Economic Development and Female Labour Force Participation in Jordan: A Test of the U-Shaped Hypothesis

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ABSTRACT

This study aims to investigate the U-shaped hypothesis between economic development -measured by per capita GDP- and female labour force participation rate (FLFPR) in Jordan. The time series data on a macro level for the period of 1990-2017 were extracted from the World Bank Indicators (WBI). Other control variables such as female education, female unemployment rate, and urbanization were incorporated to capture the behaviour of FLFPR. The Dynamic Lease Squares (DOLS) approach was used to estimate the econometric model. Based on the findings, the U-shaped relationship as predicted between the economic development and FLFPR was confirmed. Hence, the FLFPR in Jordan was still found to exhibit a transition towards the bottom of the U-shaped curve due to being at the early stages of economic development and expected to rest on the rising portion of the U-shaped in future. The other control variables such as education and urbanization indicated a significantly positive impact on FLFPR as expected. Furthermore, findings revealed the dominance of the Added Worker Effect (AWE) over the Discouraged Worker Effect (DWE) as the GDP per capita showed a negative and significant impact on FLFPR. Overall, findings suggest that economic growth in Jordan by itself was not sufficient to enhance FLFPRs, unless labor market conditions are revised to be more convenient to absorb more female employment. Moreover, traditional education programs should be revised to make female labor force more employable and appropriately skilled.

Keywords: Economic Development in Jordan, Female Labor Force Participation in Jordan, Labor Market in Jordan.

INTRODUCTION

The World Bank indicators (WBI) revealed a paradoxical fact about the female labour force participation rate (FLFPR) in Jordan. It is still one of the lowest in the world. The refined activity rate (female labour force divided by the female population age 15+ years) measured 13.96% for Jordan with only two countries out of 187 ranked below Jordan in this indicator, namely the Syrian Republic and Yemen Republic (WBI, 2017). The measured value was slightly higher based on the Jordanian statistics,

where the refined rate remained stagnant at approximately 17.3% in 2017 while the crude rate (female labour force divided by total female population) recorded 11.6% (Jordan Statistical Yearbook, 2017). This paradox stems from the fact that this low FLFPR in Jordan was accompanied with substantial achievements that would have enhanced women participation in labour force. The examples of these achievements include a higher level of education for women, low fertility rate and other institutional factors (see table 1). With these improvements the FLFPR is expected to increase.

Among many factors, the stage of economic development is considered one of the most important factors that affects and shapes the behaviour of FLFPRs. This effect translates to a U-shaped relationship between the economic growth and FLFPRs as first introduced by Sinha (1967). This hypothesized relationship can be

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explained by the dominance of income effect over substitution effect on the declining portion of the U-shape at the early stage of economic development, while at the rising portion, the substitution effect is dominant (Golden, 1995). Moreover, FLFPRduring the early stages of economic development declines because of the structural transition from agricultural to service and industrial economy. This transition forces most of women who work as unskilled and unpaid workers in agricultural sector to leave their jobs. With more economic development and technology, women start to devote more time to education and training and less time to home production, hence, increasing their economic activity by devoting more time for market activities.

No previous studies have investigated the direct relationship between economic development and FLFPR in Jordan. Hence, this study aims to investigate the U-shaped hypothesis. Therefore, the main objective of this paper is to test and provide time-series evidence of U-shaped hypothesis between the economic growth and FLFPR in Jordan for the period of 28 years (1990-2017).

Many empirical studies have analysed the main determinants of Jordanian FLFPRs by incorporating both the supply and demand side factors at the macro and micro levels but none of them has outlined the direct impact of economic development on FLFPR (Milovanovitch et al., 2016; Assaad et al., 2012; Mryan, 2012; Al-Sharu et al., 1994; Talafha, 1993; Shakhatreh, 1989). The supply-side determinants include wages, employment opportunities for female, unemployment rate, urbanization and institutional factors. While the demand side determinants consisted mainly of personal and household characteristics such as education level, age, fertility rate and other demographic and social norms. The findings from these studies were consistent with the economic theory of the expected effect of proposed determinants on FLFPR such as the positive impact of education, low fertility rate, urbanization etc. Talafha (1993) analysed – indirectly- the relationship

between labour force participation rates for both males and females and economic development by investigating the behaviour of labour force participation with regards to the unemployment rates. His findings indicated the dominance of added worker over the effect of the discouraged worker. In addition, Bashir and Wahban (2013) outlined the main determinants of employment for males and females in Jordan. GDP growth is one of the determinants. The growth in GDP reported a positive and significant impact on general employment.

This paper is organized as follows. The next section delineates the facts on the main indicators and development of Jordan labour market on a gender basis since 1990. Section 3 covers the theoretical background and empirical evidence. Section 4 presents methodology: data and econometric model. Finally, Section 5 discusses the empirical results and Section 6 concludes the paper by providing policy implications.

2. Jordan labour market: Facts and trends on a gender basis

Table (1) summaries the main indicators and development of labour market based on gender for the selected years of 1990, 2000, 2010 and 2017 (WBI, 2017). Based on the tabulated data, the FLFPR has experienced a slight increase of 3% from 10.59% in 1990 to 13.96% in 2017. A similar increase was also visible in the female employment ratio from 7.09% in 1991 to 10.47% in 2017. a massive decrease in female unemployment rate from 35.1% in 1991 to 25.01% in 2017 strongly indicated the improvement in market conditions toward female employment which should enhance the FLFPR. The subtle increases in FLFPR and employment rates wereaccompanied by significant positive changes (as shown in table (1)) such as the significant increase in per capita GDP, female school enrolment, urbanization ratio and low fertility rate. These positive changes were expected to enhance the FLFPR.

Table (1) revealed three important facts which

deterred female's participation and partially explained the trivial increase in FLFPRs in Jordan. Firstly, the female employment ratio in the service sector during the period of 1990-2017 was approximately constant at 81% from total female employment even though the GDP share of this sector reached to 59% (WBI, 2017). Hence, it can be assumed that the Jordan economy is service oriented. The second fact is that the female self-employed ratio has declined from 8.07% in 1990 to 3.96% in 2017. Part of the decline in female self-

employment ratio was due to the role of public sector as a key employer for females. Based on Table 1, approximately 52.7% of the total female employment is working in the public sector (Jordan in Figures, 2017). Another interesting fact is that the fertility rate has decreased from 5.5 in 1990 to 3.4 in 2017 which is assumed to enhance female activity rate. This substantial decline in fertility rate is due mainly to higher level of education and economic difficulties.

Table (1)
Jordan Labour Market: Main Indicators (Gender Based)Selected Years

	1990			2000			2010			2017		
	M	F	T	M	F	T	M	F	T	M	F	T
LFPR	67.1	10.6	40.5	68.9	12.7	42.0	67.3	15.3	41.9	63.7	14	39.1
Ep	56.1	7.1	33.4	60.6	9.7	36.3	60.3	11.9	36.6	55.6	10.5	33.3
Es	73.7	82.1	74.7	73.6	83.	74.8	67.6	81.8	69.9	67.4	81.1	69.5
Se	22.2	8.1	20.7	21.0	7.6	19.3	18.6	4.9	16.5	17.8	4.1	15.7
Ur	17.7	35.1	19.9	12.0	23.6	13.7	10.5	21.9	12.5	12.8	25	14.9
W&S	77.8	91.9	79.3	79	92.4	80.7	81.3	95.1	83.5	82.2	96	84.3
EDU	17.3	22.1	19.5	25.5	29.2	27.3	34.9	39.4	37.3	35	37.5	36.3
FLF/MLF	15.8			18.4			22.7			21.9		
GDP pc	922.2			1061.8			1390.3			1223.7		
Urb	73.3			78.3			86.1			90.8		
FR	5.5			4.0			3.7			3.4		

* The first year is1991 for variables: Ep, Es, Se, Ur, W&S.

* The last year is 2016 for the variables: EDU and FR

Note: The table is created by the researcher and extracted from World Bank Indicators (WBI). Important indicators for the Jordanian labour market for selected years (numbers in ratios). Below are the explanations for the female indicators. Same explanation for male and total indicators.

- LFPR: Labour force participation rate, female (% of female population ages 15+)
- Ep: Employment to population, female (% of female population ages 15+)
- Es: Employment in services, female (% of female employment)
- Se: Self-employed, female (% of female employment)
- UR: Unemployment, female (% of female labour force)
- W&S: Wage and salaried workers, female (% of female employment)
- EDU: School enrolment, tertiary, female (% gross)
- FLF/MLF: Ratio of female to male labour force participation rate (%)
- GDP pc: GDP per capita (constant LCU)
- Urb: Urban pop. (% of total)
- FR: Fertility rate, total (births per woman)

3. Theoretical background and empirical evidence

On the other hand, there are numerous socio-economic factors in economic literature that affect female decision and ability to participate in the labour force. Sherverick (2014) summarized these factors under general and overlapped dimensions, namely, the stage of economic development, educational attainment, social norms influencing marriage, fertility, and women's role, accessibility to credit and other inputs, household characteristics and institutional setting in labour market (laws, protection, benefits).

Empirical studies examined and documented the U-shaped hypotheses by analysing the relationship between economic development and FLFPRs (Khaliq et al., 2017; Chapman, 2015; Lechman and Kaur, 2015; Gaddis and Klasen, 2014; Chen et al., 2014; Verme, 2014; Tsani et al., 2013; Mujahid and Zafar, 2010; Fatima and Humera, 2009; Goldin, 1995; Pampel and Tanaka, 1986).

Below are examples of selected empirical evidence that supports the U-shaped hypothesis between economic development and FLFPRs. Khaliq et al. (2017) examined the relationship between FLFPR and economic growth in Pakistan using time series data for the period of 1990-2014. The co-integration relation between the variables was tested using the error correction model (ECM) and Johansen co-integration tests. The econometric results suggested the existence of a long-run and a U-shaped link between economic growth and FLFPR in Pakistan.

Next, Chapman (2015) investigated the relationship between economic development and FLFPR using panel data for 20 countries in the Middle East and North Africa (MENA) for the period of 1990-2012. His results supported the U-shaped relationship between economic growth and FLFPRs. He concluded that female participation rates in these countries were experiencing a transition towards the bottom of the U-shaped curve.This reflects the negative relationship between economic

growth and FLFPR at early stage of economic development as in MENA region.

Besides, Lechman and Kaur (2015) outlined the relationship between economic growth and FLFPR by using the Generalized Method of Moments (GMM) for cross-country data which covered 162 countries. His findings supported the U-shaped hypothesis for only the high-income countries, while it was not the case for low-income countries.

Tsani et al. (2013) used General Equilibrium Modelling (GEM) for the Southern Middle Eastern Countries and confirmed the hypothesis between economic growth and FLFPRs.

In addition, Mujahid and Zafar (2010) analysed the time series data for Pakistan by using the Autoregressive Distributed Lag Model (ARDL) and reported a long-run U-shaped link between economic growth and FLFPRs.

To the contrary, several empirical studies did not support the hypothesis and found that the U-shaped relationship was not applicable in some countries which are characterized with high social and religious restrictions on women's desire to work (Dogan and Akyuz, 2017; Wolch and Dear, 2014; Lahoti and Swaminathan, 2013; Tam, 2011; Haghighat, 2005; Nassar, 2003; Alder et al., 1991).

For example, Buhari and Mursel (2017) outlined the relationship between the economic growth and female participation in Turkey using co-integration technique and Autoregressive Distributed Lag Model (ARDL) for quarterly from 2000 to 2010. Their findings reported a reverse U relationship between economic growth and FLFPR.

Lahoti and Swaminathan (2013) explored the relationship between economic development and female labour supply using a state-level data spanning from 1983-1984 to 2011-2012 in India and using Ordinary Least Squares (OLS) technique. The empirical findings did not support the U-shaped hypothesis, rather revealed no significant relationship between economic growth and FLFPRs.

Furthermore, Tam (2011) analysed a worldwide panel of 130 countries for the period of 1950-1980 using the dynamic panel data estimation. The empirical results demonstrated that the U-shaped relationship between feminization of the labour force and real GDP per capita was a representation of an inter-temporal relationship.

On the other hand, the economic development alongside other important controlling factors which were categorised under socio-economic and labour market conditions were examined and documented as basic determinants for FLFPRs. Among these are the educational attainment, wage rate, household income, fertility rate, marital status, unemployment rate, and urbanization rate (Chen et al., 2014; Szulga, 2014; Tsani et al., 2012; Yousefy and Baratali, 2011; Fatmia and Sultana, 2009; Jaumotte, 2003; Lam and Duryea, 1999). The empirical findings of the above studies documented a positive and significant impact of education, urbanization and low fertility rate on FLFPR, while the impact of the unemployment rate on female participation rates varied across countries.

4. Methodology: Data and Econometric Model
4.1 Data

The inaccessibility and unavailability of data on main labour market indicators prior to 1990 in Jordan restricted the study time in this study. Hence, the data before 1990 was estimated to have a constant growth rate where it had no fluctuations (Ibrahim et al., 1989). Therefore, to estimate the model of this study, time series data on FLFPR, per capita GDP, female unemployment rate, female education, and urbanization were extracted from the World Bank Development Indicators 2017 database. Table (2) reports the descriptive statistics for the main variables of this study for the period of 1990-2017. Based on table (2) results, all variables have shown slight dispersion around the mean and trivial skewness and kurtosis.

Table (2)

Descriptive statistics

	FLFPR	**Ln(GDPpc)**	**(LnGDPpc)^2**	**Fedu**	**Fur**	**Urb**
Mean	0.138	8.028	64.476	0.811	0.258	0.816
Std. Dev.	0.015	0.143	2.294	0.059	0.045	0.054
Skewness	0.307	-0.129	-0.111	-0.706	1.256	0.502
Kurtosis	1.952	1.705	1.696	2.151	3.345	1.875
Jarque-Bera	1.722	2.035	2.040	3.166	7.499	2.653
Probability	0.423	0.362	0.361	0.205	0.024	0.265
Observations	28	28	28	28	28	28

FLFPR: Female labour force participation rate.

LNGDPpc and (LNGDPpc)^2: Natural logarithm for real GDP per capita and its square.

Fedu: Female education level.

Fur: Female unemployment rate.

Urb: Urbanization.

4.2 Econometric Model

Based on the theoretical background of this study, the investigation on the proposed U-shaped relationship between FLFPR in Jordan and the stage of economic development requires an econometric model to incorporate the quadratic form of per capita GDP. Other control variables also include female education, female unemployment rate, and urbanization. The final

specification of the econometric model of the study would be as following:

FLFPR = F(GDPpc, (GDPpc)^2, Fedu, Fur, Urb).

Accordingly, the estimated model will be specified as:

FLFPR$_t$ = β$_0$ + β$_1$ Ln(GDPpc)$_t$ + β$_2$ Ln(GDPpc)$_t$^{2} + β$_3$ Fedu$_t$ + β$_4$ Fur + β$_4$ Urb$_t$ +ε$_t$

Dependent Variable:

FLFPR: female labour force participation rate which is the ratio of female in labour force from total female population aging between 16-64 years.

Explanatory Variables:

Ln(GDPpc): the natural logarithm of real GDP per capita.

(LnGDPpc)^2: the quadratic form of the natural logarithm of real GDP per capita.

Fedu: female educational attainment. It is the ratio of female students enrolled in tertiary education to the female population of the age group which officially corresponds to tertiary education.

Fur: Female unemployment, it is the ratio of unemployed female to the total female labour force.

Urb: urbanization, it is the ratio of urban population to total population.

5. Empirical Results

5.1 Testing for unit root and the existence of co-integration

For time series data classified as stationary, the initial test involves the use of the augmented Dickey-Fuller test (ADF) (Dickey and Fuller, 1981), which tests the null hypothesis of a unit root present in a time series. Meanwhile for non-stationary series, the correlation might be totally spurious (Engle and Granger, 1987) and they are said to be co-integrated if a linear combination exists for stationary series. Moreover, the test of Zivot-Andrews- unit root test- was conducted and none of the series has shown any structural breaks.

Table (3) lists the results of the ADF test which confirmed the presence of a unit root at level (non-stationary series) except for urbanization which is stationary at level, but other series can be made stationary using the first difference which means that series were integrated in order one. The null hypothesis of the presence of unit root for the first difference is rejected at 5% significance. Table (3) also summarises the Schwarz Info Criterion (SIC) that determines the number of lags that is required to eliminate the residuals serial correlation, hence, the error term is translated as white noise.

Table (3)
The results of the ADF test and Schwarz Info Criterion (SIC)

Variable	level			First-difference		
	ADF	C.V 10%	SIC	ADF	C.V 10%	SIC
FLFPR	0.831	-1.610	0	-5.309***	-1.609	0
LnGDPpc	1.445	-1.609	1	-3.785***	-1.609	0
(LnGDPpc)^2	1.362	-1.609	1	-3.696***	-1.609	1
Fedu	-0.636	-1.609	1	-2.247**	-1.609	0
Fur	-1.436	-1.610	0	-3.261***	-1.609	0
Urb	0.678**	-1.609	1	-1.413	-1.609	0
***Sig. at 1% **Sig. at 5%.						

On the other hand, Table (4) lists the Johansen co-integration test results which were estimated to examine

the existence of at least one linear combination of the variables that were stationary. This allows a non-

spurious co-integrating relationship between time series variables in the long run (Peter C. B. Phillip, 1995).

Moreover, the Trace Test Statistics and Eigen value Test Statistic in Table (4) determine the number of co-integrated vectors for the time series of the same order.

Both statistics suggested that there are five co-integrating vectors at a 10% significance level and also confirmed the presence of a long-run equilibrium relationship among the variables.

Table (4)
Unrestricted Co-Integration Rank Test (Trace and Maximum Eigen-value)

Hypothesized No. of CE(s)	Eigen-value	Trace Stat.	0.05 / Critical Value	Prob.**	Max-Eigen Stat.	0.05/ Critical Value	Prob.**
None *	0.989	294.88	125.62	0.00	118.06	46.23	0.00
At most 1 *	0.929	176.82	95.75	0.00	68.81	40.08	0.00
At most 2 *	0.774	108.01	69.82	0.00	38.68	33.88	0.01
At most 3 *	0.687	69.33	47.85	0.00	30.17	27.58	0.03
At most 4 *	0.622	39.16	29.80	0.00	25.29	21.13	0.01
At most 5	0.403	13.87	15.46	0.09	13.41	14.27	0.07
At most 6	0.017	0.46	3.84	0.50	0.46	3.84	0.50

Trace test and Max-Eigen value test indicates 5 co-integrating equations at the 10% level

 * denotes rejection of the hypothesis at the 0.05 level

 **MacKinnon-Haug-Michelis (1999) p-values

Moreover, Table (5) shows the Q-Stat results that confirmed the absence of autocorrelation up to five lags.

Table (5)
The Q-Stat. results for Autocorrelation (AC)

Difference	AC	PAC	Q-Stat	Prob*
1	0.008	0.008	0.0019	0.965
2	0.177	0.177	0.9808	0.612
3	-0.119	-0.125	1.4401	0.696
4	-0.463	-0.514	8.7425	0.068
5	-0.097	-0.082	9.0755	0.106
6	-0.401	-0.296	15.061	0.02

Based on the empirical results above, the co-integration relationship indicated the existence of a long-run relationship among the variables. The regular Ordinary Least Square (OLS) technique is not reliable as the regression is said to be spurious, hence it was omitted. This is because the OLS regression does not consider the long-run endogeneities in the regressions and in turn produces the second order bias for any co-integrating relationships (Peter C. B. Phillip, 1995). Moreover, the fully modified OLS approach (FMOLS) also is not applicable because not all the series are integrated of order one like urbanization variable which

was stationary at level (0). Therefore, the study utilizedthe Dynamic Lesat Squares approach (DOLS) which was introduced by Philip and Hansen (1990). DOLS provides optimal estimates of co-integrating regression with different order of integration, accounts also for any serial correlation in residuals and allows potential long-run endogeneity among explanatory variables which resulted from the existing co-integrating relationship.

5.2 The Long-Run DOLS Results

According to Table (6), the results of DOLS revealed a long-run relationship between the variables in the econometric model for this study. The high value of the coefficient of determination R^2 (0.92) and adjusted R^2 (0.9) indicated high goodness of fit statistics.

The results mainly reported and confirmed the presence of the proposed u-shaped hypothesis in this study between the female labour force participation rate and economic development. There is a positive and significant impact (at 5% Sig. level) for the quadratic form of the per capita GDP on the FLFPR. Hence, the FLFPR has a negative relationship with the level of per capita GDP at an early stage of economic development (low per capita GDP) which then skews to a positive relationship at a higher level of economic development (high level of per capita GDP).

Even though, all explanatory variables were expected to impact the FLFPR, some remained insignificant namely the female unemployment rate. This would be explained partly by the discouraging effect of the high female unemployment rates during nineties (1990s)

which weaknesses the relationship between FLFPR and unemployment rate.

However, female educational attainment and urbanization have shown, as expected, highly significant positive impact on FLFPR (at 1% Sig. level). A 10% increase in either female education and or urbanization could have resulted in an increase of 1.5% and 3.6% in FLFPR, respectively. This was consistent with other studies in this field where higher education and urbanization enhanced work opportunities for females in the labour market. Hence, their participation rates increase.

On the other hand, the impact of the unemployment rate and per capita GDP on female labour force participation rate in Jordan revealed the dominance of the DWE over the AWE. The negative but insignificant impact of the unemployment rate on FLFPR can be explained through the existence of DWE. During recession times, females as a secondary labour force will stop looking for a job and withdraw from the labour force as their opportunities in finding jobs are minimal due to the high unemployment rates. Hence, the unemployment rate is negatively related with the FLFPR. But, the negative and significant (at 5% Sig. level) impact of the per capita GDP on FLFPR can be explained by the dominance of the AWE which is consistent with the findings of other studies (Talfha, 1993) . High GDP growth which is associated with a high level of income would encourage secondary labour force, consisting mostly of women, to withdraw from labour force. Hence, female participation rates will drop accordingly.

Table (6)
The results of Dynamic Least Squares (DOLS)

Dependent Variable: FLFPR				
Explanatory Variables	**Coefficient**	**Stand. Error**	**t-Statistic**	**Probability**
LnGDPpc	-4.67	1.05	-4.46	0.0002
$(LnGDPpc)^2$	0.29	0.06	4.47	0.0002

Dependent Variable: FLFPR				
Explanatory Variables	**Coefficient**	**Stand. Error**	**t-Statistic**	**Probability**
Fedu	0.15	0.05	2.95	0.0074
Fur	-0.04	0.04	-0.98	0.3384
Urb	0.36	0.08	4.19	0.0004
C	18.54	4.2	4.42	0.0002
R-squared	0.917		Mean dependent var	0.138
Adjusted R-squared	0.898		S.D. dependent var	0.0 15
S.E. of regression	0.005		Sum squared resid	0.001
Long-run variance	2.5E-05			

6. Conclusion and Policy Implications

Jordan has undergone substantial structural changes in the last three decades. Even though the country has experienced a fair economic growth, there were structural shifts in the economy towards the service sector that comprised 59% of GDP in 2017 and accounted for 81% of female employment. These structural changes were accompanied by high rates of urbanization (urbanization ratio reaches 91% in 2017), the immense increase in educational attainment levels especially for females, and large decline in fertility rates (from 5.5 in 1990 to 3.4 in 2017) among other things. Despite the above, the female labour force participation rate in Jordan is still of lowest in the world which puzzles policymakers.

The current study uses time series data to investigate the U-shaped relationship between economic development and female labour force participation which is attributable to another important controlling variablesrepresentinglabour market conditions such as unemployment rate, urbanization and personal capabilities such as educational attainment and fertility rate. The empirical results confirmed the existence of a U-shaped relationship between the quadratic form of GDP per capita and female participation rate. This reflected on the changing influence of income and substitution effects due to the structural changes in the Jordanian economy. However, the time series evidence indicated that Jordan was still exhibiting the downward portion (approach

the bottom) of the U-shape due to the early stages of economic development in the country. Moreover, the negative and significant impact of linear GDP per capita on female participation supported the above conclusion and strongly postulated that economic growth by itself is insufficient to increase female participation in labour force.

Furthermore, the other determinants of female labour force participation have shown the expected impact and were found to be statistically significant. Educational attainment and urbanization as expected were the most important determinants of female labour force participation with their positive and highly significant impact. This result is consistent with the fact that high female employment in the service sector is the key driver for more female employment in Jordan (accounted for 81% of female employment in 2017).

Additionally, the negative impact of the unemployment rate on female participation in the study revealed the dominance of the discouraging effect of the high unemployment rates which indicated the shortcomings of market conditions toward more female participation.

Overall, the economic growth in Jordan has not been employment intensive for female and the gender gap in economic activities is still sizable despite the tremendous increase in education. Therefore, the study suggests some recommendations and policy implications on both the demand and supply sides to enhance female participation rates. On the supply side, policymakers are

encouraged to reconsider the traditional education streams, and enhance female employability through expanding educational opportunities toward more technical and vocational skills than traditional education. While, on the demand side, policymakers are recommended to devote more efforts to labour market conditions to be more female-friendly through revisiting the institutional environment by reducing gender discrimination mainly in private and service sectors

where the majority of female employment was concentrated. Furthermore, more policy implications can drafted and implemented to revive incentives for female participation such as eliminating existing gender gap in wages in private sector, enforcement of provision for child day care facilities, and more public long-term programs toward social attitudes regarding gender roles.

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حالة التنمية الاقتصادية في الأردن ومعدل مشاركة الإناث في القوى العاملة: اختبار فرضية المنحنى النوني"

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ملخص

تهدف هذه الدراسة الى اختبار وتحليل العلاقة بين معدل مشاركة الإناث في سوق العمل والنمو الاقتصادي في الأردن ممثلاً بحصة الفرد من الناتج المحلي الإجمالي الحقيقي خلال الفترة من 1990-2017 من حيث الاتجاه وشكل العلاقة. وتتمثل إشكالية الدراسة بأن معدل مشاركة المرأة الأردنية في النشاط الاقتصادي يعتبر من الأقل عالميا (من أقل ثلاث دول في العالم) حسب مؤشرات البنك الدولي لعام 2017 بالرغم من الإنجازات الكبيرة التي تحققت للمرأة الأردنية خلال العقود القلية الماضية في الجوانب التعليمية والتشريعية والاقتصادية والاجتماعية التي كان يجب أن تعزز مشاركتها الاقتصادية. فالحقائق تؤكد زيادة مستويات تعليم المرأة وزيادة مشاركتها السياسية والاجتماعية، وانخفاض معدلات الخصوبة للمرأة الأردنية. و تفترض الدراسة وجود علاقة على شكل صيغة تربيعية بين معدل مشاركة المرأة والنمو الاقتصادي في الأردن مع الأخذ بعين الاعتبار أثر بعض العوامل ذات العلاقة مثل: مستوى التعليم، معدل البطالة للإناث، ونسبة التحضر. حيث أثبتت نتائج الدراسة وجود العلاقة التربيعية وبدلالة إحصائية قوية بين المتغيرين الرئيسيين وأن معدل مشاركة المرأة الأردنية يتأثر سلبياً بالنمو الاقتصادي والذي يبدو أنه ملائم أكثر للقوى العاملة من الرجال. كما أكدت الدراسة على التأثير الإيجابي القوي للتعليم والتحضر على معدل مشاركة المرأة الأردنية في سوق العمل. وأظهرت النتائج كذلك سيادة العامل المضاف على العامل المثبط المرتبط بمعدل البطالة والذي تبين من خلال العلاقة العكسية بين النمو الاقتصادي ومعدل المشاركة.وتؤكد الدراسة بأن النمو الاقتصادي بحد ذاته لن يعزز مشاركة المرأة الاقتصادية وتوصي بمراجعة جميع السياسات والإجراءات المتعلقة بجوانب الطلب والعرض والتي قد تعزز مشاركة المرأة الاقتصادية مثل ظروف سوق العمل ومدى موائمتها لعمل المرأة، وسياسات التعليم التقليدي والمهني لزيادة فرص المرأة في دخول سوق العمل.

الكلمات الدالة: سوق العمل الأردني، مشاركة المرأة الأردنية في سوق العمل، النمو الاقتصادي ومشاركة الإناث في سوق العمل.

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