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Influence of Taxation Policy on the Employment of Production Factors in Agriculture Sector Using a CGE Modelling Approach

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ABSTRACT

This study investigates the impact of indirect taxation on employment in Afghanistan's agriculture sector, addressing the lack of research on its short-term macroeconomic effects, particularly in agricultural sub-sectors. To fill this gap, a general equilibrium model integrated with a social accounting matrix was used to quantify employment responses across ten scenarios, testing 20%, 40%, 60%, 80%, and 100% changes in the 2018 indirect tax volume. The findings reveal a direct correlation between indirect taxes and labor and capital employment, where tax reductions led to a decline in employment across all agricultural categories. In contrast, tax increases had the opposite effect. Forestry contributed the most to employment growth under rising tax scenarios, followed by opium, vegetables, cereals, fruits, and livestock. The study highlights the need for alternative job opportunities and effective tax revenue management to mitigate labor market disruptions and support sustainable agricultural development.

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INTRODUCTION

Governments invest in the economy through taxation, a fundamental tool in developed countries (Khodabakhsi & Rostaee, 2022). Tax revenue is pivotal for economic growth, as it generates income from businesses that governments reinvest for long-term development. Taxes significantly influence a country's fiscal policy, where direct taxes are progressive, and indirect taxes impact income distribution due to their uniform application (Karimi & Dorbash, 2018). Economic theory suggests shifting from direct to indirect taxation for efficiency, growth, and employment, as indirect taxes such as value-added tax (VAT) and customs duties are more straightforward to collect and harder to evade (Bargain et al., 2014; Nmesirionye et al., 2019). The effectiveness of fiscal policy in employment generation depends on the balance between direct and indirect tax revenues (Obayori & Omekwe, 2019).

In Afghanistan, taxation plays a vital role in economic recovery and governance. Between 2005 and 2017, investment attraction policies supported economic activities, while domestic and foreign income sources contributed to fiscal stability. Business receipt tax (BRT) rates vary between 2%, 4%, or 10%, depending on the sector (Ministry of Finance, 2019). However, tax evasion, internal conflict, rising poverty, low tax morale, and the underground economy hinder tax collection efforts (Putzel, 2010; World Bank, 2019). Afghanistan ranks 177th out of 190 countries in the World Bank's tax system ranking due to smuggling, corruption, and illicit trade (Naseri et al., 2024; Jauhar et al., 2024; SIGAR, 2024). Despite these challenges, Afghanistan's tax-to-GDP ratio improved from 9.9% in 2017 to 13.8% in 2022, generating AFN 193.9 billion (US$ 2.2 billion), with indirect border taxes contributing 55% of revenues (Latif, 2023; Sahebe et al., 2020).

The agriculture sector, employing 47% of the workforce in 2022, remains vital for economic stability. Wheat accounts for 6.3% of national GDP and supports over a million jobs, while livestock contributes 3.8% to GDP, generating 1.1 million jobs. Additionally, opium production, though illicit, remains a significant source of income for rural households (World Bank, 2023). Given the sector's economic significance, analyzing taxation's impact on labor and capital employment is critical for informed policymaking and sustainable economic development.

While extensive international research has examined the effects of taxation on employment, Afghanistan lacks empirical studies applying computable general equilibrium (CGE) models to assess these effects in the agricultural sector. A recent strand of studies has explored tax policy shocks on employment using CGE models, but no domestic studies have applied this approach. Farajzadeh and Nazari (2023) found that a 20% agricultural tax increase led to declines in unskilled labor (-4.230%), skilled labor (-3.659%), capital (-4.778%), and land employment (-3.811%). Mousavi et al. (2011) also highlighted that higher taxes reduce employment and investment, particularly affecting rural households. In Nigeria, Chidinma and Anokwuru (2022) found no significant impact of fiscal policy on employment, while Chioma et al. (2020) emphasized VAT and excise duties' role in employment generation. Alphonsus and Anichebe (2020) reported that company income tax and personal income tax negatively influenced unemployment, and Johnson (2013) observed no strong correlation between tax policy and unemployment trends. Eduardo and Fajardo (2012) examined tax effects in Latin America, revealing that payroll taxes increase labor costs, VAT fosters informality, and corporate taxes can reduce informality under vigorous enforcement. Hagedorn et al. (2015) found that higher tax rates in OECD countries led to lower skill premia and increased unemployment among skilled workers. Meyer and Rosenbaum (2001) showed that US tax policy changes, particularly the Earned Income Tax Credit, significantly boosted employment and working hours.

Given the absence of empirical studies on Afghanistan's agricultural sector, this research aims to address the knowledge gap by evaluating the impact of indirect tax policies on labor and capital employment in the sector. This study seeks to achieve the following objectives:

1. To evaluate the shocks of indirect taxes on labor and capital employment in the agriculture sector.
2. To recommend suitable policies based on agricultural insights to boost the economy.

MATERIALS AND METHODS

The study used the International Food Policy Research Institute's standardized CGE model (Lofgren et al., 2002) to analyze the impact of direct tax shocks on labor and capital employment in agricultural sectors like cereals, fruits, vegetables, livestock, forestry, and opium. The CGE model, based on Walras' law, assumes zero excess demand at all indirect tax rates and is tailored for a small, open economy with perfect competition, full employment, and constant returns to scale. The study used a static CGE model in Afghanistan due to data limitations, as it does not consider time variables and is more adaptable to the characteristics of developing countries despite its limitations. This study utilized a Social Accounting Matrix (SAM) database curated by the Biruni Institute in 2018 to estimate the shift and share parameters of the constant elasticity of substitution and transformation functions. Transfer elasticities for cereals, fruits, vegetables, livestock, forestry, and opium were computed at 0.9, while Armington elasticities with different rates were estimated by Kafaei and Miri in 2019.

As shown in Figure 1 below, the CGE model's production process is structured as a two-step procedure reflecting the economic and technological framework.

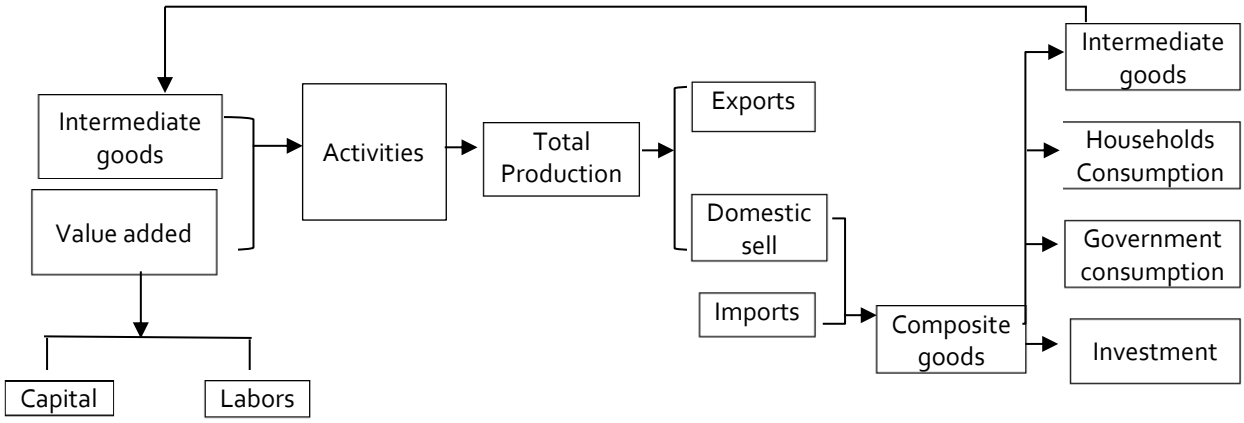

Fig. 1. Components of computable general equilibrium model
Source: (Lofgren et al. 2002).

At the initial stage, intermediate goods are produced by combining domestic and imported inputs through a production function that determines the optimal mix based on relative prices and availability. This stage captures the interplay between local and foreign goods, allowing the model to simulate how changes in trade policies or external shocks affect domestic production. In the next stage, these intermediate goods are combined with primary production factors —labor and capital — through a value-added Leontief production function. This function assumes fixed input proportions, meaning that a specific ratio of inputs is required to produce each output unit. Consequently, technological changes or shifts

in input availability directly influence production outcomes. By structuring production in this manner, the model effectively captures the complexity of supply chains and highlights the relationships between domestic production, international trade, and factor markets, providing a comprehensive view of the economy's response to policy changes or external pressures.

Model Equations

According to equation (1), producers utilize the lowest level of Cobb-Douglas production technology to maximize profits, believing that the combination of labor and capital creates value added.

$$\boldsymbol{VA_j = b_j \prod_h FD_{hj}^{\beta_{hj}}} \quad (1)$$

The Leontief production function is utilized at the upper level to combine intermediate inputs and added value to create final products.

$$Y_j = min\left(\frac{Xij}{ax_{ij}} \frac{VAj}{ay_j}\right)$$

Producers maximize profit by using the aforementioned approaches, resulting in the determination of formulas.

$$Xij = ax_{ij}.ax_j \quad \forall j \quad (2)$$

$$VA_j = ay_i \,.Y_j \quad \forall i \quad (3)$$

$$FD_{hj} = VAj \,.\frac{\beta_{hj} \,.PNj}{W_h} \quad (4)$$

$$PS_j = ay_j \,.PN_j + \sum_i ax_{ij} \,.PQ_i \quad \forall i \quad (5)$$

The utility function will be optimized using the household budget, resulting in the discovery of equation 6.

$$C_i \, PQ_i = \delta_{Ci}(\sum_h W_h \,.FS_h - TAX_{dir} - SAV_{hoh}) \quad \forall j \quad (6)$$

The government's primary revenue source is taxation, which is then utilized to cover operating costs and generate savings.

$$TAX_{ind.j} = tx_j \,.PS_j.Y_j \quad (7)$$

$$TAX_{dir} = td \,.\sum_h W_h \,.FS_h \quad (8)$$

$$TARIFF_j = tm_j \, PM_j \, M_j \quad (9)$$

The investment comprises all private, public, and foreign savings, with foreign savings as an exogenous variable influencing trade balance and currency rate.

$$SAV_{hoh} = S_{hoh} \sum_{h} W_h \ . FS_h \tag{10}$$

$$SAV_g = S_g \left(\sum_{j} TAX_{ind,i} + \sum_{i} TARIFF_i + TAX_{dir} \right) \tag{11}$$

$$SAVING = (SAV_h + SAV_{gov} + SAV_f) \tag{12}$$

$$SAVING = INVESTMENT \tag{13}$$

$$ID_i \ . PQ_i = \mu_j \ . INVESTMENT \tag{14}$$

A small country engages in international trade, ensuring global import and export price stability.

$$PE_i = \ pwe_i \ . EXR \tag{15}$$

$$PM_i = \ pwm_i \ . EXR \tag{16}$$

The Armington function, which assumes imports are imperfect substitutes for domestic products, illustrates the relationship between imports and domestic production based on the constant elasticity of substitution.

$$Q_i = \gamma_i \ (\alpha_{mi} \ M_i^{\rho_{mi}} + \alpha_{di} \ D_i^{\rho_{mi}})^{\frac{1}{\rho_{mi}}} \tag{17}$$

The maximizing problem is solved by generating equations (18) and (19) for imports and domestic output demand functions.

$$M_i = (\frac{\gamma_i^{\rho_{mi}} \ . \alpha_{mi} \ . PQ_i}{(1 + tm_i) \ PM_i})^{\frac{1}{1-\rho_{mi}}} \ . Q_i \qquad \forall j \tag{18}$$

$$D_i = (\frac{\gamma_i^{\rho_{mi}} \ . \alpha_{di} \ . PQ_i}{PD_i})^{\frac{1}{1-\rho_{mi}}} \ . Q_i \qquad \forall j \tag{19}$$

A constant elasticity of transformation function (CET) determines the relationship between exports and domestic production, where exports are considered an imperfect substitute for domestic production.

$$\boldsymbol{Y_i = \theta_i \ (\beta_{ei} \ E_i^{\rho_{mi}} + \beta_{di} \ D_i^{\rho_{mi}})^{\frac{1}{\rho_{mi}}}} \tag{20}$$

The maximizing problem will be solved to produce the supply functions of exports and domestic commodities as relations (21) and (22), respectively.

$$\boldsymbol{E_i = (\frac{\theta_i^{\rho_{mi}} \ . \beta_{ei} \ (tx_i + PS_i)}{PE_i})^{\frac{1}{1-\rho_{mi}}} \ . Y_i} \qquad \forall j \tag{21}$$

$$\boldsymbol{D_i = (\frac{\theta_i^{\rho_{mi}} \ . \beta_{di} \ (tx_i + PS_i)}{PD_i})^{\frac{1}{1-\rho_{mi}}} \ . Y_i} \qquad \forall i \tag{22}$$

The adjusting factors for labor force supply and demand, capital, and foreign exchange include wage rate, interest rate, composite product price, and exchange rate.

$$\sum_i FD_{hj} = FS_h \qquad \forall_f \tag{23}$$

$$Q_i = C_i + G_i + \sum_i X_{ij} \qquad \forall j \tag{24}$$

$$\sum_i pwe_i \; E_i + SAV_f = \sum_i pwm_i \; M_i \tag{25}$$

The price normalization equation is used to achieve equilibrium by setting a fixed price index and measuring changes in other prices relative to it.

$$PINDEX = \sum_j \omega_j \, PQ_j \tag{26}$$

The New Classic model, a closed-loop system, applies an exogenous shock related to indirect tax through the Tax_{indj} variable in equation (7), assuming full employment and investment equal savings in all markets. The GAMS program was utilized for model and scenario solving, with Appendix 1 providing the indices, variables, and parameters linked to the model equations.

Model Calibration

The transformation function's export substitution elasticity is elastic across all agriculture categories, while the Armington function's import substitution elasticity is inelastic, as per the SAM calibration approach.

Table 1*. Calibrated values and model parameters*

Parameter and Elasticity	Cereals	Fruits	Vegetables	Livestock	Opium
Imported goods share in CES	0.4	0.5	0.5	0.1	0.0
Domestic goods share in CES	0.6	0.5	0.5	0.9	0.0
Transfer parameter in CES	1.9	2.0	2.2	1.6	0.0
Exported goods share in CET	0.9	0.8	0.7	1.0	0.0
Domestic goods share in CET	0.1	0.2	0.3	0.0	0.0
Transfer parameter in CET	3.2	2.6	2.1	6.6	0.0
Elasticity substitution parameters in CES	0.5	0.9	0.9	-0.7	0.0
Elasticity parameter in CET	2.1	2.1	2.1	2.1	2.1

Source: research estimation

The sharing and transfer parameters vary across all subsectors, except for the elasticity parameter of the transformation function, which remains zero since opium import and export are not legally significant.

RESULTS AND DISCUSSION

The study compares Afghanistan's actual indirect tax rate values to a baseline scenario and investigates ten scenarios of rising and dropping indirect tax shocks. It aims to identify percentage changes across different agricultural categories to evaluate the short-term effects of indirect tax rate value changes in 2018. It should be noted that, according to the

social accounting matrix, indirect taxes were aggregated from business receipt tax, fixed tax, property tax, and others. The study tests the consequences of a 20%, 40%, 60%, 80%, and 100% decline in the 2018 indirect tax volume in scenarios A, B, C, D, and E. In contrast, F, G, H, I, and J investigate the implications of 20%, 40%, 60%, 80%, and 100% increases in the volume of indirect taxes in 2018**.** The study considers the employment share of two factors of production: labor and capital. As shown in Table 2, the study reveals a link between the share of labor employment and indirect tax variables in agriculture sub-sectors. The study found that falling indirect taxes led to decreased labor employment in all agriculture sectors, which reversed when indirect taxes increased. The indirect tax percentage in scenarios with swelling increases from F to J across all agricultural categories, while the percentage decrease from scenario A to scenario E shows a gradual, soft negative rise for cereals, fruits, vegetables, and livestock. The declining percentage of cereal, fruits, vegetables, livestock, and opium across all scenarios decreased from (-7.25% to -7.37%), (-4.77% to -5.01%), (-5.88% to -6.08%), (-3.94 to -3.96), and (-3.94% to -3.96%), respectively. Removing the indirect tax rate (scenario E) results in a 100% decline in labor employment in the forestry sector, while a 20% decrease leads to an 18.38% reduction. A 100% reduction in taxes in the forestry sector can lead to a complete decrease in employment because companies may prioritize profit optimization and invest in automation rather than hiring. In addition, demand for labor in forestry may be elastic compared to cereal, fruits, vegetables, livestock, and opium, meaning that tax savings do not necessarily translate into increased hiring. The forestry sector experienced a significant impact, while the opium sector experienced a soft reverse effect across all falling scenarios. More precisely, the percentage change in cereals, fruits, vegetables, livestock, forestry, and opium in rising scenarios varied from 14.71% to 71.89%, 10.39% to 31.58%, 22.21% to 75.72%, 4.37% to 20.17%, and 9.22% to 103.77%, respectively. With the increase of indirect taxes by 20 to 100 percent, employment in various agricultural sectors of Afghanistan has significantly risen. A remarkable increase of 9.22% to 103.77% in forestry may be related to environmental initiatives and the restoration of natural resources. The study's findings were in accordance with Bargain et al.'s (2014), Chioma et al.'s (2020), Eduardo & Fajardo's (2012), Mousavi et al.'s (2011), and Nmesirionye et al.'s (2019) investigation, which expressed that economic theory suggests that reducing direct to indirect taxation is crucial for efficiency, growth, and employment. Indirect tax revenues, like value-added tax and customs duties, are easier to collect and less prone to evasion. VAT directly impacts employment rates, while customs and excise duties significantly impact employment generation.

Table 2. *Impact of Changes in Indirect Tax on Share of Labor Employment*

Scenarios	**Percentage change from the base value**					
	Cereals	**Fruits**	**Vegetables**	**Livestock**	**Forestry**	**Opium**
Base value	45936	36741	9535	22816	10253	38055
Scenario A	-7.37	-5.01	-6.08	-3.96	-18.38	-8.69
Scenario B	-7.34	-4.96	-6.04	-3.96	-60.35	-8.72
Scenario C	-7.31	-4.89	-5.99	-3.95	-59.23	-8.75

Scenario D	-7.28	-4.83	-5.94	-3.95	-79.63	-8.78
Scenario E	-7.25	-4.77	-5.88	-3.94	-100.00	-8.81
Scenario F	14.71	10.39	22.21	4.37	22.31	9.22
Scenario G	24.34	18.22	43.30	8.10	43.66	21.51
Scenario H	55.95	26.41	66.81	14.24	67.73	63.15
Scenario I	63.48	29.37	71.67	17.52	87.51	83.06
Scenario J	71.89	31.58	75.72	20.17	109.27	103.77

Source: Author estimation

Factors like business risk, asset growth, sales growth, earnings, asset structure, and government motivation and support influence capital structure. Table 3 and Table 2 exhibit similar effects in terms of rising and falling scenarios. The decrease in indirect taxes led to decreased capital employment in all agriculture sectors, but this reverses when indirect taxes increase. The indirect tax percentage positively impacts agricultural categories from F to J, while scenarios A to E negatively affect capital employment in cereals, fruits, vegetables, livestock, and opium. The forestry scenarios A to E show a significant decrease in capital employment, with scenario E experiencing a 100% decline and scenario A experiencing a nearly 20% reduction. The cereals, fruits, vegetables, livestock, forestry, and opium sectors show a slight deviation in scenario A compared to scenario E, with the highest and lowest percentage changes observed (-8.56 to -8.07), (-5.62 to -6.24), (-6.72 to -7.30), (-4.80 to -5.20), and (9.61 to -9.87), respectively. Capital employment in scenario J has also significantly increased compared to scenarios I, H, G, and F. Scenario J recorded 56.97%, 20.15%, 60.47%, 91.10%, and 86.07%. In comparison, scenario F showed a 10.74%, 6.58%, 17.99%, 0.77%, 18.08, and 5.44% surge for cereals, fruits, vegetables, livestock, forestry, and opium, respectively. The findings confirm that indirect tax changes significantly impact capital employment in agriculture, aligning with Farajzadeh and Nazari (2023) and Mousavi et al. (2011), who found that tax increases reduce employment and income from production factors. The sectorial variations observed support Eduardo and Fajardo (2012) and Hagedorn et al. (2015), highlighting differing tax effects across industries. In addition, the positive impact of tax increases in some categories aligns with Alphonsus and Anichebe (2020), emphasizing tax policy's role in shaping employment trends.

Table 3. *Impact of Changes in Indirect Tax on Share of Capital Employment*

Scenarios	**Percentage**					
	Cereals	**Fruits**	**Vegetables**	**Livestock**	**Forestry**	**Opium**
Base value	57059	45638	11843	28340	12736	47270
Scenario A	-8.56	-6.24	-7.30	-5.20	-19.43	-9.87
Scenario B	-8.45	-0.06	-7.16	-5.11	-38.39	-9.81
Scenario C	-8.32	-5.93	-7.01	-5.00	-59.68	-9.74
Scenario D	-8.20	-5.77	-6.86	-4.90	-79.83	-9.68
Scenario E	-8.07	-5.62	-6.72	-4.80	-100.00	-9.61

Scenario F	10.74	6.58	17.99	0.77	18.08	5.44
Scenario G	18.72	12.87	36.83	3.21	37.15	16.02
Scenario H	44.90	17.46	54.99	6.15	55.85	51.60
Scenario I	50.68	19.24	58.23	8.32	72.83	68.73
Scenario J	56.97	20.15	60.47	9.74	91.10	86.07

Source: Author estimation

CONCLUSION

This study examined the impact of taxation policy on the employment of production factors in Afghanistan's agriculture sector by utilizing a computable general equilibrium (CGE) model and the Biruni Institute's Social Accounting Matrix (SAM) for 2018. Through ten simulated scenarios of indirect tax changes, the study assessed short-term macroeconomic effects on labor and capital employment across agricultural sub-sectors such as cereals, fruits, vegetables, livestock, forestry, and opium. The findings reveal a direct relationship between indirect taxes and labor employment, where a decrease in indirect taxes led to reduced labor employment. In contrast, an increase in taxes reversed this trend. Removing indirect taxes resulted in a 100% decline in labor employment in the forestry sector, whereas the opium sector experienced a softer reverse effect. Similarly, capital employment across all agricultural sub-sectors showed a comparable pattern: decreasing with tax reductions and increasing with tax hikes. These trends highlight the sector-specific sensitivity to indirect taxation and the implications for employment and economic stability in Afghanistan's agricultural landscape. Future research could further refine these findings by incorporating time variables into the model to capture the long-term effects of policy changes. Additionally, disaggregating the labor force by income, skill level, or rural-urban classification would provide a more nuanced understanding of labor dynamics and economic impacts.

Recommendations

Based on the findings, the following policy recommendations are proposed:

1. Tax Collection and Revenue Management: The study identifies a direct correlation between indirect taxes and labor and capital employment, suggesting that increased taxation can boost employment in the agriculture sector. Therefore, the government should enhance its control over tax collection to ensure efficient revenue generation.
2. Employment Diversification Strategies: Reducing indirect taxes in agriculture may result in declining labor and capital shares. To mitigate these effects, policymakers should consider implementing alternative employment opportunities, particularly in rural areas, to support affected workers and ensure economic stability.

By adopting these recommendations and further exploring taxation's impact on agricultural employment, policymakers can better understand and manage the intricate relationship between fiscal policy, employment levels, and sustainable economic growth in Afghanistan's agricultural sector. These insights pave the way for more informed policy

decisions that promote long-term development and resilience in the face of economic challenges.

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REFERENCES

Alphonsus, S., & Anichebe, A. (2020). Effect of tax policy on unemployment in Nigeria. *Research Journal of Finance and Accounting, 10*(12). https://doi.org/10.7176/RJFA/10-12-13

Bargain, O., Orsini, K., & Peichl, A. (2014). Comparing labor supply elasticities in Europe and the US. *Journal of Human Resources, 49*(3), 723–838. RePEc:uwp:jhriss:v:49:y:2014:iii:1:p:723-838

Chidinma, C., & Anokwuru, G. (2022). Fiscal policy and employment generation in Nigeria. *European Journal of Economic and Financial Research, 2*(6). http://dx.doi.org/10.46827/ejefr.v6i2.1282

Chioma, G., Ubaka, O. F., & Bidemi, O. (2020). Indirect tax and employment generation in Nigeria. *Asian Business Research Journal, 5*, 7–12. https://doi.org/10.20448/journal.518.2020.5.7.12

Eduardo, L., & Fajardo, J. (2012). *Employment and taxes in Latin America: An empirical study of the effects of payroll, corporate income and value-added taxes on labor outcomes.* Inter-American Development Bank. https://doi.org/10.18235/0011414

Farajzadeh, Z., & Nazari, M. (2023). Consequences of agricultural tax. *Journal of Tax Research, 58*(109), 49–76. https://doi.org/10.61186/taxjournal.32.58.2

Hagedorn, M., Mariovskii, I., & Stetsenko, S. (2015). Taxation and unemployment in models with heterogeneous workers. *Institute for Empirical Research,* 1–61. Link

Jauhar, S., Banuree, S. A. H., & Naseri, A. K. (2024). The obstacles faced by Afghanistan traders in exporting agricultural products. *Journal of Natural Science Review, 2*(Special Issue), 300–315. https://doi.org/10.62810/jnsr.v2iSpecial.Issue.146

Johnson, A. A. (2013). Tax policy, inflation and unemployment in Nigeria. *European Journal of Business Management, 5*(15), 114–129. Link

Kafaei, M. A., & Miri, N. (2011). The estimation of armington elasticity of substitution for Selected Goods. *Iranian Journal of Economic Research, 11*(3), 27–45. Link

Karimi, S. M., & Dorbash, M. (2018). The study on the effect of direct and indirect taxes on income distribution using the generalized method of moments. *Financial and Economic Policy Quarterly, 6*(22), 47–68. https://qjfep.ir/article-1-607-en.html

Khodabakhsi, A., & Rostaee, S. (2022). Modeling the effect of indirect taxes on welfare of income deciles in Iran using computable general equilibrium model. *Economic Modeling, 3*(59), 33–50. https://www.sid.ir/paper/1061698/en

Lofgren, H., Lee, H., R., & Robinson, S. (2002). *A standard computable general equilibrium (CGE) model in GAMS* (Vol.5). Link

Latif, L. (2023). *Checking in on tax: The evolution of checkpoint taxation in Afghanistan*. https://dx.doi.org/10.2139/ssrn.4519136

Meyer, B. D., & Rosenbaum, D. T. (2001). Welfare, the earned income tax credit, and the labor supply. *The Quarterly Journal of Economics, 116*(3), 1063–1114. https://www.jstor.org/stable/2696426

Ministry of Finance. (2019). *Afghanistan revenue department*. Link

Mousavi, S., Shaygani, B., & Farajzadeh, Z. (2012). The impact of taxes on agricultural activities. *Agricultural Economics Research, 4*(4), 63–96. Link

Naseri, A. K., Ahamdzai, K. M., & Honaryar, G. (2024). Performance of agriculture export commodities from Afghanistan to world. *Journal of Natural Science Review, 2*(Special Issue), 486–490. https://doi.org/10.62810/jnsr.v2iSpecial.Issue.148

Nmesirionye, J. A., Jones, E., & Onuche, E. V. S. (2019). Impact of indirect taxes on economic performance of Nigeria (1994–2017). *European Journal of Accounting, Finance and Investment, 5*(4), 32–39. Link

Obayori, J. B., & Omekwe, S. O. (2019). Indirect tax and economic growth in Nigeria: The case of VAT. *International Journal of Science and Management Studies, 2*(6), 61–66. https://doi.org/10.51386/25815946/ijsms-v2i6p107

Putzel, J. (2010). Why development actors need a better definition of state fragility. Link

Sahebe, A., Baheej, M., Khalazie, M., & Chukwuma, O. J. (2020). Impact of tax laws and system on Afghanistan economy. *American International Journal of Business Management, 3*(5), 52–61. Link

Special Inspector General for Afghanistan Reconstruction (SIGAR). (2024). Afghan business taxes: action has been taken to address most tax issues, but the afghan government continues to assess taxes on exempt U.S.-funded contracts. Link

World Bank. (2023). *Afghanistan economic monitor: 31 October 2023.* Link

World Bank. (2019). *The World Bank in Afghanistan: Overview.* Link