# ANALYSIS OF THE INFLUENCE OF FEMALE MANAGEMENT UPON THE MACROECONOMICAL RESULTS – THE EU 28 PERSPECTIVE

**Suzana DEMYEN**[1]
**Raluca Luana LOLEA**[2]

**ABSTRACT**

*The positioning of women in leadership has given rise to many controversies during the centuries. Literature can identify many divergences of opinion about this principle, but also regarding their capacity to manage properly the assigned tasks. Often it is made an unfair comparison to felow male colleagues, in the attempt to discover negative aspects that may incline the balance. Still, as proven, the gender - equality criteria is very important for the progress of society and overall economical well-being. The paper presents an analysis carried out for the EU 28 countries, establishing a relationship between the evolution of the number of female managers and the indicators representing economic growth, like the Gross Domestic Product / inhabitant and the Global Competitiveness Index.*

**KEY WORDS**: *female management, female leadership, economic growth, GDP, EU28*
**JEL:** *B54, J21*

## 1. INTRODUCTION

Since the earliest times, the positioning of women in leadership has given place to many controversies, with divergences of opinion about their ability to manage assigned tasks or achieve the objectives set at the same level of performance as for male employees. Even today, "women are under-represented in decision-making positions in almost all countries" (Aycan, 2004).

We must not ignore the fact that more than half of the world's population is represented by women, but although access to education is far less restricted with the global emancipation movement, there are still regions where prejudice or mentality still exists and raises significant barriers to recognizing the individual capabilities of women.

Parity does not manifest in terms of the share of women in leadership positions. The number of women in managerial positions, although higher than in the past decades, is still insufficient to talk about a total lack of discrimination in access to high levels of leadership. Why this still happens, as both literature and practice have long recognized that "the growing participation of women in the labor market has been a major engine of global growth and competitiveness" (ILO, 2015).

Some cultural barriers become more difficult to remove, as the regions in which organizations operate maintain a high level of traditionalism, yet there are no economies that can not identify at least some female figures, which are representative for the economic and social progress. Still, „cultural diversity is welcome and valuable"

[1] Assistant PhD, "Eftimie Murgu" University of Resita, Faculty of Economic Sciences, s.demyen@uem.ro
[2] Assistant PhD candidate, "Eftimie Murgu" University of Resita, Faculty of Economic Sciences, r.lolea@uem.ro

(Veras) in any enterprise, it "needs to be embraced" (Conradie et al, 2015) in order to stay competitive on the market, while also "traditional norms and beliefs do not only affect employers but they can also have an impact on women themselves" (Klaile, 2013).

We therefore consider that the issue of women's access to leadership positions is not a new one (Manciu et al., 2014), many times there is a waste of individual talent due, on the one hand, to the lack of active support for the level of female ambition on the basis of preconceived or instigated ideas for years as a "natural" path of social evolution. The popularization of the traditional mentality, according to which the role of a woman is only to support the household and to raise children, was gradually contradicted by the desire for a much more pronounced progress and personal evolution. Concretely, „research on women in management has become a significant field of study within the last twenty years" (Akpinar – Sposito, 2013).

## 2. THEORETICAL BACKGROUND

According to Schmidt and Moller, „the family related responsibilities, life and society in general have been naturally divided between men and women based on their physical differences", but we cannot ignore the fact that „the norms governing Western women's social and economic participation have changed considerably over the past 50 years" (Piterman, 2008). A great deal of factors have contributed to this, both the interaction between work and personal life, changes in the labor market, openness to Western models, and changes in mentality or culture. Nevertheless, we can still recall male cultures, together with the lack of more representative female figures, the large number of family responsibilities, the low level of support through the organizational culture, and the applied policies for women's promotion. According to Visser (Visser, 2014), "the share of women in management positions in companies across Europe is considerably lower than their presence in the general workforce," but on the other hand they also bring their negative contribution and choices personal guidance on the direction of their own careers.

Access to education represents a "telling indicator of women's status in a given society" (UNESCO, 1993), but role models are also important for a future feminine progress in the society. Also, a "trans- modern society, towards which we are heading, based mostly on cooperation, not on competition, requires a new approach of investments in human capital and a re- spiriting of the said item from an integrating perspective" (Minică, 2016), goal that "can be achieved only through education".

A study carried out by the Chartered Management Institute (2014) indicates that more than 81% of women consider the existence of a female role model to be both motivating and useful, but 55% of women also report the absence of a sufficient number of such models, not necessarily idols, as the media has popularized this concept, but rather people who inspire and cause women to aspire to a higher level of personal development.

The number of studies on this topic is increasing, attempting at the same time to stabilize the fairly delicate balance of gender equality by implementing national or global policies. One of the drawbacks of official reports remains, however, that most of them are drawn up on specific types of enterprises, and in some countries it is much more difficult to carry out such studies on female management, with obstacles of different kinds, starting with some barriers like those regarding tradition, political,

economic, cultural context, and ending with the absence of official statistics and the existence of large data gaps on this issue, "deficiencies in the availability, nature and usefulness of existing data" (Senden, 2014).

A woman can transpose into a "model for social comparison, mentor, or sponsor for women at lower levels" (Dezso et al, 2013), influencing and encourage men and women at the same time. Thus, the most important characteristics of a role model, appreciated by women, according to the above mentioned study, would be:

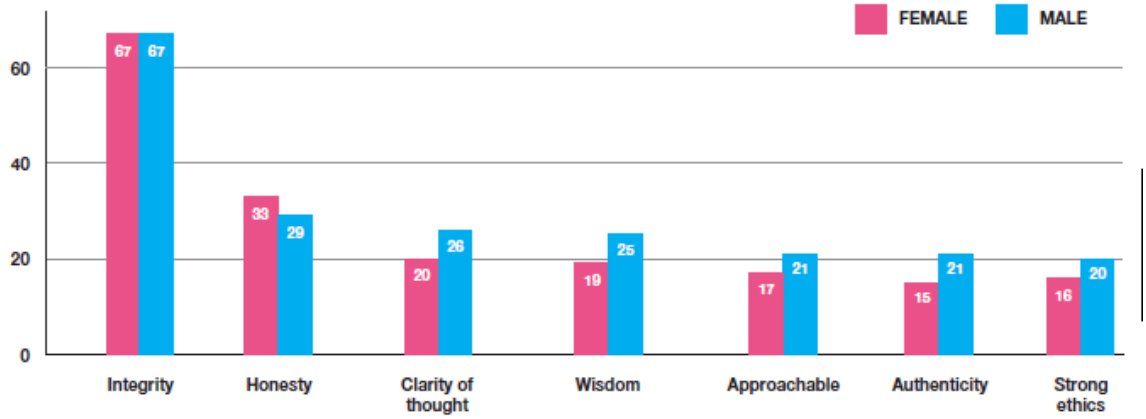


**Figure no. 1** Characteristics of a role model
(*Source*: CMI Report, 2014)

An „inferior status of women becomes difficult to improve when women themselves are convinced of their limited potential and tend to follow traditional patterns and social expectations" (UNESCO, 1993). Even with these arguments, though, we cannot argue that high managerial positions aren't demanding, no matter the abilities and capacity of women, while "women still have to deal with a number of hurdles to reach positions as CEOs and company board members" (ILO Report, 2015), being noticed an "under-representation of women in middle and higher management positions" (Senden, 2014).

Even though nowadays, the access of women to high education systems and better payd jobs is more easy, than in the past, certain gender stereotypes, as well as the amount of responsibilities, both regarding work and family, sometimes manage to slow down the individual progress of women. And gender stereotypes, as literature states, "have been documented for decades" (Duehr, Bono, 2006), thus it is not easy to eliminate them.

However, the total number of higher education graduates is higher for women than for men, even though the number of researchers is higher for men. The level of intelligence, concern, involvement is at least similar. Why are there differences anyway? What makes women's access to levels of power in organizations and what should they do to reduce these differences?

Over time, data has been obtained demonstrating the link between the company's performance as a result and the number of female managers as a determining factor. Such studies have been processed by Deloitte, the Catalyst Organization, McKinsey Company, etc., the results being in favor of employing women in leading positions in firms, but with the mention that there are some specific areas where women are more easy to advance to top-level managerial positions such as human resources,

communication, public relations, while areas such as sales or top management are "intended" for male employees.

Trzcinski and Holst (2010) state that "the percent of women in management and leadership positions, compared with men", represents a very important social indicator "of the extent to which women have achieved parity with men in the labour market" (Trzcinski, Holst, 2010). Also, it become interesting and highly important to study the relationship between the percent of women in managerial positions and the indicators that reflect the level of economic growth in a country or those that contribute to the analysis of the overall competitiveness of a country.

## 3. THE RESEARCH METHODOLOGY

In order to study how the number of women in management positions at the level of enterprises manifest a semnificative influence on the economic results recorded at macroeconomic level, we further used a series of data considered representative, namely: the number of women in top management positions, the gross domestic product per capita and the global competitiveness index for the year 2015.

This information has been selected for a specific sample of countries, ie EU 28.

To analyze the relationship between the indicators previously mentioned and also the intensity of the information, the data was processed using the Eviews7 software and analyzed using statistical tests.

The data collected from the reports published by the World Economic Forum, also from the Global Competitiveness Index Report and Eurostat, were centralized in the following table:

**Table no. 1**

| | GDP/IN | Women in managerial occupation | Global competitiveness index |
|---|---|---|---|
| Austria | 39400 | 23917 | 5,25 |
| Belgium | 36600 | 18 734 | 5,23 |
| Bulgaria | 6300 | 37329 | 4,46 |
| Czech Republik | 15800 | 43280 | 4,77 |
| Cyprus | 20800 | 1854 | 4,19 |
| Croatia | 10400 | - | 5,39 |
| Denmark | 47800 | 39323 | 5,86 |
| Estonia | 15400 | 9721 | 4,85 |
| Finland | 38200 | 15632 | 5,49 |
| France | 32800 | 552066 | 5,18 |
| Germany | 37100 | 158295 | 5,65 |
| Greece | 16200 | - | 4,02 |
| Ireland | 55100 | 47888 | 5,16 |
| Italy | 27000 | 29278 | 4,54 |
| Latvia | 12300 | 28778 | 4,4 |
| Lithuania | 12900 | 32139 | 4,58 |
| Luxembourg | 89900 | 5082 | 5,51 |
| Malta | 20300 | 3720 | 5,4 |

| | | | |
|---|---|---|---|
| Netherlands | 40000 | 101149 | 5,66 |
| Poland | 11200 | 253332 | 4,59 |
| Portugal | 17300 | 23763 | 4,57 |
| United Kingdom | 39600 | 802986 | 4,28 |
| Romania | 8072 | 95988 | 4,64 |
| Slovakia | 14500 | 33279 | 4,14 |
| Slovenia | 18700 | 7256 | 4,33 |
| Spain | 23200 | 76026 | 4,7 |
| Sweeden | 45600 | 79109 | 5,52 |
| Hungary | 11100 | 47643 | 4,42 |

(*Source*: World Economic Forum Report, Global Competitiveness Index Report, Eurostat)

The comparative graphical representation is illustrated in the following chart:

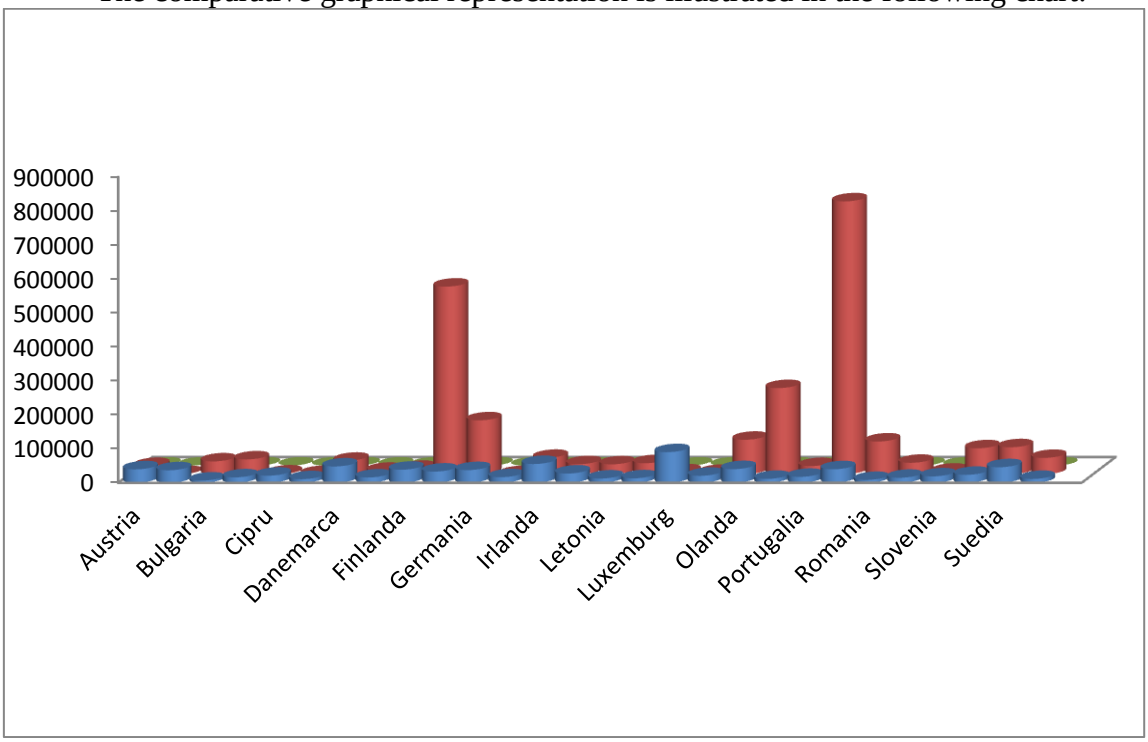


**Figure no 2 –** GPD/inhabitant, GCI and no of women in managerial occupations
(*Source*: processed by authors, according to information from World Economic Forum Report, Global Competitiveness Index Report, Eurostat)

## 4. ANALYSIS OF THE MULTIFACTORIAL REGRESSION MODEL

To achieve the multifactorial regression model in Eviews, we define the following variables:

- Resultative variable: GDP - Gross Domestic Product
- Factorial variables: OCCUPATION - women in managerial occupations and GCI - global competitiveness index

The regression equation of the multifactorial model resulting from the data processing is:

Dependent Variable: GDP
Method: Least Squares
Sample: 1 28
Included observations: 28
**GDP=C(1)+C(2)*OCCUPATION+C(3)*GCI**

| | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| **C(1)** | **-78933.88** | 26182.99 | -3.014701 | 0.0058 |
| **C(2)** | **0.017520** | 0.016043 | 1.092039 | 0.2852 |
| **C(3)** | **21414.43** | 5294.953 | 4.044310 | 0.0004 |

| | | | |
|---|---|---|---|
| **R-squared** | **0.403440** | Mean dependent var | 27270.43 |
| Adjusted R-squared | 0.355715 | S.D. dependent var | 18389.46 |
| S.E. of regression | 14760.74 | Akaike info criterion | 22.13829 |
| Sum squared resid | 5.45E+09 | Schwarz criterion | 22.28102 |
| Log likelihood | -306.9360 | Hannan-Quinn criter. | 22.18192 |
| **F-statistic** | **8.453462** | **Durbin-Watson stat** | **2.430242** |
| Prob(F-statistic) | 0.001569 | | |

Taking into account the results obtained from the data processing in the EVIEWS program, the multifactor model analysis will be based on the regression equation:

**GDP=C(1)+C(2)*OCUPATION+C(3)*GCI**

Parameter C(1) represents the value that the variable GDP takes when the factorial variables are zero and can be relevant in the model or not, depending on the concrete case being analyzed. Parameters C(2) and C(3) are called regression coefficients and represent the slope of the regression line, ie the value with which the variable GDP changes when the factorial variables change with one unit. In the case of this paper, the value of the parameter C(2) is positive and subunitary, resulting in the fact that the influence of the factorial variable OCCUPATION on the GDP variables is direct but with a small influence, while the value of the parameter C(3) is positive and superunit, resulting in the fact that the influence of the GCI factorial variable on the GDP variable is direct, with a very high influence.

The value of the R-squared correlation coefficient resulting from the data sample processing is 0.40, indicating a direct influence of the factorial variables on the studied variable.

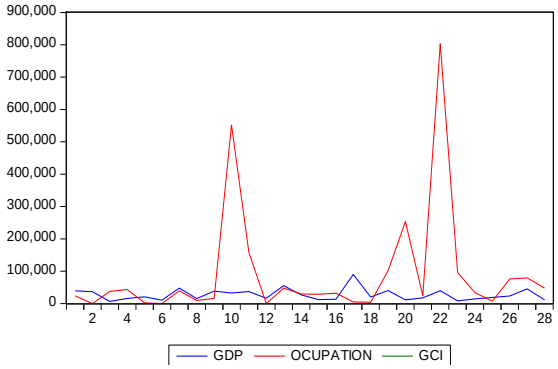


**Figure no. 3** – Graph of variables
(*Source:* computation made by authors)

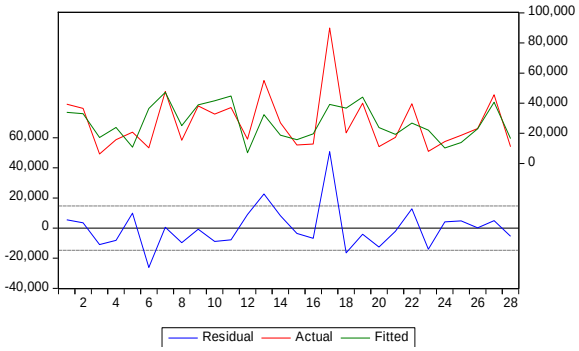


**Figure no. 4** – Graph of theoretical values
(*Source:* computation made by authors)

## 5. STATISTICAL VERIFICATION OF THE MULTIFACTORIAL MODEL. CONCLUSIONS

Statistical verification of the multifactorial regression model was performed on the basis of the **Durbin-Watson** and **Fisher** statistical tests.

*Statistical verification based on the DW test*: based on the DW test statistic tables, according to the processed data sample, its theoretical values are: the lower limit of 1.26 and the upper limit of 1.56. The value calculated in Eviews for this test is 2.43, being higher than the two theoretical limits, indicating that the hypothesis of self-correlation of random variables is rejected, meaning that the values of the random variables are independent of each other, which implies that the data in the samples were independent, ie the studied model is statistically correct.

*Statistical test based on the Fisher test*: according to the Eviews result, the calculated value of this test is 8.45. The critical value of the Fisher test from the Fisher-Snedecor distribution table in relation to the processed data sample, depending on the level of significance α and the number of degrees of freedom, is 3,354. The calculated value obtained from the data processing in the Eviews program is higher than the critical value, indicating that the zero hypothesis is rejected, the studied model has withstood the verification, ie the factorial variables have a significant influence on the resultant variable.

## REFERENCES

Akpinar-Sposito Cansu (2013), "Women in management research: theoretical perspectives", *Trends in international business*, Jun 2013, Lyon

Aycan Zeynep (2004), "Key success factors for women in management in Turkey", *Applied psychology: an international review*, no. 53 (3)

Boatman Jazmine, Wellins Richard, Neal Stephanie (2011), "Women work: the business benefits of closing the gender gap", *Global Leadership Forecast*

Conradie Jessica, Lowies Adolf, Upton Janine Lee (2015), "Management attributes that contribute to the success of women in management positions", *Business and Economics Journal*, 6:2

Dezso Cristian L, Ross David Gaddis (2012), "Does female representation in top management improve firm performance? A panel data investigation", *Strategic Management Journal*, 33

Dezso Cristian L, Ross David Gaddis, Uribe Jose (2013), "Why are there so few women top managers? A large sample empirical study of the Antecedents of female participation in top management"

Duehr Emily E, Bono Joyce E, (2006), "Men, women and managers: are stereotypes finally changing?", *Personnel psychology*, no. 59

Klaile Anna, (2013), "Why are so few women promoted into top management positions?", Hanken School of Economics, Helsinki

Manciu Venera, Oriol Irina, Tănase Diana, Miloş Laura Raisa, (2014), „A view from the top: Romanian women on the board of Universities", *Journal of Entrepreneurship and Innovation*, Issue 6, Year VI

Minică Mirela (2016), "Education - the foundation for sustainable economic development. the „RESPECT" learning strategy principles implemented in higher economic education", *Ecoforum Journal*, vol. 5, issue 2(9)

Patel Gita, (2013), "Gender Differences in leadership style and the impact within corporate boards"

Piterman Hannah, (2008), "The leadership challenge. Women in management"
Schmidt Trine Matzen, Moller Anne Louise, "Stereotypical barriers for women in management"
Senden Linda, Visser Mirella (2014), "Promoting women in management", Center for inclusive leadership
Trzcinski Eillen, Holst Elke, (2010), "Gender differences in subjective wel-being in and out of management positions", *German Institute for Economic Research*, Berlin
Veras Erika Zoeller, "Women in management: a challenge for the 21st century in Brazil and China"
Wippermann Carsten (2010), "Women in executive positions. Barriers and bridges", Heidelberg, Sinus Sociovision
***Chartered Institute of Personnel and Development (CIPD), (2016), "Why are there so few women at the top?"
***MCKinsey&Company, (2008), "Women matter. Female leadership, a competitive edge for the future"
*** International Labour Organization, (2015), "Women in business and management. Gaining momentum", ILO, Geneva
*** Chartered Management Institute, (2014), „Women in management. The power of role models"
*** UNESCO, (1993), "Women in higher education management", Paris
*** World Economic Forum, Klaus Schwab, „The Global Competitiveness Report", 2017-2018
***http://ec.europa.eu/eurostat/documents/2995521/7962764/1-30032017-AP-EN.pdf/4e9c09e5-c743-41a5-afc8-eb4aa89913f6
***http://ec.europa.eu/eurostat/documents/2995521/7896990/3-06032017-AP-EN.pdf/ba0b2ea3-f9ee-4561-8bb8-e6c803c24081