OPPORTUNITIES FOR FEMININE LEADERSHIP IN THE EUROPEAN UNION

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Abstract
Leadership is an addressed topic both in business and in the academic field, and that is why its efficiency in companies should be understood. For leadership to be effective there must be no gender discrimination; men are no better leaders than women. To be a leader means being creative, courageous, sharing love and compassion for team members, while developing self-management capacity without giving in to various pressures.

This paper analyzes the effects of women's participation in decision-making on top management positions, in the sphere of social partners (trade unions and employers' organizations), in business and political field, on their participation on the labor market and social protection as a means of reducing social exclusion and as a necessity of mitigating gender gaps.

Keywords
Leadership, female leadership, gender differences, regression model, Principal Component Analysis.

JEL Classification
C50, J16, J71, M54.

Introduction
Along time, questions about gender differences in terms of leadership have received two completely different answers: one that promotes the similarity of leadership styles, and the second one that supports the existence of fundamental differences, the latter having the support of specialists.

While leadership is learned, skills and knowledge can be influenced by attributes or traits such as beliefs, values, ethics and character. Knowledge and skills contribute directly to the leadership process, while other attributes give the leader certain characteristics that make him unique. (Sharma M. K., Shilpa J., 2013)

Women leaders can achieve remarkable results. A survey of 7280 leaders led by Zenger and Folkman shows that women excel in most leadership skills. Respondents were asked to evaluate men and women on the basis of 16 competencies criteria, which resulted in women being more skilled in taking the initiative, developing at a personal level, superior in terms of integrity and honesty and more result-oriented (Zenger and Folkman, 2012)

The state of knowledge

According to Kathleen L. McGinn and Hannah Riley Bowles (2003), women do not have any difficulty in adopting appropriate leadership styles; the problem lies in claiming authority. Moreover, a Credit Suisse research conducted in 2012 revealed those companies that have at least one woman on the board of directors have seen a higher return on investment compared to those that have not hired women for such positions.

Other research in the field shows that companies having more women in leadership position have diminished the pay gap between men and women with similar work experience and get to work in that company in similar circumstances (Tate, G., Yang, L., 2015).

Nielsen and Huse (2010) state women and men are not different in their ability to perform operational tasks but rather bring a different perspective on strategic decision making through increased sensitivity to others.

Women react in a more emotional manner to the environment and are generally more perceptible to it. Consequently, this means that women will have even more prejudices (Ladenburg & Olsen, 2010). The fact that women are more likely to be affected by context is well explained by neuroscience. Men and women have shown they are different, both structural and functional, in the brain. Men are favored by the left brain hemisphere (responsible for logic, details) and women are favored by the right hemisphere (responsible for holistic, intuitive and abstract, but these two are very well interconnected.

However, starting with 2017, according to the McKinsey report, only about 5% of senior executives, leaders of large companies, are women, and this is due to the existence of a barrier that prevents women from advancing (Gray, L., 2018). These barriers may be objective when they come from the outside (organizational or political environment) and subjective , when they have as starting point the limitations imposed by women themselves, by the lack of confidence in their own forces and perseverance in the struggle for rising. (On. A., 2010). Female leaders are likely to be seen negatively when adopting the characteristics of male leadership. When women keep their femininity, but fulfill a male role, they are perceived as being too emotional and lacking in assertiveness. This means the leading women face a compromise between being pleasant and competent.

Another challenge is that of career development, which will be easier for men. Women are more likely to have nonlinear careers, in order to have more time to spend with their family. That is why they avoid working places with travel responsibilities outside the city.

Researchers explored the essential elements of leadership but did not identify gender differences in the leadership effectiveness (Hyde, J., 2014).

Research on private firms shows that gender-based managerial diversity is linked to their positive results. (Menguc,B., Auh, S., 2006). Moreover, diversity is significantly correlated with improving corporate social responsibility (Boulouta, I., 2013).

Moreover, diversity is significantly correlated with improving corporate social responsibility.4 Another group of researchers has found that gender-balanced leadership teams of component members are less likely to create problems associated with "group thinking"(Opstrup, N., Villadsen, A. R., 2015). For workers, women's leadership can also provide another benefit. A study of businesses that were operating during the Great Recession showed that boss- women did not fire as many employees as men. The difference was significant, with the reduction in the workforce being twice as common in male-owned firms (14% vs. 6%), and thus a greater number of workers were affected (Matsa, D. A., Miller, A. R., 2014). Staff retention can reduce short-term profit, but at the same time it can support morality and reduce potential future costs of employment and training.

Research methodology

Women's involvement in the management and decision-making process was analyzed on the basis of a set of 46 variables, which belong to the following blocks of factors: the

demographic context, the educational context, the labor market context, the context of social exclusion, the macroeconomic (output) context.

The values of female leadership variables have been collected from the Gender Statistics Database (Women and Men in Decision Making) developed by the European Institute for Gender Equality and the contextual demographic, educational, labor market, social exclusion and macroeconomic outcomes variables were provided by EUROSTAT database. The data characterizes 30 European countries (inside and outside the EU), and they are related to the years 2016 and 2017. The data process was performed with the IBM SPSS Statistics Ver. 20.

To measure the level of women's involvement in the high-level decision-making process, the following variables were selected, in order to illustrate the different areas of women's leadership: the business environment (Positions held by women in senior management positions – as board members, Women in senior management positions-executives), administration, politics and justice (Women in national parliaments -members, Women in local / municipal councils: mayors or other leaders and members, Women in Supreme Courts), social (Women as members of the highest decision-making body in employees' organizations, Women in Employers' Organizations). After analyzing the correlation matrix, the contextual variables that showed significant correlations of intensity above average with the variables in the field of the female leadership were retained. By applying the Principal Component Analysis, the size of the dataset has been reduced, while retaining as much as possible the variation of the original data in a small number of components.

The variables selected within the two components identified, following the Principal Component Analysis are used in the regression analysis with two main objectives:

- to quantify the relationship between the size of the female leadership phenomenon, the degree of women's involvement in the labor market and the social protection expenditures;

- to quantify the relationship between women's participation in decision-making within the social partners (employers, trade unions) and their participation in the labor market.

The two objectives are achieved by transposing the relationships described in two multiple regression models.

Model 1 predicts changes in the participation rate of women on the labor market under the influence of female leadership in the social partners' plan. Model 2 analyzes the behavior of social protection spending in terms of female leadership in the political and business sphere, as well as women's participation in the labor market. The variables included in the two models are described in the following table (Table 1).

Table no. 1 The variables included in the regression models

Model	Variable name	Notation of the variable	Type of variable
1	Employment rate – women (%) 2017	*Women_employment_rate*	Dependent variable
	Women share in employees' organizations (%) 2016	*Women_employees_org*	Independent variable
	Women share in employers' organizations (%) 2016	*Women_employers_org*	Independent variable
2	Expenditure on social protection (% of GDP) 2016	*Exp_social_protection*	Dependent variable
	Positions held by women in senior management positions (board members) 2016	*Women_board_members*	Independent variable
	Women in National Parliaments (members, %) 2016	*Women_Parliament*	Independent variable
	Employment rate - Women (%) 2016	*Women_employment_rate*	Independent variable

Source: authors' results, in SPSS 20.0 program , based on data provided by European Institute for Gender Equality, 2016. Gender Statistics Database, Women and Men in Decision Making. [online] Available at: <https://eige.europa.eu/gender-statistics/dgs/browse/wmidm>; EUROSTAT, 2017. Database [online] Available at: <https://ec.europa.eu/eurostat/data/database>

For both models, the following hypotheses were tested: the hypothesis of the linear functional form of the model, the hypothesis regarding the normality of random errors, the hypothesis of zero average error, the hypothesis of homoscedasticity of the random errors, the hypothesis of the non-correlation of the explanatory variables with the random errors, the hypothesis of the non-autocorrelation of the errors, the multicoliniarity hypothesis of explanatory variables. The hypotheses were validated for both models.

On the basis of the results obtained from the application of the two regression models, the level of employment among women and the share of social protection expenditures was predicted, depending on the degree of representation of women in different decision-making bodies in the social, political and business environment.

Results and discussions

The Principal Component Analysis method was used to reduce the initial set of factors to a smaller number of contextual variables that would retain a higher proportion of the variability in the original set of data, so as to explain to a greater extent the variation of the variables describing the involvement of women in the leadership process. The Kaiser-Meyer-Olkin Indicator has a value that is greater than 0.6, indicating the appropriateness of applying the method (KMO = 0.689).The Eigenvalues analysis indicates the opportunity to extract two main components, which, cumulatively, account for over 80% of the variation of the initial set of data. Thus, the first component explains 57.21% of the initial data variation, and the second component explains 22.875%. The Communalities Matrix shows the extent to which the main components of the excerpts explain the variability of the observed variables, the weighting being between 60.9% (for the variable: Women share in employers' organizations) and 93.2% (for the Female employment rate variable in 2016). (Table 2).

Table no. 2 Total Variance Explained

Total Variance Explained

| Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,005	57,210	57,210	4,005	57,210	57,210	2,828	40,405	40,405
2	1,601	22,875	80,084	1,601	22,875	80,084	2,778	39,680	80,084
3	,510	7,290	87,374						
4	,429	6,122	93,496						
5	,268	3,827	97,323						
6	,185	2,641	99,965						
7	,002	,035	100,000						

Extraction Method: Principal Component Analysis.

Source: authors' results, in SPSS 20.0 program , based on data provided by European Institute for Gender Equality, 2016. Gender Statistics Database, Women and Men in Decision Making. [online] Available at: <https://eige.europa.eu/gender-statistics/dgs/browse/wmidm>; EUROSTAT, 2017. Database [online] Available at: <https://ec.europa.eu/eurostat/data/database>

Following the application of the Factor Rotation Procedure, the following two components were obtained: Component 1, consisting of the following variables: Women share in board members, women in the national parliaments, Women in employers' organization and

Expenditure on social protection; Component 2, consisting of the variables: Women in employees' organizations, and Female employment rate in 2016 and 2017 (Figure 1 and 2).
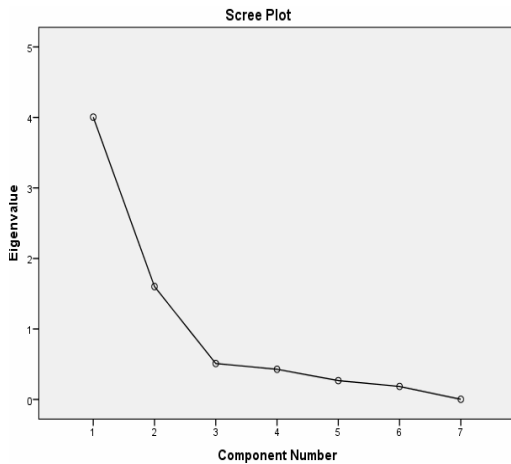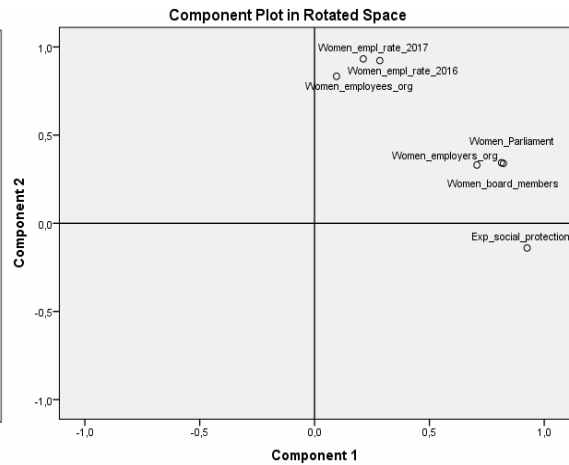
Fig. no. 1 Scree Plot   **Fig. no. 2 Component Plot in Rotated Space**

Source: authors' results, in SPSS 20.0 program , based on data provided by European Institute for Gender Equality, 2016. Gender Statistics Database, Women and Men in Decision Making. [online] Available at: <https://eige.europa.eu/gender-statistics/dgs/browse/wmidm>; EUROSTAT, 2017. Database [online] Available at: <https://ec.europa.eu/eurostat/data/database>

The first model expresses the dependence of the employment rate among women on the share of women in management positions within the social partners (trade unions and employers' organizations) on the basis of the following relationship:

$$Women\_employment\_rate\_(t) = 48{,}126 + 0{,}425 \cdot Women\_\ employees\_org\ (t\text{-}1) \\ + 0{,}325\ \cdot Women\_in\_employers\_org(t\text{-}1) \tag{1}$$

The model explains 55.9% of the female employment rate variation, with a standard error of relatively low estimation.The relation between the female employment rate, the share of women in senior management positions in trade unions and the share of women in decision-making positions in employers' organizations is strong and statistically significant (correlation ratio of 0.748). The model parameters are statistically significant and the two explanatory variables exert a significant direct influence on the female employment rate variation (for a probability of over 95%). Thus, with a 1% increase in the proportion of female members of the highest decision-making body in trade unions this year, we expect an average increase of 0.425% in the employment rate among women next year (with a minimum of 0.211% and a maximum of 0.64%), assuming that the share of women with decision-making power among employers' organizations does not change. At the same time, the 1% increase in the weight of women's top decision-making bodies in employers' organizations this year leads to an average expected 0.325% increase in women's employment rate next year (minimum 0.066% and maximum 0.584%), assuming that the share of women with decision-making power among trade unions does not change. (Table 3).

Table no. 3 Regression Model 1-Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,748[a]	,559	,526	6,29245	1,829

a. Predictors: (Constant), Women_employers_org, Women_employees_org

b. Dependent Variable: Women_employment_rate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	48,126	3,427		14,044	,000	41,095	55,158		
	Women_employees_org	,425	,105	,553	4,071	,000	,211	,640	,885	1,130
	Women_employers_org	,325	,126	,350	2,576	,016	,066	,584	,885	1,130

a. Dependent Variable: Women_employment_rate

Source: authors' results, in SPSS 20.0 program , based on data provided by European Institute for Gender Equality, 2016. Gender Statistics Database, Women and Men in Decision Making. [online] Available at: <https://eige.europa.eu/gender-statistics/dgs/browse/wmidm>; EUROSTAT, 2017. Database [online] Available at: <https://ec.europa.eu/eurostat/data/database>

Positive estimators of the model slope parameters indicate that a higher degree of women's involvement in the decision-making process from the work of social actors (trade union and employers' organizations) has a direct impact on female employment, with positive effects on the quality of life.

The second model expresses the extent to which social protection expenditure varies according to the changes in the employment rate among women, the share of women in top management positions in companies and the share of female members of national parliaments based on the following relation:

$$Expenditure\_social\_protection (t) = 27,403 + 0,231 \cdot Women\_board\_members(t) + 0,348 \cdot Women\_Parliament (t) + 0,278 \cdot Women\_employment\_rate (t) \quad (2)$$

The identified regression model has a high power to explain the variance of the dependent variable, of 62.9%, with a relative low standard error of the estimate. The relation between the share of social protection expenditures in GDP, women's employment rate, the share of women in top management positions in companies and the share of women in national parliaments is strong and statistically significant (correlation ratio of 0.793). The three explanatory variables, which quantify the degree of participation of women in economic activity, their involvement in the decision-making process in the business and political environment exert a significant direct influence on the variation of social protection expenditures (for a probability of over 95 %). Thus, a 1% increase in the share of female members of the boards of companies implies an average expected increase in the share of social protection expenditure in GDP by 0,231% (minimum 0,036% and maximum 0,426% respectively), assuming that the level of the other explanatory variables do not change. At the same time, as a result of the 1% increase in the share of female members of the national Parliaments, social protection expenditure may increase on average by 0.348% (minimum 0.138% and maximum 0.558%). The significant impact of the female employment rate translates into an average increase of 0.278% in the share of social protection expenditure as a result of a change in the rate of employment (a minimum increase of 0.058% and a maximum of 0.498%), assuming that the level of the other explanatory variables remains unchanged (table 4).

Table no. 4 Regression Model 2 - Results

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,793[a]	,629	,586	3,85387	2,426
a. Predictors: (Constant), Employment_rate_women, Women_board_members, Women_Parliament					
b. Dependent Variable: Exp_Social_protection					

Coefficients[a]										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	27,403	6,200		4,420	,000	14,658	40,148		
	Women_board_members	,231	,095	,422	2,437	,022	,036	,426	,475	2,105
	Women_Parliament	,348	,102	,601	3,407	,002	,138	,558	,458	2,182
	Employment_rate_women	,278	,107	,380	2,599	,015	,058	,498	,669	1,495

a. Dependent Variable: Exp_Social_protection

Source: authors' results, in SPSS 20.0 program , based on data provided by European Institute for Gender Equality, 2016. Gender Statistics Database, Women and Men in Decision Making. [online] Available at: <https://eige.europa.eu/gender-statistics/dgs/browse/wmidm>; EUROSTAT, 2017. Database [online] Available at: <https://ec.europa.eu/eurostat/data/database>

On the basis of the two regression models, the level of the two dependent variables (female employment rate and share of social protection expenditure in GDP) for 2019 and 2020 in Romania was foreseen, according to the estimations for these years of the five independent variables. Thus, at a confidence level of 95%, a female employment rate of 57.5% (minimum 52.6%, maximum 62.4%) is projected for 2019 and of 58.9% for 2020, (minimum 54.1%, maximum 63.7%) (Table 5)

Table no. 5 Forecast Romania 2019-2020

MODEL 1 - Employment rate forecast for women (%)				
	Year	Average (%)	Lower bound (%)	Upper bound (%)
MODEL 1	2019	57,50	52,60	62,40
	2020	58,90	54,10	63,70
MODEL 2 - Social Protection Expenditure Forecast (%)				
	Year	Average (%)	Lower bound (%)	Upper bound (%)
MODEL 2	2019	20,02	17,34	22,70
	2020	21,08	18,62	23,54

Source: authors' results, in SPSS 20.0 program , based on data provided by European Institute for Gender Equality, 2016. Gender Statistics Database, Women and Men in Decision Making. [online] Available at: <https://eige.europa.eu/gender-statistics/dgs/browse/wmidm>; EUROSTAT, 2017. Database [online] Available at: <https://ec.europa.eu/eurostat/data/database>

Regarding the share of social protection expenditure, the expected levels for 2019 and 2020 are 20.02% of GDP and 21.08% respectively (minimum 17.34% and maximum 22.7% in 2019, at least 18.62% % and maximum 23.54% in 2020)

Conclusions

The issue of gender in leadership has become particularly important as more and more women have appeared in the boards of various companies, and discrimination has also made itself felt. Although most researches have revealed that the leadership styles of women and men differ, there are a few who argue that there are no major divergences. Organizations and leadership are seen as genuinely neutral structures, offering equal opportunities for both men and women. Equality can only be achieved by stimulating the moral part of organizations to take into account the special needs of women in association with childbirth and children growing, as well as domestic responsibilities.

Research results show that a higher degree of women's involvement in the decision-making process in the work of social actors (trade union and employers' organizations) has a direct, positive impact on female employment with favorable effects on quality of life. At the same time, the degree of participation of women in economic activity, their involvement in the decision-making process in the business and political environment, on top management positions outlines a new type of leader, "updated" to the requirements of the modern world, exercising a significant direct influence on economic performance and increasing the role of social protection measures to mitigate social exclusion and optimize the living standard.

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