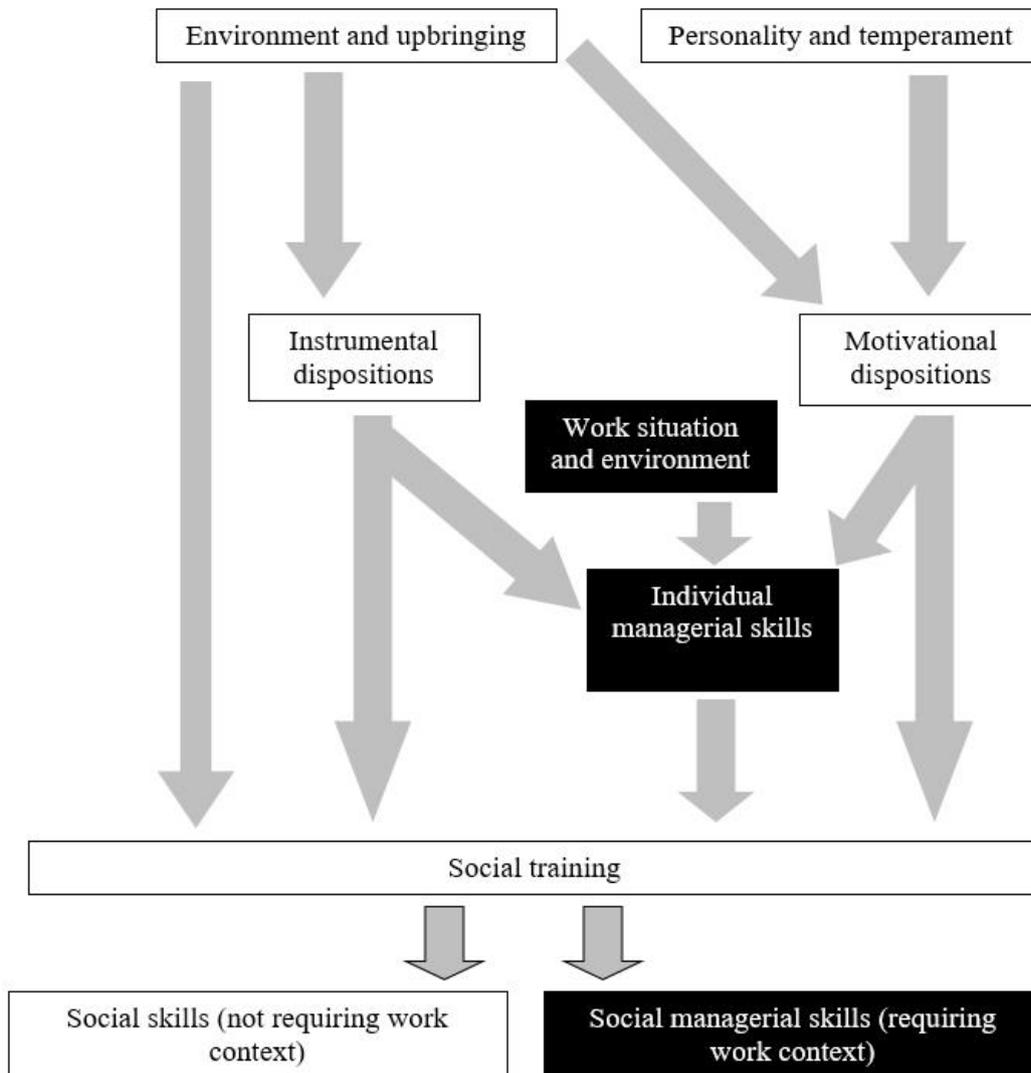
Figure 3. The model of managerial skills development based on Professor Matczak's original model



Source: self-reported data based on Professor Matczak's model.

This proposal is consistent also with the updated version of professor Matczak's model presented in Figure 4. The authors' concept of managerial skills model therefore encompasses individual and social and group skills on the one hand, and socio-personal and occupational skills on the other hand, which in the end results in having four research perspectives of managerial skills. That was precisely the reason why the name "4-KM" was proposed for the model; see Figure 5.

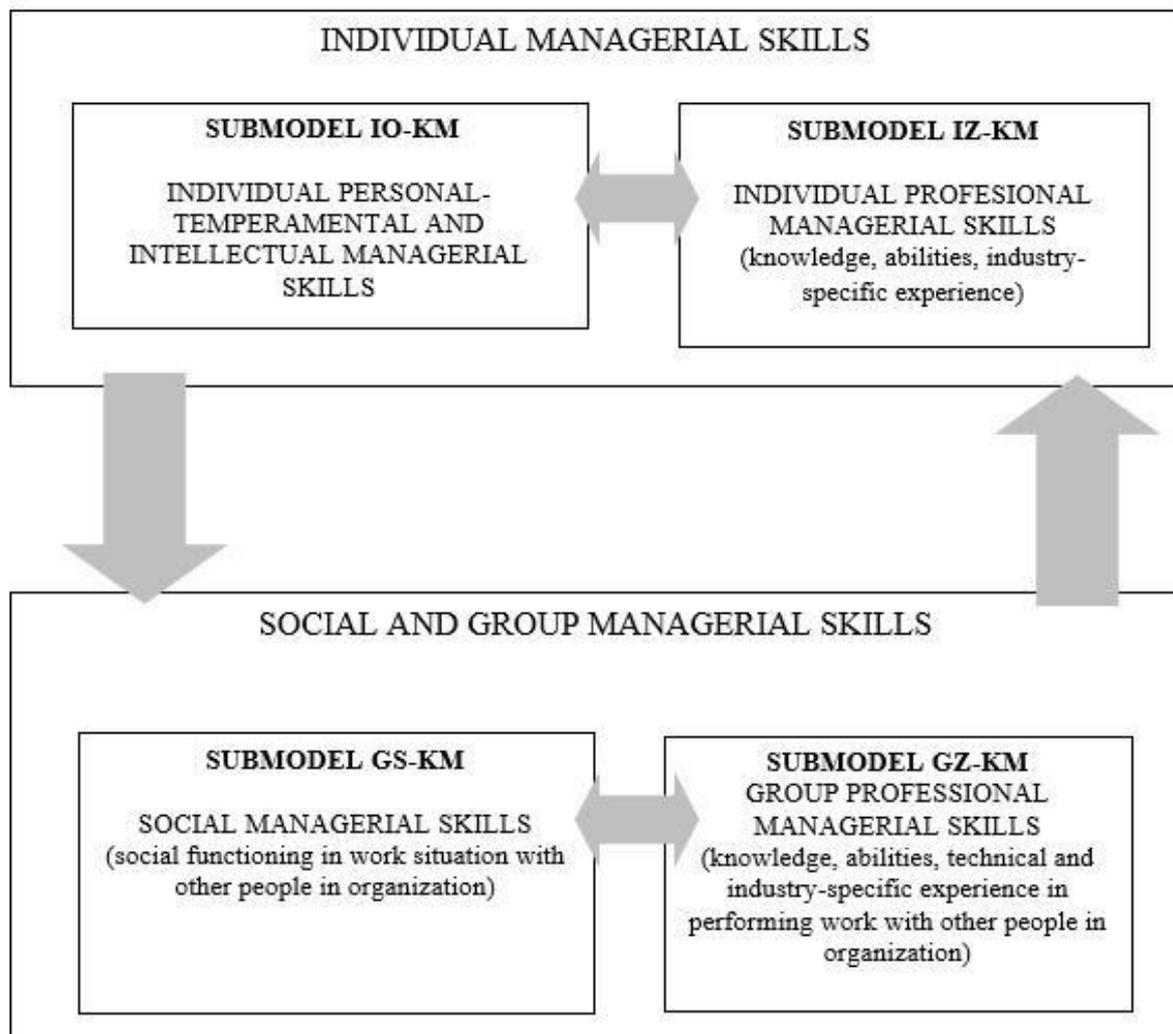
Figure 4. The model of managerial skills development based on the updated proposals of prof. Matczak



Source: self-reported data based on prof. Matczak's model.

The authors' assumption was that mutual relationships existed between the defined submodels of skills, but that would require additional and more in-depth investigation.

Figure 5. 4-KM integrated model of managerial skills



Source: self-reported data.

The study concerned with the integrated 4-KM model covers the following stages:

- The breakdown of personal managerial skills identified into individual and group skills.
- An analysis of the frequency of personal managerial skills in the diagnostic procedures under study.
- Identification of managerial skill factors which are not classified directly as primary constructs such as the dimension covering personality and temperament as well as intelligence and intellect.
- Identification, conceptualization and verification of the IO-KM sub-model of individual managerial skills in terms of personal, temperamental and intellectual skills
- Identification, conceptualization and verification of the sub-model of social and group managerial skills (SG-KM).

- f) Identification, conceptualization and verification of the sub-model of individual managerial skills (ZI-KM) within the area of occupational skills
- g) Identification, conceptualization and verification of the sub-model of group managerial skills of occupational nature (ZG-KM).

In this paper the authors focused on the first three stages and to some extent also included stage four.

5.3 The IO-KM model of individual personal skills

The 31 managerial components of personal skills defined in diagnostic procedures were analyzed and divided into two groups – the individual skills (IO-KM) and social and group skills (GO-KM). The findings within this scope are presented in the tables included in Annexes 2 and 3. The next step involved examining the frequency of occurrence of the components of these two skill groups in 20 diagnostic procedures. In the I-KM skill group the list of five most frequently applied components encompassed flexible behavior, creativity, energetic behavior, organizational abilities and economic sensibility, while the components used in the S-KM group included most frequently cooperation with other people, influence on others, preference of relevant team roles, social communication (simple and clear) and sociability. In this way the components “flexibility” and “creativity” were allocated to the IO-KM sub-model. Moreover, the component “energetic behavior” was not adopted to this sub-model, for its nature was considered to be directly that of personality and temperament, and might not necessarily be the resultant of the three components: intellect, work situation and personality. In analyzing the most likely components of social and group skills, the authors rejected “the ability to cooperate with others,” “the ability to influence others” and “sociability” as skills referring directly to the social and group context which requires participation of other employees in the organization. Considering that the concept of team roles devised by Meredith Belbin, which virtually by definition refers to the issues surrounding team work, this component was not adopted to the IO-KM model (sub-model) either. The authors’ attention, however, was drawn by another parameter – “social communication” (simplicity and clarity) which in the group with social and group parameters was relatively often considered in the assessment of managerial potential. Despite the fact that this component by definition requires participation of other people, it was nevertheless found that in this case there was a certain predictor which could determine significantly managerial potential in terms of “social communication” – knowledge of the rules of verbal and nonverbal communication. Such parameter can be tested in a similar way as

understanding emotion and social rules – each of these aspects is individual in nature and may determine how skillfully knowledge is used in real social contacts. Thus, the third component – “knowledge of the rules of verbal and nonverbal communication” was allocated to the IO-KM model. The fourth such component was economic sensibility on account of the high frequency of its application. The fifth parameter of the IO-KM model is “the ability to construct arguments” which the authors believe can be a valid predictor of another social and group skill – “(organizational) assertiveness”. The next component of the model (winning the conceptual phase) was identified by combining “conceptual functioning” with “intellectual potential”. It was assumed that “winning conceptual phase,” which means combining intellect in its broad sense with the behavior guideline “think first – do later,” can be an important component of individual managerial potential. The seventh component of the model, “selective thinking” was included because of its high frequency of application. In the context of analytical and global thinking, the authors found that a particularly valuable parameter of managerial potential could be not that much preferring one way of thinking over the other, but rather the ability to combine these two seemingly conflicting ways. The ninth parameter “effective and consistent performance of tasks (in line with the findings) emerged as a result of the conceptual combination of “organizational abilities”, “being task oriented”, “perfectionism” and “decisive behavior”. The tenth and last parameter “reliable self-evaluation” refers to some extent to the relative consistency between candidates’ self-evaluation of managerial potential and the results of the diagnosis across the procedures analyzed while using a variety of available tools. The components such as “good emotional functioning” and “work perseverance” were not included in the IO-KM model because they are very strongly linked to the area of personal and temperamental predispositions (just like the “energetic behavior” already mentioned). Other parameters such as “the willingness to improve skills,” “being autonomous oriented,” or “loyalty towards the employer” were not included in the IO-KM model because they are seldom used.

As a result the IO-KM submodel of personal managerial skills was produced with the model consisting of 10 components of skills listed in Table 6. The structure of Table 6 and its content show the method of arriving at the set of skills proposed, according to the considerations included in this section of the paper. The solutions presented correspond directly to the chief aim of this paper. It is therefore worth noting a few comments and reflections as regards the proposals outlined.

Table 6. The IKM components in the IO-KM sub-model

| Symbol | Initial managerial skills | Frequency of occurrence | Percentage indicator | IKM components in the IO-KM sub-model |
|--------|---|-------------------------|----------------------|---|
| KMI 1 | Flexible behavior | 15 | 75% | Flexibility |
| KMI 2 | Creativity | 14 | 70% | Creativity |
| KMS 4 | Social communication (simplicity and clarity) | 12 | 60 % | Knowledge of the rules of verbal and nonverbal communication |
| KMI 6 | Economic sensibility | 12 | 60% | Economic sensibility |
| KMS 6 | Being assertive with others | 10 | 50 % | The ability of constructing arguments |
| KMI 8 | Intellectual potential | 11 | 55% | Winning the conceptual phase |
| KMI 14 | Conceptual functioning | 4 | 20% | |
| KMI 11 | Selective thinking | 8 | 40% | Selective thinking |
| KMI 13 | Analytical thinking | 6 | 30% | Combining analytical with global thinking |
| KMI 10 | Global thinking | 8 | 40% | |
| KMI 4 | Organizational abilities | 12 | 60% | Effective and consistent task performance (in line with the arrangements) |
| KMI 7 | Task oriented | 11 | 55% | |
| KMI 12 | Perfectionism | 6 | 30% | |
| KMI 16 | Decisive behavior | 2 | 10% | |
| | | | | |
| | | | | Reliable self-evaluation |
| KMI 3 | Energetic behavior | 12 | 60% | |
| KMI 5 | Good emotional functioning | 11 | 55% | |
| KMI 9 | Tenacity at work | 9 | 45% | |
| KMI 15 | The willingness to improve skills | 3 | 15% | |
| KMI 17 | Autonomous oriented | 1 | 5% | |
| KMI 18 | Loyalty towards the employer | 1 | 5% | |

Source: self-reported data based on empirical material.

Firstly, the authors are aware of the fact that the IO-KM model is at the moment only a conceptual and theoretical construct, and although built on the basis of practical experiences, it

still needs to be verified in additional quantitative studies. These studies need not necessarily confirm that the authors are right in their deductions. It may happen that results elicited through psychometric examination suggest that it is necessary to reduce or increase the number of scales, to change the content and interpretation of factors or to make conceptual alterations. All this often involves the need to carry out research on relatively large samples and potential changes in the original model. According to the authors' intention, the set of 10 skills proposed should be verified through in-depth statistical and psychometric analyses while taking into account estimation of validity, reliability, discriminatory power and the possibility to generate norms for the scores.

6. Conclusions

The entire discussion presented in the paper was aimed at working out a model of individual managerial skills which made up the IO-KM sub-model. First, the authors referred to the issue surrounding the interpretation of such categories as skills and competencies, as well as director and manager, while adopting working assumptions in their explorations. Next, the empirical material was presented coming from selected assessment procedures and 31 components used within personal skills were identified. The next stage involved the presentation of Anna Matczak's model of competencies, which together with the empirical material supplied the inspiration for comprehensive systematization of managerial skills. This provided basis for defining four groups of managerial skills, including their breakdown into personal and occupational skills, and individual and social and group skills, which was presented as an integrated model of managerial skills, the 4-KM model. It became a reference system for detailed exemplification of the individual components of personal skills in the IO-KM model. After outlining the IO-KM model, certain comments and reflections were signaled. The IO-KM model encompasses 10 components of skills and requires to be tested using in-depth quantitative studies. The authors have already undertaken research in this respect, and intend to continue their explorations in the future on other sub-models of the 4-KM model and their interactions.

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Annex 1. The list of questionnaire techniques and tools, tests and self-assessment employed during the procedures of managerial potential identification

| TECHNIQUES USED FOR QUESTIONNAIRES, TESTS AND SELF-ASSESSMENT SHEETS | |
|---|--|
| Meredith Belbin's questionnaire of team roles | Measurement of team role preferences, a set of specific behaviors, personal contribution and the nature of the relations with others in work situation |
| PTI measure | Diagnosis of intellectual efficiency which determines the speed and effectiveness in terms of acquiring new knowledge and learning, as well as effectiveness in terms of identifying and solving emerging problems; verbal abilities, the ability to think logically, spatially and in numbers; knowledge about the world. |
| NEO-FFI questionnaire | The questionnaire which refers to the concept of the Big Five and which explores five dimensions highly correlated with effective management – neuroticism, extraversion, openness to new experience, agreeableness and conscientiousness |
| Temperament Measurement Questionnaire | Based on the works of Thurstone and Strelau; a questionnaire diagnosing participants' motor functioning, action dynamics |
| MSE and Blake& Mouton leadership style questionnaire | Questionnaires diagnosing the leadership style preferred by the participants of the survey with the orientation on tasks and/or employees. |
| Innovation Measurement Questionnaire | Assessing creative thinking, testing the ability to generate -create new ideas and solutions |
| Test of Understanding Human Behavior | Examining predispositions in terms of understanding human behavior and predicting human reactions in various situations. These abilities make up so called social intelligence. |
| "Decision-making participation" test | Defining the extent of decision-making participation in two different situations. Moreover, the tool examines the knowledge on situational determinants for enacting leadership styles. |
| Personal and occupational self-assessment sheets (using a 1-to-10 scale) <ul style="list-style-type: none"> • Self-assessment 1 (self-assessment of the participant in the identification procedure in terms of general characteristics and requirements referring to the position in question) • Self-assessment 2 (self-assessment of the participant in the competition in terms of the tasks expected to be performed at the position concerned) • Self-assessment 3 (the participant's self-assessment of the potential in terms of personality, temperament and intellect) • Self-assessment 4 (the participant's self-assessment in terms of occupational skills: knowledge, abilities and experience) | |

Source: self-reported data based on Witkowski, Wudarzewski (1998, 2001, 2002).

| TECHNIQUES OF OBSERVATIONS, INTERVIEWS AND QUESTIONS |
|---|
| Coach observations in terms of the following managerial traits and abilities: “team work,” “playing the role of the leader in the team – the ability to lead,” “the ability to think economically and economic sensibility,” “being inquisitive about economic problems,” “activity – aggressive behavior,” “sociability” and “flexibility in terms of adjusting to changing conditions”. |
| Coach observations as to how disciplined the participants of the identification procedures are |
| Coach observations in terms of one’s interests in economic issues. |
| Coach observations in terms of dynamics and activity of behaviors |
| Coach observations in terms of flexibility (interests, finding and adjusting oneself in relation to the assumptions of active didactic forms) |
| INTERVIEW AND QUESTION TECHNIQUES |
| <p>Targeted job interviews</p> <p>Conversation (1) aimed at a more thorough identification of the candidate in terms of communication, motivation, reaction to troublesome questions, career, interests, skill improvement, the nature of previous job, etc. The conversation structure for every candidate contained a certain part that was common for all candidates (thus, allowing for comparing candidates), and some part that was different for every candidate, depending on the scores they obtained, observations of their behaviors and background documentation. The general impression the candidate made was also of importance.</p> <p>Conversation (2) aimed at identifying the candidate in terms of sales and marketing knowledge, professional experience in marketing, as well as foreign language competence.</p> |
| <p>The willingness to improve managerial potential.</p> <p>Previous forms and the extent of occupational skill improvement (participation in diverse organized forms of skill enhancement, e.g. post-graduate studies, courses, workshops, internships, intensity and frequency in terms of skill improvement).</p> <p>Previous experience in leading others (leadership experience (the type and duration of the leadership positions, “promotion path,” the number of subordinates at work so far).</p> <p>Declared availability</p> |

Source: self-reported data based on Witkowski, Wudarzewski (1998, 2001, 2002).

| ACTIVE FORMS, SIMULATIONS, TRAINING, EXERCISES | |
|---|---|
| PROMAR business simulation | It covers all crucial areas of business functioning in market conditions: “strategic management,” “market identification and analysis – marketing,” “supplies,” “production organization and harmonization,” planning and cost analysis,” “business plan and credit policy,” “logistics,” “cooperation with other companies and negotiation of terms and conditions of this cooperation,” “competition analysis,” “financial performance planning and cost analysis,” “sales,” “economic intelligence” and “financial flows”. |
| Exercise „Investment 1” | Diagnosis of economic sensibility, i.e. economic feeling, economic intuition, economic thinking conducted within a very limited period and which requires abstract effort |
| Exercise „Investment 2” | Diagnosis of traits and abilities identified for “Investment 1,” but requiring a solution to a more difficult task, thus allowing for a greater discrimination between candidates |
| Exercise „Growth factors” | A descriptive exercise which assesses general economic knowledge on how the relationships between revenues and costs develop |
| „Alpha 1” simulation | An exercise assessing the ability to identify and solve a problem which requires that a viability analysis of the undertaking be carried out. The task refers to the so called threshold point and tests the ability to solve economic problems |
| „Alpha 2” simulation | An exercise that diagnoses the abilities highlighted in the case of “Alpha 1”, however, within an entirely different arrangement of conditions |
| „Communication” simulation | An exercise that verifies the ability to formulate one’s thoughts and to issue orders in a simple and clear way, as well as an exercise which diagnoses preferred way of thinking – either analytical or global |
| The task „Meeting” () | A group exercise which assesses organizational abilities, as well as the extent to which one exerts influence on other people’s behavior, the degree of flexibility of behavior and assertiveness |
| Group exercise „Building a tower” | A group exercise which assesses abilities in terms of organization and cooperation, as well as the extent to which one exerts influence in a situation of conflicting aims |
| Group exercise „Cardshark – arranging cards” () | Diagnosing interpersonal and motor functioning, as well as examining one’s sensibility in terms of activity assessment criteria, exerting influence on others and creativity in searching for the best course of action |
| The „Schedule” case | Organizational abilities |
| The „Zeman” case | Economic thinking |

Source: self-reported data based on Witkowski, Wudarzewski (1998, 2001, 2002).

Annex 2. The list of individual managerial skills in selected procedures for managerial potential diagnosis

| Symbol | INDIVIDUAL MANAGERIAL SKILLS | number of occurrences | percentage | INDICATION OF SKILLS TO BE IDENTIFIED IN RECRUITMENT, COMPETITION AND MANAGERIAL POTENTIAL IDENTIFICATION PROCEDURES (MARKED SYMBOLICALLY) | | | | | | | | | | | | | | | | | | |
|--------|-------------------------------|-----------------------|------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) | (K) | (L) | (M) | (N) | (O) | (P) | (R) | (S) | (T) |
| IKM1 | Flexible behavior | 15 | 75% | X | X | | X | X | X | X | X | | | | X | | X | | X | | X | |
| IKM2 | Creativity | 14 | 70% | X | | X | X | X | X | X | X | | | | X | | X | | X | | X | |
| IKM3 | Energetic behavior | 12 | 60% | X | X | | X | X | X | X | X | | | | X | | | | X | | | |
| IKM4 | Organizational abilities | 12 | 60% | X | | | X | X | X | X | X | | | | X | | X | | X | | | |
| IKM5 | Economic sensibility | 12 | 60% | X | X | | X | X | X | X | X | | | | X | | | | X | | X | |
| IKM6 | Good emotional functioning | 11 | 55% | X | | | X | X | X | X | X | | | | X | | | X | | X | | |
| IKM7 | Task oriented | 11 | 55% | X | | X | X | X | X | X | X | | | X | | | | | | | | X |
| IKM8 | Intellectual potential | 11 | 55% | | X | X | X | X | X | X | X | | | | X | | | | X | | | X |
| IKM9 | Work perseverance | 9 | 45% | X | | | X | X | X | X | X | | | | X | | | X | | X | | X |
| IKM10 | Global thinking | 8 | 40% | X | | | X | X | X | X | X | | | | X | | | X | | | | X |
| IKM11 | Selective thinking | 8 | 40% | X | | | | X | X | X | X | | | | X | | | X | | | | X |
| IKM12 | Perfectionism | 6 | 30% | X | | | | | | X | | | | | | | X | | X | | X | X |
| IKM13 | Analytical thinking | 6 | 30% | X | | | | | X | | | | | | | | X | | | | | X |
| IKM14 | Conceptual functioning | 4 | 20% | | | | | | | | | | | | | | X | | X | | | X |
| IKM15 | Willingness to improve skills | 4 | 20% | X | | | | | | | | | | | | | X | | X | | | X |
| IKM16 | Decisive behavior | 2 | 10% | X | X | | | | | | | | | | | | | | | | | |
| IKM17 | Autonomous oriented | 1 | 5% | X | | | | | | | | | | | | | | | | | | |

Source: self-reported data based on Witkowski, Wudarzewski (1998, 2001, 2002).

Annex 3. The comparison of social and group managerial skills in selected procedures for managerial potential diagnosis

| Symbol | SOCIAL MANAGERIAL SKILLS | number of occurrences | percentage | INDICATION OF SKILLS TO BE IDENTIFIED IN RECRUITMENT, COMPETITION AND MANAGERIAL POTENTIAL IDENTIFICATION PROCEDURES (MARKED SYMBOLICALLY) | | | | | | | | | | | | | | | | | | | |
|--------|--|-----------------------|------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) | (K) | (L) | (M) | (N) | (O) | (P) | (R) | (S) | (T) | (U) |
| SKM1 | The ability to cooperate with others | 17 | 85 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM2 | The ability to exert influence on others | 17 | 85 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM3 | Preferring suitable team roles | 14 | 70 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM4 | Social communications (simplicity and clarity) | 12 | 60 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM5 | Sociability | 11 | 55 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM6 | Being assertive with others | 10 | 50 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM7 | The ability to resolve conflicts (mediation abilities) | 9 | 45 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM8 | Leadership style | 7 | 35 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM9 | Negotiation abilities | 7 | 35 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM10 | People oriented at work | 6 | 30 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM11 | Cooperation with people of various ages | 2 | 10 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM12 | Didactic abilities at occupational work | 1 | 5 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| SKM13 | Inspiring others | 1 | 5 % | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

Source: self-reported data based on Witkowski, Wudarzewski (1998, 2001, 2002).