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Women's Entrepreneurship in Turkey: Evidence from OECD Data

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Abstract

Beyond being an employment choice, its contributions to national development, and being one of the main actors in fighting against unemployment, women's entrepreneurship has become a much-debated, supported, and subjected concept to many research fields. However, from a socially constructed perspective, after the 1990s, the supposedly generic structure of entrepreneurship was considered "gendered". Consequently, "less ambitious, less profit-oriented, smaller-scale" kind of generalized references to women have started to be regarded as the results of measurement mistakes. From this perspective, one of the fundamental determinants of women's entrepreneurship is family embeddedness consisting of unpaid household chores and childcare responsibilities. In this context, this study aims to quantitatively reveal if family-embeddedness affects the number of women entrepreneurships in Turkey as well as economic factors. In the case of its association, it indicates how depending on OECD data. With this aim, OECD data covering 2006-2017 is used for a causality analysis. The findings show causal links between economic and non-economic factors and the number of women's entrepreneurship.

Keywords: women's entrepreneurship, family-embeddedness, gender, causality, OECD data

JEL Classification: L26, M13, J16

1. Introduction

With a lengthy historical background, entrepreneurship studies date back to the 1700s informal written forms. Cantillon, a French banker and businessperson was

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the first one who formally defined and created the term entrepreneur. While Cantillon considers entrepreneurship as risk-taking under uncertainty, entrepreneurship's essence is that people do not fully understand the future and their actions' economic impact (Seckin-Halac, 2020). Schumpeter, Kirzner, and Knight could be announced as the pioneers of entrepreneurship studies from economic doctrine (Chrisman and Kellermans, 2015). However, following economic doctrine, several academic disciplines have been paying strong attention to the concept, and such diverse perspectives have made it hard to define a concurring definition (Bula, 2012). Traditional entrepreneurship studies generally acknowledge entrepreneurship with a fundamental domain of economic development and growth. Nowadays, this traditional view is considered one of the subcategories of entrepreneurship's umbrella concept (Haas and Hwang, 2009). It is accepted that different aims, motivations, and challenges have expanded entrepreneurship definitions and perceptions (Al-Dajani and Marlow, 2013). The research from such a traditional perspective is now widely discussed as "lacking" by a respectable number of researchers. Besides, measuring instruments are also considered "specious" while mainly originated and referred to as male-dominated entrepreneurship. While there is no distinct consensus on defining entrepreneurship, especially after the 1990s, the feminist perspective has started to get involved in the discussions (Ekinsmyth, 2011). Feminist perspectives and theories are formed to implement entrepreneurship to understand specific characteristics of women's entrepreneurship. Therefore, women's entrepreneurship has become more visible in the academic arena after the 1990s, while the first academic article was published in 1976.

Women's entrepreneurship, which has been widely discussed recently, is supported in the literature and practice for different purposes. Following the traditional view, from a neoliberal perspective, women's entrepreneurship is strongly supported by its contribution to fighting unemployment and poverty while women are seen roughly as idle labor force (Ecevit, 2007, p.47). On the other hand, stressing noneconomical factors, the feminist perspective highlights women entrepreneurship's possible power in closing the gender gap in the labor market and general sense and strengthening women's empowerment (Bolukbas, 2006, p. viii). UN 2030 Sustainable Development Goals combine both perspectives' ultimate aims and emphasize the importance of economic and non-economic achievements (Meunier et al., 2017). Similar to expected outcomes, previous research findings point out several economic and non-economic variables that seem the motivation behind becoming entrepreneurs. Entrepreneurial motivators are mostly grouped as push and pull factors (Gilad and Levine, 1986). Women's entrepreneurship is associated with push factors containing being unemployed, not finding a proper job, being ill-paying, inflexible/long working hours (Segal et al., 2005). Besides, by accepting the gendered structure of entrepreneurship, socially assigned family-embedded roles of women are considered as the prime motivators as well (Ahl, 2004 p.59; DeMartino and Barbato, 2003; Drew and Humbert, 2012, Sallan- Gul and Altindal, 2016; Jennings and Brush, 2013; Kelly et al., 2015; Maden, 2015, Özkazanç-Pan, 2015, Seckin-Halac and Seckin-Celik, 2018).

Family-embedded characteristics of women's entrepreneurship are widely discussed in conceptual studies, and several studies rely on qualitative analysis to reveal such features. Despite increasing qualitative studies on the issue, no comprehensive quantitative studies reveal family-related determinants of women's entrepreneurship (Seckin-Halac and Mese, 2021). Qualitative studies deliver detailed findings with small working groups but do not provide a large-scale general picture of the issue. Therefore, this paper focuses on causal relations between women's entrepreneurship and family-embedded non-economic variables and economic variables depending on OECD data. This study will contribute to the field by showing generalizable findings using a quantitative method from a gender perspective. From this point of view, the findings will fill this gap in the literature and provide a broader perspective to the readers about the determinants of women's entrepreneurship in Turkey. After the introduction, a literature review of women's entrepreneurship is presented. Then, family-based determinants of women's entrepreneurship are discussed. Following this, methods, analysis, and findings are shared and concluded by discussing results and facts.

2. Literature Review

Women's Entrepreneurship

When entrepreneurship became popular again in America, women -as men- were directed to entrepreneurship since the early 1970s. In these early periods, entrepreneurship was handled as a generic concept in the USA. Some efforts were made to remove the inequalities in women's access to resources in their orientation towards entrepreneurship activities. Accordingly, a series of programs were enacted in the mid-1970s to meet women's equal economic opportunities and financing needs. Such political acts reflect academia, and the first article using the term "women's entrepreneurship" was published in 1976 (Jennings and Brush, 2013).

Women's entrepreneurship studies, which follow the traditional entrepreneurship literature, either made comparisons with the characteristics of male entrepreneurs where gender used similar to sex and considered as a 'variable'; or focused on personal characteristics and sought answers to the question of who is a women entrepreneur (Foss, 2010; Ahl et al., 2016). In the 1990s, the feminist perspective started to be effective in entrepreneurship studies with increased discomfort in the US labor markets (Minniti, 2009, p. 507 - 508).

Ahl (2006) published a study consisting of discourse analysis on 81 entrepreneurship studies published in most prestigious academic journals between 1982 and 2000. The findings of discourse analysis on adjectives used to define entrepreneurship in this study reveal that entrepreneurship is a gendered concept. In her research, she compares adjectives that are used to describe entrepreneurship and BEM's femininity and masculinity index. In the end, results show that adjectives that are associated with masculinity are perfectly matched with entrepreneurship, while adjectives associated with femininity and entrepreneurship are entirely dissimilar. Therefore, the male-dominated structure of entrepreneurship is widely accepted ever since. In a similar vein, Stevenson (1990) shows that as a result of male-dominated entrepreneurship theories, supposedly independent from the traditional view, measuring scales of

entrepreneurship also consist of male norms. This mismeasurement of women's entrepreneurship leads to low profile and low performer entrepreneurs who do not meet expected entrepreneur characteristics and criteria.

Moreover, entrepreneurship as a socially structured concept, culturally seeded perceptions, and norms are also led people to think that entrepreneurship is a male vocation. Further, associated characteristics of entrepreneurship left entrepreneurship to men because it frames women at home embracing caring roles in which there is no room left for handling entrepreneurship activities (De Bruin et al., 2006). This situation leads to thinking that women are not as capable as men counterparts in meeting entrepreneurial requirements.

Traditional entrepreneurship theories covering male-dominated perspectives shape mainly three components interpreted as 3M: Money, market, and management. Brush et al. (2009) proposed an enlarged model for women's entrepreneurship as 5M considering entrepreneurship's socially structured characteristics. This 5M model encloses motherhood (encompassing caring and household chores) and Meso/Macro environment (surrounding cultural/social expectations, laws, economic structure, and national policies) in addition to the classical 3M model to state women's entrepreneurship more appropriately.

Especially with the 2000s, from a feminist perspective, a group of researchers began to discuss entrepreneurship in the context of social constructivist views. In the social constructivist viewpoint, entrepreneurship is constructed with social norms, ideologies, beliefs, just like gender, and this shared memory is embedded within social structures and social networks (Amanda et al., p. 56). Therefore, all cultural variables are influential in entrepreneurship. For example, considering women with more responsibilities at home in the family due to cultural perceptions, even being seen and reflected as entrepreneurship as a male work creates an image that women are less competent to be entrepreneurs than men (DeBruin et al., 2006).

In this sense, the main determinants of women's entrepreneurship are decided as unpaid household chores and caring responsibilities- especially childcare- that social roles are assigned and became norms depending on gender.

Family-based determinants of women's entrepreneurship

Criticisms of women's entrepreneurship in the traditional vein are mainly concentrated on some essential points (Ahl et al., 2016). One of these criticisms is not including gender in women's entrepreneurship studies as a relational and socially constructed phenomenon, including women as a sex variable in a dual system (men vs. women). Jennings and Brush (2013) strictly criticizes traditional women's entrepreneurship by not including gender perspective (especially family-based determinants) and handling the concept as gender-neutral. After the 1990s, the emphasis on gender issues in entrepreneurship studies has been increased. Those gender perspective women's studies reveal that entrepreneurship is a male-dominated gendered concept. Moreover, social roles that are culturally imposed on individuals have affected entrepreneurship and entrepreneurial activities.

A study encompassing the United States, India, and Turkey (Gupta et al., 2009) also supports that entrepreneurship is perceived as a male occupation. Ahl (2004, p.59) asserts that the male-dominated entrepreneurship frame also points out a socially assigned gender role distribution at home. While men are accepted as the ones who can carry entrepreneurial activities, women are left to handle remaining unpaid and supporting jobs at home. Therefore, this distribution even creates a division of labor. However, an increasing trend towards the thoughts "unjust positions in job distribution in household chores" has been coming to the surface instead of the traditional perspective, which recognizes women as less successful, smaller firm owners with slower growth expectations than men (for instance, Ahl et al., 2016). A qualitative study conducted in Turkey to understand the gendered structure of entrepreneurship also revealed such perceptions and unjust separation of duties (See Seckin-Halac and Seckin-Celik, 2018). As to this study's findings, as parallel with the traditional line, men are primarily motivated with market opportunities and necessities while women are motivated with family and family-related responsibilities.

Mothers' tendency towards entrepreneurship is about motherhood (considering their responsibilities for home and child care) and feel they do not have any other options. On the other hand, fathers consider dadpreneurship a suitable career choice in providing a better time with their children (e.g., Jones, 2007; Minter, 2015). Other studies that examine men and women at the same time also show that in general, this kind of sense of responsibility does not occur in men (DeMartino and Barbato, 2003; Seçkin- Halaç and Seçkin- Çelik, 2018). Another study searches for differences between men and women depending on the job- family relations of 832 mothers and fathers in the Ireland context (See Drew and Humbert, 2012). This study reveals that fathers work longer hours than mother entrepreneurs due to home and child-related responsibilities. On the other hand, women in this study highlight the necessity of flexible working conditions to meet home-based caring jobs and feel childcare's full responsibility. Moreover, such division of labor causes women more role conflicts than men.

Global Entrepreneurship Monitoring (GEM) 2013 data shows that women are less likely to start entrepreneurial activities than men worldwide (Amoros and Bosma, 2013). GEM 2012 Women's Report covers the fundamental reasons for the numerical gap between men and women entrepreneurs. As to the report, the most important determinant of women's entrepreneurship is women's caring roles depending on socially assigned roles. This caring mainly points out children, but sometimes elderly care is mentioned in addition to children. In the changing world order, childcare is occasionally transferred to childcare centers or family elders. Thus, a significant barrier that detains women from working life would be eliminated. However, it is also mentioned that such an opportunity is limited mostly because (1) economic factors- childcare services are expensive; (2) social factors- social/neighborhood pressure imposing women that the childcare is mothers' job (Kelly et al., 2013, p. 6). Therefore, previous research findings point out that gender-based variables are primarily arising from the family structure in women's entrepreneurship.

3. Method

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Methodology

Conceptual studies are frequently encountered in explaining women's entrepreneurship with familial factors. Although there has been an increase in qualitative studies recently, studies that question the relationship between women's entrepreneurship and family using quantitative data are not encountered. Moreover, although few qualitative studies are available, they focus on the small study groups to not reveal the overall picture. Therefore, in this study, the family's overall structure and the other determinants of entrepreneurship will be studied from a gender perspective for Turkey using OECD data covering 2006-2017. Because of time-span limitation, causality is the most reliable approach to investigate the link between variables.

Testing causality among variables is one of the vital and one of the problematic issues in economics. The difficulty comes from the non-experimental nature of social science, not the complexity of the methods. Especially in social sciences, many variables may affect the specific variable simultaneously; repeated experiments for keeping the variables under control are not feasible, at least not yet. The most difficult challenge in testing the causality is that "Correlation does not imply causality." Correlation does not necessarily imply causation in any meaningful sense of that word. The econometric graveyard is full of magnificent correlations, which are simply spurious or meaningless. It is not an easy task to distinguish these two from uneducated and inexperienced eyes.

Causality can be described as the relationship between cause and effect. The term 'causality' suggests a cause and effect relationship between two sets of variables, which means a change in one variable causes a change in or helps to predict another variable (Pearl, 2012). The Granger causality approach is quite popular in which involves some dynamic econometric time-series methodologies.

Assume that there are two stationary time series. If the prediction of one time series is improved by incorporating the knowledge of a second one, then the second series is said to have a causal influence on the first (Wiener, 1956). Later, Granger (1969) had turned Wiener's idea into a formula in the context of linear regression models. Specifically, suppose the variance of the error term of the first time series is reduced by including past measurements from the second time series. In that case, the second time series is said to have a causal influence on the first one. Reversing the role of the two-time series, one can consider the causal impact in the opposite direction. In line with most of the literature in econometrics, one variable is said to be "Granger Cause," the other if it helps to make a more accurate prediction of the other variable than had we only used the latter's past as a predictor. Granger causality between two variables cannot be interpreted as an actual causal relationship but merely shows that one variable can better predict another.

The brief mathematical formulation of Granger causality is given below, in which x and y are the variables and m being the lag length.

$$y_t = \alpha_0 + \alpha_1 y_{t-1} + \cdots + \alpha_m y_{t-m} + \beta_1 x_{t-1} + \cdots + \beta_m x_{t-m} + \varepsilon_{1t} \quad (1)$$

$$x_t = \alpha_0 + \alpha_1 x_{t-1} + \cdots + \alpha_m x_{t-m} + \beta_1 y_{t-1} + \cdots + \beta_m y_{t-m} + \varepsilon_{2t} \quad (2)$$

As we said before, The Granger Causality approach to whether *x* causes *y* is to see how much of the current *y* can be explained by past values of y and then see whether adding lagged values of *x* can improve the explanation. Y is said to be Granger-caused by *x* if *x* helps predict *y*, or equivalently if the coefficients on the lagged *x*'s statistically significant. We should note that two-way causation is frequently the case; *x* Granger-causes *y* and *y* Granger-causes *x*. It is important to note that the statement "*x* Granger-causes *y*" does not imply that *y* is an effect or result of *x*.

In testing for Granger causality, two variables are usually analyzed together while testing for their interaction. Four possible results can be reached at the end of the analyses: (i) Bi-directional causality between *x* and *y*, (ii) Unidirectional Granger causality from variable *x* to *y*, (iii) Unidirectional Granger causality from variable *y* to *x*, (iv) No causality. In this study, we model selected economic and non-economic indicators using Pairwise Granger causality analysis proposed by Granger (1969).

In the study, dependent variables representing the entrepreneurship structure were determined as the ratio of women entrepreneurs among the total entrepreneurs and the rate of women entrepreneurs with tertiary education among the total entrepreneurs. Also, the independent variables that represent the concepts of family structure and gender are as follow: the rate of unemployed women in total employment, the share of employed women in part-time employment, the share of employed women in involuntary part-time employment, the share of employed women in temporary employment, the mean age of women at childbirth, the divorce rate (per 1000 people), the gender gap, the employment rates for partnered mothers (15-64-year-old) with at least one child under 15, the employment rates for sole-parent mothers (15-64-year-old) with at least one child under 15, the public social expenditure on cash benefits for families as a % of GDP and the public social expenditure on services and in-kind benefits for families as a % of GDP.

Analysis and Findings

This study aims to focus on the causality relation between women entrepreneurs' rate and economic and non-economic factors. Because of this, the Granger causality approach is executed as a well-known and widely used tool to explain causality relations. As the Granger causality's pre-step, the stationarity condition of the series is needed to be checked because, like Granger and Newbold (1974) underlined, the Granger Causality tests' results will be spurious if the series are non-stationary.

We run the Augmented Dickey-Fuller (ADF) Test.[i] To determine the stationarity of the series as known as the unit root test. Table I provides the ADF test results for series in level and in first- differenced.

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According to the results given in Table I, all series are non-stationary at level, which means they have a unit root. If a time series has a unit root, it shows a systematic pattern that is unpredictable. It is ubiquitous because most of the economic variables are non-stationary. So, they are needed to turn into the stationarity form; after that, we can use these variables' stationary version throughout the Granger Causality test. Getting the first difference of the series, they are made stationary. Then, the first-differenced form of the series has no unit root, so we can perform the Granger causality test using the series's differenced form.

As mentioned before, the Granger causality test will apply to determine the possible causality relationship between women's entrepreneurship and economic and non-economic factors. Therefore, when we build the model first, we will take the rate of women entrepreneurs as a dependent variable and report this. And then, we will get the rate of women entrepreneurs with tertiary education as a dependent variable and report the results. In doing so, we aim to differentiate the causality relations based on education.

Table I: Augmented Dickey-Fuller (ADF) Test Results

	ADF Test Statistics (level)*	ADF Test Statistics (First Differenced)**
female entrepreneurs	-1.067	-2.736
female entrepreneurs' tertiary education	-0.059	-2.189
women unemployment rate	0.722	-2.833
part-time employment	-1.153	-1.982
Involuntary part-time employment	0.833	-2.429
temporary employment	-1.282	-3.847
mean age of women at childbirth	0.383	-2.166
divorce rate	0.972	-2.236
gender gap	-1.286	-3.502
employment rates for partnered mothers	-1.206	-4.658
employment rates for sole-parent mothers	1.223	-2.329
social expenditure on cash benefits	0.573	-4.243
social expenditure on in-kind	1.565	-3.001

benefits

* At 90 % critical level is -1.602
** At 90 % critical level is -1.601

The Pairwise Granger causality test results are given in Table II, in which the model is built around the rate of women entrepreneurs. According to the results in Table II, there is a limited number of causality relationships between variables. There is a causality link between the women unemployment rate and women entrepreneurs, and the direction of the relation is from the women unemployment rate to women entrepreneurs. We need to understand that the women's unemployment rate is the Granger-cause of the women entrepreneurs, which means women's unemployment rate helps predict women entrepreneurs. Besides, there is another causality link between women's mean age at childbirth and the share of women entrepreneurs. The mean age of women at childbirth is the Granger-caused of the share of women entrepreneurs.

On the other hand, we have causality links between the share of women entrepreneurs and temporary employment, employment rates for sole-parent mothers, social expenditure on cash benefits, and social expenditure on in-kind benefits. Thus, the share of women entrepreneurs is the Granger-caused of the four variables: temporary employment, employment rates for sole-parent mothers, social expenditure on cash benefits, and social expenditure on in-kind benefits. These results are weird because the expectations about the direction of causality between these variables are usually contrary.

Table II: Pairwise Granger Causality Test Results (the share of women entrepreneurs)

	F-statistics	**P-value**	**Decision**
women unemployment rate → female entrepreneurs	3.87910	0.0962	**Causality**
female entrepreneurs → women unemployment rate	0.51755	0.6248	No Causality
part-time employment → female entrepreneurs	1.78633	0.2598	No Causality
female entrepreneurs → part-time employment	0.11164	0.8965	No Causality
involuntary part-time employment → female entrepreneurs	0.92376	0.4556	No Causality
female entrepreneurs → involuntary part-time employment	1.09348	0.4037	No Causality
temporary employment → female entrepreneurs	1.55758	0.2980	No Causality
female entrepreneurs → temporary employment	4.84423	0.0676	**Causality**
mean age of women at childbirth → female entrepreneurs	5.74779	0.0506	**Causality**
female entrepreneurs → mean age of women at childbirth	0.85384	0.4797	No Causality
divorce rate → female entrepreneurs	0.11201	0.8962	No Causality
female entrepreneurs → divorce rate	2.01568	0.2281	No Causality

gender gap → female entrepreneurs	2.72389	0.1584	No Causality
female entrepreneurs → gender gap	2.16900	0.2098	No Causality
employment rates for partnered mothers → female entrepreneurs	0.38254	0.7005	No Causality
female entrepreneurs → employment rates for partnered mothers	3.35008	0.1194	No Causality
employment rates for sole-parent mothers → female entrepreneurs	1.03562	0.4204	No Causality
female entrepreneurs → employment rates for sole-parent mothers	5.27866	0.0586	**Causality**
social expenditure on cash benefits → female entrepreneurs	0.67741	0.5491	No Causality
female entrepreneurs → social expenditure on cash benefits	31.2465	0.0015	**Causality**
social expenditure on in-kind benefits → female entrepreneurs	0.78550	0.5051	No Causality
female entrepreneurs → social expenditure on in-kind benefits	5.27239	0.0587	**Causality**

The Pairwise Granger causality tests for the share of women entrepreneurs with tertiary education are given in Table III.

Table III: Pairwise Granger Causality Test Results (the share of women entrepreneurs' tertiary education)

	F-statistics	**P-value**	**Decision**
women unemployment rate → female entrepreneurs' tertiary education	1.07399	0.4092	No Causality
female entrepreneurs' tertiary education → women unemployment rate	0.92176	0.4563	No Causality
part-time employment → female entrepreneurs' tertiary education	1.26786	0.3586	No Causality
female entrepreneurs' tertiary education → part-time employment	4.54615	0.0750	**Causality**
involuntary part-time employment → female entrepreneurs' tertiary education	2.32123	0.1936	No Causality
female entrepreneurs' tertiary education → involuntary part-time employment	0.84455	0.4831	No Causality
temporary employment → female entrepreneurs' tertiary education	2.63552	0.1653	No Causality
female entrepreneurs' tertiary education → temporary employment	3.73439	0.1018	No Causality
mean age of women at childbirth → female entrepreneurs' tertiary education	5.86451	0.0488	**Causality**

female entrepreneurs' tertiary education → mean age of women at childbirth	2.19199	0.2072	No Causality
divorce rate → female entrepreneurs' tertiary education	0.06955	0.9337	No Causality
female entrepreneurs' tertiary education → divorce rate	2.19344	0.2071	No Causality
gender gap → female entrepreneurs' tertiary education	0.32319	0.7379	No Causality
female entrepreneurs' tertiary education → gender gap	0.09069	0.9148	No Causality
employment rates for partnered mothers → female entrepreneurs' tertiary education	8.64686	0.0238	**Causality**
female entrepreneurs' tertiary education → employment rates for partnered mothers	0.08761	0.9175	No Causality
employment rates for sole-parent mothers → female entrepreneurs' tertiary education	2.04250	0.2247	No Causality
female entrepreneurs' tertiary education → employment rates for sole-parent mothers	0.46058	0.6553	No Causality
social expenditure on cash benefits → female entrepreneurs' tertiary education	0.80382	0.4981	No Causality
female entrepreneurs' tertiary education → social expenditure on cash benefits	4.49277	0.0764	**Causality**
social expenditure on in-kind benefits → female entrepreneurs' tertiary education	1.82382	0.2542	No Causality
female entrepreneurs' tertiary education → social expenditure on in-kind benefits	0.96949	0.4407	No Causality

According to the results, there are only four causality linkages between variables in the model. The mean age of women at childbirth and the employment rates for sole-parent mothers are the Granger-caused shares of women entrepreneurs with tertiary education. Therefore, the causality direction is from the mean age of women at childbirth and the employment rates for sole-parent mothers to the share of women entrepreneurs with tertiary education. That means these two variables help the prediction of the women entrepreneurs with tertiary education.

On the other hand, the share of women entrepreneurs with tertiary education is the Granger-caused part-time employment and social expenditure on cash benefits. It is hard to explain these causality linkages because based on these results, we claim that women entrepreneurs with tertiary education can improve the prediction quality of part-time employment and social expenditure on cash benefits.

4. Discussion

This study aims to test a possible association between economic and non-economic factors of family embeddedness and the numerical term women's entrepreneurship in Turkey. For testing causality covering the years 2006 and 2017, the OECD database was preferred because the OECD database is one of the

leading institutions that provide gender-based entrepreneurship data and one of the world's reliable databases. The findings show that the women's unemployment rate and the mean age of women at childbirth link the number of women entrepreneurs. On the other hand, women entrepreneurship is revealed as a cause in the relation between four variables: temporary employment, employment rates for sole-parent mothers, social expenditure on cash benefits, and social expenditure on in-kind benefits. Those findings suggest that Turkey's high unemployment rates could be a decisive push factor to become entrepreneurs for women, where social expenditures motivate women as pull factors to become entrepreneurs. Depending on socially assigned caring roles, women seem to preferred to become entrepreneurs mostly after their children become at certain ages. Therefore, a causal link from the share of women entrepreneurs to employment rates for sole-parent mothers could be a sign of empowerment, at least the power of economic freedom.

TURKSTATS (Turkish Statistical Institute-TUIK) March-2020 employment data shows that women in Turkey only met % 29.2 of total employment (TUIK, 2020), and the ratio of employment participation is % 34.1 for women. This data indicates how the high rate of women in the population not even has any intention to work or show any effort to find a job. TURKSTATS' 2017 entrepreneurship research reveals that women employers' share is % 8.1 among total (TUIK, 2017). Global Entrepreneurship Monitoring Women's Report (2015) highlights that amongst 83 participant countries, Turkey is in the first rank based on inequality in terms of entrepreneurship ratios. The results show that there are only three women entrepreneurs exist per ten men entrepreneurs.

Despite the gender equality before the law, women's underrepresentation is apparent, specifically in the labor market, in line with this study's topic. In the Global Gender Gap Report, Turkey is in the 130th rank among 149 countries. Simultaneously, in the 131st rank in the subcategory of economic participation and opportunities, the 106th rank in the subcategory of education (World Economic Forum, 2018). 2013 report of Women and Men Equal Opportunities Commission of the Grand National Assembly of Turkey (Metin and Kariman, 2013) specifies a couple of leading motives of gender-based inequality in labor markets. One of them is women's insufficient education levels. The second one dominated common sense of domestic responsibilities and child and elderly caring due to the traditional division of labor. The third one is stated as inadequate mechanisms to reconcile work and family life.

According to the results of the "time usage survey" conducted by TURKSTAT in 2015 with participants over the age of 15, it is seen that men spend 53 minutes and women spend 4 hours and 53 minutes daily at home for domestic responsibilities on average. For working men and women, these numbers occurred as 46 minutes and 3 hours and 31minutes respectively. The results of the TURKSTAT 2016 Family Structure Survey reveal that in Turkey, women are responsible for household chores (91.2 %) such as doing the cooking, washing, laundry, ironing, while men do the repairs and paint-whitewash (80.4 %) kind of jobs in addition to invoice payments. TURKSTAT "women" data of 2019

states the reasons for not participating in the labor force. It is seen that the reason stated by 45.9% of the women who do not participate in the labor force is "household chores" (TUIK, 2019b). Therefore, TURKSTAT's surveys alone are sufficient to present inequality in the domestic division of labor as the main reason women stay away from the labor market.

In 1995, the "Small Entrepreneurship Project" was carried out by the General Directorate on Women's Status. The report shows that gender-based roles and family structure are influential on women entrepreneurs. For example, the report states that entrepreneurship is attractive in terms of flexible working hours in running work and household jobs. The findings present most women have work experience before having children; after giving birth to a child, they leave their jobs and return to working life- entrepreneurial activity- when their children start school.

Carkoglu and Kalaycıoglu's (2012) research was conducted in 65 cities with 1555 households, where 50.5 % of the participants involved women over 18. According to the results, it is idealized for the mother not to work, stay at home, look after / raise children, do housework, and be a housewife. Only because of a social necessity, in the face of increasingly tricky livelihoods depending on the economy, women considered contributing to household income. As a very grave finding, the study also points out that in the year 2012, "men's breadwinning and women's caring responsibility" kind of gender-segregated role distribution is still dominant in Turkey.

This study's findings show high unemployment rates could be a strong motive for women to become entrepreneurs. Beyond economic return to the family and the general economy, women's entrepreneurship should be discussed to contribute to women's empowerment and gender equality. Considering increased violence cases against women and homicides in Turkey, entrepreneurship's empowerment and economic freedom would be a sustainable solution to structural problems.

In Turkey, current women's entrepreneurship literature is limited to conceptual, qualitative, or quantitative, including survey research. Furthermore, those survey results mostly cannot be generalized because of collection methods and sampling. In this study, although there are some constraints based on using secondary data, the findings are still generalizable to Turkey's frame. On the other hand, there is not any similar study conducted in terms of data and method. However, considering gender perspective conceptual studies, open-access official data, and studies consisting of small samples, the findings of this study in line with them.

In a nutshell, this study reveals the gendered face of entrepreneurship in Turkey quantitively. In other words, findings point out women's entrepreneurship in Turkey is associated with gender perceptions and socially expected gender role requirements. Therefore, this study contributes to the literature in several ways: (1) the perspective: Handling women's entrepreneurship from a gender perspective is limited in Turkey; (2) methodology: Quantitative studies from a gender perspective are scarce, (3) generalizability: Beyond the rareness of family-

embeddedness of women's entrepreneurship studies, there is not any study that generalized to Turkish context.

As social science research, this paper also has some constraints depending on secondary data use. First, not all desired variables that are considered to be included in the analysis are not provided in the OECD database. Second, some variables such as "gender wage gap" and "time use" cannot be included in the data due to a lack of years. Therefore, if possible, a nationwide field study consisting of lacking ones with a representative sample would provide important insights. Finally, different statistical and econometric models could be applied depending on the proposed model and available data set.

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