



School of Social Sciences

Master in Business Administration

Postgraduate Dissertation

**Assessing the importance of soft skills for the public sector
performance**

Aikaterini Krithinaki

Supervisor: Dr. Dimitrios Koufopoulos

Patras, Greece, June 2024

© Hellenic Open University, 2017

The content of this thesis/dissertation along with its results is owned by the Hellenic Open University and his/her author, where each of them has the sole and exclusive right to use, reproduce, and publish it (totally or partially) for educational or research purposes, with the obligation to make reference to the thesis's title, the author's name and to the Hellenic Open University where the thesis / dissertation was written.



Assessing the importance of soft skills for the public sector performance

Aikaterini Krithinaki

Supervising Committee

Supervisor:

Dimitrios N. Koufopoulos
Hellenic Open University

Co-Supervisor:

Dimitrios Manolopoulos
Hellenic Open University

Patras, Greece, June 2024

*“Keep Ithaka always in your mind.
Arriving there is what you’re destined for.*

*.....
And if you find her poor, Ithaka won’t have fooled you.
Wise as you will have become, so full of experience,
you’ll have understood by then what these Ithakas mean”*

*Ithaka by C. P. CAVAFY,
Translated by Edmund Keeley.*

*To my husband Xenofon and my beloved daughters, Athanassia and Helen, who supported me on this
journey.*

Special thanks to Dr D. Koufopoulos and Dr D. Manolopoulos

Abstract

In an era when public organizations strive to achieve their goals with limited resources, human resources and soft skills are becoming increasingly important. Public administration literature acknowledges that the effective use of soft skills in the workplace can benefit both the economy and society by broadly enhancing performance. Consequently, governments are investing more in the development of essential soft skills to cultivate a public workforce that is flexible, forward-looking and fulfilling, and ensuring effective performance from employees. Surprisingly, little empirical research has investigated to date the relationship between the perceived soft skill utilization and outcomes, such as job performance, within public organizations. This study explores the importance of perceived soft skills utilization on perceived job performance in public organizations using data from a questionnaire-based survey conducted in 2024.

Keywords: Soft skills, skill variety, employee job performance, job satisfaction, organizational performance, public servants, public organizations.

Περίληψη

Σε μια εποχή όπου οι δημόσιοι οργανισμοί προσπαθούν να επιτύχουν τους στόχους τους με περιορισμένους πόρους, το ανθρώπινο δυναμικό και οι δεξιότητές του αποκτούν ολοένα και μεγαλύτερη αξία για την αποτελεσματική και αποδοτική λειτουργία των οργανισμών. Η βιβλιογραφία της δημόσιας διοίκησης αναγνωρίζει ότι η σωστή χρήση των δεξιοτήτων στον εργασιακό χώρο μπορεί να προσδώσει σημαντικά οφέλη τόσο στην οικονομία όσο και στην κοινωνία, συμβάλλοντας στη βελτίωση της εργασιακής απόδοσης. Οι κυβερνήσεις επενδύουν όλο και περισσότερο στην ανάπτυξη των δεξιοτήτων για να καλλιεργήσουν ένα δημόσιο εργατικό δυναμικό ευέλικτο, προοδευτικό και αποδοτικό, ικανό για υποστήριξη την προσπάθεια των οργανισμών για βελτίωση της απόδοσης και αριστεία. Παραδόξως, σχετικά λίγες εμπειρικές έρευνες έχουν διερευνήσει μέχρι σήμερα τη σχέση μεταξύ της αντιλαμβανόμενης σημασίας των δεξιοτήτων και της εργασιακής απόδοσης στους δημόσιους οργανισμούς. Η παρούσα μελέτη διερευνά αυτή τη σχέση, χρησιμοποιώντας δεδομένα από έρευνα με βάση ερωτηματολόγιο που διεξήχθη το 2024.

Λέξεις – Κλειδιά

Δεξιότητες, εργασιακή απόδοση, δημόσιος τομέας, δημόσιοι υπάλληλοι, δημόσιοι οργανισμοί.

Table of Contents

Abstract	v
Περίληψη	vi
Table of Contents	vii
List of Tables	x
List of Abbreviations & Acronyms	xi
Chapter 1. Introduction	1
1.1 Background of research.....	1
1.2 Research aim and objectives	1
1.3 Rationale for the study and expected contribution to the field	2
1.4 Structure of the dissertation	2
Chapter 2. Literature Review	3
2.1 Introduction	3
2.2 DEFINITIONS	4
2.2.1 Public service and Public servants	4
2.2.2 Soft skills.....	5
2.3 PERSONAL QUALITIES	10
2.3.1 Time Management	10
2.3.2 Adaptability and Flexibility.....	11
2.3.3 Result oriented	13
2.3.4 Professionalism and Integrity.....	14
2.4 SOCIAL SKILLS	15
2.4.1 Team working.....	15
2.4.2 Service skills.....	17
2.4.3 Conflict management.....	19
2.4.4 Communication skills	21
2.4.5 Leadership	22
2.5 CONCEPTUAL / THINKING SKILLS	25
2.5.1 Problem solving, critical thinking, decision-making.....	25
2.5.2 Creativity and Innovation.....	28
2.5.3 Learning to learn	32
2.6 PERFORMANCE	32
2.6.1 Understanding the concept of organizational performance	32
2.6.2 Understanding the concept of employee job performance	34
2.7 CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT.....	35
Chapter 3. Methodology	40
3.1 Sample	40
3.2 Measurements	41
Chapter 4 Results and Analysis	44
4.1 Introduction	44
4.2 Demographic analysis	44
4.3 Analysis of the importance of Personal Qualities	49
4.4 Analysis of the importance of work-related Social Skills.....	50

4.5 Analysis of the importance of Conceptual/Thinking Skills	51
4.6 Analysis of Perceived Employee Job Performance	52
4.7 Analysis of General Job Satisfaction	53
4.8 Hypotheses testing	53
4.9 Analysis of the importance of soft skills for Organizational Performance	59
Chapter 5. Conclusions	62
5.1 Introduction	62
5.2 Theoretical contributions	62
5.3 Limitations of the study and future research	63
Bibliography	64
Appendix A: Questionnaire used in the survey (main body)	76
Appendix B: Regression Summary	82

List of Figures

Figure 1. Research Model.....40

List of Tables

Table 1 Soft Skills Definitions	8
Table 2 Demographic analysis: the description of the study sample (N=109) in absolute numbers and percentages	45
Table 3 Perceived importance of Personal Qualities for employee job performance	49
Table 4. Perceived importance of Social Skills for employee job performance	50
Table 5. Perceived importance of Conceptual/Thinking Skills for employee job performance.....	51
Table 6. Descriptive Statistics of Soft Skills Clusters ranked on the basis of Mean	52
Table 7. Descriptive Statistics for the independent variable “employee job performance”	52
Table 8. Descriptive Statistics for the variable “General job satisfaction”	53
Table 9. Cronbach’s reliability coefficients	54
Table 10. Regression Summary	54
Table 11. Causal steps	58
Table 12. Employee Job Performance R2 adjusted values before and after entering the mediator variable	59
Table 13. Frequency analysis of important soft skills for organizational performance	60

List of Abbreviations & Acronyms

OECD	Organization for Economic Co-operation and Development
NPM	New Public Management

Chapter 1. Introduction

1.1 Background of research

Employee job performance in the public sector has been a variable of interest for scholars. Literature acknowledges that competencies, including abilities, knowledge, soft skills, behaviours and attitudes, have a positive impact on employee job performance. Although unique characteristics of the public organizations may dampen the beneficial effects of soft skills utilization, public policy experts argue that the competencies of individual civil servants would determine to a certain extent how effective the public sector is at meeting today's and tomorrow's policy challenges and changing public expectations.

Policy experts argue that in order competencies to be used as a strategic HRM tool, they should be integrated into a competency model/framework. In Greece, a new competency model was introduced and established through the Greek Law 4940/2022 entitled "Target setting, evaluation and reward system to enhance the effectiveness of public administration, arrangements for human resources in the public sector and other provisions". Generally speaking, competency frameworks provide the basis for the assessment of civil servants and are designed through a process of trial and error (OECD 2011). Scholars argue that all the former performance appraisal systems implemented in the Greek public sector are perceived as ineffective, biased and not sufficiently structured (Fafaliou et al. 2020). To date, there is limited information about public servants' perceptions of which soft skills are needed in the workplace. Thus, it would be interesting to examine if public servants perceive soft skills, as part of the holistic concept of competency (Marin-Zapata et al. 2022), important for their job performance, assuming that the perceived job performance may contribute to organizational performance.

1.2 Research aim and objectives

The main research aim of this study is to identify the perceived effect of soft skills utilization on job performance (employee and organizational) in public organizations.

Specifically, the research aims to:

1. Provide indicative soft skills' definitions and insights on how the selected soft skills are conceptualized in the reviewed literature.
2. Investigate public servants' perceptions about the selected soft skills importance for performing their job roles.
3. Investigate public servants' perceptions on skill variety.
4. Investigate public servants' perceptions about the selected soft skills importance for organizational performance.

Findings may assist public administration to have a more comprehensive insight of employees' perceptions on the importance of soft skills. Furthermore findings may be used by managers to prioritise the implementation of soft skills to improve organizational performance.

1.3 Rationale for the study and expected contribution to the field

Literature acknowledges that both performance and soft skills are challenging to define, assess, and measure due to individual differences, work-context characteristics and other factors. However, it can be argued that employee surveys may provide valuable insights into a range of factors related to soft skills utilization across the civil service. Thus, the rationale for conducting this research stems from a critical need to deepen our understanding of the definitions and perceived importance of essential soft skills in the workplace in the public sector. Furthermore, given that there is little empirical evidence proving that soft skills can be reliably related to job performance, this study aims to contribute to the field by exploring the relationship between some essential soft skills and perceived job performance (employee and organizational) within public organizations.

1.4 Structure of the dissertation

The dissertation is organized as follows:

Chapter 1 introduces the reader to the aim and objectives of the research through an overview of the dissertation structure.

Chapter 2 provides an overview of the literature on the selected soft skills in the public sector.

Chapter 3 introduces the methodology adopted and the framework of the research.

Chapter 4 presents and discusses the findings.

Finally in **Chapter 5**, the conclusions of the analysis are presented, and further research directions and the limitations of the study are acknowledged.

Chapter 2. Literature Review

2.1 Introduction

For the purposes of this study, a literature review was conducted aiming to address the prevailing confusion and conceptual dispersion regarding soft skills in general. Following the OECD (2021b) recommendations, some soft skills are especially important for the future of the public service. The importance of these essential soft skills may vary according to the specific job tasks and requirements. Scholars perceive and classify soft skills differently. We adopted the classification proposed by Schulz (2008), customized it slightly for the purposes of this research, in order to group some core soft skills into three clusters: Personal Qualities, Social Skills, and Conceptual/Thinking Skills. Personal qualities include peoples' abilities to manage time, the ability to effectively adapt to a variety of situations, being result oriented, and abilities to accept personal accountability and responsibility. Social skills include individual abilities to cultivate relationships, develop empathy, effectively manage team/group dynamics and conflict and the ability to work towards win-win outcomes. Conceptual/Thinking skills include sets of thinking and reasoning strategies that may support critical thinking, problem solving and self-awareness.

Cluster A – PERSONAL QUALITIES

- time management
- adaptability and flexibility
- result oriented
- professionalism and integrity

Cluster B – SOCIAL SKILLS

- team-working
- service skills

- conflict management
- communication skills
- leadership

Cluster C – CONCEPTUAL/THINKING SKILLS

- problem solving/ creative problem solving
- critical thinking
- decision making
- creativity and innovation
- learning-to-learn

It is worth noting that there is no definitive list of soft skills, and as Katz (1974) argues, these skills sets intertwine. However, we divide them into clusters to develop clearer understanding of each skill and effectively link them to job roles.

This literature review aims to provide clear and indicative definitions of the selected soft skills and their characteristics within the public sector workplace. The reviewed papers were analyzed in depth to identify 1)comprehensive definitions of the concept of soft skills 2)definition of one or more essential soft skills for public sector employees 3)the identification of relevant theories that may explain the development process and utilization of soft skills in the workplace. By examining these aspects, we argue that the literature review may provide a framework for understanding how soft skills contribute to job performance in public organizations.

2.2 DEFINITIONS

2.1.1 Public service and Public servants

For the purposes of this study, the approach put forward by OECD (2021b) is adopted to use the terms “public service” and “public servants”. The term “public service”, as defined, represents the workforce of organizations related to the executive branch of the government but does not cover employees of the broader public sector, such as teachers, doctors, police, judiciary and military, who are under different sectoral frameworks. The term “public servant”, as defined, represents all administrative employees of Greek Public Sector,

regardless of their official legal status, such as life-long civil servants or public employees on either indeterminate or temporary contracts.

2.1.2 Soft skills

The definition of skills varies widely among different sources, disciplines (economics, psychology, sociology) and fields (labor economics, human resource development, management) and is multifaceted. In literature there is a consensus that skills in general can be divided into two main categories: “hard skills” and “soft skills” (Lamri & Lubart 2023, Marin-Zapata et al. 2022). The exact origin of this classification remains rather blurry and has been a topic of debate in the field of psychology. Researchers found that the term “soft skills” was first articulated in a US Army document from 1968. A few years later, the first use of the term was marked in two papers by the researcher Paul G. Whitmore which were presented at the 1972 CONARC Soft Skills Training Conference in Texas. In them, Whitmore figured out the difference between “hard skills” and “soft skills” and proposed a framework for use (Phillips et al. 2020, Parlamis and Monnot 2019, Touloumakos 2020).

Most scholars argue that the concept of “hard skills” relates to technical expertise, professional/academic knowledge and specific practical abilities of an individual to perform a particular job or task within a specific domain (Dell’ Aquila et al. 2017, Cimatti 2016, Levant et al. 2016, Laker and Powell 2011). According to Stewart et al. (2016), hard skills refer to technical, tangible, measurable competencies believed to be valued in the workplace.

On the other hand, “soft skills” constitutes a broader concept, which includes many personal attitudes or characteristics, such as agreeableness, conscientiousness and curiosity (Hirudayaraj et al. 2021). “Soft skills” are related to non-technical, interpersonal (i.e. being able to work well with others) and intrapersonal (i.e. being able to manage one’s own attitudes and emotions), transversal competences that are not directly connected to a specific task (Cimatti 2016). Soft skills are less tangible and harder to measure and quantify when compared with hard skills (Byrne et al. 2020). Scholars argue that the term “soft skills” remains to date an ambiguous term without a universally agreed definition and classification. In academic and governance literature one can find a lot of different approaches to defining “soft skills” and different ways of clustering, depending on the

theoretical approach chosen. The main interest of all these various frameworks is to delineate soft skills needed for the future of work (Lamri & Lubart 2023). Thus, different people may mean different things when referring to soft skills (Touloumakos 2020). Another source of confusion and misunderstanding is given by the fact that the terms “skills” and “competence” or “competencies” (i.e. the plural of competency) are often confused or used interchangeably by different scholars for defining the same concepts, although are not synonymous (Cimatti 2016, Marin-Zapata et al. 2022). It should be noted that the concept of competence is a much broader concept than skill. According to Draganidis and Mentzas (2006), “*a competence is a combination of tacit and explicit knowledge, behaviour and skills, that gives someone the potential for effectiveness in task performance*”. Thus, at a given time, the overall level of competence of an individual in a given domain is an aggregate function of these components and is always dynamic with the different components growing or declining separately in different periods since they can be affected by several factors (Rodrigues et al. 2021).

It is well established that soft skills can be learned and developed, although the extent varies (Matteson et al. 2016). Generally speaking, development of soft skills is a main goal of university studies and the better this task is performed the higher the benefit offered by universities to the main beneficiaries of educational services, such as individuals, organizations (employers) and society as a whole (Nicolescu et al. 2009). Beyond education, soft skills can be acquired and improved through work experience, within learning-by-doing environments, and through training either self-training or guided/formal training programmes that usually offer the advantage of a formal assessment for acquiring a certification. In the context of formal training programmes, some traditional methods are group discussions, role-play simulations, interactive exercises and case studies. In recent years organizations leverage blended learning which combines online learning with face-to-face classes (Dell’ Aquila et al. 2017). In terms of self-training one’s soft skills, common ways are reading books and socializing with other members of society. The latter is why “soft skills” are also referred to as “people skills” (Levasseur 2013). Scholars argue that the extent to which skills can be developed lies on a spectrum. This means that soft skills change in different ways and can be developed over the life cycle, but through different mechanisms and to different degrees at different ages. According to adult learning theory, adults learn

differently from children, and therefore the learning process and any accompanied educational content must be tailored to their specifications and qualities. To this end, Schulz (2008) highlights that it is not always guaranteed that a given training can successfully improve a person's soft skills. Moreover, it is established that the acquisition and development of skills is affected by genetic and environmental factors. For instance, when learning outcomes are not consistently applied in the workplace or are used rarely, they may depreciate in the long run (Rodrigues et al. 2021). Evidence suggests that most soft skills can be transferred across contexts, although scholars argue that they should better be considered as content dependent (Lamb et al. 2017).

Public servants, regardless of their particular role, will need to adopt a culture of continuous or lifelong learning, a fundamental aspect of resilience, to cope with change and enhance their future potential. To this end, public organizations will also need to implement any available tool, such as mentoring, coaching, peer learning and mobility, to promote a learning culture among public servants.

It is worth noting that literature acknowledges that optimum workplace performance and successful job outcomes may depend on a combination of hard and soft skills given that these skills often intersect and support one another depending on the context in which skills are applied. Thus, both must be considered as complementary elements (Lamri & Lubart 2023, Lyu and Liu 2021, Rainsbury et al. 2002).

Given the growing interest by policymakers, organizations and educational stakeholders for the importance of soft skills in work lives today with a view toward improving performance, researchers compile lists of soft skills based on employers' requirements (via analysis of online job advertisements) or employers' expectations (via surveys) at different levels of employment and within different disciplines, in the context of the so-called "soft skill revolution". These lists lack of uniformity, but may be of great value in revealing the direction of change on skills demand, especially in times of rapid skill-biased technological change. For instance, these lists can provide detailed information in order to support people on capturing which skills have currency in the workplace and making sense of trends in line with the new realities.

Soft skills are broadly applicable (Robles 2012). A summary of soft skills definitions is provided in Table 1, although they may overlap to some degree.

Table 1 Soft Skills Definitions

Publication	Definition
Hewitt Sean (2008) cited in Tobin (2006)	Soft skills are “non-technical, intangible, personality specific skills” which determines an individual’s strength as “a leader, listener and negotiator, or as a conflict mediator”. Soft skills are the traits and abilities of attitude and behavior rather than of knowledge or technical aptitude.
Sharma (2009)	[Soft skills are] the extra edge that set apart the leader from the followers and includes communication skills, interpersonal skills, negotiation skills, emotional intelligence, teamwork and cooperation.
Maniscalco (2010)	“Soft skills refer to a cluster of qualities, habits, personality traits, attitudes and social graces which everyone possesses in varying degrees, and are needed for everyday life as much they are needed for work”.
Kechagias (2011)	[Soft skills are] “intra- and inter- personal (socio-emotional) skills, essential for personal development, social participation and workplace success”.
Laker and Powell (2011)	[Soft skills are] “intrapersonal skills such as one’s ability to manage oneself as well as interpersonal skills such as how one handles one’s interactions with others”.
Heckman and Kautz (2012)	[Soft skills are] “personality traits, goals, motivations, and preferences that are valued in the labor market, in school, and in many other domains...”
Haselberger et al. (2012)	“Soft skills represent a dynamic combination of cognitive and meta-cognitive skills, interpersonal, intellectual and practical skills. Soft skills help people to adapt and behave positively so that they can deal effectively with the challenges of their professional and everyday life”.
Hurrell et al. (2012)	“Non-technical and not reliant on abstract reasoning, involving interpersonal and intrapersonal abilities to facilitate mastered performance in particular contexts”.

Robles (2012)	“Soft skills are interpersonal qualities, also known as people skills, and personal attributes that one possesses”.
AlHouli & Al-Khayatt (2020)	Soft skills are non-technical, non-academic competencies that support performance in academic and career settings or specific social contexts.
Fernández-Arias et al. (2021)	“Soft skills are interpersonal attributes and personal qualities, which are linked to personality characteristics that include abilities such as flexibility, leadership, communication, professional ethics, ... among others”.

Recent competence literature acknowledges a current “skills mismatch” in the international labour market (i.e. Mavromaras et al. (2007) study in Australia, Green and McIntosh (2007) study in Britain, Nielsen (2007) study in Denmark, Verhaest and Omey (2006) study in Belgium, Capelli 2015, Hurell 2016). According to OECD (2021b) “*the term “skills mismatch” refers to the sub-optimal use of an individual’s skills in the activity he or she performs i.e. an under-use of skills or, conversely, a situation where the skill level is below that required*”.

Generally speaking, Greek civil servants have strong administrative expertise related to the duties of each occupation and stock skills of the traditional public service. However, even before the COVID-19 pandemic, the development of megatrends, such as globalization, digitalization, automation, technological progress, big data, artificial intelligence, and population ageing, were already affecting the future of public sector and reshaping societies by challenging the traditional competencies. To this end and taking into account national circumstances, the Greek public administration provides lifelong learning and training opportunities for upskilling or reskilling existing civil servants. Based on the definitions proposed by Li (2022), upskilling means that public servants gain new soft skills needed to adapt to a changing environment and carry out their changing job responsibilities. Reskilling, on the other hand, means that civil servants gain the knowledge and soft skills needed to take on different or even new job roles. It is worth highlighting that lifelong initiatives can only be brought to scale through awareness and positive attitudes towards lifelong learning, and that there are no one-size-fits-all policies aimed at skills development that work across different contexts, administrative structures and culture.

2.3 PERSONAL QUALITIES

2.3.1 Time Management

As early as the decades of 1950s and 1960s a plethora of studies (e.g. Lakein and Leake 1973, Mackenzie 1972) highlight the importance of time and focus on the ways in which individuals, especially managers, manage their time in order to perform work tasks within deadlines. According to Claessens et al. (2007) time management was introduced in 1954. The authors argue that the term “time management” is misleading, given that time is an inaccessible factor and cannot be managed. As they suggest “self-management”, related to the performance of multiple tasks within a certain time period, would be a more appropriate term, however in literature “self-management” has a different meaning.

What is time management? Scholars argue that there is a lack of agreement about this definition. Claessens et al. (2007) define time management as “*behaviors that aim at achieving an effective use of time while performing certain goal-directed activities*”. Generally speaking, time management is the ability of an individual to prioritize, schedule and manage personal responsibilities to achieve outcomes (Seaward 2002 cited in Otken et al. 2023). Time management may include time assessment, short-range planning (e.g. setting goals and priorities, making to-do lists) and monitoring activities (observe one’s own progress) and may be associated with job performance (Britton and Tesser 1991).

Given that there is no general theoretical model of time management (Claessens et al. 2007), there is a debate over what soft skills and behaviors constitute effective time management (Hellsten 2012). Based on literature search, Hellsten (2012) identifies seven (7) time management skills that can be considered essential in daily practice: a)time analysis b)planning c)goal setting d)prioritizing e)scheduling f)organizing, and g)establishing new and improved time habits.

Bozbayindir (2019) and Otken et al. (2023) argue that when employees are able to manage their time effectively are less prone to cyberloafing behavior at work while pretending to work. Cyberloafing is defined as “*any voluntary act of employees’ using their companies’ internet access during office hours to surf non-job related Web sites for personal purposes and to check personal e-mail as misuse of the internet*” (Lim 2002: 677).

Time management has been studied in relation to a number of variables in order to investigate its link with performance (e.g. study of Hassan 2003). However, Macan (1994) failed to find a positive relation between time management behaviors and job performance. Instead, Macan (1994) argues that the perception of control over time is related to positive outcomes. This means that public servants who perceive that they have control over their time may be healthier as employees (i.e. fewer stresses) and experience greater job satisfaction than colleagues who did not perceive themselves as having control over their time. As Britton and Tesser (1991) point out in their study subjects report feelings of self-efficacy, such as they are able to say “No” to people or they are able to cease routines.

The study of Landy et al. (1991) provide evidence that a significant correlation exists between time management and overall job satisfaction. There are studies providing evidence that there is a positive relation between time management skills and job performance (e.g. Orpen 1994). As Hellsten (2012) argues empirical findings demonstrate that an optimal management of time may lead to better results, while on the other hand lack of control over time demands may lead to lower performance and have negative impact on individuals’ physiological symptoms of stress.

2.3.2 Adaptability and Flexibility

Adaptability and flexibility are fundamental concepts used to describe in general terms an employee’s skills and ability to adapt quickly and effectively to new, dynamic or changing situations at work environment. They are based on the ability to understand and evaluate different and sometimes opposing perspectives on an given issue and to adjust his/her behaviours in a changing environment (Ployhart et al. 2006).

Pulakos et al. (2000, 2002) argue that if employees can adapt easily to a new workplace or environment and different job requirements or irregular situations, by adjusting their behaviours, may be more efficient than other employees.

Charbonnier-Voirin and Roussel (2012) introduced five dimensions of adaptive performance that are applicable across various organizational contexts, including:

- Dealing with uncertainty
- Creativity
- Managing work stress

- Training and learning effort
- Interpersonal adaptability

OECD (2021b) argues that the public service of the future is flexible. This means that public service will be one where different kinds of people work from more locations at different times contributing their skills and experience to projects across multi-disciplinary teams. In the context of this vision, the public sector workforce for the future is one that is mobile, flexible, skills-based and collaborative, in order to be able to respond quickly to fast changing environments and policy challenges. Recently, flexibility is empowered by a wide variety of digital tools, infrastructure and systems for better performance more broadly. Therefore, being able to adapt and be flexible for change may be prominent skills for civil servants in today's public organisations.

The OECD (2023) examines the concept of flexibility in public sector organizations through the following three pillars, each of them contributed to public service resilience during recent public health emergencies such as the COVID-19 pandemic:

- a) strategic mobility
- b) learning and development
- c) flexible ways of working

Well-balanced, strategic mobility is considered to be an essential tool that can boost flexibility needed to address complex and multidisciplinary challenges. It relies on public sector organizations' capability to establish the right conditions and mobility mechanisms (e.g. structured mobility opportunities to move across the modern public service to learn and apply new skills), provide support tools for minimizing disruptions associated with mobility (e.g. general guidance, coaching, on-boarding sessions, risk assessments) for promoting the right types of mobility (OECD 2023). However in practice there is limited mobility within the Greek public sector due to heavy and difficult procedures (OECD 2011).

Given that the role of a future-focused public servant is changing substantially and is requiring new skillsets and competencies, learning becomes vital for flexibility because learning itself is essential for adaptation and workforce resilience. The establishment of a learning culture might help fostering an environment in which public servants welcome the idea of updating their skills and developing new ones. However, it is crucial to note that

employees usually need incentives to engage in learning or at least some kind of justification for it. Beyond traditional financial incentives and promotion decisions that are rare in large scale, relevant case studies on flexibility illustrate that linking learning to incentives such as the use of competency frameworks and performance evaluations can be an effective strategy.

2.3.3 Result oriented

After Hood (1991) introduced the term “New Public Management” (NPM) to define a set of beliefs, doctrines and experiences, or as he says “*specific ideas about what should be done in administration*” (Hood and Jackson 1991: 12), NPM has been guiding public sector reform initiatives in many OECD countries, and intergovernmental organizations, such as the OECD and the World Bank Group, act as prominent supporters of the associated reforms. In this context, Verbeeten and Spekle (2015) highlight that the performance improvement in public sector, as advocated by the NPM theories, requires a results-oriented culture that advocates outcomes.

Zwart (2017) review and analysis on implementing results-based management in OECD countries highlights that the results-based approaches vary depending on contextual factors and benefit from having clearly defined results (outputs and outcomes) and developed strategies to achieve them. The concept of result orientation is a relatively new one for public administration and to date is not clearly defined in literature. Generally speaking, result oriented is a term used to describe an individual or organization that focuses on achieving specific outcomes or results rather than processes used to produce a product or deliver a service. Therefore, in the context of this study, result orientation in the workplace is a term used to describe public employees who focus on achieving results as per the goals set, and have the right skills set to achieve them. According to the above-mentioned Greek Law, being result-oriented involves completing in the best possible way the activities and tasks that are related to achieving the results, at the highest possible level of achievement and within the shortest possible time. Moreover, as stated, public employees should put the required efforts and time needed to accomplish those activities and tasks, be consistent, and driven by willingness, interest and self-motivation for the timely, effective completion of tasks involved and the quality of the final project deliverables. Therefore, it

can be argued that no matter of the definition used for result orientation, the ultimate outcome of this skill is the contribution to successful organizational performance.

However, for the successful implementation of performance management in the public central administration a number of pre-conditions should be met. Scholars argue that a number of challenges and difficulties remain to date in public organizations, including a weak results culture within the organization, performance measurement and method issues, and lack of guidance on results-based management (Vähämäki and Verger 2019).

2.3.4 Professionalism and Integrity

The concept of ethics for public administration has been conceptualized in various ways, such as a defence of core public values or as a social contract reflecting the values of society or social norms. Although at the beginning the focus has been on personal ethics as the individual constitutes a decision maker, soon after the changes introduced by NPM in public policy ethics scholars argue that ethics in public administration should be understood as professional ethics, and as a result, a professional ethics code guided by the principles of public good and social equity should be established in practice to protect against administrative evil (Shafritz et al. 2017, Fuertes 2021). It is acknowledged among scholars that the traditional approaches of the “old” ethics management based on ethics laws to encourage ethical behavior and discourage unethical behavior through a list of rules and regulations have been of limited effectiveness (Menzel 2015).

Integrity is a moral quality. The OECD (2017c) argues that “*public integrity refers to the consistent alignment of, and adherence to, shared ethical values, principles and norms for upholding and prioritising the public interest over private interests in the public sector*”. The OECD approach aims at encouraging moral behaviour and supporting civil servants make ethical decisions based on moral values, norms and principles. According to Huberts (2018) a value is a quality or belief that contributes to judgments about what is good; right, etc, while norms tell us whether something is good or bad; right or wrong. In this context, attention must be given to three major components, such as culture, accountability and system, and several sub-components. Analyzing all these components is beyond the focus of this study. Given that all countries have their own legislative framework to promote integrity, this study focuses on the organizational perspective and provide insights on how

training activities can contribute to raising awareness about integrity within the organization. Generally speaking, the importance of public integrity should be communicated and discussed within public organizations. The better public servants understand the importance of integrity, the better they can safeguard the public sector values and the specific values of the organization they work at. Thus, it is recommended public organizations know what kind of risks (vulnerabilities) and moral dilemmas face their public servants in their daily work and provide regular trainings about what integrity policies and measures should be taken to address these risks. Furthermore, training may contribute to the cultivation of a culture that values professionalism. On-the-job integrity training and ethical guidance can help public servants to get adequate knowledge about rules and regulations, and to develop or enhance essential skills for acting with integrity. These skills are vital in decision-making when dealing with moral dilemmas and the so-called grey areas. Scholars argue that training may provide individuals with a high level of moral understanding, principled behavior, analytical power and moral courage (Bowen 2016, Haq 2011). Given that organizational values have much to do with leadership, it is worth noting that leaders and the human resource departments play an important role in the promotion of ethical behavior and culture.

Professional civil servants are the foundation of effectiveness and capacity. They are driven by a common set of values that emphasize an ethical orientation to the public good (OECD 2017b). Professionalism in the public includes a strong component of integrity. Scholars argue that trust in public organizations depends heavily on their capacity to manage public problems efficiently and reliably. Such capacity depends on the professional standing and integrity of public servants.

2.4 SOCIAL SKILLS

2.4.1 Team working

The public sector today faces challenges that demand greater and deeper collaboration. Public organizations recognize the benefits of teams that operate in organizational context and try to leverage team-based structures in order to accomplish goals that cannot be met by relying on one individual alone. Scholars argue that when organizations require employees

to work in teams is based on the expectation that they will perform some demanding tasks more effectively than individuals and will reach organizational objectives (West 2012, Mathieu et al. 2008).

Teamwork is defined in Merriman-Webster (2024) dictionary as the “*work done by a group acting together so that each member does a part that contributes to the efficiency of the whole*”. In practice, teamwork refers to several possibilities such as work groups, cross-functional teams, virtual teams, or quality circles. For the purposes of this study, only the concept teams will be used. According to Kozlowski and Bell (2003: 334), teams are defined as “*collectives who exist to perform organizationally relevant tasks, share one or more common goals, interact socially, exhibit task interdependencies, maintain and manage boundaries, and are embedded in an organizational context that sets boundaries, constrains the team, and influences exchanges with other units in the broader entity*”.

How employees understand the concept of teamwork is based on some factors, such as the cultural context, individual’s experiences in the workplace, the media and public debate. Therefore, employees may regard teamwork as some kind of cooperation with colleagues or may have a clearer idea of what a team is indeed (Vašková 2007).

Studies investigating the efficiency of teams in the workplace argue that teams can work well and can be effective only if certain conditions are upheld (e.g. autonomous decision-making, information sharing) and if each member of the team has certain qualities. Salas et al. (2015) propose nine critical considerations, so that organizations might be able to use teams effectively. Six of these considerations comprise emergent states and processes that could ensure that team is motivated and focus in achieving team objectives, such as: 1) cooperation 2) conflict 3) coordination 4) communication 5) coaching 6) cognition.

The above-mentioned considerations include attitudes and motivations within the team, behavioral interactions among members and the shared team knowledge created by interactions. The rest three considerations, according to Salas et al. (2015), comprise influencing conditions that shape the degree to which teams engage in teamwork, such as

- 1) Composition
- 2) organizational culture (shared values, norms and practices of behavior)
- 3) context.

Therefore, according to Almonte (2022), teamwork skills are used as an umbrella term to cover all individual's sub-soft skills that would support the ability to work closely with other people with different personality styles. Some important sub-soft skills are considered to be the following:

- Reflexivity, that is the ability to adjust to changes about the task at hand, both internal changes e.g. members' various perspectives, and external changes e.g. shortened deadline (Widmer et al. 2009)
- Interpersonal communication skills, that is the ability to embrace diversity and treat all other equally and with fairness
- Active listening
- Cross-functional cooperation/collaboration, that is the ability to maintain a collegial, positive and helpful attitude to achieve common goals and interests
- Conflict resolution, that is the ability to understand other points of view and strive for compromise in situations of conflict by creating an option that everyone can agree with.
- Given that organizational performance depends on the ability of teams to work effectively, scholars have noted two important predictors, such as taskwork knowledge and teamwork knowledge, of team effectiveness (Guchait et al. 2015).

2.4.2 Service skills

Citizen service orientation is considered to be a fundamentally important skill for many parts of the economy, such as hospitality, sales and retail, and for public service-oriented organizations. Based on recent EU policy framework, citizens are at the heart of public institutions' considerations and are considered main stakeholders. It is worth noting that the term "citizen", as used in this study, encompass all people who may be impacted by the delivery of public services (Pfeil et al. 2018). Scholars highlight that citizens today have rising expectations from the public sector. Therefore, high-quality service delivery begins with a good understanding of citizens' changing needs and expectations, and at the same time requires experiences and key drivers of satisfaction for citizens. This statement means that public organizations should invest at least in three pillars, including the development of a service excellence culture, providing employees' training focused on developing citizen-

service skills, and collecting data and insights from citizens in order to design targeted, effective service-delivery improvements based on the input from citizens and not on assumptions about citizen requirements (Pfeil et al. 2018).

Lytle and Timmerman (2006) defines an organizational service orientation as “*an organization-wide embracement of a basic set of relatively enduring organizational policies, practices, and procedures intended to support and reward service-giving behaviors that create and deliver service excellence*”.

But what are the service skills required in practice, especially for the category of public servants who are closer to the front line and may interact regularly with citizens to provide services? OECD (2017) highlights the fact that important trends, including the increasingly complex service delivery landscape, technological change that enhances a variety of new channels and engagement tools, and, the push for a public management more open to new ideas and innovation, are changing the skill sets required. To this end, OECD (2017) argues by bringing insights from the public sector that today’s public servants need to be more than transactional, and develop skills such as the following ones:

- Act as guides or pathfinders in order to help citizens navigate complex web/online portals of services so as to get the service they need.
- High level communication skills, empathy, reflection and a level of discretion, so as to understand the diverse needs of different citizens and provide personalized help.
- Innovation skills for redesigning tools and processes.
- Online consultation and engagement skills to achieve specific outcomes.
- Managing social media. That is a newer skill set that requires a constantly updated skill set to maximize potential.

Dudley et al. (2015) argue that although front-end operations have indeed the most immediate impact on citizen experience and satisfaction, back-office administrative operations are an equally crucial part of enhancing the citizen experience.

Almonte (2022) argues that the most important skills required to demonstrate a service orientation are as follows:

- Building rapport and trust, an important step toward building long-term relationships

- Maintaining positivity
- Understanding and satisfying the citizen's needs
- Be polite, be responsive to citizen questions, and be helpful

Taken together, all the above-mentioned skills and normative expectations highlight the importance of the alignment of public servants' skills and capabilities, processes and policies in a transformation manner aiming at creating superior value to citizens.

Despite the fact that little empirical research has investigated the relationship between service orientation and organizational performance, mainly because measuring public sector performances is extremely difficult due to some issues, Lytle and Timmerman (2006) research findings provide a strong basis for supporting that building and maintaining policies and service delivery mechanisms which respond to the needs/expectations of citizens would bring financial and operational success at involved organizational unit.

2.4.3 Conflict management

Recent literature in conflict management provide evidence to the belief that today's organizations deal with high levels of conflict in the workplaces resulting from many procedural and personnel issues, including lack of resources, confusing organizational structures, competition, disagreements, bad relationships, budget cuts, insufficient communication, high pressure. In essence, when different people, with different backgrounds, aims and values, are working together in close proximity interpersonal conflict may arise. Generally speaking, conflicts within organizations may lead to disturbed routines, decreased productivity and satisfaction (Shih and Susanto 2010). Furthermore, studies highlight that strained relationships may lead to more performance problems than from deficits in skills or motivation.

Flanagan and Ruden (2008) support that there are two major types of conflict in organizations: task conflict and relationship conflict. Task conflict focuses on how to solve problems arised by differences in ideas and opinions. This type of conflict has the potential, when properly managed, to result in creative approaches and advanced decision making. On the other hand, relationship conflict is related with disagreements about values and personal norms or taste, and may escalate into counterproductive workplace behaviors, envy and knowledge hiding (Peng et al. 2021). Flanagan and Ruden (2008) suggested that team

members should develop norms to address conflict when it emerges, by enhancing collaboration, emotional intelligence skills within the team, trust and safety. Although it is challenging to address conflict, the authors suggest that a beneficial process would involve processes, such as cooling down (i.e. increase one's self-awareness, observe the moment and choose your response), slowing down (i.e. find a contingency plan for conflict) and engaging conflict constructively (i.e. listening for understanding, expressing honestly emotions etc.).

It is widely acknowledged that managers and leaders play a key role in conflict management. Scholars argue that to manage conflict, the manager or leader first identify the conflict, analyze the causes and select the appropriate style to use. Conflict management styles are defined as “*specific behavioral patterns that individuals prefer to employ when dealing with conflict*” (Moberg 2001). Based on the Blake and Mouton's model (1964,1970) and the research of Van de Vliert and Kabanoff (1990) there are five main styles of dealing with conflict, as follows:

- 1) Collaborating (I Win – You Win). It is regarded as a superior style that fits in all situations and circumstances.
- 2) Compromising (I Lose / Win Some – You Lose / Win Some). It is regarded as an effective style since both parties are willing to propose mutually acceptable solutions for their different needs.
- 3) Accommodating (I Lose – You Win)
- 4) Competing (I Win – You Lose)
- 5) Avoiding (I Lose – You Lose)

The accommodating, competing and avoiding styles are not recommended to manage interpersonal conflict.

Conflict management skills, principles and procedures may play a key role in dealing with types of conflict and their related costs. According to Hendijani and Ahmadi (2023), both managers at any level and employees can manage conflict through the above-mentioned conflict management styles and approaches, and by using the following soft skills:

- Communication skills, such as being able to listen effectively and actively, understand issues, propose solutions, be clear in communicating the message
- Negotiation skills, such as negotiating agreements, making compromises, attempting to influence others (rational persuasion)
- Rational thinking, critical thinking and constructive thinking, needed to analyse the challenge of conflict management from different angles
- Decision making skills, needed to formulate arguments and take positions consistent with facts and situations at hand
- Problem-solving skills, needed to reach better solutions
- Emotional intelligence
- Being able to identify creative means to resolve disputes
- Positiveness aiming at win-win situations
- Social skills, such as self-esteem

2.4.4 Communication skills

A number of scholars have attempted to define communication competence but to date there is a lack of widely accepted definition. According to Canel and Luoma-aho (2019) a definition of public sector communication, that depicts today's multipurpose, multistakeholder and multiorganizational public sector, is: *“Goal-oriented communication inside organizations and between organizations and their stakeholders that enables public sector functions, within their specific cultural/ political settings, for the purpose of building and maintaining the public good and trust between citizen and stakeholders”*.

Wiemann (1977:198) as cited in Wiemann and Backlund (1980) defines communicative competence as *“the ability of an interactant to choose among available communicative behaviors in order that he (she) may successfully accomplish his (her) own interpersonal goals during an encounter while maintaining the face and line of his (her) fellow interactants within the constraints of the situation”*.

It can be argued that the above mentioned definitions focus on two main components: a) knowledge of both communication and context b) ability (skill) to carry out behaviors to obtain specific goals within the organizational context. In literature, communication is acknowledged as the lifeblood of an organization; therefore, any

weakness in communication skills would imply difficulties for individual professional performance that affects the organization as a whole (Awad and Alhashemi 2012).

What are communication skills? In general communication skills may take three forms: 1) personal communication 2) organizational communication, which means being comfortable with traditional written correspondence (letters, memos), contemporary correspondence (emails, social media posts), written documents (reports, briefs) as well as with oral/spoken communication (phone calls, team meetings, presentations) 3) nonverbal communication, which means to be able to use body language or gestures (e.g. smiles, raised eyebrows) or tone of voices properly at different contexts (Saramolee et al. 2022, Almonte 2022). It is widely acknowledged that in some of the above-mentioned aspects of communication there are techniques and appropriate vocabulary that can be taught in order to achieve the goal of improved relations.

According to the new EPSO Competency Framework, communication refers to individual's ability to convey information, effectively and concisely articulate ideas, thoughts and opinions (verbally or in writing), use convincing arguments and solid reasoning, communicate in ways that generate buy-in by facilitating interaction, and engage effectively with other parties (De Sutter 2022).

Touloumakos (2023) argues that communication skills always have to meet the communication aims and situational requirements. Therefore, she argues that communication skills cannot be recognised simply by identifying various de-contextualized communication behaviours applied in various cases. To this end, Touloumakos (2023) identifies the following three characteristics about communication skills: a) they are highly contextualized (i.e. they can be recognized as communication skills only within the specific scene of interaction), b) they are transient in nature c) they are elusive (i.e. a doing that can be perceived as communication skill in one incidence will not be necessarily be communication skill in another incidence).

2.4.5 Leadership

Public sector administrative leaders/managers at the top of the organizational hierarchy are facing challenges which are increasingly complex. For instance, they are asked to manage and transform very large public organisations, direct the activities of their workforces

towards goals, inspire and motivate their workforces, undertake the responsibility for achieving certain objectives, design and implement innovative initiatives that shape the future of the organization involved. A growing body of research argue that public sector leaders/managers, no matter how gifted, should be equipped with appropriate qualities, soft skills and competencies.

Generally speaking, after the decade of 1990 leadership is considered as a multifaceted concept. Goleman (2000) argues that there are six basic leadership styles and highlights that leaders should be able to switch among styles according to the requirements of different eras and situations. The six styles are the following:

- 1) The coercive style (immediate compliance is demanded)
- 2) The authoritative style (it is about mobilizing people toward a vision)
- 3) The affiliative style (it focuses on building emotional bonds and harmony)
- 4) The democratic style (it involves reaching consensus through participation)
- 5) The pacesetter style (it expects excellence and self-direction)
- 6) The coaching style (it aims at developing people for the future)

In this study we shift our thinking from a focus on behavioral patterns of leaders according to the above styles to an emphasis on soft skills and abilities that can be learned and developed over time through training programs, job experience, coaching sessions, workshops, performance reviews and by studying. In the context of this study, leadership skills are defined as the ability to use one's knowledge and competencies to achieve a set of goals or objectives.

Boyatzis (2009) argues that given research findings the most important competencies (including soft skills) to advanced performance are included in three clusters: a) cognitive intelligence competencies b) emotional intelligence competencies and intrapersonal abilities consisting of adaptability, self-awareness, self-regulation, achievement orientation, positive outlook, and c) social intelligence competencies and interpersonal abilities including empathy, coaching and mentoring, teamwork, conflict management and inspirational leadership.

According to Katz's (1974) skill-based model of leadership, as published in the Harvard Business Review, successful leadership may be rest on three categories of

administrative, interrelated, skills: technical, human, and conceptual. Katz argued that these skills are different from any innate characteristics or traits, which mainly are considered as fixed. Technical skill is concerned with working with “things” and includes specialized knowledge in a specific type of work (i.e. process or hands-on activity within an organization). Human skill is concerned with knowledge and ability to work effectively with people. Conceptual skills involves the ability to work with ideas and concepts. In other words, a leader should see the organization as a whole and be able to make strategic long-term plans, policy judgments and large scale choices that advance the overall welfare of the organization but also the well-being of employees and stakeholders.

Mumford et al. (2000) developed a model of leadership emphasizing on “*the capabilities, knowledge, and skills that make effective leadership possible*” (Mumford et al. (2000:12). The model is based on three important competencies that include a wide range of soft skills: 1) problem-solving skills, 2) social judgement and social skills, and 3) knowledge. The first type of skills are needed to solve unusual or novel, ill-defined organizational problems. Good problem solving involves creating solutions that are logical, effective, unique and go beyond given information (Mumford et al. 2000). The second type includes skills that are needed to understand and manage people and social systems, to communicate effectively, to resolve conflict, for being flexible and sensitive to the perspectives of others. As scholars argue, leaders do not do the work; they depend on followers to actually do the work. Thus, interpersonal communication is critical for leaders (Wart 2016). The third type of skills is knowledge that help people to formulate solutions considering restrictions, downstream consequences, risks and workability.

The recent findings of Mumford et al. (2017) suggest that the following nine distinct cognitive skills may contribute to leader performance: 1) problem definition 2) cause/goal analysis 3) constraint analysis 4) planning 5) forecasting 6) creative thinking (idea generation) 7) idea evaluation 8) wisdom, and 9) sensemaking.

Crosbie (2005) identified eight soft skills needed by leads, including: 1) collaboration/teamwork 2) communication skills 3) initiative 4) leadership ability 5) coaching/ people development 6) personal effectiveness / personal mastery 7) planning and organizing, and 8) presentation skills.

Other scholars have identified the importance of emotional intelligence in managerial decision-making and also during confrontations with subordinates (usually with diverse personalities, skills, expectations) in the public sector. Chaidi and Drigas (2020) define emotional intelligence as the ability to recognize, understand and manage one's own emotions as well as those of others. Paoletti and Ben-Soussan (2021) argue that emotional intelligence consists of the following four components:

- Self-awareness. It is developed by having individuals identify their own values, attitudes and behaviors as a means to become more self-aware of their cultural biases and to understand how their emotions influence their thoughts and behaviors.
- Self-regulation. It is the ability to manage and regulate one's emotions in various contexts. It may involve techniques such as resilience, adaptability, and emotional self-control
- Social awareness. It includes empathy and the ability to consider other's viewpoints.
- Relationship management. It is the ability to find common ground and build rapport.

According to Bhardwaj and Punia (2013) review study, the core competencies for successful and effective leaders and managers are communication skills, teamworking, vision, ambition, self-management, decision making, proactiveness, risk taking, creativity, result-orientation and strategi-orientation.

Empirical findings provide evidence that the quality of leadership or, in other words, positive forms of leadership in the public sector may initiate a motivational cycle that yields outcomes such as individual and organizational performance and efficiency (Backhaus and Vogel 2022).

2.5 CONCEPTUAL / THINKING SKILLS

2.5.1 Problem solving, critical thinking, decision-making

Personnel in the public administration, especially managers, are often required to manage complex information and concepts or dynamic difficulties by thinking out-of-the-box in order to develop practical, creative and innovative solutions for a given need or problem. In literature, soft skills focused on navigating complexity are conceptualized as cognitive

skills. Cognitive skills are reported to be growing in importance most rapidly than other skills. Core skills in this domain, such as problem-solving, creative problem-solving, critical thinking and decision making, can be conceptualized as applied cognitive skills, because they take into account a variety of qualities, traits, values, attributes and sensitivities to make decisions and also require the capacity to consider the consequences and accept accountability for the products of one's work. This suggests moral and intellectual maturity ((World Economic Forum 2016).

Lamb et al. (2017) provides a generic definition according to which “*critical thinking as a skill refers to the ability to assess the value of a claim or information and come to a conclusion about what to believe or to do about it*”. Scholars argue that dispositions, such as openmindedness, inquisitiveness, and the desire to seek information, are an integral part of critical thinking (Lamb et al. 2017). Critical thinking means to reason effectively, recognizing connections between concepts, and disciplines to solve problems and make decisions (Germaine et al. 2016).

Problem-solving is the ability to identify and define problems as well as to generate potentially effective solutions (Parker et al. 2009). Problem-solving is seen as the most important cognitive activity which is vital for success in both the workplace and everyday life. According to Sarathy (2018), real-world problem solving is indeed what we do every day, and therefore, solving real world problems in real time, given the constraints posed by one's environment, is vital for our survival. In the new EPSO Competency Framework published in 2022, “critical thinking, analyzing and creative problem-solving” represent as a whole one out of the eight general competencies required for EU officials in the workplace and is defined as follows: “*Manage complex information with a holistic, systems thinking perspective. Show awareness of ramifications of issues beyond own area of responsibility and consider the wider picture and other points of view. Grasp what is essential and structure thoughts clearly. Develop creative and innovative solutions taking stakeholders' needs and positions into account*” (Sutter 2022).

What is a problem? According to Mayer (2013) a problem is the difference between a given state and a desired state, and there is no obvious way to move from the given state to the desired state. Thus, problem solving can be seen as moving from an initial/given state to a goal state (solution) using a series of operations (Newell and Simon 1972 in OECD

2017). In recent literature there are different typologies of problems, including logical, algorithmic, story, rule-using, decision-making, troubleshooting, diagnosis-solution, strategic performance, case-analysis, design, and dilemma (Jonassen 2000). In terms of their structuredness, Jonassen divides problems as well-structured or well-defined and ill-structured or ill-defined and argues that solving each kind of problem engage different set of intellectual skills (Jonassen 2000). Well-structured or well-defined problems are typically found in educational practice and are characterized by having a known goal and one correct answer. Instead, ill-structured or ill-defined problems are the kinds of problems that are involved in everyday practice and in professional environments and are characterized by multiple goals and multiple potential and acceptable solutions.

Scholars may present different approaches of how to solve a problem. In this study, we focus on the rational and the lateral or creative. According to Reiter-Palmon & Illies (2004), a lateral or creative problem solving may include the following rational steps:

- Problem construction or problem definition. This may be a time-consuming and effortful activity.
- Information search (from internal and external sources) and encoding. It may be a challenge to determine the relevance of obtained information.
- Generation of alternatives solutions. The quality and authenticity of ideas generated may be critical.
- Evaluation of solutions. In this step it is important to clearly communicate to followers what criteria are being used to evaluate solutions.

Problem solving and creative problem-solving skills are expected to be among the top in-demand skills in Industry 5.0 due to advanced technologies, such as automation and cyber-physical systems, and unpredictable challenges (Güğerçin 2022). It is argued by scholars (Gagné 1985) that several factors can affect one's problem-solving ability, such as level of maturity, experience, interests, intelligence, readiness, emotional motivation and environmental context (cited in Saramolee et al. 2022).

Employees who are engaged in problem-solving are more likely to be able to create new knowledge. The stock of knowledge held by employees in an organization can allow the organization as a whole to solve new problems and adapt to changes, and thus can contribute

to organizational performance and effectiveness, including operational excellence (Gray and Chan 2000). However, to date, only few empirical studies have investigated the relationship between problem-solving skills and employee or organizational performance.

According to the approach set by the Survey of Adult Skills, problem solving in technology-rich environments is defined as “*using digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks*” (PIAAC 2009).

2.5.2 Creativity and Innovation

Societies as a whole increasingly depend on innovation and knowledge creation to meet the needs of the community and improve the standard of living. It is widely accepted that today there is a fundamental need the level of innovation to be increased within the public sector to meet challenges, such as rising social expectations for new or improved services, complex policy issues and the quest for efficiency. Public sector innovation is defined as “*the process of generating new ideas, and implementing them to create value for society either through new or improved processes or services*” (European Commission 2013). Public sector innovation is a broad concept, fundamentally different from private sector innovation, and often results in increased difficulties (Vivona et al. 2020).

The 2018 edition of Oslo Manual provides a general definition of innovation, that is applicable to all sectors, as follows: “*An innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit’s previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)*” (Oslo Manual 2018). In this definition the term “unit” refers to any institutional unit in any sector. Chen et al. (2019) defines public sector innovation as “*the development and implementation of a novel idea by a Public Service Organization to create or improve public value within an ecosystem*”. The authors argue that the above-mentioned definition encompasses three attributes -novelty, development and implementation, and ecosystem – and one outcome that is public value for society. Social value is therefore a goal of public innovation, but cannot be guaranteed on an ex-ante basis.

There is substantial literature that explores the nature of innovation. For instance, contemporary innovation theory put forward four modes of change to products and services,

each of them requires different policy contexts and approaches, as follows: 1) radical innovation 2) architectural innovation 3) incremental innovation 4) product or service development (Osborne and Brown 2013). Scholars who conducted Innovation research in public services (e.g. Osborne 1998) argue that more effective frameworks are likely to include small-scale and step-wise incremental change than large-scale transformational or fundamental change, and therefore may include only the following types of innovation 1) architectural innovation 2) two types of incremental innovation, such as expansionary and evolutionary 3) per se innovation, derived from gradual service development (Osborne and Brown 2013). To this end, Chen et al. (2020) put forward a classification of public service innovation that includes six types of innovation: 1) mission innovation 2) policy innovations 3) management innovation 4) partner innovation 5) service innovation and 6) citizen innovation, based on three criteria of focus, locus and coverage.

In literature the terms “creativity” and “innovation” are usually used interchangeably, but they are distinct concepts (Houtgraaf et al. 2023). The focus of creativity is primarily on the individual level. Instead, innovation can flourish better at the group/team and organizational levels (McLean 2005, Amabile 1996). Houtgraaf et al. (2023:3) defines public sector creativity as “*public servants coming up with novel and useful ideas through various practices*”. Creativity entails the production of something novel or useful in a given social context (Plucker et al. 2004 cited in Lamb et al. 2017). The social situatedness of creativity explains why something cannot be labeled as creative *a priori* (Lamb et al. 2017).

Despite the common belief that innovation is rare in public sector and several constraints, such as constitutional, legal and political, recent research has proved that innovation is taking place in the public sector (e.g. Leyden & Link 2015, Houtgraaf et al. 2023). The authors argue that two categories of creativity with different foci may flourish in the public sector, namely “pragmatic creativity” and “pioneering creativity”. The first one is risk-mitigation, aims at problem solving and continuity and encompasses dimensions of “incrementalism”, “reactivism”, and “realism”. On the other hand, the latter is risk-taking due to discontinuity, aims at exploration and disruption and encompasses the dimensions “radicalism”, “proactivism” and “idealism” (Houtgraaf et al. 2023).

Scholars argue that creativity represents a two-criterion combination between originality/novelty/newness and usefulness/utility, meeting task constraints as defined

within a particular context (Gajda et al. 2017). For instance, Sternberg and Lubart (1999) define creativity as “*the ability to produce work that is both novel and appropriate*”. Simonton (2012), inspired by the criteria imposed by the US Patent Office, proposes the three-criterion definition: “An idea is only creative if it can be credited with novelty, utility, and surprise”, using a multiplicative rather than additive function.

Several public administration scholars underscore the critical role of creativity among civil servants, particularly when it is implemented in a well-structured and targeted manner. Such creativity can be seen as a vital source of productivity growth, improvements in service quality and cost savings (e.g. Denhardt et al. 2013, Kruyen and Van Genugten 2017).

People are the most important resource for public innovation at every stage of its process. What skills do public servants need to support innovation? OECD (2017b) argues that innovation is not as skill or ability in itself, but the combination of a variety of elements that co-exist at the right place and time. Although there is no recipe for innovation, it is well accepted that a wide range of soft skills, in addition to some specific technical abilities, may play an important role in innovation. A fundamental skill in the change and innovation process is the ability to manage change. Furthermore, the OECD (2017b) argues that the following six (6) skills may support and enable innovation in the public sector:

- 1) Iteration. This is about using incremental approaches in the development of a project (product or service) while reducing risks. Iteration skills are about adopting project management techniques (such as time-boxes, workflows), using prototypes to demonstrate what something (a service, a policy) might look like, conducting tests and robust experiments to test whether something works and if not, take action to identify the best solution.
- 2) Data literacy. Public servants are data literate when they can appreciate the value and importance of variety of data available in order to understand the changing needs and expectations of citizens. In the context of today’s “data revolution”, public servants must be able not just to collect data but also to work with data experts (analysts and scientists) alongside with traditional experts (statisticians, researchers and economists) to make decisions aiming at improving public service outcomes.
- 3) User centered. Being user centered is about considering whether a project (product or service) meets user changing needs and if not identify needs and design effective

- user centered services/policies that meets those needs. In this context it is also important to develop alternative approaches for those with particular needs (e.g. with a disability)
- 4) Curiosity. This is the ability to ask the right questions of multiple sources, taking advantage of reframing techniques so as to be able to see a problem from a different perspective, discovering how other people deliver a similar service so as to be able to identify examples of success and adapt their approach to meet similar goals, and also about adopting a mindset of continuously learning in a constantly changing world.
 - 5) Storytelling. Stories can be a powerful way to engage people in talking about the story of change (past, present and possible futures) and exchanging knowledge and practice. Acting as a mentor or coach, other public servants can identify common challenges or needs, learn from your own experience, and when talking about the future reveal uncertainties and possibilities.
 - 6) Insurgency. Given that the majority of public servants are typecast risk averse, insurgency is about finding new, alternative ways of doing things by challenging the status quo of doing things and building new synergies and approaches.

Innovation skills are necessary, but not sufficient to support innovative activity. Motivating public servants to be innovative requires consideration of various incentives and disincentives that simultaneously operate within a public organization. Thus, the organizational capacity to innovate may be linked to the organizational culture (i.e. how people are motivated within an organizational setting), structures, rules and processes (i.e. may offer or block opportunities to innovate). Scholars highlight that the major factor that impedes creative performance is control, including both control in decision making and control of information flow, since control may negatively affect both intrinsic motivation and creativity. Therefore, institutional settings must provide a supportive overall environment in which public servants can use their skills to their best ability (OECD 2015). In terms of organizational supports for innovation in safe and controlled ways are 1) organizational encouragement (supportive organizational structures, innovative culture and administrative managerial support, communication channels), 2) supervisory encouragement in communicating goals and in providing task support, 3) work group

encouragement, 4) freedom and autonomy for determining the means to achieve a goal and 5) providing optimal resources of both time and money (McLean 2005).

2.5.3 Learning to learn

According to Weinstein et al. (2015) learning to learn “*involves a complex and dynamic interaction of cognitive, metacognitive, motivational, affective, and behavioral processes selected to enhance the probability of reaching a goal for knowledge acquisition or application*”.

Learning to learn has been argued to be a key competence. The EU working group defines the concept as follows: “*Learning to learn is the ability to pursue and persist in learning, to organise one’s own learning, including through effective management of time and information, both individually and in groups. This competence includes awareness of one’s learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. This competence means gaining, processing and assimilating new knowledge and skill as well as seeking and making use of guidance. Learning to learn engages learners to build on prior learning and life experiences in order to use and apply knowledge and skills in a variety of contexts: at home, at work, in education and training. Motivation and confidence are crucial to an individual’s competence*” (Education Council, 2006 annex, par.5 cited in Hoskins and Fredriksson 2008). This definition implies that a number of skills and abilities are involved in the intellectual process, such as social skills (e.g. motivation, confidence), cognitive skills (e.g. the ability to handle obstacles), positive attitude towards lifelong learning (e.g. refers to building on “prior learning) and self-regulating mechanisms (Hoskins and Fredriksson 2008).

2.6 PERFORMANCE

2.6.1 Understanding the concept of organizational performance

Defining and measuring performance in public sector is just as complex as defining and measuring soft skills due to the nature of public sector work. Generally speaking, there are three different perceptions regarding organizational performance. The first category of researchers defines performance based on outputs (the services being provided) of public

sector activities (e.g. Afonso et al. 2003). Other scholars argue (e.g. Dixit 2002) that measuring outputs is problematic because the outputs of public services are collective and the benefits are both economic and social. The second category defines performance based on results and usually takes the form of a ratio analysis. The third category utilizes the concepts of efficiency and effectiveness to define performance (Zhu et al. 2024). According to Krawchenko (2021), public sector efficiencies concern the inputs required for a given number of outputs produced with those resources, can be applied to limited activities and issues (i.e. cost savings), and have been a major rationale for public management reforms. On the other hand, effectiveness includes difficult-to-measure objectives (i.e. quality) and intangible outcomes (i.e. wellbeing).

Scholars argue that strict performance measurement systems in the public sector usually face implementation difficulties due to four important factors: a) the diverse nature of services provided b) the wide range of service users c) the difficulties in defining targets and goals, some of which may be in conflict d) the lack of competencies (Arnaboldi and Azzone 2010). Au (1996) argues that organizational performance is complex and subjective and hard to measure due to the absence of well-specified models of organizational effectiveness in the public sector.

Dooren et al. (2015) argue that performance in public sector is defined as the realization of public values such as efficiency, effectiveness, equity, robustness, openness and transparency. They classified performance of public sector into three different levels, as follows:

- The macro-level, which deals with the performance of a country, or supranational aspects of performance
- Meso-level, which deals with the performance of organizations, involved in policy sectors or in governing chains and networks
- Micro-level, which deals with individual's performance in organizations of public sector

Performance at each of the above-mentioned levels is gauged by different mix of specific indicators, selected on the basis of their quality and relevance, considering that all of them have a variety of advantages and disadvantages in terms of risks associated with them.

Generally speaking, performance indicators need to fit the particular social-economic context in which are deployed, be based on robust data and be aligned with political objectives at a national setting (Nunn 2012).

Since the time EU governments started to be accountable for the results achieved in relation with the use of public resources, public management studies have developed various conceptual frameworks and models for measuring/evaluating the different dimensions of performance (e.g. outputs, efficiency, effectiveness, responsiveness, outcomes) of public sector. The assessments of performance may be either more “objective” when based on a set of well-defined (i.e. relevant and useful) performance indicators and real figures from organizations or more “subjective” and/or biased when take into account several other qualitative criteria, such as stakeholder’s perceptions of various aspects of organizational activities (Johannessen et al. 1999). At the European level, good practice advice and EU-wide recommendations aim to continuously improve the quality and efficiency of public services and a main challenge of the transformation process of public administration is being focused on boosting performance and meeting sustainable indicators. Despite such progress, the conceptualization and measurement of performance in the public sector remains to date a challenge (Amirkhanyan et al. 2014, Andrews et al. 2006).

2.6.2 Understanding the concept of employee job performance

In literature there are different conceptualizations of employee job performance and these differing conceptualizations result in differing measurement parameters (Pandey 2018). Furthermore, it may be confusing that scholars have often interchangeably used the terms “job performance”, “individual performance” and “task performance” (Awan et al. 2020).

Researches argue that job performance should be measured in terms of task performance and contextual performance, since both aspects of performance are vital to achieve organizational goals and objectives. Task performance may vary between different jobs and is related to an individual’s effectiveness at performing work-related activities that contribute either directly or indirectly to the organization’s “technical core”, while contextual performance may be relatively similar across jobs and is related to activities that support the organizational environment e.g. helping and cooperating with colleagues (Borman and Motowidlo 1997).

Locke (1976) defines job performance as “*a function of the perceived relationship between what one wants from a job and what one perceives it is offering*”. Spector (1997) argues that job performance is “*simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs*”. Motowildo (2003: 39) defines job performance as “*the total expected value to the organization of the discrete behavioral episodes that an individual carries out over a standard period of time*”. According to Viswesvaran and Ones (2000: 216), job performance refers to “*scalable actions, behavior, and outcomes that employees engage in or bring about that are linked with and contribute to organizational goals*”.

2.7 CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

What are the factors that affect employee job performance? Pandey (2018) developed a frame the identifies and classifies factors affecting job performance. Findings provide evidence that job performance is affected by a number of factors that fall into four categories of resources: personal/individual resources, job resources, organizational resources, and social resources. As might be expected, the lists provided by Pandey (2018) are lengthy and bring together many internal and external factors.

Generally speaking, employee job performance is an important indicator of organizational performance outcomes. However, the relationship between these two variables is complex and insufficiently researched to date. As Bakotić (2016) and Mahoney (1984) point out it would be naïve to assume that organizational performance is a simple sum of individual performances, because organizational performance is influenced by various factors, internal (i.e. the organization may influence) and external (i.e beyond the organization’s influence). Instead, it is logical to support the assumption that there are job-relevant behavioral attitudes that can impact employee job performance and these attitudes might have a visible impact on organizational performance if specific conditions/circumstances are met (e.g. when individual performances are not blocked by the influence of external factors). There are many studies focus on factors affecting employee job performance. For instance, scholars have identified situational factors, such as enriched

jobs (i.e. jobs that provide employees the opportunity to use different skills and talents), which are associated with positive personal and job-relevant behavioral outcomes, including employee job performance, and determine the perceived level of job satisfaction (e.g. Wood et al. 2012, De Dreu and Nauta 2009).

Hackman and Oldham (1975) developed the job characteristics model which became very influential. According to their model, high-quality job performance may be a function of five job characteristics, including skill variety, task identity, task significance, job autonomy, and feedback from the job done. Literature acknowledges that a combination of these characteristics is likely to bring a positive affective and attitudinal state that would improve the motivational level of employees and, as a result, have a positive effect on individual performance (Johanim and Yaha 2016, Ghosh et al. 2015, Sulea et al. 2012, Wright 2004).

Skill variety: Having considered the above, the current study is focused on the variable “skill variety”. Skill variety is “*the degree to which a job requires a variety of different activities in carrying out the work, which involves the use of a number of different skills and talents of the employee*” (Hackman and Oldham 1975: 161). The authors argue that “*when a task requires a person to engage in activities that challenge or stretch his skills and abilities, that task almost invariably is experienced as meaningful by the individual*” (Hackman and Oldham 1975: 257). Meaningfulness of work is acknowledged as the main source of intrinsic motivation (i.e. self-motivation) for public servants (Johari and Yahya 2016). Given that there is considerable diversity to the degree to which management practices in public organizations utilize the skills of their employees, it would be interesting to examine whether such “skill variety” exists in job roles in public organizations and also to investigate if it can have an effect on employee job performance.

Skill-utilization: O’Brien (1983) highlights that skill-utilization is very similar to the concept of skill-variety however it constitutes a distinct concept. O’Brien (1983: 462) defines skill utilization “*as the degree of match or congruence between an individual’s skills and the level of skill required by his or her job*”. Concerning the job characteristics theory by Hackman and Oldham (1975, 1976, 1980), O’Brien argues that the provided by the authors “skill variety” definition implies that employees will use core job skills. However, this constitutes a dubious assumption, since it is not true that the variable “skill variety”

measures skill use. O'Brien (1983) has empirically tested the effect of skill utilization and concluded that is an important and distinct job characteristic that may lead to job satisfaction and advanced performance. As O'Brien (1983: 467) argues "*employees who perceive their jobs as using their skills are likely to report relatively high levels of job satisfaction*". Later studies have also considered the positive correlation between skill utilization and job satisfaction. For instance, according to Gallie et al. (2017) skill utilization can drive high levels of satisfaction at work, while on the other hand poor use of skills may create job dissatisfaction and can be related to increased turnover. Having considered the above arguments, in this study we enter the variable "skill-utilization" into our regression model as a critical **theoretical mediator** between skill variety and job satisfaction. Given that we do not have distinct empirical data to measure "skill-utilization" we assume for the purposes of this study that skill variety and skill utilization scales are equivalent. Being consistent with this rationale, it is posited that:

H1α- "Skill variety" is positively related to employee job performance

H1β- "Skill variety" is positively related to job satisfaction

Soft skills: Researchers argue that it is logical to assume that a link exists between employee' competencies, including soft skills, and organizational performance. Indeed, the recent years public policy makers take as axiomatic that it does exist, despite the fact that such empirical research in the Greek public sector has been largely ignored by scholars, to the best of our knowledge. Given the large number of varying factors that may contribute to organizational performance and the interrelations between these factors, it is hardly surprising that it is very difficult to single out the contribution that soft skills might make to organizational performance (Grugulis and Stoyanova 2011). A growing number of studies have provided valuable insights on the relationship between soft skills and job performance mainly in private organizations (e.g. Linna et al., 2010; Morgeson et al. 2005, Seri and Zanfei 2013, Wade and Parent 2002, Ashaye and Irani 2019, Heckman and Rubinstein 2001, Park et al. 2003, Jiang et al. 2012), but differ significantly on what attention has been paid to soft skills specifically or on HR practices. For instance, Chowhan' analysis provide evidence that HR investments in skill-enhancing practices may lead to higher levels of innovation and subsequently higher organizational performance (cited in Boxall et al. 2016).

This conclusion is consistent with other studies that propose that improvements in employee competencies may enhance organizational performance (Noe et al. 2010). As a result, from these studies it is difficult to build robust evidence on what extent soft skills have a positive impact on organizational performance (Grugulis and Stoyanova 2011, Borgonovi et al. 2018). Given the multifaceted nature of soft skills and the individual differences, it can be argued that even at the individual level it is challenging to assess the direct link between soft skills and improved employee job performance with confidence since there are factors, such as how employees apply their own soft skills to the tasks they perform, that may blur the level of performance achieved (Johari and Yahya 2016, Autor 2013 cited in Grundke 2017). The current study is focused on selected “soft skills” classified into three clusters: Personal Qualities, Social Skills, and Conceptual/Thinking Skills. Delisle and Lajoie (2022) argue that not all the skills are created equal and that the theoretical importance of a skill should be accompanied by empirical evidence showing that the skill is linked to job performance. In this context, we explore which ones of the clusters civil servants are perceived as important for their job performance. Based on the preceding research, we further hypothesize the following:

H2a- “Personal Qualities” have a significant impact on employee job performance

H2b- “Personal Qualities” have a significant impact on employee job performance mediated by job satisfaction

H3a- “Social skills” have a significant impact on employee job performance

H3b- “Social skills” have a significant impact on employee job performance mediated by job satisfaction

H4a- “Conceptual/Thinking Skills” have a significant impact on employee job performance

H4b- “Conceptual/Thinking Skills” have a significant impact on employee job performance mediated by job satisfaction

H5- “Personal Qualities” are perceived as important for organizational performance mediated by employee job performance

H6- “Social skills” are perceived as important for organizational performance mediated by employee job performance

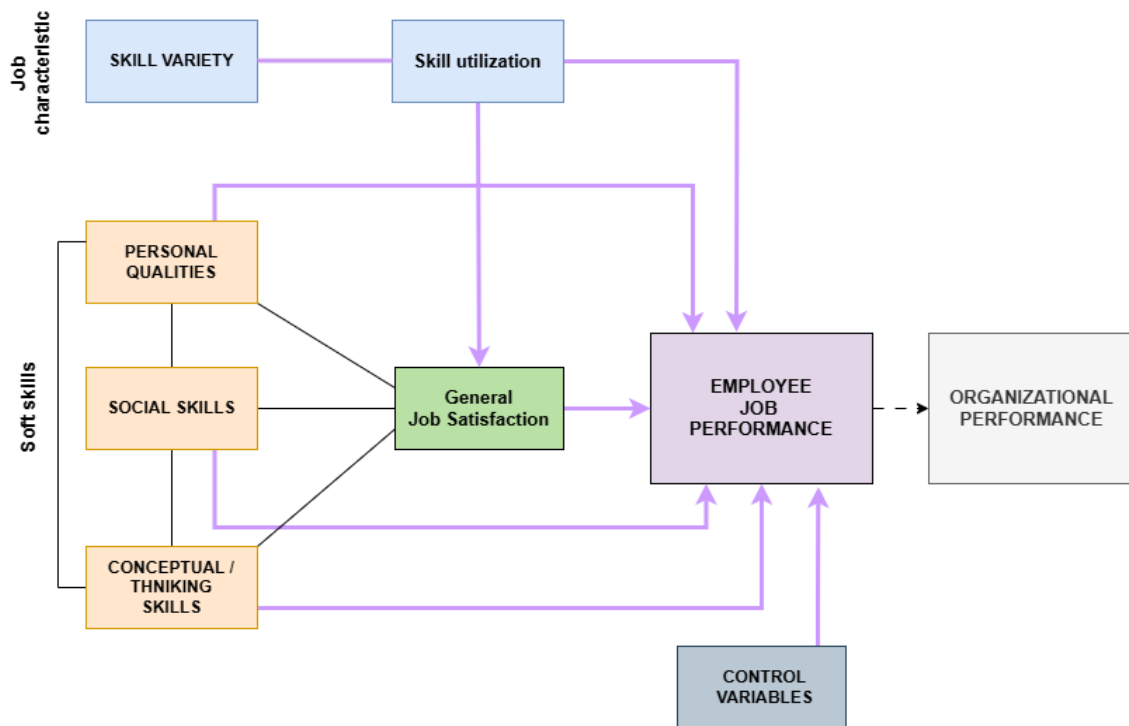
H7- “Conceptual/Thinking Skills” are perceived as important for organizational performance mediated by employee job performance

Job Satisfaction: Apart from the above factors, scholars have revealed other crucial factors that may affect job performance, such as job satisfaction or overall/general job satisfaction (e.g. Judge et al. 2001), motivation, and organizational commitment (Fafaliou et al. 2020). In this study, we focus on general job satisfaction. Job satisfaction is a multifaceted concept and scholars have different approaches when defining this concept. However, as Porter (1961) notes, it is usually conceived as an one-dimensional construct, which means that employees are either satisfied or dissatisfied with their job. The relationship between job satisfaction and job performance is a major study of interest. A number of studies have provided evidence that job satisfaction can drive positive outcomes, including increased employee job performance (Homberg et al. 2015, Alessandri et al. 2017, Judge et al. 2001). However, other studies have failed to find a consistent link (e.g. Brown and Peterson 1993). In the current study we examine whether overall job satisfaction has a mediating role in employees’ perceptions of job performance. The findings of the study conducted by Alessandri et al. (2017) suggest that satisfied employees may demonstrate higher job performance over time than do unsatisfied employees. Thus, satisfied employee job advanced performane is, in turn, a contributor to superior organizational performance.

Furthermore, if we accept that job satisfaction drives positive outcomes we can argue that drives also positive emotions. According to the Broaden-and-Build Theory of Positive Emotions (Fredrickson 2001), positive emotions may drive positive attitudes, such as create curiosity and interest, and expand our thinking and sense of possibilities, which in turn results in our ability to learn new skills (Byrne et al. 2020).

H8- The relationship between skill utilization and employee job performance is moderated by job satisfaction

Figure 1. Research Model



Chapter 3. Methodology

3.1 Sample

A total of 1200 public servants of the Greek Ministry of Education, Religious Affairs, and Sports, including administrative personnel working at the National Technical University of Athens, were invited to participate in this study. A total of 109 usable responses were received representing 9% response rate. The responses were gathered during the period of February-May 2024. The questionnaire was written in English, implemented in Google Forms, and distributed via mail.

Handling response bias: Generally speaking, researchers using questionnaires rely on truthful responses from participants to explore meaningful conclusions. Throughout the process, respondents were assured of the anonymity of their responses thus reducing evaluation apprehension (Podsakoff et al. 2012).

3.2 Measurements

For our analysis, we construct simple and multiple regression models.

Independent Variables

The *Independent variables* of the model are:

- X1- “Skill variety”
- X2- “Personal Qualities”
- X3- “Social skills”
- X4- “Conceptual/Thinking Skills”

Skill variety was measured with the model developed by Hackman and Oldham (1975). The respondents were asked to indicate according to their perception to what extent their job requires to do many different things at work using a variety of skills and talents, using a seven-point scale, ranging from “very little” (i.e. the job requires me to do the same routine things over and over again) to “very much” (i.e. the job requires me to do many different things, using a number of different skills and talents).

The importance of the three soft skills clusters -Personal qualities, Social skills, and Conceptual/Thinking skills- was measured with the survey used by Dall’Amico and Verona (2015) in the context of the Erasmus+ project “VALORIZE HIGH SKILLED MIGRANTS” in order to identify soft skills that high-skilled migrants perceive as important for employment success. The questionnaire was slightly modified for the purposes of this study (i.e items were added, language was updated for clarity reasons). The revised survey included 33 items. The criteria for defining the three soft skills clusters are based on literature, that is skill clusters should demonstrate internal cohesion (i.e. similarity in the kinds of skills included) and cross-cluster isolation. In this context, 14 items were included in the cluster Personal Qualities, 13 items were included in the cluster Social Skills and 6 items were included in the cluster Conceptual/Thinking skills. The respondents were asked to evaluate the importance of the selected soft skills in performing efficiently their jobs, using a seven-point scale, ranging from “not important at all” to “extremely important”.

Dependent Variables

The *Dependent variables* of the model are:

Y1- Employee job performance

Y2- Organizational performance

Employee job performance was measured with the model developed by Hackman and Oldham (1975). According to Brewer and Selden (2000: 689), two types of factors, which work in concert, may affect organizational performance: individual-level factors and organization-level factors. Thus, in this study employee job performance is included in the model because it is assumed that it contributes to organizational performance. Literature acknowledges that there are both objective and subjective measures of job performance. Rotundo and Rotman (2002) argue that subjective assessments capture a wider range of employee behaviors, while objective measures focus on the individual output/results. Having considered the above arguments, in this study we measure employee job performance with subjective measures. Ten (10) survey items were used to construct a rating scale: “Overall, I am a very good performer”; “The quality of my work is superior”; “I consider my performance is better than the average employee in my organization”; “I almost always perform better than what can be characterised as acceptable”; “I often perform better than what can be expected”; “I always reach my performance target”; “I feel that my performance is reflective of my abilities”; “I often expend extra effort in carrying out my job”; “I intentionally expend a great deal of effort in carrying my job”; and, “I try to work as hard as possible”. The response categories range from 1=Strongly Disagree to 5=Strongly Agree.

Mediating Variables

The *Mediating variables* of the model are:

Theoretical M1- Skill utilization

M2- Job Satisfaction

M3- Employee job performance

The mediation effect is tested with the principles set by Baron and Kenny (1986): 1) The predictor variables are significantly correlated with the mediator; 2) the predictor and mediator variables are all significantly correlated with the dependent variable.

Control Variables

Scholars acknowledge that the use of control variables plays a central role in several research domains (Schjoedt and Sangboon 2015). In this study, we identified several potentially relevant control variables. The variables studied consist of demographic characteristics (gender, age, educational level, marital status and annual personal income) and work-related characteristics (position, work experience in the current working environment, organizational size, type of organization, years of organization establishment). Educational level constitutes the academic credentials or degrees an individual has achieved. Organizational size was measured by the number of employees in the organization.

Various theories may provide a theoretical relationship between a potential control variable and a focal study variable. For instance, according to **human capital theory** certain individual characteristics such as educational level, work experience, and tenure may drive positive attitudes, such as job satisfaction, and behaviors such as job/task performance, since it is acknowledged that accumulated knowledge provide individuals with additional resources needed for successful task performance (Ng and Feldman 2009, Ehrenberg and Smith 1997, Bernerth and Aguinis 2016). Furthermore, **learning theory** suggests that work experience enhances job ability/task proficiency. Therefore, based on both perspectives it can be argued that job performance changes over time, given that individuals accumulate experience, i.e. job knowledge, soft skills and abilities.

Beyond the above-mentioned theories, a number of empirical studies support that variables such as age, gender and organizational tenure may play a significant role in affecting employee job performance, and to this end, scholars highlight the importance of our understanding the effects of these variables (Sturman 2003). For instance, scholars argue that age is related to a wide range of attitudes. A number of empirical studies support that aging may have positive, negative or no relationships with performance (Rhodes 1983 cited in Sturman 2003). It must be noted that the strengths of the effects vary over time. The theoretical rationale for the negative relationship argues that increased age accounts for

decreased ability levels, e.g. in speed or dexterity, declining cognitive function, and also that can affect performance through decreased motivation (Sturman 2003).

According to Carstensen (1992), **socio-emotional selectivity theory** explains differences in the social activities and emotional experiences of adults, and as a result, this theory may be useful for our understanding the relationships between age and work attitudes. For instance, according to this theory, older employees are more likely to have favorable job attitudes than younger (Ng and Feldman 2010).

Education may be positively related to core task performance by providing individuals with more knowledge (declarative and procedural) and job-relevant soft skills with which they can perform their tasks successfully. According to the study of Ng and Feldman (2009) there is a significant positive relationship between educational level and job performance. Furthermore, the authors argue that highly educated employees are likely to display greater creativity and engage in fewer counterproductive work behaviors (e.g. absenteeism) than do less educated employees. Furthermore, they argue that educational level can enhance cognitive ability and help the development of a strong work ethic, both of which can advance performance in turn. It must be noted that the relationship between education and aspects of performance are not uniformly consistent across employee groups (Ng and Feldman 2009).

Chapter 4 Results and Analysis

4.1 Introduction

This chapter presents the findings of the study and provides an in-depth analysis of the data collected. The chapter is organized into several sections that align with the research questions and hypotheses established in the previous chapters.

4.2 Demographic analysis

Regarding demographic information, the frequencies and relative frequencies are provided in Table 2. The results indicated that 81.7% of the participants were female and only 18.3% were male. The majority of the respondents (62.4%) were aged 46-55 years and most of

them (65.1%) are married with children. Additionally, a majority of 60.6% are postgraduate degree holders, 43.1% worked in Ministries, 67.9% had administrative responsibilities, and 65.1% had more than total 21 years' experience. In terms of organization size, the majority of the respondents (69.7%) come from large-sized public organizations. The fact that the majority of the respondents are female is not surprising. Existing studies focus on gender effect in survey participation provide evidence that women seem to be more likely than man to respond in online surveys (Becker 2022).

Table 2 Demographic analysis: the description of the study sample (N=109) in absolute numbers and percentages

	Frequency (f)	Percentage (%)
Gender		
Male	20	18,3
Female	89	81,7
Age		
26-35	4	3,7
36-45	22	20,2
46-55	68	62,4
56 and over	15	13,8
Educational level		
Secondary education	12	11,0
Graduate	31	28,4
Postgraduate	66	60,6
Marital status		
Single	15	13,8
Married	13	11,9
Married with children	71	65,1
Divorced	6	5,5
Other	4	3,7
Annual Personal Income		
1-10.000 Euros	3	2,8

10.001-15.000 Euros	35	32,1
15.001-19.000 Euros	37	33,9
19.001-25.000 Euros	20	18,3
More than 25.000 Euros	14	12,8
Position		
Senior manager	12	11,0
Middle level manager	23	21,1
Administrative employee	74	67,9
Work experience in the current working environment		
0-5 years	2	1,8
6-10 years	3	2,8
11-15 years	11	10,1
16-20 years	22	20,2
21 or more years	71	65,1
Organizational size		
(Small) Number of employees 10-49	24	22,0
(Medium-sized) Number of employees 50-249	9	8,3
(Large) Number of employees 250 and more	76	69,7
Type of organization		
Ministries	47	43,1
Public Entities	39	35,8
Local Authorities	5	4,6
Social Security Funds	4	3,7
Independent Authorities	5	4,6
Other	9	8,3
Years of organization establishment		
0-20 years	46	42,2
21 years and above	63	57,8

Relationship of employee job performance and gender

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Employee job performance	Male	20	4,79	1,48	,33
	Female	83	5,60	,96	,10

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Employee job performance	Equal variances assumed	6,890	,010	-3,009	101	,003	-,80590	,26787	-1,33729	-,27451
	Equal variances not assumed			-2,317	22,948	,030	-,80590	,34779	-1,52545	-,08636

Results indicate that female participants had higher employee job performance levels (M= 5.60, SD= 0.96) than male participants (M= 4.79, SD=1.48), $t(22.948) = -2.317$, $p = .03$.

Relationship of employee job performance and educational level

Descriptives

Employee job performance

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			
					Lower Bound	Upper Bound	Minimum	Maximum
Secondary education	12	3,86	1,54	,45	2,88	4,84	1,70	6,83
Graduate	28	5,49	,91	,17	5,14	5,84	3,45	6,70
Postgraduate	64	5,67	,94	,12	5,43	5,90	3,48	7,00
Total	104	5,41	1,15	,11	5,19	5,64	1,70	7,00

Robust Tests of Equality of Means

Employee job performance

	Statistic ^a	df1	df2	Sig.
Welch	7,534	2	25,960	,003

a. Asymptotically F distributed.

Multiple Comparisons

Dependent Variable: Employee job performance

Tamhane

		95% Confidence Interval				
(I)	(J)	Mean Difference (I- J)	Std. Error	Sig.	Lower Bound	Upper Bound
Secondary education	Graduate	-1,62635*	,47725	,012	-2,9146	-,3381
	Postgraduate	-1,80507*	,46047	,006	-3,0715	-,5386
Graduate education	Secondary	1,62635*	,47725	,012	,3381	2,9146
	Postgraduate	-,17872	,20827	,778	-,6922	,3347
Postgraduate	Secondary education	1,80507*	,46047	,006	,5386	3,0715
	Graduate	,17872	,20827	,778	-,3347	,6922

*. The mean difference is significant at the 0.05 level.

We compared the effects of the educational level on employee job performance. To this end, 104 respondents were randomly assigned to three groups: secondary education, graduates, or postgraduates. Mean test scores and standard deviations were:

Secondary education group (M = 3.86, SD = 1.54).

Graduates group (M = 5.49, SD = 0.91).

Postgraduates group (M = 5.67, SD = 0.94).

We conducted a Welch test to compare the means of the three groups, since the homogeneity of variances assumption is rejected (Levene test, $F(2,101)=3.277$, $p=0.042 < \alpha=0.05$).

A Welch test revealed a significant effect of the educational level on employee job performance, $F(2,25.960) = 7.534$, $p = 0.003 < \alpha=0.05$.

Tamhane post hoc test showed the Postgraduates group scored significantly higher in the employee job performance scale than the secondary education ($p = 0.006$) group. The graduates group scored significantly higher than the secondary education group ($p = 0.012$). Thus, employee job performance is higher in respondents who are Master's degree holders.

4.3 Analysis of the importance of Personal Qualities

The questionnaire used in this survey consisted of 33 items regarding the section II that focus on soft skills importance. The cluster “Personal Qualities” consisted of 14 items out of the 33-item questionnaire. Respondents were asked to rate the importance of each questionnaire item. The history of studying personal qualities or personality traits in order to explore their relationship with job performance and job satisfaction is long.

Although literature has provided several classifications of these skills and their associated attitudes/behaviours (e.g. the “Big Five” presented by Norman 1963), in this study, after conducting a selective review of the literature, the studied items were adaptability/flexibility, being result-oriented, time-management, professionalism and integrity, and the ability to work well with technology. The latter is about public servants understanding the potential of digital and the dimensions of any use of digital technologies to generate public value regardless of their role (OECD 2021a). Results are presented in Table 3. On average, participants indicated that the highest two rated personal qualities were “Capacity to respect schedule and deadlines and being on time” in which the average score was 5,78 (SD=1,50) and “Ability to acquire and to use information using digital systems & technology” in which the average score was 5,68 (SD=1,65).

Table 3 Perceived importance of Personal Qualities for employee job performance

Item Nr	Personal Qualities	<i>M</i>	<i>SD</i>
1	Identifying work goals	4,99	1,86
3	Accept changes as a new challenge	5,07	1,82
4	Adapt to new situations and modify approaches if required by the context	5,35	1,55
5	Attitude to be energetic and enthusiastic and capacity to self-motivate	4,94	1,88
6	Recognize and apply company values, culture	4,83	1,78
7	Adapt/act in accordance to places and situations (properly dressed, etc.)	4,77	1,78
8	Understand/recognize the organization policies and structure	5,61	1,45
9	Manage work roles, workplace rights/duties, requests and expectations	5,53	1,42
10	Check to have understood the task assigned and ask assistance if needed	5,50	1,56
11	Take responsibility for one’s own actions without blaming anyone else	5,67	1,65
12	Capacity to respect schedule and deadlines and being on time	5,78	1,50
13	Ability to acquire and to use information using digital systems & technology	5,68	1,65
14	Ability to work well with technology and manage risks associated with online environments	5,26	1,72
20	Maintain good level of performance when dealing with environmental pressures and difficulties (self-control, resilience, self-confidence)	5,51	1,53

4.4 Analysis of the importance of work-related Social Skills

In this study, the cluster “Social skills” consisted of 13 items out of the 33-item questionnaire. Respondents were asked to rate the importance of each questionnaire item. According to Salzberg et al. (1986) social skills performed at the workplace should be divided into two main categories, as follows: a) social skills that are directly related to performance of job tasks (e.g. providing information or help to other employees) and b) personal social skills that are not directly related to job performance (e.g. using social amenities). In this study we focus on the first category.

Table 4 displays the means and standard deviations of the perceived importance of social skills for employee job performance. On average, participants indicated that the highest two rated social skills were “Speak clearly and politely to any typology of speakers (heads, colleagues, clients, etc.)” in which the average score was 5,86 (SD=1,58) and “Provide support to your team members and colleagues” in which the average score was 5,68 (SD=1,72).

Table 4. Perceived importance of Social Skills for employee job performance

Item Nr	Social Skill	<i>M</i>	<i>SD</i>
15	Speak clearly and politely to any typology of speakers (heads, colleagues, clients, etc.)	5,86	1,58
16	Use body language, gesture, tone/pitch of voices properly at different levels and contexts	5,14	1,80
17	Know what medium to use when communicating at different level and contexts	5,30	1,62
18	Ability in active listening, repeating, recollecting, interpreting	5,47	1,59
19	Empathy (being aware of others' feelings)	5,07	1,72
21	Capacity to work in a team and in a collaborative style to achieve results	5,56	1,73
22	Provide support to your team members and colleagues	5,68	1,72
23	Identify and respond to client needs and deal politely with clients problems	5,45	1,86
24	Capacity to lead groups of people and make them work for a common goal	4,92	1,90
25	Inspire/influence on others producing an impact	4,71	1,86
26	Detect a conflict at an early stage without being afraid of calling it “conflict”	4,64	1,82
27	Manage conflict when it arises and understand which conflicts cannot be solved	5,14	1,62
28	Take appropriate actions to minimize cultural, gender or other diversity difficulties	4,98	1,95

4.5 Analysis of the importance of Conceptual/Thinking Skills

According to Dickinson and Sullivan (2014), “Conceptual/Thinking skills” include the ability to see the organization as a whole, to think strategically, and to carry out decisions and solve problems from a systematic point of view considering both current and future issues.

In this study, these skills consisted of 6 items out of the 33-item questionnaire. Table 5 displays the means and standard deviations of the perceived importance of conceptual/ thinking skills for employee job performance. On average, participants indicated that the highest two rated conceptual/thinking skills were “Ability to analyse and valorize information” in which the average score was 5,45 (SD=1,68) and “Capacity to find and solve routine and non-routine problems to achieve work goals” in which the average score was 5,36 (SD=1,65). The results indicate that public servants are working in a complex and challenging work environment, thus they deem important being able to make effective decisions to deal with complex issues as well as being able to solve problems creatively. The results are consistent with scholars (e.g. Dickinson and Sullivan 2014) who regard these soft skills as key skills for the effective performance of the future public service.

Table 5. Perceived importance of Conceptual/Thinking Skills for employee job performance

Item Nr	Conceptual/Thinking Skill	<i>M</i>	<i>SD</i>
2	Learning-to-learn (curiosity, ability to recognise one's knowledge and skills, be aware of learning opportunities)	4,95	1,91
29	Capacity to make a choice from a range of possibilities prioritizing actions and use different decision-making approaches reflecting on the outcome of decisions	5,31	1,66
30	Capacity to find and solve routine and non-routine problems to achieve work goals	5,36	1,65
31	Ability to come up with new/innovative solutions, approaches, etc, and to think “out of the box”	5,31	1,78
32	Ability to analyse and valorize information	5,45	1,68
33	Problem solving in technology-rich environments	4,84	1,84

The descriptive statistics based on participants perceptions for the three studied clusters of soft skills are presented in Table 6, ranked on the basis of their mean scores. The highest score is for “Personal Qualities” (5.61). However, it is worth noting that the mean values of the other two important clusters are very close: i.e. “Social Skills” with a mean value of 5.39, followed by “Conceptual/Thinking Skills” with a mean value of 5.38. This means that the respondents consider the soft skills “Personal Qualities”, “Social Skills” and “Conceptual/Thinking Skills” as important to very important.

Table 6. Descriptive Statistics of Soft Skills Clusters ranked on the basis of Mean

(N=109)				
Clusters of soft skills	Mean	SD	Minimum	Maximum
Personal Qualities	5.61	0.90	1	7
Social Skills	5.39	1.24	2	7
Conceptual / Thinking Skills	5.38	1.25	1	7

4.6 Analysis of Perceived Employee Job Performance

Perceived employee job performance was measured using ten items proposed by Hackman and Oldham (1975). The respondents were asked to rate their own overall performance in the workplace at the present time. Table 7 displays the means and standard deviations of the perceived employee job performance. On average, participants indicated that the highest rated performance item was “Overall, I am a very good performer” in which the average score was 4,13 (SD=0,73).

Table 7. Descriptive Statistics for the independent variable “employee job performance”

(N=109)				
	Mean	SD	Minimum	Maximum
Overall, I am a very good performer	4,13	0,73	1	5
The quality of my work is superior	3,91	0,78	2	5
I consider my performance is better than the average employee in my organization	3,96	0,86	2	5
I almost always perform better than what can be characterised as acceptable	3,94	0,90	1	5

I often perform better than what can be expected	3,78	0,99	1	5
I always reach my performance target	3,98	0,84	1	5
I feel that my performance is reflective of my abilities	3,82	0,96	1	5
I often expend extra effort in carrying out my job	3,54	0,96	1	5
I intentionally expend a great deal of effort in carrying my job	3,27	1,09	1	5
I try to work as hard as possible	3,81	0,89	2	5

4.7 Analysis of General Job Satisfaction

General job satisfaction was measured using three items proposed by Hackman and Oldham (1975). In the context of this study, general job satisfaction is positioned as a mediator between the utilization of soft skills and employee job performance. The respondents were asked to rate their satisfaction status in the workplace at the present time. Table 8 displays the output. On average, participants indicated that the highest rated item was “I am generally satisfied with this kind of work I do in this job” in which the average score was 4,94 (SD=1,51).

Table 8. Descriptive Statistics for the variable “General job satisfaction”

<i>(N=109)</i>				
	Mean	SD	Minimum	Maximum
Generally speaking, I am very satisfied with this job	4,86	1,47	1	7
I frequently think of quitting this job	3,33	1,80	1	7
I am generally satisfied with this kind of work I do in this job	4,94	1,51	1	7

4.8 Hypotheses testing

SPSS statistics v.26 was used for data analysis and to test the hypothetical relationships. Cronbach alpha tests were conducted to see whether the questionnaire items (Likert scale) are accurately measuring the variable of interest. Results are presented in Table 9. The second section consisted of 33 items regarding the importance of the selected soft skills for employee job performance. The fourth section consisted of 10 items focus on perceived job performance. The fifth section consisted of 2 items, after the item “I frequently think of

quitting this job” was dropped for increasing Cronbach’s alpha to acceptable levels, regarding general job satisfaction. The sixth section consisted of 14 items regarding aspects of job satisfaction. Thus, all the sections were found highly reliable, since Cronbach’s alpha is more than 0.70.

Table 9. Cronbach’s reliability coefficients

Scale	Cronbach’s Alpha	N
Section II	0.98	33
Section IV	0.875	10
Section V	0.901	2
Section VI	0.911	14

Pearson correlation coefficients (r) were computed to assess the degree and the direction of the linear relationships between the variable pairings. In this study the interpretation is based on the guide that Evans (1996) suggests for the absolute value of r :

- 00-.19 “very weak”
- .20-.39 “weak”
- .40-.59 “moderate”
- .60-.79 “strong”
- .80-1.00 “very strong”

Simple linear regression analysis was conducted separately for each one of the hypothesized factors of employee job performance. Table 10 presents the model summary and the ANOVA test for the research hypotheses $H1a$, $H2a$, $H3a$, $H4a$. The regression is highly significant in all three clusters of soft skills i.e. personal qualities, social skills and conceptual/thinking skills.

Table 10. Regression Summary

<i>(N=109)</i>							
MODEL SUMMARY					ANOVA		
	<i>R</i>	<i>R square</i>	<i>Adjusted R square</i>	<i>Std Error</i>		<i>F</i>	<i>P-Value</i>
Criteria							
Skill Variety	0.391	0.153	0.145	1.246	<i>H1a</i>	19.328	<0.001

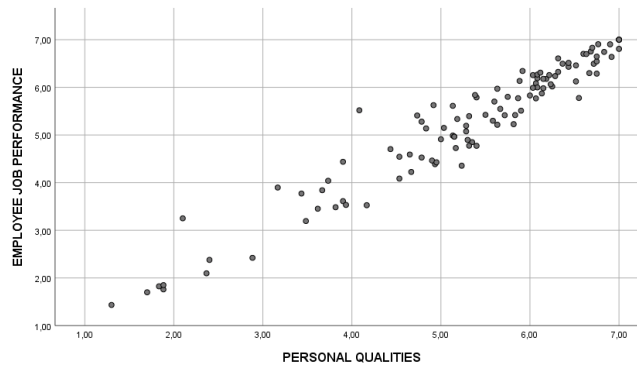
Personal Qualities	0.992	0.984	0.984	0.167	<i>H2a</i>	6616.936	<0.001
Social Skills	0.995	0.991	0.991	0.138	<i>H3a</i>	11639.222	<0.001
Conceptual / Thinking Skills	0.981	0.962	0.962	0.287	<i>H4a</i>	2716.641	<0.001

Notes: Criteria: hypothesized factors of employee job performance.

A correlation for the data revealed the following results:

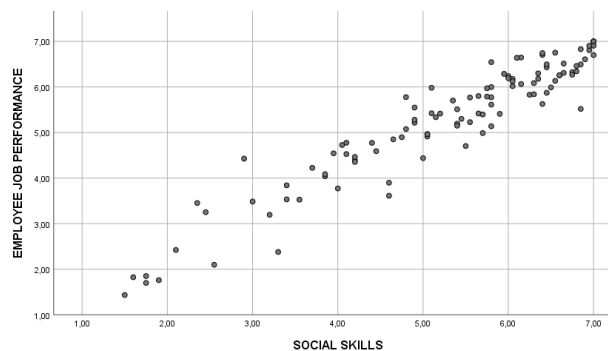
1) There is weak and positive correlation between “Skill Variety” and “Employee job performance” ($r = 0.391$, $n = 109$, $p < 0.001$, two tails), hence, confirming *H1a*. Then, we tested *H1β*. A Pearson correlation coefficient was computed to assess the linear relationship between skill variety and job satisfaction. There was a positive correlation between the two variables, $r = 0.398$, $p < 0.001$.

2) A very strong and positive correlation between “Personal qualities” and “Employee Job performance” ($r = 0.992$, $n = 109$, $p < 0.001$, two tails) exists, hence, confirming *H2a*. The average employee job performance score within the sample was 5.32 ($SD = 1.31$), and the average personal qualities score was 5.61 ($SD = 0.90$). The linear regression analysis revealed a statistically significant model ($F(1,107) = 6616.936$, $p < .001$), with an adjusted R^2 of 0.984. This suggests that personal qualities account for approximately 98.4% of the variance in employee job performance among the sampled individuals. Furthermore, the regression coefficient for personal qualities variable was found to be 0.961, with a standard error of 0.012. This indicates that for each additional unit of personal qualities scale, there is an average increase of 0.961 units in employee job performance. This positive relationship between personal qualities and employee job performance was found to be statistically significant ($t = 81.345$, $p < .001$), affirming the predictive power of personal qualities on employee job performance.

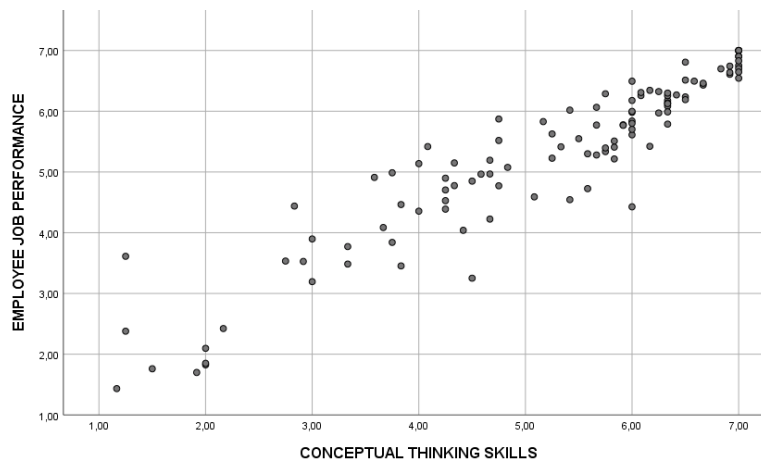


3) There is a very strong and positive correlation between “Social Skills” and “Employee Job performance” ($r= 0.995$, $n=109$, $p < 0.001$, two tails), hence, confirming H3a. A significant regression was found ($F(1,107) = 11639.222$, $p < 0.001$). The R^2 coefficient was 0.991, indicating that social skills explained approximately 99.1 % of the variance in employee job performance. The regression equation was: employee job performance = $0.035 + 0.99 \cdot \text{social skills}$

That is, for each one-unit increase in social skills, the predicted employee job performance increased by approximately 0.99 units.



4) A very strong and positive correlation between “Conceptual/Thinking Skills” ($M=5.17$, $SD=1.55$) and “Employee Job performance” ($M=5.20$, $SD = 1.47$), was indicated ($r= 0.981$, $p < .001$), hence, confirming H4a. These data predict that for each additional unit increase in conceptual thinking skills, employee job performance has an average increase of 0.93, ($b=0.93$, $t=52.121$, $p<0.001$).



Job satisfaction as Mediator

Bennett (2000) defines mediator as “a variable that specifies how the association occurs between an independent variable and an outcome variable”. Existing literature indicates that job satisfaction may be crucial in explaining the relationship between soft skills utilization in the workplace and perceived job performance, but the strength of the relationship varies. For instance, Ostroff (1992) found that organizations with more satisfied employees are likely to be more effective when compared to organizations with dissatisfied employees. Thus, in this study job satisfaction is incorporated as mediator. Given that we found that the direct effect of each of the studied clusters of soft skills, i.e. Personal Qualities, Social Skills and Conceptual/Thinking Skills, on “Employee Job performance” is statistically significant, we could test the mediator effect in our model.

As theory suggests a mediated or indirect effect exists if at least the following criteria are met: First, there is a correlation between the independent variable and the mediator variable. Second, there is a correlation between the mediator variable and the dependent variable. To this end, hierarchical multiple regression analysis was conducted for testing *H2b*, *H3b* and *H4b*.

Testing *H2b*: When testing the predictor variable “Personal Qualities” we found that is significantly positively correlated with the hypothesized mediator “job satisfaction” ($r=0.27$, $p=0.004 < \alpha=0.05$). Also, we found that the mediator variable “job satisfaction” is significantly correlated with the dependent variable “employee job performance” ($r=0.241$, $p=0.012 < \alpha=0.05$). Thus, we concluded that job satisfaction is a mediator. To assess mediation, we conducted tests of the different logical relationships among the three variables involved. In Step 1 of the mediation model, the regression of personal qualities on

job satisfaction, ignoring the mediator, was significant, $b=0.1877$, $t= 2.9041$, $p= 0.0045 < \alpha=0.05$. Step 2 showed that the regression of personal qualities and job satisfaction on employee job performance, was also significant, $F=3454.0264$, $p < 0.001$. Step 3 of the mediation process showed that the employee job performance, controlling for Personal qualities, was significant, $b = 0.9612$, $t = 81.3445$, $p < 0.001$. A t-test was conducted and found full mediation in the model ($t = 80.6290$, $p < 0.001$). Thus, job satisfaction fully mediates the relationship between personal qualities and employee job performance.

Testing *H3b*: We also found that the predictor variable “Social skills” is significantly positively correlated with the hypothesized mediator “job satisfaction” ($r=0.211$, $p=0.027 < \alpha=0.05$). The mediator variable “job satisfaction” is significantly correlated with the dependent variable “employee job performance” ($r=0.213$, $p=0.026 < \alpha=0.05$). Thus, job satisfaction fully mediates the relationship between social skills and employee job performance.

Testing *H4b*: We also found that the predictor variable “Conceptual/Thinking Skills” is significantly correlated with the hypothesized mediator “job satisfaction” ($r=0.268$, $p=0.005 < \alpha=0.05$). The mediator variable “job satisfaction” is significantly correlated with the dependent variable “employee job performance” ($r=0.217$, $p=0.023 < \alpha=0.05$). Thus, job satisfaction fully mediates the relationship between conceptual/thinking skills and employee job performance.

According to the provided results as presented above and in the tables 11 and 12, the final conclusion is that the hypotheses H2b, H3b and H4b were supported.

Table 11. Causal steps

	Step 1 X must affect Y	Step 2 X must affect M	Step 3 M must affect Y
Regression of Personal Qualities	$b=0.1877$ $t=2.9041$ $p= 0.0045^*$	$F=3454.0264$ $p < 0.001^*$	$b = 0.9612$ $t = 81.3445$ $p < 0.001^*$
Regression of Social Skills	$b = 0.1377$ $t = 2.2352$ $p = 0.0275^*$	$F=5769.9961$ $p < 0.001^*$	$b = 0.9903$ $t = 107.8852$ $p < 0.001^*$
Regression of Conceptual/ Thinking Skills	$b = 0.1632$ $t = 2.8774$ $p = 0.0048^*$	$F=1434.0356$ $p < 0.001^*$	$b = 0.9299$ $t = 52.1214$ $p < 0.001^*$

**Significant at 0.01 level*

Table 12. Employee Job Performance R² adjusted values before and after entering the mediator variable

	R ² adjusted before	R ² adjusted after	Change in R ² adjusted
Personal Qualities <i>H2b</i>	0.9840	0.9846	0.0006
Social Skills <i>H3b</i>	0.9908	0.9908	0
Conceptual/Thinking Skills <i>H4b</i>	0.9617	0.9637	0.0020

4.9 Analysis of the importance of soft skills for Organizational Performance

Public organizations have implemented appraisal systems based on competency models, which focus on the soft skills/competencies that employees need to be effective in their job roles. Given this, it would be interesting to explore which soft skills public servants perceive as important not only for one's job (and for which one is rewarded) but for organizational performance, i.e. to see the organization as a whole. To put it differently: policy makers and/or public managers argue that creativity and innovation are very important skills for the public sector performance. But do public servants consider, for instance, innovation skills as important in practice, especially when a lack of a universal definition of the concept innovation might lead to a blurring of our knowledge?

The importance of studied soft skills for perceived organizational performance was measured using 18 items (Table 13) adapted by the framework developed by Dall'Amico and Verona (2015) and customized for the purposes of this study. Results are presented in Table 12. Amongst the most popular soft skills that considered important by the respondents are "Adaptability and Flexibility" with 8,5%, "Teamworking" with 8,5%, "Problem solving" with 7,8%, and "Critical Thinking" with 7,5%. We can argue that the results provide us a good understanding of the requirements and challenges civil servants currently face and are consistent with a number of public administration scholars that have pointed out the importance of these competencies (Lamb et al. 2017).

Table 13. Frequency analysis of important soft skills for organizational performance

Item	Frequency (f)	Percentage (%)
1. Identifying work goals	44	5.2
2. Learning to learn	41	4.9
3. Adaptability and Flexibility	72	8.5
4. Self-Motivation	43	5.1
5. Empathy	37	4.4
6. Service skills	28	3.3
7. Work well with technology	46	5.5
8. Time Management	47	5.6
9. Result-Oriented	25	3.0
10. Communication skills	58	6.9
11. Personal effectiveness, Professionalism and Integrity	55	6.5
12. Team working	72	8.5
13. Leadership	32	3.8
14. Conflict Management	35	4.2
15. Decision making	46	5.5
16. Problem solving	66	7.8
17. Creativity and Innovation	33	3.9
18. Critical thinking	63	7.5

Having investigated the importance of each of the 18 items, we clustered them into the three studied clusters to measure the perceived importance of each cluster on perceived organizational performance mediated by employee job performance. The cluster “Personal Qualities” consisted of the items 1, 3, 4, 7, 8, 9 and 11. The clustered “Social Skills” consisted

of the items 5, 6, 10, 12, 13, 14, while the clustered “Conceptual/Thinking Skills” consisted of the items 2, 15, 16, and 18.

When testing *H5*, surprisingly we found that employee job performance does not mediate the relationship between “Personal Qualities” and perceived organizational performance. This means that although public servants have assessed “Personal Qualities” as important for their job, they do not feel that these soft skills may drive organizational performance. A simple linear regression analysis indicated that “Personal Qualities” did not significantly predict organizational performance, $R^2 = 0.033$, $F(1, 107) = 3.652$, $\beta = 0.251$, $p = 0.059 > \alpha = 0.05$. We found similar results when testing *H6*, meaning that “Social Skills” did not significantly predict organizational performance, $R^2 = 0.01$, $F(1, 107) = 1.104$, $\beta = 0.117$, $p = 0.296 > \alpha = 0.05$. Thus, the hypotheses *H5* and *H6* are rejected. A possible explanation for these results is that without a theoretical underpinning of what constitutes a valid set of organizational performance and effectiveness criteria (Ostroff 1992) employees are likely to use customized performance measures used in different contexts to answer the survey items.

We found different and perhaps more important findings when testing *H7*. The predictor variable “Conceptual/Thinking Skills” is significantly correlated with the hypothesized mediator “employee job performance” ($r = 0.981$, $p < 0.001$). The mediator variable “employee job performance” is significantly correlated with the dependent variable “organizational performance” ($r = 0.218$, $p = 0.023 < \alpha = 0.05$). Thus, employee job performance is a mediator. This indicated that Hypothesis *H7* was supported.

Finally, we tested *H8*. When testing the predictor variable “Skill utilization” we found that it is significantly positively correlated with the hypothesized mediator “job satisfaction” ($r = 0.398$, $p < 0.001$). In addition, we found that the mediator variable “job satisfaction” is significantly correlated with the dependent variable “employee job performance” ($r = 0.233$, $p = 0.015 < \alpha = 0.05$). Thus, we concluded that job satisfaction is a mediator. To assess mediation, we conducted tests of the different logical relationships among the three variables involved. In Step 1 of the mediation model, the regression of “Skill utilization” on “job satisfaction”, ignoring the mediator, was significant, $b = 0.2346$, $t = 4.4812$, $p < 0.001$. Step 2 showed that the regression of “skill variety” and “job satisfaction” on “employee job performance”, was also significant, $F = 10.1025$, $p = 0.0001 < \alpha = 0.05$. Step 3 of the mediation process showed that the “employee job

performance”, controlling for “Skill utilization”, was significant, $t = 4.396$, $p < 0.001$. A t-test was conducted and found full mediation in the model ($t = 3.6559$, $p = 0.0004 < \alpha = 0.05$). Thus, “job satisfaction” fully mediates the relationship between “Skill utilization” and “employee job performance”.

Chapter 5. Conclusions

5.1 Introduction

This chapter provides a glimpse into the perceived importance of core soft skills for job performance in public organizations.

5.2 Theoretical contributions

The findings of this study may offer several important contributions to public administration scholarship. As many organizations are already heavily investing in soft skills, understanding the perceived importance of a skill, especially when combined with its theoretical importance, may be one key factor in decisions about upskilling and reskilling. Public servants perceive as important the reviewed soft skills for their job performance and the overall quality of public administration services. Additionally, there was a strong consensus among the respondents on the perceived importance of conceptual/thinking skills in enhancing organizational performance. These results align with a number of empirical studies demonstrating that soft skills in general can directly influence both employee job performance and organizational outcomes. Despite this, the study acknowledges the conceptual confusion regarding soft skills, aligning with the study of Appelbaum et al. (2000), who suggest that while soft skills are very important in the workplace, their exact contribution to improved job performance is almost impossible to assess due to various factors. Delisle and Lajoie (2021) further argue that the predictive power of soft skills varies depending on the job type and the environment, resulting in different performance outcomes that are challenging to measure. Therefore, despite the growing enthusiasm for investing in soft skills development it remains a challenge to effectively define what soft skills are and consist of. Furthermore, given the complex interconnection between how the public sector performs (reality) and how employees self-assess that performance (perceptions) there is

still a lack of clarity on how public organizations can effectively leverage soft skills in order to see the potential improvements in organizational performance.

5.3 Limitations of the study and future research

Although the results are interesting, they must be viewed with caution due to several methodological limitations. First, results may potentially be susceptible to common method bias since they are based on survey data with all measurements being self-reported data. Scholars argue that researchers should be aware of the fact that common method bias may produce artificially inflated correlations (Crampton and Wagner 1994). Second, given the relatively small sample size and the focus on the Greek public sector caution should be exercised when generalizing and interpreting these findings. Third, there is lack of prior research on the topic within the public sector in Greece, leaving the potential importance of soft skills utilization for employee job performance largely unexplored. Further research on the topic is needed to delve deeper into this area. For instance, it may be useful to explore other factors, such as motivation, that might mediate the relationship between soft skills utilization and job performance. While the study focuses on soft skills and abilities, it is important to consider that these skills alone may not translate to improved performance without consideration of the other determining factors.

Bibliography

- Alessandri, G., Borgogni, L., & Latham, G. P. (2017). A dynamic model of the longitudinal relationship between job satisfaction and supervisor-rated job performance. *Applied Psychology, 66*(2), 207-232.
- AlHouli, A. I., & Al-Khayatt, A. K. A. (2020). Assessing the Soft Skills Needs of Teacher Education Students. *International Journal of Education and Practice, 8*(3), 416-431.
- Almonte Richard (2022). *A Practical Guide to Soft Skills: Communication, Psychology, and Ethics for your Professional Life*. New York & London: Routledge.
- Andrews, Rhys, George A. Boyne, and Richard M. Walker. 2006. Subjective and objective measures of organizational performance: An empirical exploration. In *Public service performance: Perspectives on measurement and management*, ed. George A. Boyne, Kenneth J. Meier, Laurence J. O'Toole, Jr., and Richard M. Walker, 14–34. New York, NY: Cambridge Univ. Press.
- Afonso, António; Schuknecht, Ludger; Tanzi, Vito (2003) : *Public sector efficiency: an international comparison*, ECB Working Paper, No. 242, European Central Bank (ECB), Frankfurt a. M.
- Amirkhanyan, A. A., Kim, H. J., & Lambright, K. T. (2014). The performance puzzle: Understanding the factors influencing alternative dimensions and views of performance. *Journal of Public Administration Research and Theory, 24*(1), 1-34.
- Appelbaum, E. (2000). *Manufacturing advantage: Why high-performance work systems pay off*. Cornell University Press.
- Arnaboldi, M., & Azzone, G. (2010). Constructing performance measurement in the public sector. *Critical perspectives on accounting, 21*(4), 266-282.
- Au, C. F. (1996). Rethinking organizational effectiveness: Theoretical and methodological issues in the study of organizational effectiveness for social welfare organizations. *Administration in social work, 20*(4), 1-21.
- Awad Tamer A. and Alhashemi E. Suhaila (2012), "Assessing the effect of interpersonal communications on employees' commitment and satisfaction", *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 5 Iss 2 pp. 134 – 156.
- Backhaus, L., & Vogel, R. (2022). Leadership in the public sector: A meta-analysis of styles, outcomes, contexts, and methods. *Public Administration Review, 82*(6), 986-1003.
- Bakotić, D. (2016). Relationship between job satisfaction and organisational performance. *Economic research-Ekonomska istraživanja, 29*(1), 118-130.
- Barbot, B., & Heuser, B. (2017). Creativity and identity formation in adolescence: A developmental perspective. In *The creative self* (pp. 87-98). Academic Press.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology, 51*(6), 1173.
- Becker, R. (2022). Gender and survey participation: An event history analysis of the gender effects of survey participation in a probability-based multi-wave panel study with a sequential mixed-mode design. *Methods, data, analyses: a journal for quantitative methods and survey methodology (mda), 16*(1), 3-32.

- Bennett, J. A. (2000). Mediator and moderator variables in nursing research: Conceptual and statistical differences. *Research in nursing & health*, 23(5), 415-420.
- Bernerth, J. B., & Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Personnel psychology*, 69(1), 229-283.
- Bhardwaj, A., & Punia, B. K. (2013). Managerial competencies and their influence on managerial performance: A literature review. *International Journal of Advanced Research in Management and Social Sciences*, 2(5), 70-84.
- Borman C. Walter & Stephan J. Motowidlo (1997): Task Performance and Contextual Performance: The Meaning for Personnel Selection Research, *Human Performance*, 10:2, 99-109.
- Bowen, S. (2016). Values, ethics, and professionalism in public affairs. *The handbook of public affairs*, 2, 316-331. Thousand Oaks, CA: Sage.
- Boyatzis, R. E. (2009). Developing emotional, social, and cognitive intelligence competencies in managers and leaders. *The SAGE handbook of management learning, education and development*. Sage, 439-42.
- Bozbayindir, F. (2019). The Relationship between the Time Management Skills and Cyberloafing Behavior of School Administrators: A Quantitative Analysis. *Educational Policy Analysis and Strategic Research*, 14(3), 178-199.
- Borgonovi, E., Anessi-Pessina, E., & Bianchi, C. (Eds.). (2018). Outcome-based performance management in the public sector.
- Boxall, P., Guthrie, J. P., & Paauwe, J. (2016). Editorial introduction: Progressing our understanding of the mediating variables linking HRM, employee well-being and organisational performance. *Human Resource Management Journal*, 26(2).
- Brewer, G. A., & Selden, S. C. (2000). Why elephants gallop: Assessing and predicting organizational performance in federal agencies. *Journal of public administration research and theory*, 10(4), 685-712.
- Britton, B. K., & Tesser, A. (1991). Effects of time-management practices on college grades. *Journal of Educational Psychology*, 83, 405-410.
- Brown, S. P., & Peterson, R. A. (1993). Antecedents and consequences of salesperson job satisfaction: Meta-analysis and assessment of causal effects. *Journal of marketing research*, 30(1), 63-77.
- Byrne, Z. S., Weston, J. W., & Cave, K. (2020). Development of a scale for measuring students' attitudes towards learning professional (ie, soft) skills. *Research in Science Education*, 50(4), 1417-1433.
- Canel, M. J., & Luoma-Aho, V. (2018). *Public sector communication: Closing gaps between citizens and public organizations*. John Wiley & Sons.
- Carstensen, L. L. (1992). Social and emotional patterns in adulthood: support for socioemotional selectivity theory. *Psychology and aging*, 7(3), 331.
- Cedefop (2021). Understanding technological change and skill needs: skills surveys and skills forecasting. Cedefop practical guide 1. Luxembourg: Publications Office. <http://data.europa.eu/doi/10.2801/212891>

- Chaidi, I., & Drigas, A. (2020). Autism, expression, and understanding of emotions: literature review. 94-111.
- Charbonnier-Voirin, A., & Roussel, P. (2012). Adaptive performance: A new scale to measure individual performance in organizations. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 29(3), 280-293.
- Chen, Jiyao & Walker, Richard & Sawhney, Mohanbir. (2019). Public service innovation: a typology. *Public Management Review*. 22. 1-22.
- Cimatti, Barbara (2016). Definition, development, assessment of soft skills and their role for the quality of organizations and enterprises. *International Journal for Quality Research*, 10: 97.
- Cinque, M. (2016). "Lost in translation". Soft skills development in European countries. *Tuning Journal for Higher Education*, 3(2), 389-427.
- Claessens, B.J.C., van Eerde, W., Rutte, C.G. and Roe, R.A. (2007), "A review of the time management literature", *Personnel Review*, Vol. 36 No. 2, pp. 255-276.
- Crampton, S., & Wagner, J. (1994). Percept–percept inflation in micro-organizational research: An investigation of prevalence and effect. *Journal of Applied Psychology*, 79, 67-76.
- Crosbie, R. (2005). Learning the soft skills of leadership. *Industrial and commercial training*, 37(1), 45-51.
- Dall'Amico, E., & Verona, S. (2015). Cross-country survey on soft skills required by companies to medium/high skilled migrants. *Methodological approach for a common framework of Soft Skills at work. Valorize high skilled migrants*, 16-19.
- David, S., Zinica, D., Bărbuță-Mișu, N., Savga, L., & Virlanuta, F. O. (2024). Public administration managers' and employees' perceptions of adaptability to change under “the future of work” paradigm. *Technological Forecasting and Social Change*, 199, 123088.
- De Dreu, C.K.W. and Nauta, A. (2009), “Self-interest and other-orientation in organizational behavior: implications for job performance, prosocial behavior, and personal initiative”, *The Journal of Applied Psychology*, Vol. 94 No. 4, pp. 913-926.
- De Sutter, J. (2022). *The New EPSO Competency Framework. Old Wine in a New Bottle*. E-book available at: [The New EPSO Competency Framework 2022.pdf \(eutraining.eu\)](https://eutraining.eu/The%20New%20EPSO%20Competency%20Framework%202022.pdf)
- Dell'Aquila, E., Marocco, D., Ponticorvo, M., Di Ferdinando, A., Schembri, M., Miglino, O., ... & Miglino, O. (2017). Soft skills. *Educational Games for Soft-Skills Training in Digital Environments: New Perspectives*, 1-18.
- Delisle, M., & Lajoie, D. (2022). Skills of the future for a high-performing workforce: Implications of recent evidence for the public sector. *Canadian Public Administration*, 65(1), 144-165.
- Denhardt, R. B., J. V. Denhardt, and M. P. Aristigueta. (2013). “Fostering Creativity.” In *Managing Human Behavior in Public and Nonprofit Organizations*, edited by R. B. Denhardt and J. V. Denhardt, 59–89. 3rd ed. Thousand Oaks, CA: Sage Publications.
- Dickinson, H. and Sullivan, H. 2014. Imagining the 21st Century Public Service Workforce. Available at: [1\) Imagining the 21st century public service workforce | Helen Farley - Academia.edu](https://www.academia.edu/11111111/1_Imagining_the_21st_century_public_service_workforce) Accessed on May 27, 2024.
- Dixit, A (2002), Incentives and Organizations in the Public Sector: An Interpretive Review, *Journal of Human Resources*, 37(4), 696-727.

- Dooren Van, W., Bouckaert, G., & Halligan, J. (2015). *Performance Management in the Public Sector* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315817590>
- Draganidis, F., & Mentzas, G. (2006). Competency based management: a review of systems and approaches. *Information management & computer security*, 14(1), 51-64.
- Dudley, E., Lin, D. Y., Mancini, M., & Ng, J. (2015). Implementing a citizen-centric approach to delivering government services. *McKinsey & Company*.
- Ehrenberg, R. G., & Smith, R. S. (1997). *Modern Labor Economics: Theory and Public Policy* (6th ed.). Addison-Wesley.
- European Commission (2013). *Powering European Public Sector Innovation: Towards A New Architecture*. Report of the Expert Group on Public Sector Innovation, Directorate General for Research and Innovation, Innovation Union, European Commission, Brussels. Retrieved from [42-public sector innovation - towards a new architecture.pdf \(europa.eu\)](#)
- Evans, J. D. (1996). *Straightforward statistics for the behavioral sciences*. Thomson Brooks/Cole Publishing Co.
- Fafaliou, I., Chountalas, P., & Manousakis, I. (2020). Civil servants' work performance in the context of less effective appraisal systems: an exploratory study for Greece. *International Journal of Public Sector Performance Management*, 6(4), 467-487.
- Fernández-Arias, P., Antón-Sancho, Á., Vergara, D., & Barrientos, A. (2021). Soft Skills of American University Teachers: Self-Concept. *Sustainability* 2021, 13, 12397.
- Flanagan, T. A., & Runde, C. E. (2008). Hidden potential: Embracing conflict can pay off for teams. *Leadership in Action: A Publication of the Center for Creative Leadership and Jossey-Bass*, 28(2), 8-12.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American psychologist*, 56(3), 218.
- Fuertes, V. (2021). The rationale for embedding ethics and public value in public administration programmes. *Teaching Public Administration*, 39(3), 252-269.
- Gajda, A., Karwowski, M., & Beghetto, R. A. (2017). Creativity and academic achievement: A meta-analysis. *Journal of educational psychology*, 109(2), 269.
- Gerald V. Barrett and Alissa J. Kramen and Sarah B. Lueke (2003), *New Concepts of Intelligence: Their Practical and Legal Implications for Employee Selection*.
- Goleman, D. (2000). Leadership that gets results. *Harvard Business Review*, 78, 78-90.
- Gray, P.H. and Chan, Y.E. (2000), "Integrating knowledge management practices through a problem solving framework", Working Paper WP 00-03, Queen's School of Business, Queen's University, Kingston.
- Grugulis, I., & Stoyanova, D. (2011). Skill and Performance. *British Journal of Industrial Relations*, 49(3), 515-536.
- Grundke, R., et al. (2017), "Skills and global value chains: A characterisation", OECD Science, Technology and Industry Working Papers, No. 2017/05, OECD Publishing, Paris.

Guchait Priyanko, Lei Puiwa & Tews J. Michael (2015): Making Teamwork Work: Team Knowledge for Team Effectiveness, *The Journal of Psychology: Interdisciplinary and Applied*, DOI: 10.1080/00223980.2015.1024596

GÜĞERÇİN, S. G. U. (2022). How employees survive in the industry 5.0 era: in-demand skills of the near future. *International Journal of Disciplines in Economics & Administrative Sciences Studies*, 7(31), 524-533.

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied psychology*, 60(2), 159.

Haq, Sonia. (2011). Ethics and leadership skills in the public service. *Procedia - Social and Behavioral Sciences*. 15. 2792-2796. 10.1016/j.sbspro.2011.04.190.

Haselberger, D., P. Oberheumer, E. Perez, M. Cinque, and D. Capasso. 2012. Mediating Soft Skills at Higher Education Institutions, Handbook of ModEs Project, Life Long Learning Programme.

Hassan, R. (2003), *The Chronoscopic Society: Globalization, Time and Knowledge in the Network Economy*, Peter Lang Publishing, Oxford

Heckman, J. J., & Kautz, T. (2012). Hard evidence on soft skills. *Labour economics*, 19(4), 451-464.

Heckman, J. J., & Rubinstein, Y. (2001). The importance of noncognitive skills: Lessons from the GED testing program. *American economic review*, 91(2), 145-149.

Hendijani, R. and Ahmadi, M.M. (2023), "Thinking styles and conflict management: a gamified empirical study", *International Journal of Organizational Analysis*, Vol. ahead-of-print No. ahead-of-print.

Hellsten, L. M. (2012). What do we know about time management. *A review of the literature and a psychometric critique of instruments assessing time management. Rijeka, Croatia: Intech*, 21-22.

Hirudayaraj, M., Baker, R., Baker, F., & Eastman, M. (2021). Soft skills for entry-level engineers: What employers want. *Education Sciences*, 11(10), 641.

Homberg, F., McCarthy, D., & Tabvuma, V. (2015). A meta-analysis of the relationship between public service motivation and job satisfaction. *Public Administration Review*, 75(5), 711-722.

Hood, C. (1991). A public management for all seasons?. *Public administration*, 69(1), 3-19.

Hoskins, B., & Fredriksson, U. (2008). *Learning to learn: What is it and can it be measured?*. European Commission JRC.

Houtgraaf, G., Kruyen, P., & van Thiel, S. (2023). Measuring the construct of public sector creativity: Development of a validated scale. *Public Administration Review*.

Huberts, L. W. (2018). Integrity: What it is and Why it is Important. *Public Integrity*, 20(sup1), S18-S32.

- Hurrell, S. A., Scholarios, D., & Thompson, P. (2012). More than a “humpty dumpty” term: Strengthening the conceptualization of soft skills. *Economic and Industrial Democracy*, 34(1), 161–182.
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of management Journal*, 55(6), 1264-1294.
- Johannessen, J., Olaisen, J. and Olsen, B. (1999), "Strategic use of information technology for increased innovation and performance", *Information Management & Computer Security*, Vol. 7 No. 1, pp. 5-22.
- Jonassen, D. H. (2000). Toward a design theory of problem solving. *Educational technology research and development*, 48(4), 63-85.
- Johari, J., & Yahya, K. K. (2016). Job characteristics, work involvement, and job performance of public servants. *European Journal of Training and Development*, 40(7), 554-575.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological bulletin*, 127(3), 376.
- Katz, R. L. (1974). Skills of an effective administrator. *Harvard business review*, Vol. 52, No. 5, pp. 90–102, September/October 1974.
- Kechagias, K. (2011). Teaching and assessing soft skills. MASS Project.
- Kozlowski, S. W., & Bell, B. S. (2003). Work groups and teams in organizations. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology*, Vol. 12: 333-375. London: Wiley. *Handbook of psychology: Industrial and organizational psychology*, 12, 333-375.
- Krawchenko, T. (2021), “Public Sector and Productivity: Governing at the Right Scale”, Background paper for the OECD-EC High-Level Expert Workshop Series “Productivity Policy for Places”, April 18-19.
- Kruyen, P. M., and M. Van Genugten. (2017). “Creativity in Local Government: Definition and Determinants.” *Public Administration*, 95 (3): 825–841.
- Vašková, R. (2007). Teamwork and high performance work organisation. *European Foundation for the Improvement of Living and Working Conditions*, 1-59.
- Lakein, A., & Leake, P. (1973). *How to get control of your time and your life* (p. 204). New York: New American Library.
- Laker, D. R., & Powell, J. L. (2011). The differences between hard and soft skills and their relative impact on training transfer. *Human resource development quarterly*, 22(1), 111-122.
- Lamb, S., Maire, Q., & Doecke, E. (2017). Key skills for the 21st century: An evidence-based review.

- Lamri, J., & Lubart, T. (2023). Reconciling hard skills and soft skills in a common framework: the generic skills component approach. *Journal of Intelligence*, 11(6), 107.
- Landy, F. J., Rastegary, H., Thayer, J., & Colvin, C. (1991). Time urgency: The construct and its measurement. *Journal of Applied Psychology*, 76(5), 644.
- Law 4940/2022 “Goal-setting, performance assessment and Reward System for Enhancing the Efficiency of Public Administration”.
https://www.et.gr/api/DownloadFeksApi/?fek_pdf=20220100112
- Levant, Y., Coulmont, M., & Sandu, R. (2016). Business simulation as an active learning activity for developing soft skills. *Accounting Education*, 25(4), 368-395.
- Levasseur, R. E. (2013). People skills: Developing soft skills - A change management perspective. *Interfaces*, 43(6), 566-571.
- Li, L. (2022). Reskilling and upskilling the future-ready workforce for industry 4.0 and beyond. *Information Systems Frontiers*, 1-16.
- Lim, V. K. (2002). The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice. *Journal of organizational behavior: the international journal of industrial, occupational and Organizational Psychology and Behavior*, 23(5), 675-694.
- Locke, E.A. (1976). The Nature and Causes of Job Satisfaction. In: Dunnette, M.D., Ed., *Handbook of Industrial and Organizational Psychology*, Vol. 1, 1297-1343.
- Lytle, R.S. and Timmerman, J.E. (2006), "Service orientation and performance: an organizational perspective", *Journal of Services Marketing*, Vol. 20 No. 2, pp. 136-147.
- Lyu, W., & Liu, J. (2021). Soft skills, hard skills: What matters most? Evidence from job postings. *Applied Energy*, 300, 117307.
- Macan, T. H. (1994). Time management: Test of a process model. *Journal of applied psychology*, 79(3), 381.
- Mackenzie, R.A. (1972), *The Time Trap: Managing your Way Out*, Amacom, New York, NY.
- Maniscalco, R. S. (2010). The impact of the European policies on the new skills for the new jobs. *Rev. Eur. Stud.*, 2, 54.
- Marin-Zapata, S.I., Román-Calderón, J.P., Robledo-Ardila, C. *et al.* (2022). Soft skills, do we know what we are talking about?. *Rev Manag Sci* 16, 969–1000.
- Mathieu, J., Maynard, M. T., Rapp, T. & Gilson, L. (2008). Team Effectiveness 1997-2007: A Review of Recent Advancements and a Glimpse Into the Future. *Journal of Management*, 34 (3), pp. 410-476.
- Matteson, M. L., Anderson, L., & Boyden, C. (2016). " Soft skills": A phrase in search of meaning. *portal: Libraries and the Academy*, 16(1), 71-88.

Mavromaras, Kostas; McGuinness, Seamus; Fok, Yin King (2007) : Assessing the incidence and wage effects of over-skilling in the Australian labour market, IZA Discussion Papers, No. 2837, Institute for the Study of Labor (IZA), Bonn.

Mayer, R. E. (2013). What problem solvers know: Cognitive readiness for adaptive problem solving. In *Teaching and measuring cognitive readiness* (pp. 149-160). Boston, MA: Springer US.

McLean, L. D. (2005). Organizational culture's influence on creativity and innovation: A review of the literature and implications for human resource development. *Advances in developing human resources*, 7(2), 226-246.

Menzel, D. C. (2015). Research on Ethics and Integrity in Public Administration: Moving Forward, Looking Back. *Public Integrity*, 17(4), 343–370.

Merriman-Webster (2024), available at [Merriam-Webster: America's Most Trusted Dictionary](#) (accessed 21 May 2024).

Moberg, P.J. (2001), "LINKING CONFLICT STRATEGY TO THE FIVE-FACTOR MODEL: THEORETICAL AND EMPIRICAL FOUNDATIONS", *International Journal of Conflict Management*, Vol. 12 No. 1, pp. 47-68.

Motowidlo, S.J. (2003), "Job performance", in Borman, W.C., Ilgen, D.R. and Klimoski, R.J. (Eds), *Handbook of psychology: Industrial and organizational psychology*, Wiley, New York, Vol. 12, pp. 39-53.

Mumford, M. D., Zaccaro, S. J., Harding, F. D., Jacobs, T. O., & Fleishman, E. A. (2000). Leadership skills for a changing world: Solving complex social problems. *The leadership quarterly*, 11(1), 11-35.

Mumford, M. D., Todd, E. M., Higgs, C., & McIntosh, T. (2017). Cognitive skills and leadership performance: The nine critical skills. *The Leadership Quarterly*, 28(1), 24-39.

Ng, T. W., & Feldman, D. C. (2009). How broadly does education contribute to job performance?. *Personnel psychology*, 62(1), 89-134.

Nicolescu, L., Dima, A. M., Anghel, F., & Paun, C. (2009). An analysis of job satisfaction at the academic level: A Romanian case study. *Global Journal of Business Research*, 3(1), 83-90.

Noe, R., Hollenbeck, J., Gerhart, B. and Wright, P. (2010), *Human Resource Management: Gaining a Competitive Advantage*, 7th ed., McGraw-Hill, New York, NY.

Nunn, A. (2012). Performance management in public employment services.

O'brien, G. E. (1983). Skill-utilization, skill-variety and the job characteristics model. *Australian Journal of Psychology*, 35(3), 461-468.

OECD (2011), *Public Servants as Partners for Growth: Toward a Stronger, Leaner and More Equitable Workforce*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264166707-en>.

OECD (2015), *The Innovation Imperative in the Public Sector: Setting an Agenda for Action*, OECD Publishing, Paris. <https://doi.org/10.1787/9789264236561-en>

OECD (2017a), *Skills for a High Performing Civil Service*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264280724-en>

OECD (2017b), “Core skills for public sector innovation”, in *Skills for a High Performing Civil Service*, OECD Publishing, Paris. <https://doi.org/10.1787/9789264280724-6-en>

OECD (2017c), “Public Integrity”, OECD Publishing, Paris, [OECD Recommendation on Public Integrity - OECD](#)

OECD (2021a), "The OECD Framework for digital talent and skills in the public sector", OECD Working Papers on Public Governance, No. 45, OECD Publishing, Paris, <https://doi.org/10.1787/4e7c3f58-en>.

OECD (2021b), *Public Employment and Management 2021. The Future of the Public Service*. OECD Publishing, Paris, [Public Employment and Management 2021 : The Future of the Public Service | OECD iLibrary \(doi.org\)](#)

OECD (2023), *OECD Employment Outlook 2023: Artificial Intelligence and the Labour Market*, OECD Publishing, Paris, <https://doi.org/10.1787/08785bba-en>.

Orpen, C. (1994). The Effect of Time-Management Training on Employee Attitudes and Behavior: A Field Experiment. *The Journal of Psychology*, 128(4), 393–396.

Oslo Manual (2018). Guidelines for collecting, reporting and using data on innovation. *The measurement of Scientific, Technological and Innovation Activities. 4th Edition*.

Ostroff, C. (1992). The relationship between satisfaction, attitudes, and performance: An organizational level analysis. *Journal of Applied Psychology*, 77, 963–974.

Ötken, A. B., Bayram, A., Beşer, S. G., & Kaya, Ç. (2023). Are time management and cyberloafing related? Investigating employees' attitudes. *Global Business Review*, 24(5), 874-886.

Parlamis, J., & Monnot, M. J. (2019). Getting to the CORE: Putting an end to the term “soft skills”. *Journal of Management Inquiry*, 28(2), 225-227.

Pandey, J. (2018). Factors affecting job performance: an integrative review of literature. *Management Research Review*, 42(2), 263-289.

Peng, H., Bell, C. and Li, Y. (2021), "How and when intragroup relationship conflict leads to knowledge hiding: the roles of envy and trait competitiveness", *International Journal of Conflict Management*, Vol. 32 No. 3, pp. 383-406. <https://doi.org/10.1108/IJCMA-03-2020-0041>

Pfeil, H., Agarwal, S., Bernstein, D., Recanatini, F., Knack, Stephen; Ladegaard, Peter Farup. (2018), *Indicators of citizen-centric public service delivery* (English). Washington, D.C.: World Bank Group.

PIAAC Problem Solving in Technology-Rich Environments: A Conceptual Framework. (2009). OECD Education Working Paper No. 36

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual review of psychology*, 63(1), 539-569.

Porter, L. W. (1961). A study of perceived need satisfactions in bottom and middle management jobs. *Journal of applied Psychology*, 45(1), 1-10.

Ployhart, R. E., & Bliese, P. D. (2006). Individual adaptability (I-ADAPT) theory: Conceptualizing the antecedents, consequences, and measurement of individual differences in adaptability. In *Understanding adaptability: A prerequisite for effective performance within complex environments* (pp. 3-39). Emerald Group Publishing Limited.

Pulakos, E.D., Schmitt, N., Dorsey, D.W., Hedge, J.W. and Borman, W.C. (2002), "Predicting adaptive performance: further tests of a model of adaptability", *Human Performance*, Vol. 15 No. 4, pp. 299-323.

Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85(4), 612–624.

Rainsbury, E., Hodges, D. L., Burchell, N., & Lay, M. C. (2002). Ranking workplace competencies: Student and graduate perceptions. *Asia-Pacific Journal of Cooperative Education*, 3(2), 8-18.

Reiter-Palmon, R., & Illies, J. J. (2004). Leadership and creativity: Understanding leadership from a creative problem-solving perspective. *The leadership quarterly*, 15(1), 55-77.

Robles, M. M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business communication quarterly*, 75(4), 453-465.

Rodrigues, M, Fernández-Macías, E., Sostero, M., (2021). A unified conceptual framework of tasks, skills and competences, Seville: European Commission, 1, JRC121897.

Rotundo, M., & Rotman, J. L. (2002). Defining and measuring individual level job performance: A review and integration. *Journal of Applied Psychology*, 90(5), 225-254.

Salas, E., Shuffler, M. L., Thayer, A. L., Bedwell, W. L., & Lazzara, E. H. (2015). Understanding and improving teamwork in organizations: A scientifically based practical guide. *Human Resource Management*, 54(4), 599–622.

Salzberg Charles, Agran M., and Lignugaris/Kraft B. (1986). Behaviors that contribute to entry-level employment a profile of five jobs, *Applied Research in Mental Retardation*, Volume 7, Issue 3, Pages 299-314, ISSN 0270-3092.

Saramolee, A., Hareebin, Y., Boonkaew, S., Aujirapongpan, S., & Jutidharabongse, J. (2022). Professional skills development affecting organizational learning and corporate performance: an empirical study in Thailand. *TEM Journal*, 11(1), 234.

Sarathy, V. (2018). Real world problem-solving. *Frontiers in human neuroscience*, 12, 261.

Schjoedt, L., & Sangboon, K. (2015). Control variables: problematic issues and best practices. In *The Palgrave handbook of research design in business and management* (pp. 239-261). New York: Palgrave Macmillan US.

Schulz, B. (2008). The importance of soft skills: Education beyond academic knowledge. *NAWA Journal of Language and Communication*, 2(1), 146 - 154.

- Seri, P., & Zanfei, A. (2013). The co-evolution of ICT, skills and organization in public administrations: Evidence from new European country-level data. *Structural Change and Economic Dynamics*, 27, 160-176.
- Sharma, M. (2009). How Important Are Soft Skills from the Recruiter's Perspective. *ICFAI Journal of Soft Skills*, 3(2).
- Shih, H. and Susanto, E. (2010), "Conflict management styles, emotional intelligence, and job performance in public organizations", *International Journal of Conflict Management*, Vol. 21 No. 2, pp. 147-168.
- Simonton, D. K. (2012). Taking the U.S. Patent Office Criteria Seriously: A Quantitative Three-Criterion Creativity Definition and Its Implications. *Creativity Research Journal*, 24(2-3), 97-106.
- Sonnentag, S., & Frese, M. (2002). Performance concepts and performance theory. *Psychological management of individual performance*, 23(1), 3-25.
- Sternberg, R. J., & Lubart, T. I. (1999). The concept of creativity: Prospects and paradigms. *Handbook of creativity*, 1(3-15).
- Stewart, C., Wall, A., & Marciniak, S. (2016). Mixed signals: Do college graduates have the soft skills that employers want? *Competition Forum*, 14(2), 276-281.
- Sturman, M. C. (2003). Searching for the inverted U-shaped relationship between time and performance: Meta-analyses of the experience/performance, tenure/performance, and age/performance relationships. *Journal of management*, 29(5), 609-640.
- Tobin, P. (2006). Managing Ourselves-Leading Others". *ICEL2006, Inspiring Leadership: Experiential learning and leadership development*, Vol. 2.
- Touloumakos, A. K. (2020). Expanded yet restricted: A mini review of the soft skills literature. *Frontiers in psychology*, 11, 568111.
- Touloumakos, A. K. (2023). Taking a step back to move forward: Understanding communication skills and their characteristics in the workplace. *Studies in Continuing Education*, 45(2), 188-207.
- Vähämäki, J. and C. Verger (2019), "Learning from Results-Based Management evaluations and reviews", *OECD Development Co-operation Working Papers*, No. 53, OECD Publishing, Paris.
- Van de Vliert, E., & Kabanoff, B. (1990). Toward theory-based measures of conflict management. *Academy of Management Journal*, 33(1), 199-209.
- Verbeeten, F. H. M., & Speklé, R. F. (2015). Management Control, Results-Oriented Culture and Public Sector Performance: Empirical Evidence on New Public Management. *Organization Studies*, 36(7), 953-978.
- Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment*, 8(4), 216-226.
- Vivona, R., Demircioglu, M. A., & Raghavan, A. (2020). Innovation and innovativeness for the public servant of the future: what, why, how, where, and when. *The Palgrave handbook of the public servant*, 1-22.

- Wade, M. R., & Parent, M. (2002). Relationships between job skills and performance: A study of webmasters. *Journal of Management Information Systems*, 18(3), 71-96.
- Wart, M. (2016). Public-sector leadership theory: An assessment. In *Administrative leadership in the public sector* (pp. 11-34). Routledge.
- Weinstein, Claire & Krause, Jaimie & Stano, Nancy & Acee, Taylor & Jaimie, M.. (2015). Learning to Learn. International Encyclopedia of the Social & Behavioral Sciences.
- Wiemann, J. M., & Backlund, P. (1980). Current theory and research in communicative competence. *Review of educational research*, 50(1), 185-199.
- Wood, S., Van Veldhoven, M., Croon, M., & de Menezes, L. M. (2012). Enriched job design, high involvement management and organizational performance: The mediating roles of job satisfaction and well-being. *Human relations*, 65(4), 419-445.
- World Economic Forum (2016). *The Future of Jobs Report 2023*. Geneva: World Economic Forum.
- Wright, B. E. (2004). The role of work context in work motivation: A public sector application of goal and social cognitive theories. *Journal of public administration research and theory*, 14(1), 59-78.
- Zhu, B., Zhong, R., & Wei, C. (2024). Measuring digital government service performance: Evidence from China. *China Economic Review*, 83, 102105.
- Zwart, R. (2017), "Strengthening the results chain: Synthesis of case studies of results-based management by providers", OECD Development Policy Papers, No. 7, OECD Publishing, Paris.

Appendix A: Questionnaire used in the survey (main body)

	1	2	3	4	5	6	7
SECTION I: Please indicate to what extent does your job require you to do many different things at work, using a variety of your skills and talents (Choose the number which is the most accurate description of your job)							
SECTION II Please evaluate the importance of the following skills in performing efficiently your job, regardless of whether you like or dislike your job (choose one response per row)							
1. Identifying work goals							
2. Learning-to-learn (curiosity, ability to recognise one's knowledge and skills, be aware of learning opportunities)							
3. Accept changes as a new challenge							
4. Adapt to new situations and modify approaches if required by the context							
5. Attitude to be energetic and enthusiastic and capacity to self-motivate							
6. Recognize and apply company values, culture							
7. Adapt/act in accordance to places and situations (properly dressed, etc.)							
8. Understand/recognize the organization policies and structure							
9. Manage work roles, workplace rights/duties, requests and expectations							

10. Check to have understood the task assigned and ask assistance if needed							
11. Take responsibility for one's own actions without blaming anyone else							
12. Capacity to respect schedule and deadlines and being on time							
13. Ability to acquire and to use information using digital systems & technology							
14. Ability to work well with technology and manage risks associated with online environments							
15. Speak clearly and politely to any typology of speakers (heads, colleagues, clients, etc.)							
16. Use body language, gesture, tone/pitch of voices properly at different levels and contexts							
17. Know what medium to use when communicating at different level and contexts							
18. Ability in active listening, repeating, recollecting, interpreting							
19. Empathy (being aware of others' feelings)							
20. Maintain good level of performance when dealing with environmental pressures and difficulties (self-control, resilience, self-confidence)							
21. Capacity to work in a team and in a collaborative style to achieve results							
22. Provide support to your team members and colleagues							

23. Identify and respond to client needs and deal politely with clients problems							
24. Capacity to lead groups of people and make them work for a common goal							
25. Inspire/influence on others producing an impact							
26. Detect a conflict at an early stage without being afraid of calling it "conflict"							
27. Manage conflict when it arises and understand which conflicts cannot be solved							
28. Take appropriate actions to minimize cultural, gender or other diversity difficulties							
29. Capacity to make a choice from a range of possibilities prioritizing actions and use different decision-making approaches reflecting on the outcome of decisions							
30. Capacity to find and solve routine and non-routine problems to achieve work goals							
31. Ability to come up with new/innovative solutions, approaches, etc, and to think "out of the box"							
32. Ability to analyse and valorize information							
33. Problem solving in technology-rich environments							

<p>SECTION III Based on your experience and perception, which of these soft skills, in case they are lacking, might have the greatest negative impact on an organization performance ? (choose your responses)</p>	●
1. Identifying work goals	
2. Learning to learn	
3. Adaptability and Flexibility	
4. Self-Motivation	
5. Empathy	
6. Service skills	
7. Work well with technology	
8. Time Management	
9. Result-Oriented	
10. Communication skills	
11. Personal effectiveness, Professionalism and Integrity	
12. Team working	
13. Leadership	
14. Conflict Management	
15. Decision making	
16. Problem solving	
17. Creativity and Innovation	
18. Critical thinking	

SECTION IV Please indicate your level of agreement with each of the following statements (choose one response per row)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Overall, I am a very good performer					
2. The quality of my work is superior					
3. I consider my performance is better than the average employee in my organization					
4. I almost always perform better than what can be characterised as acceptable					
5. I often perform better than what can be expected					
6. I always reach my performance target					
7. I feel that my performance is reflective of my abilities					
8. I often expend extra effort in carrying out my job					
9. I intentionally expend a great deal of effort in carrying my job					
10. I try to work as hard as possible					

SECTION V Please indicate how you personally feel about your job by indicating how much you agree with each of the statements (choose one response per row)	Strongly Disagree	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1. Generally speaking, I am very satisfied with this job							
2. I frequently think of quitting this job							
3. I am generally satisfied with this kind of work I do in this job							

Appendix B: Regression Summary

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	PERSONAL_QUALITIES ^b		Enter

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_1

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,992 ^a	,984	,984	,16659	2,012

a. Predictors: (Constant), PERSONAL_QUALITIES

b. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_1

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	183,629	1	183,629	6616,936	,000 ^b
	Residual	2,969	107	,028		
	Total	186,598	108			

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_1

b. Predictors: (Constant), PERSONAL_QUALITIES

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,227	,065		3,512	
	PERSONAL_QUALITIES	,961	,012	,992	81,345	

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_1

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1,4765	6,9551	5,3211	1,30394	109
Residual	-,33580	,66737	,00000	,16581	109
Std. Predicted Value	-2,948	1,253	,000	1,000	109
Std. Residual	-2,016	4,006	,000	,995	109

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_1

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	SOCIAL_SKILLS ^b	.	Enter

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_2

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,995 ^a	,991	,991	,13780	2,076

a. Predictors: (Constant), SOCIAL_SKILLS

b. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_2

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	220,999	1	220,999	11639,222	,000 ^b
	Residual	2,032	107	,019		
	Total	223,031	108			

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_2

b. Predictors: (Constant), SOCIAL_SKILLS

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	,035	,050		,702	,484
	SOCIAL_SKILLS	,990	,009	,995	107,885	,000

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_2

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1,5204	6,9669	5,2244	1,43049	109
Residual	-,48330	,54058	,00000	,13716	109
Std. Predicted Value	-2,589	1,218	,000	1,000	109
Std. Residual	-3,507	3,923	,000	,995	109

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_2

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables		Method
		Removed		
1	CONCEPTUAL_THINKING_SKILLS ^b			Enter

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_3

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,981 ^a	,962	,962	,28687	1,957

a. Predictors: (Constant), CONCEPTUAL_THINKING_SKILLS

b. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_3

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	223,563	1	223,563	2716,641	,000 ^b
	Residual	8,805	107	,082		
	Total	232,369	108			

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_3

b. Predictors: (Constant), CONCEPTUAL_THINKING_SKILLS

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	,398	,096		4,137	
	CONCEPTUAL_THINKING_SKIL	,930	,018	,981	52,121	
	LS					

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_3

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1,4830	6,9076	5,2049	1,43876	109
Residual	-,78025	,97134	,00000	,28554	109
Std. Predicted Value	-2,587	1,183	,000	1,000	109
Std. Residual	-2,720	3,386	,000	,995	109

a. Dependent Variable: EMPLOYEE_JOB_PERFORMANCE_3

Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,182 ^a	,033	,024	1,85015

a. Predictors: (Constant), PERSONAL_QUALITIES

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12,502	1	12,502	3,652	,059 ^b

Residual	366,269	107	3,423		
Total	378,771	108			

a. Dependent Variable: ORGANIZATIONAL_PERFORMANCE

b. Predictors: (Constant), PERSONAL_QUALITIES

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	1,717	,718		2,392	,019
	PERSONAL_QUALITIES	,251	,131	,182	1,911	,059

a. Dependent Variable: ORGANIZATIONAL_PERFORMANCE

Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,101 ^a	,010	,001	1,67207

a. Predictors: (Constant), SOCIAL_SKILLS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,086	1	3,086	1,104	,296 ^b
	Residual	299,152	107	2,796		
	Total	302,239	108			

a. Dependent Variable: ORGANIZATIONAL_PERFORMANCE

b. Predictors: (Constant), SOCIAL_SKILLS

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	1,790	,605		2,958	,004
	SOCIAL_SKILLS	,117	,111	,101	1,051	,296

a. Dependent Variable: ORGANIZATIONAL_PERFORMANCE

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**

Model : 4
Y : v25 employee job performance
X : v26 Skill utilization
M : v24 job satisfaction

Sample
Size: 109

**

OUTCOME VARIABLE:
v24

Model Summary

	R	R-sq	MSE	F	df1	df2
p	,3975	,1580	,7541	20,0809	1,0000	107,0000
	,0000					

Model

	coeff	se	t	p	LLCI
ULCI					
constant	3,1660	,2977	10,6357	,0000	2,5759
	3,7561				
v26	,2346	,0524	4,4812	,0000	,1308
	,3384				

**

OUTCOME VARIABLE:
v25

Model Summary

	R	R-sq	MSE	F	df1	df2
p	,4001	,1601	1,5539	10,1025	2,0000	106,0000
	,0001					

Model

	coeff	se	t	p	LLCI
ULCI					
constant	3,0314	,6129	4,9461	,0000	1,8163
	4,2465				
v26	,2995	,0819	3,6559	,0004	,1371
	,4619				

v24 ,1313 ,1388 ,9465 ,3460 -,1438
,4065

***** DIRECT AND INDIRECT EFFECTS OF X ON Y

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
,2995	,0819	3,6559	,0004	,1371	,4619

Indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
v24 ,0308	,0392	-,0389	,1176

***** ANALYSIS NOTES AND ERRORS

Level of confidence for all confidence intervals in output:
95,0000

Number of bootstrap samples for percentile bootstrap confidence
intervals:
5000

----- END MATRIX -----

Correlations

		SKILL VARIETY	JOB_SATIS FACTION
SKILL VARIETY	Pearson Correlation	1	,398**
	Sig. (2-tailed)		,000
	N	109	109
JOB_SATISFACTIO	Pearson Correlation	,398**	1
	Sig. (2-tailed)	,000	
	N	109	109

** . Correlation is significant at the 0.01 level (2-tailed).

Author's Statement:

I hereby declare that, in accordance with article 8 of Law 1599/1986 and article 2.4.6 par. 3 of Law 1256/1982, this thesis/dissertation is solely a product of personal work and does not infringe any intellectual property rights of third parties and is not the product of a partial or total plagiarism, and the sources used are strictly limited to the bibliographic references.