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The Employment Structure of Women-Led Small and Medium-Sized Enterprises in Kazakhstan

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Abstract

This study examines how women-led small and medium-sized enterprises (SMEs) are represented in Kazakhstan's employment structure and how that representation changed between 2016 and 2025. The study aims to assess the level and organisational structure of employment in women-led small and medium-sized enterprises in Kazakhstan during 2016–2025. The empirical base consisted of ten annual observations based on data from the Bureau of National Statistics of the Republic of Kazakhstan. Descriptive dynamics analysis, Pearson correlation coefficients, and parsimonic models of ordinary least squares are applied. Also, it was found that the total share of employment in enterprises headed by women increased from 31.2% in 2016 to 34.0% in 2025, with the main increase occurring after 2022. The corresponding shares increased by 3.1 p.p. in both legal entities and individual enterprises and by 3.3 p.p. in farms. Within women-led SMEs, legal entities remained the largest employment category in 2025 (52.7%), followed by individual enterprises (41.9%) and farms (5.5%). The strong negative correlation between the shares of individual enterprises and legal entities ($r = -0.993$) primarily reflects their compositional relationship rather than economic substitution. Regression estimates are therefore interpreted as descriptive associations, not causal effects. The findings show a modest expansion of women-led employment without a fundamental change in its organisational composition.

Keywords: Gender, Gender Inclusion, Woman-led Enterprise, Entrepreneurship, Employment, Leadership, Empowerment

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1. INTRODUCTION

Women's entrepreneurship is relevant to labour-market policy for two distinct reasons. First, business ownership is itself a form of economic participation and income generation. Second, enterprises led by women may create employment for other workers. These dimensions should not be treated as interchangeable: a rise in the number of self-employed women does not necessarily imply a comparable rise in wage employment, firm scale or job stability. An employment-based perspective therefore complements conventional measures based on firm counts or entrepreneurial intentions.

The organisational form of a business is particularly important in this respect. Individual enterprises provide a comparatively accessible route into entrepreneurship, but they often operate at a small scale and rely mainly on the owner's labour. Legal entities are more likely to formalise managerial responsibilities, contracts and hired employment, although they also face higher entry and compliance costs. Farms occupy a separate position because their labour demand is shaped by seasonality, location and agricultural production cycles. The distribution of women-led employment across these forms offers a concise indication of both participation and organisational depth.

Kazakhstan provides a useful setting for examining these relationships. Women's entrepreneurial activity has expanded, yet gender differences persist in access to finance, networks, infrastructure and high-growth sectors (Gamidullaeva & Anessova, 2025; Kenzheali, 2025). Aggregate national statistics make it possible to track employment associated with women-led SMEs by legal form. However, the resulting annual series is short, and the indicators share common denominators and accounting identities. These features require cautious inference and make descriptive interpretation more appropriate than causal claims.

Existing research explains gender differences in entrepreneurship through institutions, sectoral sorting, resources, human capital and social norms (Estrin & Mickiewicz, 2011; Jennings & Brush, 2013; Klapper & Parker, 2011). Policy research additionally warns that interventions often treat women as deficient in skills instead of addressing the gendered structure of entrepreneurial ecosystems (Foss et al., 2019). Much less attention is paid to the internal composition of employment generated by women-led businesses in a single national setting over time. This study addresses that gap by separating two questions: how large is the women-led employment share within each SME category, and how is employment distributed across organisational forms inside the women-led segment?

Accordingly, the study aims to assess the level and organisational structure of employment in women-led SMEs in Kazakhstan during 2016–2025. It asks: (1) how did women-led employment shares change across legal entities, individual enterprises and farms; (2) did the internal employment structure shift across these forms; and (3) how should the observed correlations be interpreted given the aggregate and compositional nature of the data? The contribution is a transparent indicator framework, a corrected interpretation of the statistical relationships, and policy implications that distinguish participation from business scaling.

2. LITERATURE REVIEW

Cross-country evidence shows that women's and men's entry into entrepreneurship responds differently to institutional and economic conditions (Verheul et al., 2006). Formal rules, access to credit and property, labour-market alternatives and informal gender norms jointly shape whether entrepreneurship is opportunity-driven, necessity-driven or compatible with household responsibilities. Estrin and Mickiewicz (2011) similarly demonstrate that institutions influence female entrepreneurial entry, while Noguera et al. (2015) emphasise the role of the institutional environment in women's business activity.

Ahl (2006) argues that research often evaluates women-led firms against an implicit growth-oriented male norm. This framing can understate economic contributions realised through income security, continuity and local service provision. Dean et al. (2019) extend this critique by showing how the dominant economic-growth narrative narrows the evaluation of women's entrepreneurship. An employment-structure approach does not eliminate this problem, but it makes explicit whether participation is concentrated in owner-operated activity or in organisations that employ additional labour.

This critique also has a direct policy implication. A systematic review by Foss et al. (2019) finds that recommendations in women's entrepreneurship research frequently focus on correcting women's supposed skill deficits, while paying less attention to finance systems, procurement, care responsibilities and sectoral opportunity structures. More recent evidence indicates that appropriately designed accelerators can reduce barriers involving networks, legitimacy, mentoring and access to capital (Avnimelech & Rechter, 2023). Accordingly, employment outcomes should be interpreted as products of both firm-level capabilities and the institutional environment in which women-led businesses operate.

Women-led enterprises are, on average, smaller and less likely to employ paid workers. Fairlie and Robb (2009) report gender differences in firm performance and employer status, while Klapper and Parker (2011) connect these differences to sectoral concentration and the business environment. Women are more frequently represented in trade and services, where entry barriers may be lower, but capital intensity and average firm size are also limited. Terrell and Troilo (2010) further show that values and occupational choices affect entrepreneurial pathways.

In developing and transition contexts, women's entrepreneurship is frequently realised through microenterprises and self-employment. Such activity can support household income and local resilience without necessarily generating many hired jobs (Lock & Lawton Smith, 2016; Minniti, 2010). Resource access alone may not close the gap: evidence from African enterprises indicates persistent gender differences in converting resources into business performance and employment (Lemma et al., 2023). Entrepreneurial competencies and the capacity to absorb new knowledge are therefore relevant to sustainability and scaling (Setyaningrum et al., 2023).

Recent configurational studies also caution against assuming a single pathway. Different combinations of finance, education, policy support, opportunity perception and social norms may produce either employer firms or widespread small-scale self-employment (Li et al., 2021; Xie et al., 2021). The analytical implication is that a higher women-led employment share may coexist with a stable organisational structure. Participation and structural upgrading should consequently be measured separately. At the firm level, women entrepreneurs' performance is also associated with access to finance, managerial experience, education and institutional support (Alene, 2020).

Evidence from Kazakhstan similarly points to the combined importance of institutional access, sectoral concentration and territorial conditions. Onyusheva and Meyer (2020) described women's entrepreneurship as an expanding but uneven component of the national economy, constrained by access to finance, support infrastructure and business knowledge. This country-specific literature is consistent with the broader ecosystem view: legal equality and general SME programmes may increase participation without automatically producing employer firms, higher productivity or entry into capital-intensive activities.

The literature suggests two descriptive expectations. First, women-led employment shares should move in the same direction across legal forms when broad institutional or macroeconomic conditions affect women's participation throughout the SME sector. Second, because the internal structural shares sum approximately to one, increases in one

category must be offset by decreases in another. A negative association between the legal-entity and individual-enterprise shares is therefore expected, but it cannot by itself demonstrate behavioural substitution. These expectations guide the empirical analysis without being framed as causal hypotheses.

The analytical framework distinguishes three layers of women's entrepreneurial employment. The first is participation: the extent to which employment within each SME organisational form is associated with women-led businesses. The second is organisational allocation: the distribution of employment inside the women-led segment among legal entities, individual enterprises and farms. The third is employment depth: the capacity of a business to move beyond owner-employment and sustain paid jobs for other workers. The available statistics measure the first two layers directly but do not observe the third. This distinction matters because an increase in women-led participation may result from more owner-operated enterprises, from the expansion of existing employer firms, or from both processes simultaneously. Aggregate shares alone cannot separate these channels.

The accessibility of entry into entrepreneurship shapes participation. Registration procedures, start-up costs, household responsibilities, access to small amounts of capital and the availability of market information affect whether women can establish economic activity. Individual entrepreneurship may lower some of these barriers because it requires a simpler organisational structure and can be combined more easily with family responsibilities. However, accessibility does not guarantee growth. A business that remains dependent on the owner's labour can generate income and autonomy while contributing little to hired employment. It should therefore be recognised as economically important without being interpreted automatically as an employer firm.

Organisational allocation reflects both strategic choice and constraint. Legal-entity status may be selected by firms seeking investment, contracts, partnerships or a clearer separation between personal and business liabilities. Conversely, women may remain individual entrepreneurs because their activities do not require a complex structure. After all, formalisation costs exceed expected benefits, or because finance and demand are insufficient to support expansion. The observed legal form is thus not a simple hierarchy in which one category is universally superior. Its meaning depends on sector, business model, growth intention and the regulatory environment. Nevertheless, when the policy objective is stable wage-employment creation, the capacity to employ workers and enter formal contractual relationships becomes a relevant outcome.

Employment depth connects these organisational choices to labour-market inclusion. A women-led firm can contribute through self-employment, unpaid family work, temporary labour or formal paid employment, each carrying different implications for income security and social protection. The official aggregate indicators used here do not distinguish these employment relationships. Consequently, the study treats legal form as an organisational marker rather than a direct measure of job quality. This cautious interpretation prevents a normative equation of legal entities with good employment and individual enterprises with poor employment, while still recognising that firm scale and formal employer status are important dimensions for future measurement.

The framework also locates enterprise outcomes within a gendered ecosystem. Finance, procurement rules, sectoral segregation, care infrastructure, mobility, digital access and professional networks influence both entry and scaling. Women entrepreneurs may therefore display similar capabilities to men but face different opportunity structures. The policy problem cannot be reduced to individual training deficits. Ecosystem interventions are more likely to affect employment depth when they combine capability development with market access, finance, mentoring, technology and demand. This interpretation is consistent with

the critical policy review of Foss et al. (2019) and the accelerator evidence of Avnimelech and Rechter (2023).

3. METHODOLOGY

The empirical base comprises annual aggregate indicators for Kazakhstan, covering the period from 2016 to 2025. The source is the business-statistics section of the Bureau of National Statistics of Kazakhstan (2025). The unit of analysis is the country-year; consequently, the effective sample contains ten observations. Employment is disaggregated by legal entities, individual enterprises and farms and is separately reported for women-led SMEs.

The term women-led follows the classification used in the official source. The publicly available aggregate series does not permit identification of individual firms, transitions between legal forms, sectoral composition, regional heterogeneity or the number of employees per firm. The analysis therefore concerns employment associated with women-led SMEs at the aggregate level and should not be interpreted as evidence about individual women workers or individual business outcomes. Table 1 shows operational definitions of source variables.

Table 1. Operational definitions of source variables

Code	Definition
EMP_TOTAL	Total employment in SMEs
EMP_LLC	Employment in SME legal entities
EMP_IP	Employment in individual enterprises
EMP_FARM	Employment in farms
EMP_W	Employment in all women-led SMEs
EMP_W,LLC	Employment in women-led legal entities
EMP_W,IP	Employment in women-led individual enterprises
EMP_W,FARM	Employment in women-led farms

Note: compiled by the authors based on the Bureau of National Statistics (2025)

Two indicator families are calculated. The first measures the women-led employment share within organisational form j in year t (1):

$$W\_SHARE_{jt} = EMP\_W_{,jt} / EMP_{jt} \quad (1)$$

where:

W_SHARE_{jt} – the share of employment in women-led SMEs of organisational form j in year t;

$EMP\_W_{,jt}$ – the number of persons employed in women-led SMEs of organisational form j in year t;

EMP_{jt} – the total number of persons employed in all SMEs of organisational form j in year t.

This ratio answers how much employment in a given SME category is associated with women-led enterprises. W_SHARE without a subscript denotes the overall SME sector. The second family measures the distribution of women-led SME employment across organisational forms (2):

$$STRUCT_{jt} = EMP\_W_{,jt} / EMP\_W_{t} \quad (2)$$

where:

W_SHARE_{jt} – the share of employment attributable to organisational form j within total employment in women-led SMEs in year t.

The analysis proceeds in four steps. First, levels, percentage-point changes and turning points are described. Second, the averages for 2016–2022 and 2023–2025 are compared to determine whether the visible post-2022 movement concerns the level of participation, organisational composition or both. Third, Pearson correlation coefficients summarise contemporaneous co-movement. Statistical significance is reported as an exploratory

diagnostic only. With ten annual observations, conventional p-values are sensitive to outliers, serial dependence and the common post-2022 shift.

Third, the two parsimonious ordinary least squares specifications reported in the source analysis are retained for comparability: W_SHARE is regressed on W_LLC and W_FARM and STRUCT_IP is regressed on STRUCT_LLC. The models are descriptive accounting summaries. They do not identify causal effects because the dependent and explanatory variables are constructed from related aggregates, the sample is small, omitted macroeconomic factors may affect all series, and no lag structure or exogenous identification strategy is available.

The second regression deserves caution. STRUCT_IP and STRUCT_LLC are components of the same total, and farms account for only about 5.5–6.3%. Their near-perfect negative association is largely expected from the adding-up constraint. Accordingly, coefficient magnitude and R^2 are not evidence that one legal form causes employment to leave the other. As a sensitivity check, rank correlations and correlations of annual first differences are also considered. First differences remove persistent levels and focus on whether year-to-year changes move together. All calculations use the annual series reported in Tables 2 and 3; the original estimates were generated in JASP.

The validity of the indicators depends on keeping their denominators conceptually distinct. W_LLC, W_IP and W_FARM compare women-led employment with total employment inside the same organisational category; they measure representation. STRUCT_LLC, STRUCT_IP and STRUCT_FARM divide women-led employment by total women-led SME employment; they measure composition. A high value of W_IP therefore does not imply that individual enterprises constitute the largest source of women-led employment. Conversely, a high STRUCT_LLC value does not imply that women are proportionately well represented among all legal entities. Reporting both families prevents denominator ambiguity and allows the substantive conclusions to be replicated from the source aggregates.

Reproducibility is supported by presenting every annual derived observation, the construction formulas, the regression sample size and the complete coefficient tables. Rounding to three decimals creates small deviations in the structural adding-up identity. It may slightly alter correlations if calculations are reproduced from the published table rather than unrounded source values. The analysis therefore avoids interpreting third-decimal differences substantively. No missing-value procedure, interpolation or extrapolation was applied. The study also refrains from constructing confidence intervals around descriptive national aggregates because the main uncertainty concerns measurement, model specification and temporal dependence rather than conventional sampling error.

4. ANALYSIS AND RESULTS

This section sequentially presents the empirical findings. First, it examines changes in the share of employment associated with women-led SMEs across different organisational forms. Second, it compares the periods before and after 2022 to determine whether the observed changes reflect increased women's participation or shifts in the internal structure of employment. Third, correlation and sensitivity analyses are used to evaluate the consistency of relationships among the indicators. Finally, descriptive OLS models assess the associations between the overall women-led employment share and employment across specific organisational forms. Given the small number of annual observations and the interdependence of the constructed indicators, all results are interpreted as descriptive associations rather than causal effects—Table 2 shows 2omen-led employment share by SME organisational form.

Table 2. Women-led employment share by SME organisational form for 2016–2025

Year	Overall	Legal entity	Individual enterprise	Farm
2016	0.312	0.253	0.392	0.216
2017	0.314	0.257	0.401	0.216
2018	0.304	0.249	0.400	0.208
2019	0.312	0.262	0.400	0.208
2020	0.314	0.264	0.399	0.206
2021	0.311	0.262	0.399	0.204
2022	0.311	0.264	0.400	0.203
2023	0.337	0.279	0.429	0.246
2024	0.340	0.284	0.426	0.247
2025	0.340	0.284	0.423	0.249

Note: compiled by the authors

The overall share of employment associated with women-led SMEs increased from 31.2% in 2016 to 34.0% in 2025, a gain of 2.8 percentage points. The series was broadly stable between 2016 and 2022, fluctuating from 30.4% to 31.4%, before rising to 33.7% in 2023 and 34.0% in 2024–2025. Thus, the end-of-period increase is concentrated in a short interval rather than representing a smooth decade-long trend.

Individual enterprises recorded the highest women-led employment share throughout the period: 39.2% in 2016 and 42.3% in 2025. The legal-entity share increased from 25.3% to 28.4%, while the farm share rose from 21.6% to 24.9%. In percentage-point terms, the three categories changed by similar magnitudes. The result does not mean that individual enterprises created the largest absolute number of jobs, because Table 3 reports within-category proportions rather than employment counts. It shows that women-led businesses account for a larger fraction of employment in individual enterprises than in the other organisational forms.

Table 3. Average indicators of women-led employment participation and organisational composition for 2016–2022 and 2023–2025, %

Indicator	2016–2022	2023–2025	Difference, p.p.
Women-led employment share	31.11	33.90	+2.79
Legal entities: women-led share	25.87	28.23	+2.36
Individual enterprises: women-led share	39.87	42.60	+2.73
Farms: women-led share	20.87	24.73	+3.86
Individual enterprises within women-led SMEs	42.16	42.27	+0.11
Legal entities within women-led SMEs	51.91	52.07	+0.16
Farms within women-led SMEs	5.89	5.67	−0.22
Unweighted averages of annual observations. P.p = percentage points.			

Note: compiled by the authors

The subperiod comparison separates the change in participation from the change in composition. The overall women-led employment share averaged 31.11% in 2016–2022 and 33.90% in 2023–2025, a difference of 2.79 percentage points. All three within-form indicators rose, with the largest difference in farms. By contrast, the internal distribution was virtually unchanged: the average shares of individual enterprises and legal entities differed by only 0.11 and 0.16 percentage points, respectively. The post-2022 shift is therefore a level shift in women-led representation across the SME sector, not evidence of organisational restructuring. The distribution of employment across organisational forms within the women-led SME segment is reported in Table 4.

Table 4. Distribution of employment within women-led SMEs for 2016–2025

Year	Individual enterprise	Legal entity	Farm
2016	0.374	0.562	0.063
2017	0.403	0.535	0.062
2018	0.427	0.511	0.061
2019	0.435	0.509	0.056
2020	0.426	0.516	0.057
2021	0.442	0.501	0.057
2022	0.444	0.500	0.056
2023	0.423	0.519	0.057
2024	0.426	0.516	0.058
2025	0.419	0.527	0.055

Note: compiled by the authors

Legal entities remained the largest component of women-led SME employment in every year, although their share declined from 56.2% in 2016 to 52.7% in 2025. Individual enterprises increased from 37.4% to 41.9%, and farms declined from 6.3% to 5.5%. The largest shift occurred before 2021: the individual-enterprise share reached 44.4% in 2022 while the legal-entity share fell to 50.0%. Part of that movement reversed after 2022.

Women-led representation is highest within individual enterprises, but legal entities still account for the largest share of all employment inside the women-led SME segment. The organisational structure changed only moderately over the full period and remained dominated by the same two categories.

Figure 1 visualises the pairwise correlations between the participation and structural indicators.

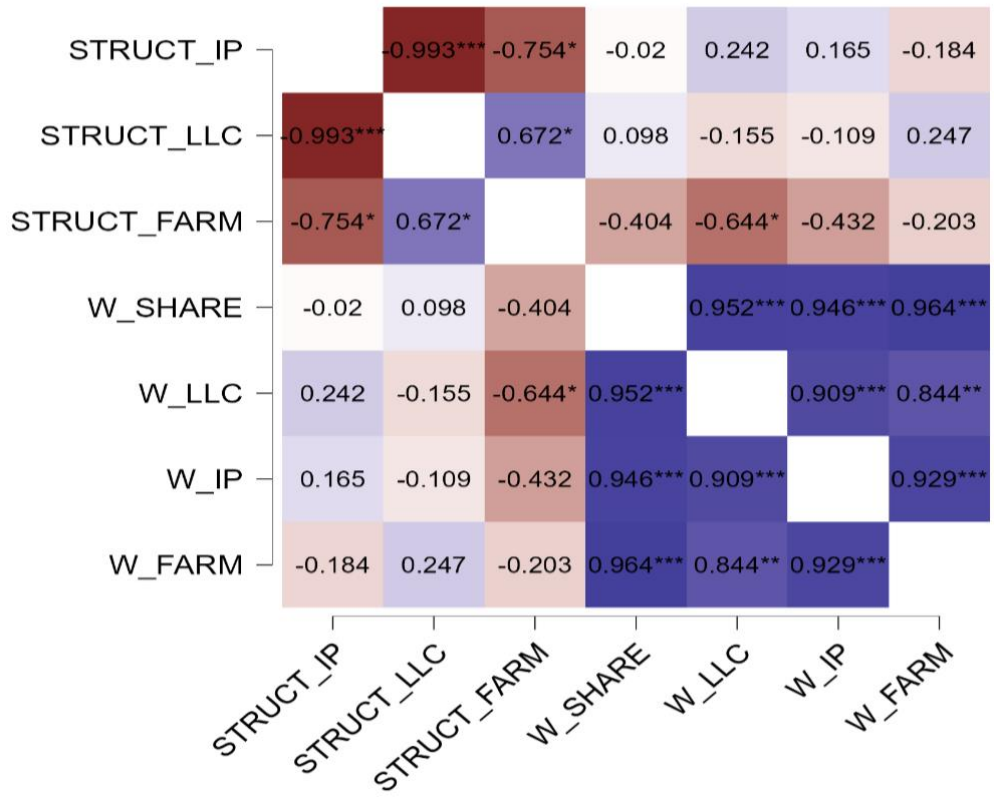

Figure 1. Correlation matrix of women-led SME employment indicators for 2016–2025

The four within-category women-led employment indicators co-move strongly: correlations range from 0.844 to 0.964. W_SHARE is most strongly associated with W_FARM (r = 0.964), followed by W_LLC (r = 0.952) and W_IP (r = 0.946). These coefficients are consistent with a broad increase across organisational forms, but common denominators, shared trends and the 2023 level shift prevent causal interpretation.

Within the structural block, STRUCT_IP and STRUCT_LLC are almost perfectly negatively correlated (r = −0.993). STRUCT_FARM is negatively correlated with STRUCT_IP (r = −0.754) and positively correlated with STRUCT_LLC (r = 0.672). Because the three structural shares add to one and the farm component varies within a narrow range, the first relationship is substantially mechanical. Correlations between W_SHARE and the structural components are weak: −0.020 for individual enterprises, 0.098 for legal entities and −0.404 for farms. Thus, the available data do not show that changes in organisational composition were systematically associated with the overall women-led employment share. Table 5 assesses whether the principal relationships remain consistent when rank correlations and correlations of annual first differences are used instead of Pearson correlations in levels.

Table 5. Sensitivity of selected associations

Indicator pair	Pearson levels	Spearman levels	Pearson first differences
W_SHARE–W_LLC	0.952	0.762	0.910
W_SHARE–W_IP	0.946	0.642	0.836
W_SHARE–W_FARM	0.964	0.806	0.928
STRUCT_IP–STRUCT_LLC	−0.993	−1.000	−0.987

Note: compiled by the authors

The direction of the principal associations is robust to alternative summaries, although magnitudes vary. The positive relationships between W_SHARE and the three organisational-form indicators remain strong after first differencing (0.836–0.928), which suggests that co-movement is not exclusively a result of smooth common trends. Nevertheless, the simultaneous 2023 increase can still dominate such a short series. The negative STRUCT_IP–STRUCT_LLC association also persists in first differences (−0.987), as expected under the adding-up constraint. The fit statistics for the two descriptive OLS specifications are presented in Table 6.

Table 6. Descriptive OLS model fit

Dependent variable	R^2	RMSE	F	P	N
W_SHARE	0.996	0.001	830.475	< .001	10
STRUCT_IP	0.986	0.003	548.911	< .001	10
W_SHARE model includes W_LLC and W_FARM. STRUCT_IP model includes STRUCT_LLC.					

Note: compiled by the authors

Following the assessment of overall model fit, the individual regression coefficients were examined to determine the direction, magnitude and statistical significance of the relationships between the selected indicators. It reports the unstandardised coefficients, standard errors, standardised coefficients, t-statistics, significance levels and variance inflation factors for both specifications. These estimates make it possible to compare the relative contribution of the explanatory variables while evaluating potential multicollinearity. Nevertheless, because the variables are constructed from related

aggregate employment shares, the coefficients should be interpreted as descriptive measures of co-movement rather than independent causal effects. Table 7 reports the unstandardised and standardised coefficients, standard errors, test statistics and collinearity diagnostics for both OLS models.

Table 7. Descriptive OLS coefficients

Dependent variable	Term	B	SE	β	t	p	VIF
W_SHARE	Intercept	0.090	0.008	—	10.870	< .001	—
W_SHARE	W_LLC	0.531	0.050	0.480	10.526	< .001	3.473
W_SHARE	W_FARM	0.401	0.033	0.559	12.244	< .001	3.473
STRUCT_IP	Intercept	0.998	0.025	—	40.557	< .001	—
STRUCT_IP	STRUCT_LLC	−1.109	0.047	−0.993	−23.429	< .001	1.000

Note: compiled by the authors

The W_SHARE specification reproduces a very high R^2 of 0.996. W_LLC ($B = 0.531$, $p < .001$) and W_FARM ($B = 0.401$, $p < .001$) are positively associated with the overall share. A mechanical and trend-related component is unavoidable because all variables measure women-led employment shares and are derived from related aggregates. VIF values of 3.473 indicate moderate predictor correlation; they do not resolve the shared-measurement problem.

The STRUCT_IP specification yields $R^2 = 0.986$ and $B = −1.109$ for STRUCT_LLC. The estimate is close to −1 because a one-point rise in the legal-entity component must be offset mainly by the individual-enterprise component when the farm share is nearly constant. The model therefore confirms the adding-up identity more than an independent economic mechanism. The statistically responsible conclusion is that the composition is stable and tightly constrained, not that legal entities causally displace individual enterprises

5. DISCUSSION

Three findings are central. First, women-led businesses increased their employment representation in all SME organisational forms. The overall gain of 2.8 percentage points is meaningful but modest, and it is concentrated after 2022. Second, organisational roles differ depending on the denominator. Women-led representation is highest within individual enterprises, whereas legal entities account for the largest portion of employment inside the women-led SME segment. Conflating these two statements would lead to an incorrect claim that individual enterprises necessarily generate most women-led SME employment.

Third, the organisational composition did not fundamentally transform. The individual-enterprise component increased relative to 2016, but legal entities remained dominant and regained part of their earlier share after 2022. This pattern is consistent with the literature describing women's entrepreneurship as concentrated in small and owner-operated formats (Fairlie & Robb, 2009; Minniti, 2010), while also showing that formal legal entities remain crucial for aggregate employment. The evidence therefore supports a dual policy objective: maintain accessible entry routes and improve the capacity of viable women-led firms to formalise, hire and scale.

The statistical results also illustrate a methodological point relevant to gender-entrepreneurship research. Very high correlations and R^2 values are not automatically evidence of strong explanatory power when indicators share numerators, denominators or accounting identities. In the present data, correlated movement may reflect broad time trends, while the negative structural coefficient largely follows from compositional closure. Explicitly reporting these constraints improves reproducibility and prevents causal overstatement.

For policy, programmes should be evaluated using outcomes beyond registrations or participant counts. Relevant measures include the transition from non-employer to employer status, paid jobs created and retained, average employment per firm, survival, access to procurement and finance, and movement into higher-productivity sectors. Support instruments should also recognise heterogeneity: individual entrepreneurs may need simplified pathways to formal hiring, while established legal entities may benefit more from growth finance, export support, digitalisation and supplier-development programmes.

A gender-responsive employment strategy should also avoid treating formalisation as a purely administrative transition. Moving from individual entrepreneurship to an employer organisation requires predictable demand, working capital, accounting capacity and the ability to absorb payroll and compliance costs. Accelerator and mentoring programmes can strengthen networks and legitimacy (Avnimelech & Rechter, 2023), but they should be connected to procurement opportunities and finance if the intended outcome is job creation. This ecosystem approach is more consistent with the evidence reviewed by Foss et al. (2019) than isolated training interventions.

The results partly support, but also qualify, the dominant account of women's entrepreneurship as concentrated in small and informal activity. The high women-led representation within individual enterprises is consistent with research linking women's business ownership to lower-capital sectors and owner-operated formats (Fairlie & Robb, 2009; Klapper & Parker, 2011). However, legal entities account for more than half of employment within the women-led SME segment throughout most of the period. This indicates that a focus only on self-employment would overlook a substantial formal organisational base. The empirical picture is therefore dual: individual entrepreneurship is the category in which women-led employment is most strongly represented, while legal entities remain the largest organisational location of that employment.

The stability of the internal structure also adds nuance to claims of rapid transformation. The rise in overall women-led employment representation after 2022 appears across organisational forms, while subperiod averages for the structural shares are almost unchanged. This pattern is compatible with a horizontal expansion of women-led activity rather than a vertical movement toward a different organisational configuration. It may reflect common changes in registration, economic conditions, policy coverage or classification, but the data do not permit these explanations to be tested. Describing the shift as structural upgrading would therefore exceed the evidence.

The findings resonate with the Kazakhstan-focused analysis of Onyusheva and Meyer (2020), which presents women's entrepreneurship as expanding under persistent institutional and resource constraints. They also align with configurational research showing that different institutional combinations can sustain different forms of entrepreneurial activity (Li et al., 2021; Xie et al., 2021). The contribution of the present study is to show how these broad arguments appear in employment-based national indicators: participation can improve across categories without a corresponding reallocation of employment among organisational forms.

6. CONCLUSION

Employment associated with women-led SMEs expanded between 2016 and 2025, but the organisational structure remained comparatively stable. The overall women-led employment share rose from 31.2% to 34.0%. Women-led representation was consistently highest among individual enterprises, while legal entities continued to account for the largest portion of employment within the women-led SME segment. Farms remained a small component.

The observed correlations indicate common movement across organisational forms, not causal effects. Likewise, the near-perfect negative relationship between the structural shares of individual enterprises and legal entities is largely a consequence of their common total. The study's main substantive conclusion is therefore measured: women-led employment participation increased modestly, but the evidence does not establish structural upgrading or identify the causes of the post-2022 change.

Policy should distinguish entry into entrepreneurship from the creation of stable paid employment. Monitoring systems should track employer transitions, firm survival and jobs retained. At the same time, support should combine accessible self-employment pathways with targeted instruments that enable productive women-led firms to formalise and scale.

A first implication concerns target definition. Programmes designed to increase the number of women entrepreneurs should not be evaluated solely by the number of registrations, training participants or loans issued. Those indicators measure programme reach, not employment outcomes. If job creation is an explicit objective, monitoring should include the number of women-led employer firms, paid employees, full-time-equivalent jobs, survival after two or three years, wage levels and access to social insurance. Indicators should be disaggregated by legal form, sector, region, urban–rural location and firm age to reveal whether aggregate gains are broadly distributed or concentrated in a small number of categories.

A second implication is the need for differentiated support trajectories. New individual entrepreneurs may require low-cost registration, basic financial services, digital sales tools and assistance with first contracts. Businesses that demonstrate stable demand may need working capital, payroll guidance, accounting systems and help converting informal labour into formal employment. More established legal entities may benefit from procurement access, export readiness, certification, technology adoption and management development. A uniform programme is unlikely to address these different constraints efficiently. Movement between support stages should be based on observable business needs and employment potential rather than the entrepreneur's gender alone.

A third implication concerns the institutional environment. Credit products may be ineffective when women lack collateral, market access or time because of unpaid care responsibilities. Training may have limited effects without follow-up mentoring and buyer connections. Digital platforms can reduce spatial and information barriers, but their benefits depend on connectivity, logistics and digital capability. Gender-responsive entrepreneurship policy should therefore coordinate finance, care services, infrastructure, procurement and business-development support. The purpose is not to direct all women-owned firms toward rapid growth, but to ensure that women who seek to build employer businesses face fewer gender-specific constraints.

Finally, evaluation should distinguish additionality from simple participation. A programme creates additional employment only when supported firms generate outcomes beyond what would have occurred without assistance. Future evaluations should use comparison groups, phased implementation or eligibility thresholds where feasible. Administrative programme records should be linked, under appropriate privacy safeguards, to business registration, tax and employment data. Such a system would allow policymakers to identify which instruments improve survival and paid employment, which merely subsidise activity that would have occurred anyway, and whether impacts differ across organisational forms.

The study has four principal limitations. First, ten annual country-level observations provide little statistical power and do not support complex time-series modelling. Second, aggregate data conceal regional, sectoral and firm-size heterogeneity. Third, the

official category of women-led SMEs does not reveal ownership shares, management arrangements or changes in classification. Fourth, ratio variables constructed from related totals generate mechanical dependence and make conventional regression significance difficult to interpret.

Future research should use a regional panel or firm-level microdata, distinguish ownership from management, and model employment counts alongside shares. A richer design could examine employer status, job quality, wages, survival and transitions between legal forms. Event-study or difference-in-differences strategies may become possible if a clearly timed policy change and a credible comparison group can be identified. For compositional outcomes, log-ratio methods would provide a more suitable framework than regressions among raw shares.

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