



FORCE

FOCUS ON RESEARCH IN CONTEMPORARY ECONOMICS

THE CONTRIBUTION OF WOMEN'S EMPLOYMENT TO ENTREPRENEURSHIP AND INNOVATION IN SENIOR AND MIDDLE MANAGEMENT

Yagmur Akarsu, Serdar Kurt, & Nur Dilbaz Alacahan |

To cite this article: Akarsu, Y., Kurt, S., & Alacahan, N. D. (2020). The contribution of women's employment to entrepreneurship and innovation in senior and middle management. *Focus on Research in Contemporary Economics (FORCE)*, 1(1), 46-59.

To link to this article: <https://www.forcejournal.org/index.php/force/article/view/5>



© 2020 The Author(s). This open access article is distributed under a Creative Commons Attribution-NonCommercial-NoDerivatives (CC-BY-NC-ND) 4.0 license.



Published online: 15 June 2020.



Submit your article to this journal [↗](#)

Full terms & conditions of access, and use can be found out

<http://forcejournal.org/index.php/force/about>

THE CONTRIBUTION OF WOMEN'S EMPLOYMENT TO ENTREPRENEURSHIP AND INNOVATION IN SENIOR AND MIDDLE MANAGEMENT

Yagmur Akarsu*, Serdar Kurt, & Nur Dilbaz Alacahan

ABSTRACT

As a result of the modernization and development of societies from past to present, the place of women in society and business life is increasing day by day. Now, women take a more active role in society and are employed, take a place more in academia, work more in the fields of senior and mid-level management by breaking down the understanding that managers should be men before in business life. However, it has been wondered whether women's senior and mid-level management leads to more innovative thinking or innovation, or increases the entrepreneurship. The reason for this is that women have a different thinking system than men. In addition, scientific studies reveal that the male and female brain structures and neural connections in the brain are different. The aim of this study is to investigate whether there is a relationship between the number of women in senior and mid-level management and innovation and entrepreneurship activities due to these differences between women and men. In this study, panel causality relationships between variables in the OECD countries with data were investigated by taking into consideration the female employment rate and entrepreneurship and innovation index in senior and mid-level management of 2000-2017. In the study, Kónya (2006) causality analysis which is a bootstrap causality analysis, was used as panel causality analysis. According to the results of the study, in some countries, the presence of women in senior and mid-level management has a relationship with innovation and entrepreneurship, but not in some countries. Starting from this point of view, in order to ensure that a different perspective exists in the business world, increasing female employment and increasing the number of senior and mid-level female managers in addition to increasing the policies and campaigns encouraging this can be presented as a policy proposal to be drawn from this study.

KEY WORDS: Women's employment, entrepreneurship, innovation, panel causality analysis.

*Correspondence concerning this article should be addressed to Yagmur Akarsu, Gokceada Vocational College, Canakkale 18 Mart University, Turkey.
E-mail: yagmurakarsu@comu.edu.tr

1. INTRODUCTION

There are many empirical studies that analyze gender-specific disparities in employment with GDP per capita and its impact on countries' macroeconomic growth. Among the country's policies, there is a positive relationship between women's active participation in the labor force and growth.

Entrepreneurship, which is seen as the main factor in the social, political, cultural and economic development of countries, is very important in terms of economic development. Developed countries, which show steady growth and development compared to underdeveloped and developing countries, also raise their levels of health, cultural and social well-being. Entrepreneurship activities carried out by women, especially in recent times, have been of great benefit to the economy and have led to a decrease in unemployment rates. However, the fact that women own their own business in business also benefits the development of countries economically.

Providing and maintaining economic growth and development has become the most important goal of all countries from past to present. The most important factor to achieve this goal is undoubtedly Labor, which is the most important factor of production. It is possible to achieve sustainable growth and development by bringing women, who make up half of the world's population, into the labor market.

Among the most important tasks of women worldwide, there is a low participation rate of women in the labor force due to the excessive amount of time spent on housework and motherhood. Both developed and developing countries should increase women's employment with the aim of eliminating existing gender inequality and increasing the level of well-being, as well as achieving sustainable development. In order to achieve a strong growth, production factors must be used effectively and efficiently. But in the world, gender inequality is shaped in favor of men. The essential condition for sustainable growth and development that has become the common goal of all countries is the effective use of scarce resources. The only element that will provide this is human. Therefore, increasing the position of women in society should be one of the most important goals of the countries.

There is no doubt that women contribute to economic growth and development.

But for that, the elimination of gender inequality is important. Therefore, the elimination of gender inequalities that exist both in economic, cultural and political terms should become the main goal of the countries in economic growth and development effort.

It is very important for developed and developing countries to increase the participation of women entrepreneurship in the workforce. With their knowledge and skills, women are able to generate new ideas and reach important places in business life. In order to increase women's participation in working life, technological developments, legal regulations and education quality should be improved and women should be made more use of in the work force. Education is a necessary factor for women to participate effectively and efficiently in the labor force and be useful. However, the importance given to women's education is not enough when viewed worldwide. It is important to raise the level of education for women to contribute to the economy. Because the marginal productivity of women with different educational differences to the workforce will also be different. Therefore, efforts should be made to raise the level of education of women. It is essential for sustainable growth and development that countries prioritize policies to support women entrepreneurship.

Countries grow and develop healthier in economies where men and women have the same rights. Besides technological developments, investments in science and human beings bring countries closer to their goals. Women entrepreneurs are becoming a source of economic growth by consolidating their place in society day by day. Women will be able to achieve their goals with more effective economic policies by contributing to the growth and development of businesses with innovative thinking styles thanks to their skills.

2. LITERATURE REVIEW

There are many studies in the domestic and foreign literature that investigate the relationship between women's employment and productivity, economic growth and innovation. The studies on this subject are given below. However, countries, years included in the study, empirical estimation methods and data characteristics are different in the analyzes. For this reason, different results are likely.

Gali (1999) analyzed the relationship between productivity and employment in

the USA. According to the results of the VAR analysis using the data from the 1948-1994 period, an increase was observed between the hours worked while the technological shocks decreased the hours worked.

Tansel (2002) examined the relationship between women's employment and economic growth for Turkey. 1980-1990 period data were used for 67 provinces. According to the results of the research, it has been found that women's labor force participation rate positively affects economic growth.

Ark et al. (2004) analyzed the relationship between productivity and employment for 66 countries. According to the results of the analysis made using the data of the 1980-2000 period, the relationship between productivity and employment was determined in a negative way, although the relationship aspects differed between periods.

Cavelaars (2005) analyzed the relationship between productivity and employment in OECD countries. According to the results of the analysis made using the OLS method with the data of 1961-2000 period, there is a negative relationship between employment and productivity in the short term and a positive direction in the long term.

Tunç (2007), who analyzed the relationship between productivity and employment in Turkey. According to the results of the VAR analysis using data from the 1950-2006 period, there was a negative relationship from employment to productivity in the short term, whereas a positive relationship from productivity to employment was found in the long term.

Luci (2009) examined the relationship between economic growth and female employment for 184 countries. In the research, panel data analysis was done with the period data of 1965-2005. According to the results of the research, while increasing female employment positively affects economic growth, economic growth has no effect on female employment.

İnce (2011), with economic growth for Turkey was examining the relationship between women's employment. In the research, time series analysis was done by using the data of 1980-2009 period. According to the results of the study, as a result of increasing the education levels of women, birth rates will decrease

and women's contribution to economic growth will increase.

Er (2012) examined the relationship between women's employment and economic growth. In the research, panel data analysis was performed for 187 countries with 1998-2008 period data. According to the results of the research, it has been reached that the reduction of fertility in women and the more participation of women in the labor force and the employment of women in the upper positions of the state will affect the economic growth of the countries.

Akan and Güngör (2012) examined the relationship between women's employment and productivity for Turkey. In the research, panel data analysis was done using 2000-2010 period data. According to the results of the research, it has been reached that there is a long-term co-integration relationship between women's employment and labor productivity.

Günsoy and Özsoy (2012) examined the relationship between women's labor and economic growth in Turkey. VAR model with 2005-2011 period data was used in the research. According to the survey results, women's participation in the labor force in Turkey has a positive impact on economic growth.

Kasa and Alptekin (2015) examined the relationship between women's employment and economic growth in Turkey. VAR model with 2000-2013 period data was used in the research. According to the results of the research, the contribution of women who are primary school graduates to economic growth has been found as 15%.

Lenchman and Kaur (2015) examined the relationship between women's employment and economic growth for 162 countries. In the research, panel data analysis method was applied using 1990-2012 period data. According to the results of the research, there is a positive relationship between women's employment and economic growth.

Dücan and Polat (2017) examined the relationship between women's employment and economic growth for OECD countries. In the research, panel data analysis method was used. According to the results of the research, it was found that the increase in the labor force participation rate of women in OECD countries negatively affects economic growth. It is also among the findings of

the study that this effect is higher for G7 countries compared to other OECD countries.

Serel and Ozdemir (2017) examined the relationship between women's employment and economic growth for Turkey. In the research, ADF and PP unit root tests and regression analysis were performed using 2000-2013 period data. According to research results, the increase in the rate of female employment in Turkey has a positive impact on economic growth.

Türlüoğlu (2018) examined the relationship between women's employment and economic growth for Turkey. In the research, VAR model with 1999-2017 period data was used. According to the survey, Turkey has been reached that there is a bidirectional causality between women's employment and economic growth.

2.1. Female labor participation: the relationship between growth, innovation, and productivity

In the literature of economics, gender-specific determinants are supposed to have a positive and meaningful effect on economic growth. In particular, recent empirical studies have shown that active participation of women in the workforce will positively impact economic growth. Women's participation in the workforce is progressing in direct proportion to their level of Education. In this case, measures should be taken, and policies should be put in place to improve the education levels of women. As a result, employment and earned income will increase with the active participation of women in the workforce, resulting in a decrease in birth rates. With the participation of women in the workforce, the level of household income will increase, and this will allow more savings to be made in the household. In addition, an increase in savings would also bring about an increase in production (Luci, 2009, p. 2-3).

With the determination of the export-based industrialization model, women's employment was transferred from the agricultural sector to the industrial sector. In addition, women are seen as a cheap labor force, which in this case presents as an opportunity for the employer to minimize costs. Choosing women as cheap labor will prevent educated women from working in these sectors, thereby minimizing costs and reducing expected productivity (Akan & Güngör, 2012, p. 3).

It is shown that female employment rates are low among the reasons there are some cases; women have their own insecurities, to be weaker than men, some obstacles to work in jobs, work experience, lack of training, lack of traditional structure, women the mission of motherhood can be shown.

If we consider that the essence of creativity is to produce, it is also possible for countries to express production as social welfare, economic strength, and increase in their macroeconomic variables (Cropley, 2002, p. 3).

Two different hypotheses about women's participation in the labor force are proposed: the first is that economic growth will occur immediately with women's active participation in the labor force; the other is that it will have a negative impact on growth in the short term but increase growth in the long term with women's active participation in the labor force.

Despite the economic progress in the countries, the low labor force rates of women are evidence that women are not being adequately exploited. While women in most countries are employed in similar jobs and underpaid, gender inequality is thought to have negative macroeconomic consequences.

One of the most important indicators of countries' economic performance is undoubtedly the Employment indicator. Since the increase in employment will also bring about an increase in competition, emphasis should be placed on policies aimed at increasing female employment rates.

Furthermore, existing views are that by increasing women's Labor continuously and narrowing the gender gap, men's production and well-being can be increased (Aydin & Erdem, 2014, p. 62).

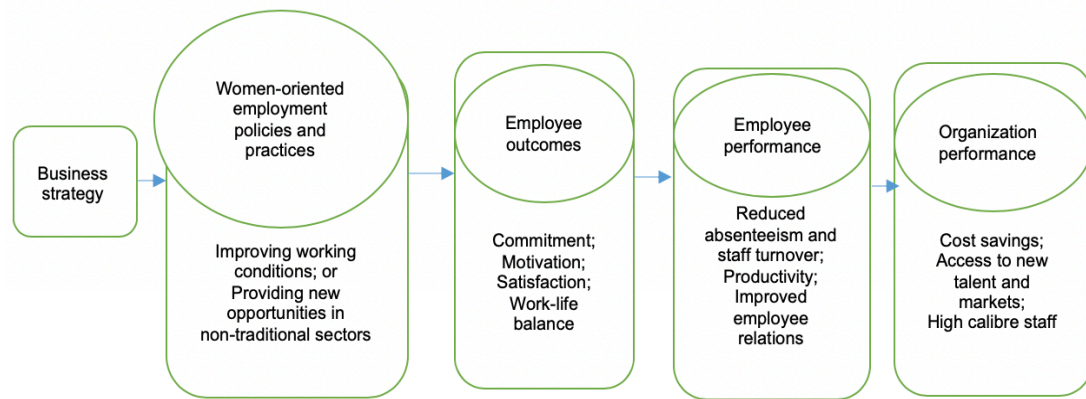


Figure 1: The relationship between “women-oriented” employment policies and practices and improved business performance (Source: International Finance Corporation, 2013, p. 9)

In Figure 1, the relationship between employment policies and practices in women-oriented enterprises is given. Within the scope of business strategies, women-oriented employment policies have been identified, which are seen as improving the conditions of employees and new opportunities in non-traditional sectors. As a result of this, employee outcomes, women's commitment to the business, satisfaction and motivation are formed. Thus, working women's performance will be positively affected and employee relationships will be improved. Finally, organizational performance will be positively affected and access to new markets will be provided and the performance and quality of the staff will be increased.

Among the reasons why women are more capable than men and have a positive impact on the macroeconomic variables of countries but are not preferred in upper and middle management are (Özmutaf et al., 2015, p. 221):

- Gender role stereotypes,
- Family responsibilities of women,
- Women's lack confidence,
- Women outside the network established by men,
- Negative attitudes of senior managers towards female managers, and
- Employment discrimination.

There are innovative ideas in female managers that are not in men. They are open to change, and the secret to being successful is also possible through change. When women make decisions compared to men, they make decisions that can have an impact on others. In addition, while male managers work business-oriented, female managers adopt a more person-oriented and

authoritarian management style than male managers. Therefore, because women's communication power is more encouraging than men's, positive effects are likely to be reflected within the business. Female managers have collaborative features but also supportive features.

3. MODEL AND DATA SET

In this section, Kónya (2006) investigated whether there is a causality relationship from the rate of female employment in the upper and middle management to entrepreneurship and innovation with bootstrap causality analysis.

The rate of female employment in the upper and middle management used in the study represents the proportion of women in the total upper and middle management. Patent applications made by the residents as the proxy variable of the innovation variable were taken into consideration. All data were obtained from the World Bank database. The data used in the study are annual data covering the period 2000-2017. In the study, 13 OECD members whose data are available are taken into consideration. These countries; America, Austria, Denmark, England, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Norway, Spain and Sweden.

3.1. Kónya's (2006) bootstrap panel causality

Kónya (2006) panel causality analysis Granger is a bootstrap based panel causality analysis that investigates causality relationships. Since this method is a bootstrap-based analysis, it is based on deriving existing data many times and provides valid and more accurate results especially in small samples. Variables used in analysis with variables with time dimensions must be stationary. Otherwise, false regression may arise and cause the results to be inconsistent and statistically invalid. However, another feature expected in panel methods is that the data studied and the country group must be homogeneous. In case of working with non-homogeneous (heterogeneous) panel groups, the results again lose their statistical reliability. Since Kónya (2006) method is a bootstrap based analysis, it does not require the variables to be stationary and homogeneous. Reliable results can also be obtained with stationary and inhomogeneous variables. In the panel data analysis, in the causality tests, an average coefficient is obtained for the country group in general and individual coefficients are not calculated. Another advantage of Kónya (2006) causality

analysis is that the calculation of individual coefficients based on country also gives direction of causality relations between countries. The hypothesis of causality analysis for this study can be formed as follows:

Null Hypothesis: There is no causal relationship from the ratio of women in upper and middle management to innovation.

Alternative Hypothesis: There is a causal relationship from the ratio of women in upper and middle management to innovation.

In order to decide whether the null hypothesis is rejected or not, the Wald chi-square test statistic is first calculated for each cross-section unit and then compared with the specific table critical values calculated for each cross section unit. If the calculated chi-square test statistic is greater than the table critical values, the null hypothesis is rejected, otherwise it cannot be rejected. If the null hypothesis is rejected, it is decided that there is a causal relationship, and if it cannot be rejected, there is no causal relationship.

In this study, FPE (Final Predict Error) and Akaike information criteria were taken into consideration in determining the optimal lag length in causality analysis. Optimal lag length was determined as 4 according to FPE and Akaike information criteria. However, in order not to overlook the robustness and causality relationships of the study, analysis was performed for each lag by repeating the analysis from 1 to 4 lags. The results obtained are summarized in the table below.

Table 1: Kónya (2006) causality analysis results

Lag	Causality	Sign	Country	Significance
1	yes	positive	Austria	10 %
2	no	-	-	-
3	yes	positive	Netherlands	10 %
4	yes	positive	Austria and Netherlands	05 %

According to the results obtained from Kónya (2006) causality analysis; In the 1st lag, a meaningful and positive causality relationship was found only at 10% significance level for Austria. No causality relationship was identified for the 2nd

lag. In the third lag, a meaningful and positive causality relationship of 10% was determined only for the Netherlands. In the 4th lag, a positive causality relationship was found at 5% significance level for both Austria and the Netherlands. The results of analysis for different lag levels are supportive and consistent. No negative causality relationship has been identified for any country. It is seen that there is a positive relationship in countries where causality relationship is detected.

4. CONCLUSION AND RECOMMENDATIONS

As seen from the results of Kónya (2006) causality analysis, the increase in female employment in the upper and middle management levels also increases the number of patent applications in Austria and the Netherlands. This effect is getting stronger and more meaningful as time goes on.

As the lag gets longer, the relationship becomes more meaningful and it can be interpreted that it takes 3-4 years for patent applications to increase as the share of women increases in the upper and middle management. This can be interpreted as the time required for the woman who started working in the company to get to know the company and to understand the operation.

As a suggestion to be excluded from this study; It can be said that the number and role of women in upper and middle management should be supported by both the state and the private sector, as the increase in the number of women who can look with a different mindset and thinking structure than men, contributes to innovation activities.

Of course, the studies conducted for the first stage of development, that the active participation of women in the labor force will affect the growth negatively, of course has political importance. However, since the participation of women in the labor force positively affects economic growth for developing countries, it is encouraged by policies to enable women to enter the labor market more easily.

DISCLOSURE OF CONFLICT

The author(s) declare that they have no conflicts of interest.

AUTHOR(S) DETAILS

Yagmur Akarsu, PhD. Candidate

Gokceada Vocational College

Canakkale 18 Mart University, Turkey

E-mail: yagmurakarsu@comu.edu.tr

ORCID ID: <https://orcid.org/0000-0002-9277-5019>

Serdar Kurt, PhD.

Biga Faculty of Economics and Administrative Sciences

Canakkale 18 Mart University, Turkey

E-mail: skurt10@comu.edu.tr

ORCID ID: <https://orcid.org/0000-0002-7718-355X>

Nur Dilbaz Alacahan, PhD.

Biga Faculty of Applied Sciences

Canakkale 18 Mart University, Turkey

E-mail: n_dilbaz@comu.edu.tr

ORCID ID: <https://orcid.org/0000-0002-8156-0020>

REFERENCES

Akan, Y., & Güngör, M. (2012), *Kadın istihdamı ve cerimlilik arasındaki ilişki: Türkiye imalat sanayi üzerine bir uygulama*. <http://teacongress.org/papers2012/AKAN.pdf>.

Ark, B. Van, F. E., & Duteweerd, H., (2004). *Productivity and employment growth: An empirical review of long and medium run evidence*. Research Memorandum GD-71, Groningen Growth and Development Centre, 1-117.

Aydın, F., & Erdem, E. (2014). The effect of women's employment on competitiveness and economic growth: A comparison of Turkey and the most competitive countries. *Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 44, 59-71.

Cavelaars, P. (2005). Has the trade-off between productivity gains and jobs growth disappeared. *Kyklos*, 58(1), 45-64. <https://doi.org/10.1111/j.0023-5962.2005.00277.x>

Cropley, A. (2002). Creativity and innovation: Men's business or women's work? *Baltic Journal of Psychology*, 3, 77-88.

Dücan, E., & Polat, M. (2017). Kadın istihdamının ekonomik büyümeye etkisi: OECD ülkeleri için panel veri analizi. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 26(1), 155-170.

Er, Ş. (2012). Women indicators of economic growth: A panel data approach. *The Economic Research Guardian*, 2(1), 27-42.

Gali, J. (1999). Technology, employment, and the business cycle: Do technology shocks explain aggregate fluctuations? *American Economic Review*, 89(1), 249-271.

Günsoy, G., & Özsoy, C. (2012). Türkiye'de kadın işgücü, eğitim ve büyüme ilişkisinin VAR analizi. *Finans Politik & Ekonomik Yorumlar*, 49(568), 23-42.

Internation Finance Corporation. (2013). *Investing in women's employment good for business, good for development*. 2121 Pennsylvania Avenue, N.W. Washington, D.C. 20433. <https://openknowledge.worldbank.org/bitstream/handle/10986/16257/82636.pdf?sequence=1&isAllowed=y>

İnce, M. (2011). The role of female education in economic development: A case for Turkey. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 26(1), 227-238.

Kasa, H., & Alptekin, V. (2015). Türkiye’de kadın işgücünün büyümeye etkisi. *Selçuk Üniversitesi Sosyal Bilimler Meslek Yüksekokulu Dergisi*, 18(1), 1-24.

Kónya, L. (2006). Exports and growth: Granger causality analysis on OECD countries with a panel data approach. *Economic Modelling*, 23(6), 978-992.

Lenchman, E., & Kaur, H. (2015). Economic growth and female labor force participation-verifying the U-feminization hypothesis: New evidence for 162 countries over the period 1990-2012. *Economics and Sociology*, 8(1), 246-257.

Luci, A. (2009). Female labor market participation and economic growth. *International Journal of Innovation and Sustainable Development*, 4(2), 97-108.

Özmutaf,N., M., Aktekin, E., Ergani, B., & Çıta, K. (2015). The effects of innovative features of women managers on their business performance: The food exporter companies in aegean region sample. *Procedia - Social and Behavioral Sciences*, 195, 220 – 229.

Serel, H., & Özdemir, B. S. (2017). Türkiye’de kadın istihdamı ve ekonomik büyüme ilişkisi. *Yönetim ve Ekonomi Araştırmaları Dergisi*, 3(15), 132-148.

Tansel, A. (2002). Economic development and female labor force participation in Turkey: Time-series evidence and cross-province estimates. *ERC Working Papers in Economics*, 01/05.

Tunç, T. (2007). Üretkenlik istihdam ilişkisi: Türkiye imalat sanayi üzerine bir uygulama. Yüksek Lisans Tezi. Mersin Üniversitesi Sosyal Bilimler Enstitüsü: Mersin.

Türlüoğlu, E. (2018). Kadın istihdamı ve büyüme ilişkisi: VAR modeli analizi. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi (ASEAD)*, 5(9), 59-68.