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BUSINESS COMPETENCE DEVELOPMENT: KEY STRATEGIES AND TOOLS

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ABSTRACT

The objective of this study is twofold: firstly, to examine the potential relationship between soft skills and professional performance; secondly, to conduct a comprehensive statistical analysis of the principal soft skills exhibited by workers in the commercial sector. The sample comprises 1,654 participants from the commercial sector. The findings suggest that the sample can be classified into four discrete homogeneous profiles of professional performance. Furthermore, the primary soft skills examined are found to be interrelated and exert a direct influence on professional performance. In conclusion, the results are interpreted with a focus on the realities of the business market.

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1. Introduction

The advent of the digital age and, more recently, artificial intelligence has led to the expansion of professional and business opportunities. This has allowed both companies and workers instant access to information, inexhaustible resources and agile connections at any time and to any place on the planet. However, the professional development of a worker is not merely confined to the execution of repetitive and potentially automatable functions. Instead, it must prioritise the cultivation of soft skills, which are indispensable for both professional and personal success (Marrero et al., 2018; Musicco, 2018; Rodríguez et al., 2019). Moreover, organisations are cognizant that work teams exhibiting a high level of development in specific competencies and soft skills tend to demonstrate enhanced performance and productivity (Ibrahim et al., 2017). The professional market is subject to constant evaluation, with the results of this evaluation largely oriented towards the cultivation of competencies and soft skills for the overall development of the worker and their professional functions. This study investigates the potential relationships between soft skills, professional performance and employability.

1.1. Importance of Soft Skills in the Workplace

It is crucial to comprehend the attributes that organisations seek in their employees, with the objective of collectively attaining strategic business goals. A distinction can be made between two types of professional skills: hard skills and soft skills.

Hard skills are those that pertain to the set of competencies that the worker is required to develop in order to fulfil the technical functions of their position. Such skills may include, but are not limited to, business analysis skills, accounting skills, knowledge of specific software, application design, video editing and production, and so forth. Such skills are more specific to the professional position, the company, and the sector in question.

In contrast, soft skills are the non-technical abilities that facilitate securing employment, enable the retention of a position, facilitate professional development and contribute to success in the role. These types of skills are related to personal talent and pertain to the primary means by which an individual can contribute to an organisation and thereby differentiate themselves from their peers. Examples of this category of skills include results orientation, frustration tolerance, problem-solving abilities, flexibility, and persuasive communication.

A consensus exists regarding the importance of objective achievement, both from the perspective of the individual worker and from that of the organisation. The combination of both types of skills in a single worker is believed to facilitate the achievement of organisational objectives. Nevertheless, organisations tend to prioritise the identification of individuals with specific soft skills, while placing less emphasis on the presence of hard skills. This is due to the fact that the technical skills required for a given position can be easily transferred to a worker. Companies can simply provide their employees with the necessary training to enable them to perform the duties of their role. In many cases, this training is even standardised and provided in a structured manner. However, it is more challenging for organisations to provide initial training during the onboarding process, particularly in the area of soft skills. This is because soft skills are highly specific to each individual worker, and the combination of several of them is what makes them unique and attractive to companies.

As Ummatqul (2020) indicates, the availability of certain soft skills is directly related to access to the labour market and employability. This is because it has been demonstrated that hard skills are not sufficient either to ensure worker loyalty or to achieve technical objectives in a sustained manner over time (Robles, 2012).

In a similar vein, there is evidence that universities worldwide are incorporating soft skills training into their existing undergraduate and postgraduate degree programmes. Additionally, they are developing and implementing tailored training plans in this area with the objective of equipping their students with enhanced preparation for the professional market (Cinque, 2016; González-Rico and Lluch, 2024; Kechiagas, 2011).

Accordingly, there is considerable interest in establishing a correlation between soft skills and career success. Klaus (2010) has demonstrated that only 25% of job success is attributable to technical skills, with the remaining 75% derived from soft skills. Sethi (2014) conducted a similar study and obtained results that were in alignment with those of his colleague yet demonstrated a more pronounced

discrepancy between the two. The findings indicated that 85% of professional success can be attributed to soft skills, while only 15% can be attributed to the technical skills specific to the position. It thus appears reasonable to conclude that organisations are engaged in an ongoing and active pursuit of professionals who possess a diverse range of soft skills and have undergone extensive training in these abilities.

1.2. Soft Skills in Commercial Profiles

It is crucial to recognise that the development of soft skills does not automatically guarantee future employment opportunities. Rather, it is essential to gain a deeper understanding of the specific soft skills required in each sector and to align one's skills accordingly. The worker may choose to pursue either of two avenues. The first is to engage in introspective self-assessment to identify sectors that align with their skill sets. The second is to conduct a detailed analysis of the skills required in the sector of their choice and to undertake training and development activities to enhance their specific skill sets, thereby facilitating their access to that sector.

To illustrate, the soft skills most in demand among police officers are empathy, interpersonal communication skills and emotional stability (Bloksgaard and Prieur, 2021). Among administrative staff, digital competence is the most in-demand soft skill, as well as correct communication and interpretation with executive profiles (Krpálek et al., 2021) In teachers, the most in-demand skills are teamwork and lifelong learning, as well as management skills for students (Tang, 2018). In the customer service sector, the most in-demand skills are hospitality, effective communication, and motivation (Escamilla et al., 2022). Teamwork and problem-solving are not significant in this sector.

In the professional profile under consideration in the present study, those engaged in commercial activities are observed to possess a number of skills that are conducive to the optimal development of their roles. These include a persistent effort to capture the attention of consumers, which may be characterised as customer orientation; a high capacity to handle computers and social networks; and the ability to design and implement strategies to meet customer demands, which may be described as results orientation (Moreno and Marcaccio, 2014). Furthermore, as these same authors indicate, work in the commercial sector is characterised by dynamism and change, thus requiring the development of skills such as frustration tolerance, adaptability and problem-solving abilities.

1.3 Impact of Soft Skills on Job Performance

It can be observed that there is a common factor that is present in both organisations and employees, namely professional performance. It is common practice for companies to utilise the performance evaluation of their team members as a measure and indicator of success. One of the key factors that drives employee loyalty is the contribution of value and impact that the functions of the worker have a direct repercussion on the organisation. This can be demonstrated by the inverse relationship between professional performance and job satisfaction.

Both hard skills and the capacity for innovation and learning have a positive impact on the performance of an organisation. However, soft skills have been found to exert a greater influence on the performance of both workers and the economic growth of the organisation (Caputo et al., 2019; Purwanto, 2021). Moreover, the cultivation of soft skills exerts a beneficial and pronounced effect on creative and innovative abilities, which in turn exert a direct and positive influence on the performance of professionals (Putra et al., 2020).

As indicated by Ibrahim et al., (2017), the soft skills training provided to employees by organisations is directly related to the individual professional performance of each employee and, in short, to the performance of the company as a whole. The findings of this study indicate that the implementation of appropriate soft skills training plans can lead to an increase in professional performance by 14.5%. However, the use of the spatio-temporal methodology, which involves allowing sufficient time for workers to internalise, assimilate and apply the acquired learning before progressing to the next training phase, can result in an even greater improvement, up to 27.9%.

Having presented this information, the overarching objective of this study is to analyse the level of professional performance exhibited by individuals in commercial profiles. Furthermore, the following specific objectives have been established:

- *Specific Objective 1*: To evaluate the feasibility of categorising profiles according to their levels of professional performance, identifying potential patterns that could inform decision-making at the organisational level.
- Specific Objective 2: To provide a detailed description and analysis of the data on the main soft skills of the commercial profiles under examination, employing a specific measurement tool.

In order to provide inferential value to these objectives, the following hypotheses are proposed:

- Hypothesis 1: Four types of homogeneous performance profiles will emerge in the sample analysed, with the largest being the one with the highest scores on the soft skills self-assessment.
- Hypothesis 2: The eight soft skills under consideration in this study will be significantly correlated with one another and will exert a direct influence on the distribution of the various profiles.

2. Methodology

2.1. Project Design

The objective of this project is to ascertain and anticipate the typical conduct of the individual undergoing assessment within their occupational role. In this instance, the focus is on a commercial work environment. Additionally, the project aims to determine the extent to which the individual's conduct aligns with the expectations associated with the role. Furthermore, this study will provide a framework for analysing the candidate's areas of interest, identifying strengths and areas for improvement, thus enabling the evaluator to ascertain the subject's comprehensive competence profile.

To this end, a Commercial Competences questionnaire has been administered, which assesses eight key competencies for success in the performance of commercial or customer service roles without a team in charge, such as hostess, salesperson, commercial consultant, sales assistant, and so forth.

2.2. Sample and Data Collection

In this study, a questionnaire was employed as a data-gathering instrument to ascertain the business competencies of the participants. The survey was designed and validated by the Institute of Knowledge Engineering (Autonomous University of Madrid) in collaboration with the company The Adecco Group, which was responsible for its implementation and subsequent data collection.

The questionnaire is generated online through the AdeccoXpert platform and consists of a total of 118 items, which describe common behaviours in the commercial work environment. The questionnaire enables the candidate to indicate the extent to which the descriptions reflect their abilities and performance at work. This is done by selecting one of four possible answers on a scale: rarely (behaviour occurs only very rarely), sometimes (behaviour does not usually occur in this way), frequently (behaviour usually occurs in the indicated way) and very frequently (behaviour always occurs as indicated in the sentence).

The database resulting from this questionnaire and used in this study comprises a comprehensive collection of data. The sample comprises 1,654 employees from the sales department of a consulting company, and covers eight competencies: *result orientation, persuasive communication, customer orientation, frustration tolerance, adaptability, ethical work behaviour, problem solving and digital competence*. To guarantee the integrity and accuracy of the data, a process of cleaning and validation was implemented.

The results of the questionnaire are expressed in deciles on a scale of 1 to 10, which can be interpreted in accordance with the following table (Table 1):

Table 1. Table for conversion of scores to deciles

Decile	Meaning	Level of development
1-2	Well below average	Competence to improve
3-4	Below average	Competence in development
5-6	Average	Acquired competence
7-8	Above average	Outstanding competence
9-10	Well above average	High potential competition

Source: The Adecco Group, 2023

Additionally, based on the decile, a classification of competencies was made across four levels of development (Table 2):

Table 2. Conversion table of deciles to development levels

Areas	Decile	Description
High potential strengths	9-10	Refers to those competencies that the candidate has fully developed and that he/she usually shows in the performance of the job.
Developing strengths	7-8	Competences developed by the candidate, but not always shown in the development of the position.
Developing areas	4-6	Competences that may sometimes be displayed by the candidate but are not always present.
Areas for improvement	1-3	Competencies that are never or only occasionally displayed by the candidate. In most cases, they will need training or development actions.

Source: The Adecco Group, 2023

The database provides a robust foundation for the quantitative and qualitative statistical analysis conducted in this study.

2.3. Data Analysis

The data analysis was conducted using the statistical software package SPSS, which is designed for advanced statistical analysis and exploration. The data, which had previously been organised in Excel, were imported into SPSS, where the variables were defined and labelled according to their type. A descriptive, univariate and multivariate analysis was conducted to ascertain significant differences between the variables under investigation. In this study, the correlation and communalities analyses would be of particular significance, offering comprehensive insight into the relationships between different variables and the underlying structure of the competences.

3. Results

The analysis of results is presented in the five sections below.

3.1. Descriptive Statistics

This initial descriptive analysis is intended to provide an initial overview of the eight competences reflected in the questionnaire. As illustrated in Table 3, the data exhibits notable homogeneity, with the sample means for each variable ranging from 6.05 to 6.71 and a moderate dispersion, as indicated by a coefficient of variation (CV) of approximately 0.30 in all cases.

Table 3. Descriptive statistics for each of the competences studied.

	N	Media	Standard deviation
Results-oriented	1654	6.12	1.987
Persuasive communication	1654	6.42	2.055
Customer orientation	1654	6.34	2.119
Tolerance of frustration	1654	6.23	2.037
Flexibility - Adaptability	1654	6.05	2.038
Ethical behaviour at work	1654	6.43	2.329
Troubleshooting	1654	6.33	2.104
Digital competence	1654	6.71	2.021

Source: Own elaboration, 2024.

3.2. Gust test

The cluster test was applied to the questionnaire database for the purpose of analysing the randomness of the responses and checking for bias. In order to achieve this, the data are separated into two groups using the median (Me) as a point of demarcation. This dichotomisation methodology allows for the evaluation of potential patterns or trends that could indicate a lack of randomness in the sample.

As can be observed in Table 4, the p-values obtained are all above the 0.05 significance level, indicating that the data exhibit a non-significant pattern. This indicates that the evidence is insufficient to reject the null hypothesis of randomness. In other words, this result provides evidence that the data are random, indicating that the sample analysed is free of bias and thus demonstrating the reliability of the collected data.

Table 4. Runs test as an analysis for randomness of the data

	Results-oriented	Persuasive communication	Customer orientation	Tolerance of frustration	Flexibility-Ability to adapt	Ethical behaviour at work	Troubleshooting	Digital competence
No. of runs	754	703	770	754	813	814	765	793
Sig. (bilateral)	.932	.502	.500	.244	.904	.526	.283	.556

Source: Own elaboration, 2024.

3.3. Cluster Analysis and ANOVA

The multivariate analysis commences with the execution of a non-hierarchical cluster analysis utilising the K-means algorithm. The K-means method permits the processing of an unlimited number of cases; however, the number of clusters to be obtained must be proposed in advance.

Four pre-fixed clusters, each taking values for eight variables, will be considered. The number of iterations was set to 10.

As illustrated in Table 5, profiles exhibiting superior competencies have predominantly been clustered within Group 3, followed by Groups 4, 1, and 2.

Table 5. Final Cluster Centres

	1	2	3	4
Results-oriented	5	4	8	6
Persuasive communication	6	4	8	7
Customer orientation	5	4	8	7
Tolerance of frustration	5	4	8	6

Flexibility - Adaptability	5	4	8	6
Ethical behaviour at work	7	4	9	6
Troubleshooting	5	4	9	6
Digital competence	6	5	8	7

Source: Own elaboration, 2024.

Conversely, the number of profiles associated with each cluster was also highest in cluster 3, followed by clusters 4, 1 and 2 (Table 6).

Table 6. Number of cases in each cluster

	Number of cases in each cluster
1	388.00
2	328.00
3	516.00
4	422.00
Valid	1654.00
Lost	0.00

Source(s): Own elaboration, 2024.

The results confirm Hypothesis 1 and indicate that most participants in the questionnaire (516 cases) belong to cluster 3, which corresponds to an average score of 8–9 on the various competencies.

An ANOVA analysis was conducted on the clusters obtained to identify potential discrepancies in the profiles regarding the various competencies.

In order to achieve this objective, the F-statistic is employed. The F-value quantifies the relationship between the variability between group means and the variability within groups. A high value indicates that the differences between means are greater than the variations within groups.

Table 7. ANOVA analysis

	Root mean square	**F**
Results-oriented	1394.144	980.593
Persuasive communication	1442.776	896.872
Customer orientation	1675.736	1152.925
Tolerance of frustration	1594.956	1126.597
Flexibility - Adaptability	1577.424	1220.838
Ethical behaviour at work	1726.069	751.338
Troubleshooting	1753.252	1407.937
Digital competence	1063.937	493.548

Source: Own elaboration, 2024.

The F-values obtained indicate that the competence of *ethical behaviour at work*, particularly digital competence, exhibits notably low F-statistics. This signifies a striking homogeneity between the diverse candidate profiles in the two aforementioned competences, which exhibit the highest mean scores. Conversely, the competence exhibiting the greatest degree of heterogeneity is that of *problem-solving*.

3.4. Correlation and Communalities Analysis

The present study employs a design that necessitates the assessment of correlations between variables. This assessment is undertaken with a view to determining whether a reduction in the number of

variables is a reasonable consequence of the manner in which the variables in the questionnaire interact with each other.

To this end, a factor analysis is conducted to ascertain the latent factors that underpin the observed correlations and to streamline the dataset by clustering analogous variables. The data are thus amenable to grouping by factors, allowing for the simplification and reduction of the number of original variables while retaining as much information as possible (Tables 8, 9, 10 and 11).

As illustrated in Table 8, there are notable correlations between the variables, which substantiate the interconnectivity between the factors.

Table 8. Correlation matrix

	Results-oriented	Persuasive communication	Customer orientation	Tolerance of frustration	Flexibility-Ability to adapt	Ethical behaviour at work	Troubleshooting	Digital competence
Results-oriented	1.000	0.692	0.727	0.753	0.731	0.653	0.751	0.600
Persuasive communication	0.692	1.000	0.7300	0.744	0.719	0.585	0.753	0.594
Customer orientation	0.727	0.7300	1.000	0.749	0.769	0.619	0.759	0.636
Tolerance of frustration	0.753	0.744	0.749	1.000	0.803	0.647	0.843	0.602
Flexibility - Adaptability	0.731	0.719	0.769	0.803	1.000	0.621	0.815	0.621
Ethical behaviour at work	0.653	0.585	0.619	0.647	0.621	1.000	0.662	0.476
Troubleshooting	0.751	0.753	0.759	0.843	0.815	0.662	1.000	0.610
Digital competence	0.600	0.594	0.636	0.602	0.621	0.476	0.610	1.000

Source: Own elaboration, 2024.

Table 9. One-sided Significance Matrix

	Results-oriented	Persuasive communication	Customer orientation	Tolerance of frustration	Flexibility-Ability to adapt	Ethical behaviour at work	Troubleshooting	Digital competence
Results-oriented		<.001	<.001	<.001	<.001	<.001	<.001	<.001
Persuasive communication	.000		.000	.000	.000	.000	.000	.000
Customer orientation	.000	.000		.000	.000	.000	.000	.000
Tolerance of frustration	.000	.000	.000		.000	.000	.000	.000
Flexibility - Adaptability	.000	.000	.000	.000		.000	.000	.000
Ethical behaviour at work	.000	.000	.000	.000	.000		.000	.000
Troubleshooting	.000	.000	.000	.000	.000	.000		.000
Digital competence	.000	.000	.000	.000	.000	.000	.000	

Matrix determinant=.001
Source: Own elaboration, 2024.

The results of the significance matrix analysis indicate that the determinant of the matrix is close to zero (approximately equal to zero), which suggests that the variables are correlated. Furthermore, the p-values of the correlation coefficients are less than 0.05, indicating that the observed correlations are statistically significant and not merely random.

The results obtained by the Kaiser-Meyer Olkin test (KMO index) and the MSA index, both of which are greater than 0.9, indicate that the correlations between the variables are sufficiently high to justify the factor analysis. Subsequently, Bartlett's test of sphericity was conducted. A low p-value suggests that the variables are correlated and that the factor analysis is appropriate.

Table 10. KMO and Bartlett's Test

KMO measure of sampling adequacy		0.954
Bartlett's Test of Sphericity	Chi-square approximation	11575.465

	gl	28
	Sig.	.000

Source: Own elaboration, 2024.

Table 11. Anti-image matrix

	Results-oriented	Persuasive communication	Customer orientation	Tolerance of frustration	Flexibility-Ability to adapt	Ethical behaviour at work	Troubleshooting	Digital competence
Results-oriented	0.962*	-0.098	-0.154	-0.159	-0.096	-0.211	-0.109	-0.119
Persuasive communication	-0.098	0.966*	-0.201	-0.150	-0.066	-0.035	-0.170	-0.107
Customer orientation	-0.154	-0.201	0.955*	-0.076	-0.223	-0.092	-0.091	-0.179
Tolerance of frustration	-0.159	-0.150	-0.076	0.939*	-0.224	-0.084	-0.369	-0.028
Flexibility - Adaptability	-0.096	-0.066	-0.223	-0.224	0.950*	-0.032	-0.266	-0.106
Ethical behaviour at work	-0.211	-0.035	-0.092	-0.084	-0.032	0.970*	-0.137	0.012
Troubleshooting	-0.109	-0.170	-0.091	-0.369	-0.266	-0.137	0.934*	-0.038
Digital competence	-0.119	-0.107	-0.179	-0.028	-0.106	0.12	-0.038	0.972*

*: MSA sampling adequacy measures
Source: Own elaboration, 2024.

Following the factor analysis carried out, it can be concluded that these results provide strong evidence that we can generate new variables (factors) with high explanatory power.

To do this, we used the Kaiser-Guttman criterion, a technique used in factor analysis that allows us to decide how many factors should be considered significant. According to this criterion, only factors with eigenvalues greater than 1 should be retained, where eigenvalues are defined as the amount of variance accounted for by each factor. If the variance is greater than 1, it means that the factor contributes more variance than a standard single variable and therefore these factors are considered relevant and should be retained. See the results of the analysis in Table 12.

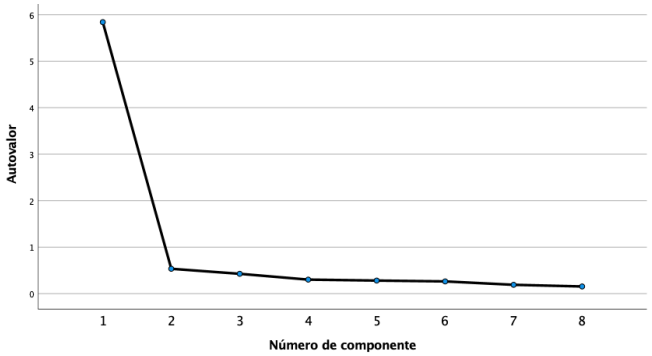
Table 12. Analysis of Variance

	Eigenvalues			Sums of squared extraction charges		
Factors	**Total**	**% Variance**	**% Cumulative**	**Total**	**% Variance**	**% Cumulative**
1	5.841	73.016	73.016	5.841	73.016	73.016
2	.536	6.697	79.713	.536	6.697	79.713
3	.428	5.345	85.058	.428	5.345	85.058
4	.303	3.783	88.842			
5	.282	3.526	92.368			
6	.264	3.302	95.669			
7	.191	2.388	98.057			
8	.155	1.943	100.000			

Extraction method: principal component analysis
Source: Own elaboration, 2024.

The sedimentation graph (Figure 1) is used as a complementary method for optimal factor extraction.

Figure 1. Sedimentation graph



Source: Own elaboration, 2024.

In accordance with the Kaiser criterion (eigenvalues >1) and the sedimentation graph, it can be demonstrated that the results of the questionnaire can be reduced to a single final factor. However, it has been determined that extracting three factors is the optimal approach. As illustrated in Table 12, a single final factor accounts for 73.20% of the candidate profile. However, three final factors collectively explain 85.1% of the competence profile.

Following the completion of the eigenvalue analysis, a communalities analysis is conducted to facilitate a comparison between a single final factor and three final factors.

Table 13. Extraction of communalities considering 1 factor.

	Extraction
Results-oriented	.751
Persuasive communication	.729
Customer orientation	.773
Tolerance of frustration	.817
Flexibility - Adaptability	.800
Ethical behaviour at work	.587
Troubleshooting	.830
Digital competence	.555

Source: Own elaboration, 2024.

Table 14. Extraction of communalities considering 3 factors.

	Extraction
Results-oriented	.759
Persuasive communication	.770
Customer orientation	.781
Tolerance of frustration	.847
Flexibility - Adaptability	.824
Ethical behaviour at work	.978
Troubleshooting	.856
Digital competence	.990

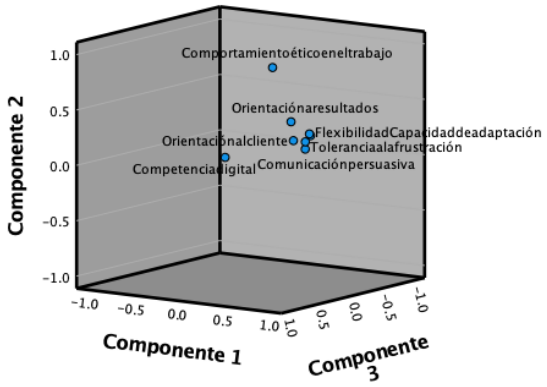
Source: Own elaboration, 2024.

It is evident that the variables *Work Ethical Behaviour and Digital Competence* warrant particular consideration, given that their communalities are markedly below the 0.7 threshold. Accordingly, in light of the communality interpretation, for values markedly below 1, the variables are not adequately

represented by the factors and may therefore be deemed less pertinent within the factor model. Considering these findings, it can be concluded that the results pertaining to the variables of *Work Ethical Behaviour and Digital Competence* are significantly less aligned with the remaining competences.

To complete the analysis, a graph of the competences in the rotated space has been created (see Figure 2). It can be observed that in the three-dimensional space generated by the final factors, the competences of ethical behaviour at work and digital competence are positioned at a distance from the remainder, which, conversely, exhibit a tendency to cluster together. These findings provide partial support for Hypothesis 2.

Figure 2. Chart of competences in rotated space



Source: Own elaboration, 2024.

3.5. Multiple Regression Model

In order to conclude the analysis, a multivariate linear model is proposed, based on the final factors derived from the factor analysis. A regression model is defined as a statistical tool that enables the examination of the relationship between a dependent variable and multiple independent variables. In this instance, the coefficients of the regression are calculated in order to ascertain the impact of a single factor (Table 15) and three factors (Table 16) on a specific response.

Table 15. Regression coefficient matrix for the 1-factor linear model.

	Component
Results-oriented	.148
Persuasive communication	.146
Customer orientation	.151
Tolerance of frustration	.155
Flexibility - Adaptability	.153
Ethical behaviour at work	**.131**
Troubleshooting	.156
Digital competence	**.128**

Source: Own elaboration, 2024.

Therefore, the corresponding regression model considering one factor is as follows:

$$Candidate\ profile = 0.148 * Results_{Or} + 0.146 * Persuasive_{Com} + 0.151 * Customer_{or}$$

$$+0.155 * Tol_{frustation} + 0.153\ Flex_{adaptability} + 0.131 * Ethical_{behaviour} + 0.156 * Problem_{solving} + 0.128 * Digital_{comp}$$

Table 16. Regression coefficient matrix for the 3-factor linear model.

	Component 1	Component 2	Component 3
Results-oriented	.057	.225	.009
Persuasive communication	.390	-.284	-.097
Customer orientation	.200	-.105	.092
Tolerance of frustration	.356	-.093	-.214
Flexibility - Adaptability	.338	-1.75	-.096
Ethical behaviour at work	-.474	**1.239**	-.090
Troubleshooting	.331	-.061	-1.97
Digital competence	-.433	-.096	**1.253**

Source: Own elaboration, 2024.

The corresponding regression model considering three factors is as follows:

$$Sales_{comp} = 0.057 * Results_{or} + 0.39 * Persiasive_{com} + 0.2 * Customer_{or} +0.356 * Tol_{frustation} + 0.338\ Flex_{adaptability} - 0.474 * Ethical_{behaviour} + 0.331 * Problem_{solving} - 0.433 * Digital_{comp}$$

$$Ethical_{comp} = 0.225 * Results_{or} - 0.284 * Persuasive_{com} - 0.105 * Customer_{or} -0.093 * Tol_{frustation} - 0.175\ Flex_{adaptability} + 1.239 * Ethical_{behaviour} - 0.061 * Problem_{solving} - 0.096 * Digital_{comp}$$

$$Digital_{comp} = 0.009 * Results_{or} - 0.97 * Persuasive_{com} + 0.092 * Customer_{or} -0.214 * Tol_{frustación} - 0.096\ Flex_{adaptability} - 0.09 * Ethical_{behaviour} - 0.197 * Problem_{solving} + 1.253 * Digital_{comp}$$

Upon calculation of the coefficients of the multiple regression, it becomes evident that the three-factor model corroborates the hypothesis that the competences of *ethical work behaviour* and *digital competence* are not correlated with candidates' performance in the other competences. In other words, the competencies of *ethical work behaviour* and *digital competence* do not contribute in the same way as other competencies to the analysis of candidates' results.

4. Discussion and Conclusions

This research has concentrated on the analysis of the performance levels of a variety of business profiles, employing quantitative techniques and data visualisation. The initial objective was to categorise the profiles under examination into disparate groups that were nevertheless internally homogeneous, with a view to establishing a classification based on the performance of each individual. Secondly, the variables included in the questionnaire have been subjected to analysis with a view to establishing whether there are any redundancies in the assessment of the facets evaluated in the performance of the profiles analysed.

The results demonstrate the efficacy of cluster analysis (using the k-means method) in identifying and classifying workers' performance levels into homogeneous groups. This approach allows for the grouping of individuals according to their performance, while simultaneously identifying patterns and significant differences between groups. This facilitates a deeper understanding of the inherent dynamics in the data and informs strategic decision-making based on the results obtained.

Furthermore, the segmentation of subjects into clusters based on multiple performance variables allows for the identification of high and low performers, as well as the elucidation of the factors contributing to these differences. This provides a robust foundation for the development of targeted

training programmes, which are designed to address the specific needs and enhance the competencies of each identified group.

Conversely, the three-factor model employed in this analysis provides substantial evidence that the competences of *work ethical behaviour* and *digital competence* are not significantly correlated with the results observed in the other competences assessed. This lack of correlation indicates that these two competences do not contribute significantly to overall performance in this context. Alternatively, it could suggest that the profiles analysed are the result of social and/or occupational desirability. However, it should also be considered that these competences may be entirely independent of the other skills assessed, indicating that their development may not necessarily affect or be affected by the development of other competences. This finding suggests that the assessment methods employed in this study may not fully capture the influence of these competencies on overall performance. Consequently, there is a need for a revision of the assessment techniques used.

In conclusion, the multiple regression model obtained indicates that while some competences are correlated and jointly affect the results of the profiles, *work ethical behaviour* and *digital competence* are not significantly correlated. These findings are of great importance and relevance in order to gain a deeper understanding of the manner in which different competences contribute to the success of the individuals under analysis. Furthermore, they can serve as a valuable guide for future training and assessment initiatives, particularly in relation to specific competences that have a more pronounced and direct impact on performance.

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References

Bloksgaard, L., & Prieur, A. (2021). Policing by social skills: the importance of empathy and appropriate emotional expressions in the recruitment, selection and education of Danish police officers. *Policing and Society*, 31(10), 1232–1247. https://doi.org/10.1080/10439463.2021.1881518

Caputo, F., Cillo, V., Candelo, E. & Liu, Y. (2019). Innovating through digital revolution: The role of soft skills and Big Data in increasing firm performance. *Management Decision*, 57(8), 2032-2051. https://doi.org/10.1108/MD-07-2018-0833

Cinque, M. (2016). Soft Skills in development in European countries. *Tuning Academy Journal.*

Escamilla, R.; Segovia-Romo, A. & López, J.F. (2022). Soft skills in customer service: Sales area in automobile dealers. *Contaduría y Administración*, 67(2). doi:http://dx.doi.org/10.22201/fca.24488410e.2022.3172.

González-Rico P, Lluch Sintes M. (2024). Empowering Soft Skills through Artificial Intelligence and Personalised Mentoring. *Education Sciences*; 14(7). https://doi.org/10.3390/educsci14070699

Ibrahim, R., Boerhannoeddin, A. & Bakare, K.K. (2017). The effect of soft skills and training methodology on employee performance. *European Journal of Training and Development*, 41(4), 388-406. https://doi.org/10.1108/EJTD-08-2016-0066

Kechagias, K. (2011). Teaching and Assessing Soft Skills. Retrieved July 20, 2024, from MASS Project: https://www.researchgate.net/profile/Behrouz_Ahmadi_Nedushan/post/Is_there_an_assessment_model_of_specifically_for_measuring_soft_skills_of_students_in_college_university/attachment/59d63a3079197b807799762 5/AS%3A405122485112832%401473600135834/doënload/Te

Klaus P. (2010). Communication breakdown. *California Job Journal*, 28, 1-9.

Krpálek, P.; Berková, K.; Kubisová, A.; Krelová, K.; Frendlovská, D. & Spiesová, D. (2021). Formation of professional competences and soft skills of Public Administration employees for sustainable professional development. Sustainability, 13. https://doi.org/10.3390/su13105533

Marrero, O.; Mohamed, R.; Xifra. J. (2018). Habilidades blandas: necesarias para la formación integral del estudiante universitario. *Rev. cient. ecociencia*, 5, 1–18. https://doi.org/10.21855/ecociencia.50.144

Moreno, J. E. & Marcaccio, A. (2014). Perfiles profesionales y valores relativos al trabajo. *Ciencias Psicológicas*, 8(2), 129-138.

Musicco, G. (2018). Soft skills & coaching: Engine of the new University in Europe. *Rev. Univ. Europea*, 29, 115-132.

Sethi, D. (2014). Executive Perceptions of Top Ten Soft Skills at Work: Developing These Through Saif. Retrieved July 19, 2024, from Indian Institute of Management: https://www.iimk.ac.in/websiteadmin/FacultyPublications/Working%20Papers/160abs.pdf

Purwanto, A. (2020). Effect of Hard Skills, Soft Skills, Organizational Learning and Innovation Capability on Islamic University Lecturers' Performance. *Systematic Reviews in Pharmacy*.

Putra, A., Novitasari, D., Asbari, M., Purwanto, A., Iskandar, J., Hutagalung, D., & Yoyok, S. (2020). Examine relationship of soft skills, hard skills, innovation and performance: the mediation effect of organizational learning. International Journal of Science and Management Studies, 3(3).

Robles, M. (2012). Executive Perceptions of the Top 10 Soft Skills Needed in Today's workplace. *Business and Professional Communication Quarterly* , 454-455.

Rodríguez, A.; Cortés, A., & Val, S. (2019) Análisis de la mejora del nivel de empleabilidad de los universitarios mediante la mejora de competencias transversales y habilidades. *Rev. Espa. Orient. Y Psicoped*., 30(3), 102-119. https://doi.org/10.5944/reop.vol.30.num.3.2019.26275

Tang, K. N. (2018). The importance of soft skills acquisition by teachers in higher education institutions. *Kasetsart Journal of Social Sciences*, *41*(1), 22–27. Retrieved from https://so04.tci-thaijo.org/index.php/kjss/article/view/229129

Ummatqul, K. (2020), Soft Skills Development in Higher Education. *Universal Journal of Educational Research*, 8 (5), 1916 - 1925. DOI: 10.13189/ujer.2020.080528