

FORECAST VALUES OF THE IMPACT ASSESSMENT ON ENSURING FEMALE EMPLOYMENT IN THE SERVICE SECTOR

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Annotatsiya: Qoraqalpog'iston Respublikasida faoliyat ko'rsatayotgan yakka tartibdagi tadbirkor xotin-qizlar sonini va xizmat ko'rsatish sohasida faoliyat yuritayotgan kichik biznes va xususiy tadbirkorlik tarkibidagi xotin-qizlar soniga tadbirkor xotin-qizlar sonidagi o'zgarishlar ta'sirini baholash natijalarini ochib berilgan.

Kalit so'zlar: Xotin-qizlar, sonini, xizmat ko'rsatish, model, soha, baholash, natija, Mintaqada, faoliyat, ayollar, bandligi, faoliyat.

Аннотация: Раскрыты результаты оценки численности индивидуальных женщин-предпринимателей, осуществляющих деятельность в Республике Каракалпакстан, и влияние изменения численности женщин-предпринимателей на численность женщин в малом бизнесе и частном предпринимательстве, осуществляющих деятельность в сфере услуг.

Ключевые слова: Женщины, численность, предоставление услуг, модель, сектор, оценка, результат, Регион, деятельность, женщины, занятость, активность.

Abstract: The results of the assessment of the number of women entrepreneurs operating in the Republic of Karakalpakstan and the impact of
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changes in the number of women entrepreneurs on the number of women in small businesses and private entrepreneurship operating in the service sector are disclosed.

Keywords: *Women, number, service, model, sector, assessment, result, Region, activity, women, employment, activity.*

Another important area of employment is individual entrepreneurship. This type of entrepreneurship creates the opportunity to start a business with minimal capital, without unnecessary expenses and fees. Therefore, ensuring women's employment in this area is one of the promising areas. The current trend in the number of individual women working in the region has been a steady growth rate, but the restrictions imposed due to the pandemic in 2020 caused a sharp decrease in the indicator. In subsequent years, higher growth rates have been observed to compensate for this decrease. Taking this into account, the following model was selected to develop forecast values.

$$X_7 = 32,6 * t - 989,8 * D_{X7}$$

Here: X_7 - the number of individual female entrepreneurs operating in the Republic of Karakalpakstan (persons); D_{X7} - an additional factor introduced to take into account the decrease in 2020 due to restrictions introduced due to the pandemic.

The results of the criteria required to justify the reliability and adequacy of the model are presented in Table 1, all of which are at the required level.

Table 1

Results of a model developed to calculate forecast values for the number of female individual entrepreneurs operating in the Republic of Karakalpakstan

Model 43: ARMAX, using observations 2012-2023 (T = 12)

Dependent variable: (1-L) X_7

	<i>Coefficient</i>	<i>Std. Error</i>	<i>z</i>	<i>p-value</i>	
DX_7	-989.780	169.501	-5.839	<0.0001	***
Time	32.5780	5.92645	5.497	<0.0001	***

Mean dependent var	135.1667	S.D. dependent var	335.1892
Mean of innovations	-26.68663	S.D. of innovations	158.8024
Uncentered R-squared	0.905630	Centered R-squared	0.795948
Log-likelihood	-76.74526	Akaike criterion	157.4905
Schwarz criterion	158.4603	Hannan-Quinn	157.1315

Based on these results, the model was used to develop forecast values for 2024-2028. According to the forecast results, the number of active female individual entrepreneurs will also continue to grow steadily. That is, by 2028, their number is expected to reach 9,492, which means that the average growth rate in their number over the next five years will be 6.6 percent (Table 2).

Table 2

Forecast values for the number of female individual entrepreneurs operating in the Republic of Karakalpakstan

For 95% confidence intervals, $z(0.025) = 1.96$

Years	X ₇	Growth rate	Standard error	95 percent interval
2024	7342	106,6	158,802	(7030,84, 7653,34)
2025	7831	106,7	224,581	(7390,59, 8270,93)
2026	8352	106,7	275,054	(7812,91, 8891,11)
2027	8906	106,6	317,605	(8283,34, 9528,33)
2028	9492	106,6	355,093	(8796,27, 10188,2)

If we take into account that the average growth rate of this indicator in 2011-2023 was 2.4 percent, and in the last five years - 3.3 percent, we can see that significant changes are expected in this direction in the next five years. The high growth rate of the forecast results for the last two indicators indicates that a favorable environment is being created for women to engage in entrepreneurship to ensure their employment. As a result, they will not only ensure their employment but also help others to secure employment.

The issue of assessing the impact of both of these indicators on ensuring female employment in the service sector was also considered.

$$\ln(X_5) = 5,06 + 0,37 * \ln(X_6) + 0,35 (X_7)$$

The results obtained show that the model has a high level of reliability (Table 3). In particular, the coefficients are highly reliable, the coefficient of determination is almost equal to one, and the Durbin-Watson statistic is in an ideal state.

The model results show that a one percent increase in the number of women-owned small businesses in the region will increase female employment in the service sector by 0.37 percent. Similarly, a one percent increase in the number of women sole proprietors will increase employment by 0.35 percent. Overall, a one percent increase in both indicators will increase employment by 0.72 percent in the number of women employed in small businesses and private entrepreneurship in the service sector.

Table 3

Results of an assessment of the impact of changes in the number of women entrepreneurs on the number of women in small businesses and private entrepreneurship operating in the service sector in the Republic of Karakalpakstan

Model 7: OLS, using observations 2011-2023 (T = 13)

Dependent variable: $\ln X_5$

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
Const	5.06229	0.525067	9.641	<0.0001	***
$\ln X_6$	0.375786	0.0316308	11.88	<0.0001	***
$\ln X_7$	0.350983	0.0806380	4.353	0.0014	***
Mean dependent var	10.95704		S.D. dependent var	0.096852	
Sum squared resid	0.001641		S.E. of regression	0.012811	
R-squared	0.985420		Adjusted R-squared	0.982504	
F(2, 10)	337.9353		P-value(F)	6.59e-10	

Log-likelihood	39.90611	Akaike criterion	-73.81223
Schwarz criterion	-72.11738	Hannan-Quinn	-74.16060
Rho	-0.088767	Durbin-Watson	2.055610

The results of the study show that in the next five years, positive results will be achieved in increasing women's entrepreneurial activity and employment in the service sector in the region, and high growth rates will be ensured. In particular, the number of women employed in the service sector will reach 110,195 by 2028, with an average growth rate of 1.7 percent.

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