Migration Letters

Volume: 20, No: 7, pp. 1116-1144

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)
www.migrationletters.com

The Influence of Land as an Economic Factor on Emigration Decisions: Evidence from Afghanistan

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Abstract

This comprehensive study delves into the multifaceted dynamics of emigration decisions in Afghanistan from 2016 to 2021, with a focus on the impact of land as an economic factor. Employing a binary logistic regression model and a cross-sectional time series dataset, the research uncovers significant findings. Notably, the logistic regression analysis underscores a compelling inverse correlation between land ownership and emigration, with a one-hectare increase in land reducing the likelihood of emigration by 0.3%.

Intriguingly, this association remains consistent across various income levels, livestock ownership, employment statuses, and rural area sub-samples. Additionally, the study reveals the nuanced interplay of income, particularly among middle-income individuals and the employed, and its negative influence on emigration. Household livestock ownership, in tandem with employment status, also exerts a substantial negative effect on emigration, with both small and medium-sized land holdings exhibiting similar patterns.

Moreover, the research considers social factors, such as dissatisfaction with public services, political instability, internet usage, and the presence of relatives abroad, all of which positively influence emigration decisions. Demographic factors, including age, education, residence, household size, gender, and marital status, further shape the decision-making process.

By intertwining the economic implications of land ownership with the empirically supported insights of forensic marketing, this study provides invaluable insights for public policy, academics, and international donor organizations. It underscores the importance of considering both pull and push factors when addressing migration dynamics in Afghanistan and presents a holistic framework for strategic managerial choices in the context of changing emigration patterns.

Keywords: *Afghanistan, emigration decision, economic factors, land ownership, income, employment, socio-demographic, logistic.*

Introduction

Emigration from Afghanistan has emerged as a burgeoning regional and global concern for transit and destination nations, as well as international organizations actively engaged in humanitarian assistance endeavors. As per the United Nations report, the number of

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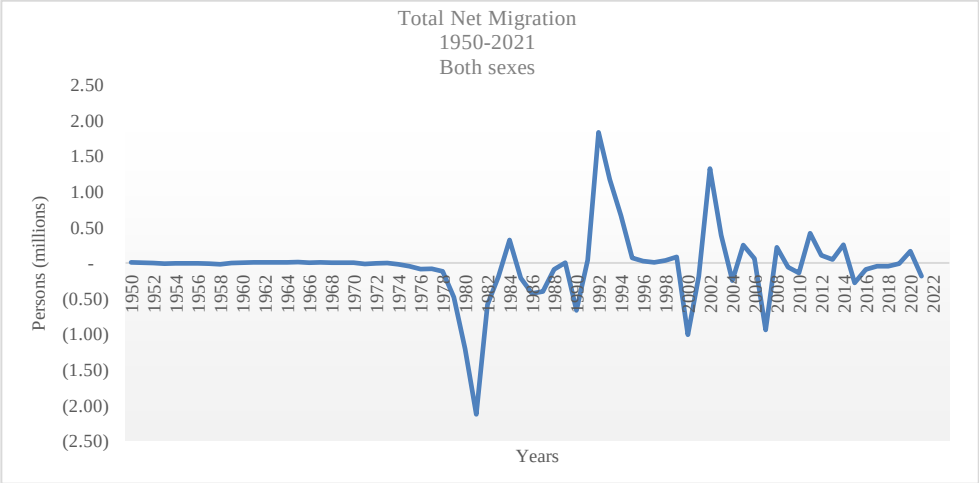
international migrants surged to 281 million in 2022, representing a substantial increase of 66 million compared to the figures in 2010 (United Nations, 2022a). Additionally, according to the 2020 report by the International Organization for Migration (IOM), Afghans ranked as the second-largest population of refugees worldwide, surpassed only by Syria (Daniel Garrote-Sanchez, 2017). Afghanistan, a less developed country, has suffered from ongoing economic and political instability since the USSR invasion in 1979. Resulted years of civil war, instability, and mass emigration from the country (Durana et al., 2021; Privara et al., 2018; Vavrečka et al., 2021). However, prior to that, Afghans were also emigrating, primarily driven by economic factors, albeit in relatively modest proportions (Katrin Marchand & Etal., 2014; Sirkeci et al., 2017). As illustrated in Figure 1, the first wave is characterized by social factors, specifically the onset of war, which was initiated by the invasion of the USSR in 1979 (Afsaneh Ashrafi & Haideh Moghissi, 2002). The second wave is defined by a civil war among the Mujahideen groups following the withdrawal of USSR troops in 1989, leading to widespread violence within the country. A third wave of mass emigration commenced when the Taliban gained control over more than 95% of Afghanistan's territory in 1995 and enforced strict societal regulations. The fourth wave, observed from 2000 to 2021, exhibits volatility and results from a combination of factors. These factors, including the escalation of warfare 2007 and presidential election 2009, political instability and presidential election in 2014, and the collapse of the government in 2021, have acted as triggering elements.

Figure 1. Net Migration Trend



Source: (United Nations, 2023a)

Figure 1 depicts a notable increase in the percentage of Afghans aspiring to leave the country in 2020, attributed to political instability, 2019 presidential election, insurgency escalation, ambiguous peace negotiations with the Taliban, and the US-Taliban Doha agreement. Following the US president's withdrawal announcement in April 2021 and the failure of Taliban peace talks with the Afghan government, the Taliban accelerated their military operations, leading to the collapse of the Afghan government in August 2021. As result, there was a significant 53% surge in people wanting to emigrate (Julie Ray, 2022). Following the occurrence of the collapse, an approximate total of 150,000 Afghan individuals have been successfully evacuated solely by the United States, the United Kingdom, Germany, Canada, and Australia (Kessler, 2021; BBC, 2022; Reuters, 2021). Additionally, between October 2021 and January 2022, an estimated one million Afghans migrated to Iran, as reported by The New York Times (Goldbaum & Akbary, 2022). Simultaneously, around 300,000 Afghans departed for Pakistan, corresponding to a Pakistani official's report (Gul, 2021). Further, according to Augustova & Karimi (2021), a significant number of 12,000 Afghan individuals departed the country on a daily average subsequent to the collapse. However, it is noteworthy that the neighboring

countries have predominantly intensified their deportation efforts. For instance, within the period of December 1st to December 15th, 2022, Iran forcefully repatriated a substantial count of 18,665 Afghan nationals (IOM,2022).

The decision to undertake emigration is influenced by a multitude of factors, encompassing a complex interplay of socioeconomic, political, and personal elements. In the field of migration studies, researchers commonly employ the conceptual frameworks of "push" and "pull" factors to elucidate the underlying reasons that impel individuals to depart from their country of origin Bodvarsson and Berg (2013).

The extant empirical evidence pertaining to Afghanistan exhibits a predominant presence of diverse factors exerting an influence on the choice to emigrate. Several studies have revealed that, taking into account the socio-political milieu of Afghanistan, the crisis of emigration is intricately intertwined with the recent surge in political turbulence, social instability, and insecurity (Koser & etal, 2014; Loschmann & Siegel, 2015; Glanska, 2014; Přívara & Přívarová, 2019). Nevertheless, a plethora of scientific research has established climate change, land degradation, drought, and declining agricultural income as major contributors to social problems, resulting in both internal and external migrations. (Privara, 2019; Jacobs &etal, 2015; Iqbal, 2018; ActionAId International, 2020) . Additionally, a group of literature focused on the demographic factors such as age, family size, province, education, and gender (Loschmann, 2014). However, a comprehensive study of representative economic factors influencing emigration decision with application of quantitative methods and large sample size define the gap.

Given that approximately 70% of the Afghan population dwells in rural regions and is actively involved in agricultural pursuits and considering that around 60% of households rely on income generated from farming operations Daniel, (2017), it becomes evident that land holds great importance within Afghanistan's agrarian economy. This circumstance renders Afghanistan an opportune setting to explore the economic determinants of an agriculture-intensive economy in a developing countires with a notable emigrant population. Thus, the core objective of this study is to assess the economic factors influencing the decision of Afghan people to emigrate or stay, with specific focus on the share of agriculture land they own. Additionally, the empirical literature on land and emigration yields inconclusive results. Land's relation to emigration can be positive or negative, depending on individual intentions and other socio-economic and demographic factors. Land ownership and agricultural land are vulnerable to environmental shocks, impacting land outcomes. Further, small landholding has a positive impact on emigration, while the impact of medium and large landholding is inconclusive Leah K. VanWey's study (2005).

Hence, this study will make significant contributions to existing literature in several ways. First, it represents the first analysis of the influence of land on emigration decisions using a large sample size from a recent comprehensive survey of 73,856 Afghans across 34 provinces of Afghanistan for the period of 2016-2021. The empirical approach employed, and the utilization of an extensive cross-sectional time series survey offer multiple avenues for analyzing the problem.

Second, this study presents unique evidence by exploring the influence of small, medium, and large landowners on emigration decisions.

Third, beyond examining the impact of agricultural land on emigration decisions, it also controls the influence of factors such as social and demographic characteristics.

Finally, the outcomes of this study hold relevant implications for further discussions among public policymakers in both source and destination countries, academics, and the international donor community actively involved in addressing the adverse effects of emigration. Furthermore, it will serve as a valuable contribution to the existing body of migration studies, specifically from the perspective of the source country. The findings of

this paper reveal that emigration decisions are influenced by multiple factors, categorized as economic, social, and demographic factors.

The research is structured as follows. Section 2 presents the literature. Section 3 includes the methodology adopted, specification of model, data, and methods. Section 4 presents the result and discussion. And section 5 provides a conclusion.

Research Question: Does agricultural land ownership influence the likelihood of a person in Afghanistan to emigrate?

2. Literature Review and Conceptual Framework

Emigration is a complex process influenced by various factors in the source and destination countries. The "Push-Pull" and "Stay-Stay Away" approach helps analyze these factors. Push factors influence emigration levels and motivations, while pull factors in the destination country also influence the decision. Economic factors, like access to land, income, and employment play a role in determining whether to emigrate or stay. However, the influence of agricultural land with varying sizes remains inconclusive in the context of agriculturally intensive developing countries.

Table.1 Push and Pull Factors (stay or not Stay)

Source Country	Cost of Moving	Destination Country
Push Factors	Transport cost	Pull Factors
Poverty	Danger of the voyage	High wages
Low wages	Time of travel	Employment
Unemployment	Lost income during move	Low taxes
High Taxes		Economic freedom
Overpopulation		
Discrimination	Formal Exit Barriers	Personal freedom
Religious Persecution	Exit visa	Law and order
	Exit tax	
Civil war	Prohibition	Religious freedom
Violence	Imprisonment	Educational opportunity
Conscription	Penalties on family	
Social Immobility		Social mobility
		Family reunion
Stay Factors		**Stay Away Factors**
Family ties	Formal Entry Barriers	Language barriers
Friendship		Cultural barriers
Social status	Entry visa	Discrimination
Employment	Quota	Low social status
Property	Prohibition	

Familiarity	Imprisonment	Unemployment
Certainty	Fines	Low wages
Political Privilege		Lack of political rights
		Unfamiliarity
		Uncertainty
		War and crime

Source: (Bodvarsson and Berg, 2013)

Access to land, as a wealth resource, exerts influence on emigration decisions through two distinct mechanisms. Firstly, a greater amount of land offers supplementary income, thereby enabling landowners to financially support the costs associated with emigration (Ran Abramitzky et al., 2013; Saura et al., 2022). Peter McHenry's study in 2015 discovered that individuals with minimal or negative net wealth display a higher propensity for undertaking long-distance migration. However, when evaluating the varying levels of wealth ownership, minority groups and individuals with lower levels of education demonstrate lesser inclination towards embarking on long-distance relocations (Peter McHenry, 2015). Additionally, Adams Jr. and Richard H.'s 1993 study revealed an inverted U-shaped relationship between income and migration, indicating that income initially positively influences emigration decisions. Secondly, land, as a source of livelihood, offers employment, income, and higher wages, deterring emigration. A study by David Eche and Ramiro Vivas (2022) found that aspiring emigrants showed less interest in agricultural work but had a positive correlation with parents' land ownership. This study establishes two key facts: lower land returns encourage emigration, while land inheritance influences the decision to stay.

The limited availability of land significantly contributes to food insecurity, poverty, and emigration, whereas enhanced access to land positively impacts overall welfare. Eliasu Mumuni (2013) found that land ownership positively impacts household welfare in Ghana. Lack of land and livestock in rural areas leads to higher poverty rates and incentivizes emigration (Sarah and Tanya, 2007; Istudor et al., 2022). Poverty increases the likelihood of food insecurity and the desire to emigrate (Ahmad Saddiddin et al., 2019; Dolinayova & Domeny, 2022). From an extreme perspective, unequal access to land drives the migration crisis, suggesting the need for equal land access in source and destination countries (Franklin, 2017). Removing migration restrictions would likely prompt impoverished individuals with limited land to emigrate (Abramitzky et al., 2013).

The existing body of environmental literature on migration underscores climate shocks as a principal catalyst for emigration, particularly in regions where the scarcity of water surpasses that of land. Climate variations, shocks, and droughts exert adverse impacts on landowners and agricultural laborers, resulting in diminished crop yields and revenues. Consequently, emigration frequently becomes an adopted strategy for risk mitigation among rural households grappling with climate shocks. A study conducted by Kubik and Maurel (2016) revealed that a 1% decrease in agricultural income resulting from environmental shocks enhances the likelihood of household emigration by 13%. Nevertheless, factors such as land ownership, social connectedness, and household economic resilience exert a significant influence on the decision to remain, even in circumstances characterized by risk and environmental threats (Mallick et al., 2022).

Size of land ownership impacts both short-term and long-term emigration decisions and destination choices. Leah K. VanWey's study (2005) reveals that land size influences migration through wealth, employment, and investment opportunities. Smaller landholdings are negatively related to out-migration, while larger landholdings show a

positive relationship. Similarly, S. Chandrasekhar and Soham Sahoo (2019) highlight that access to less than 1 hectare of land and land leasing affect short-term emigration decisions. Wealthy households prefer shorter distances, while impoverished households opt for long-distance emigration. Collective land ownership introduces insecurity in land rights, particularly during emigration, leading to short-term emigration in some cases (Maëlys De La Rupelle, 2008; Oláh et al., 2022).

In summary, Furthermore, the empirical literature regarding land and emigration presents inconclusive findings. The association between land and emigration can exhibit both positive and negative tendencies, contingent upon individual intentions and various socio-economic and demographic factors. The ownership of land, particularly agricultural land, is susceptible to environmental shocks, which in turn affect land outcomes. Moreover, the influence of landholding size on emigration demonstrates a positive effect for small landholdings, while the impact of medium and large landholdings remains uncertain, as revealed in Bodvarsson and Berg, (2013).

2.1. Country Context

2.1.1. Land Use

Afghanistan encompasses 652,230 square kilometers of land, of which 47% is comprised of rangelands and pastures, 8 million hectares are classified as deserts, and 1.9 million hectares are designated as forests. Merely 12% of the total land area is suitable for agriculture, amounting to approximately 7.8 million hectares (World Bank, 2023a). Annually, approximately 2.5 million hectares of arable land and 1.4 million hectares of non-arable land are cultivated. The country possesses 3.6 million hectares of irrigated land and 3.7 million hectares of non-irrigable land. In terms of productivity, Afghanistan's yields are relatively low compared to its neighboring countries, with 2.5 metric tons per hectare under irrigation and 1 metric ton per hectare under rainfed conditions (CAD-NPP, 2018).

Over 80% of the impoverished population and approximately 71% of the total populace reside in rural areas, where agriculture serves as their primary source of income. In the 2011/12 period, 49% of households derived income from agriculture, with 30% relying exclusively on this sector. Agriculture provides employment to around 40% of the workforce, corresponding to approximately 2.5-2.7 million full-time jobs (Privara, 2022a, 2022b; World Bank, 2014). Despite enduring political instability, the agricultural sector's contribution to the Gross Domestic Product (GDP) has risen from 26% ($5.4 billion) in 2020 to 33.5% ($4.95 billion) in 2021. This substantial increase can be attributed to a 20% decline in the overall GDP (World Bank, 2023b). Notably, opium cultivation continues to hold significance, occupying an estimated 233,000 hectares in 2021 and generating $1.4 billion, which accounts for approximately 29% of the sector's total value (United Nations, 2022b).

Over the past two decades, Afghan cities have undergone considerable expansion without the implementation of strategic spatial planning. Prominent urban centers such as Kabul, Herat, Mazar-i-Sharif, Kandahar, and Jalalabad have experienced a substantial increase in population, now accommodating approximately one-third of the total populace. Notably, Kabul alone houses 41% of the urban residents. However, the rates of property registration remain alarmingly low, with less than 30% of properties registered in urban areas and a mere 10% in rural regions. The dominance of agriculture in city regions is remarkable, as it covers 46% of the available land. Conversely, industrial land constitutes a mere 3% of the overall landscape, and its primary usage is predominantly residential. This underscores the significant importance of agriculture and land utilization in these regions (USAID, 2018).

The distribution of land in Afghanistan is frequently influenced by the political agendas of the ruling government, employed as a means to reward supporters and strengthen their

hold on power. Furthermore, publicly-owned land is often allocated among political allies or unlawfully seized (Azadi Radio, 2017; Přívara, 2021; Přívara et al., 2019). Land ownership is classified into three categories: private, public, and state-owned, and is subject to intricate governance structures and policies (USAID, 2018). Moreover, land disputes are widespread due to outdated registration systems and conflicting customary claims. These conflicts pose significant obstacles to long-term investment opportunities, particularly in the realms of orchards and agro-industry (World Bank, 2018).

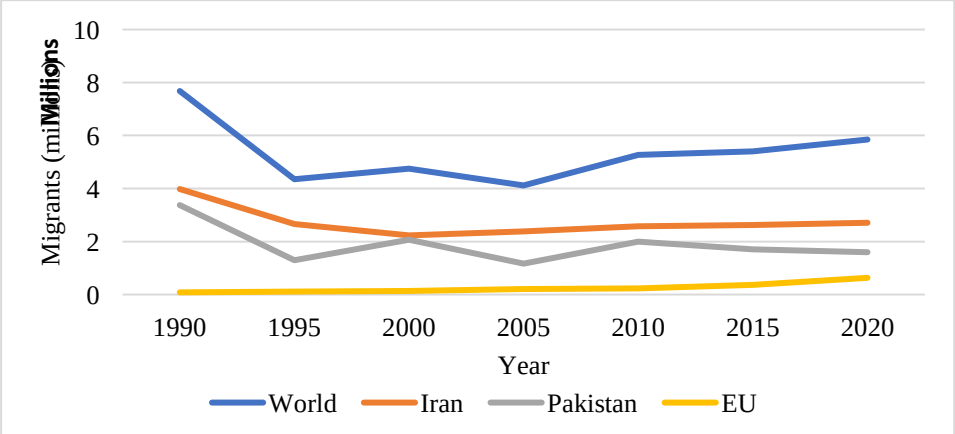
2.1.2. Emigration Waves from Afghanistan

Afghanistan has undergone multiple waves of emigration pertaining to various factors, including political instability, armed conflict, economic adversity, and natural calamities. The Soviet-Afghan War, spanning from 1979 to 1989, resulted in the displacement of numerous Afghans, prompting a considerable number to seek refuge in neighboring countries, such as Pakistan (3.2 million) and Iran (3 million). Roughly 6.7 million individuals departed the country during this period; however, around 4.5 million individuals returned in the early 1990s following a relative de-escalation of the conflict (Monsutti, 2006).

The rule of the Taliban from 1994 to 2001 instigated a surge in emigration due to the enforcement of strict Islamic laws and the violation of human rights. The civil war, drought, and economic challenges further compelled Afghans to seek improved opportunities elsewhere. Emigration during this period witnessed an increase from 2.6 million to 3.8 million, with many individuals fleeing to Pakistan (Garrote-Sanchez, 2017).

The post-9/11 War on Terror (2001-2020) resulted in heightened emigration, internal displacement, and return migration within Afghanistan. As depicted in Figure 2, the stock of international Afghan migrants grew from 4.7 million in 2000 to 5.9 million in 2020, with a noticeable decline in the early 2000s. However, during this timeframe, approximately 5.3 million Afghan refugees repatriated through the UNHCR's Voluntary Repatriation program, which has been decreasing since 2016 (UNHCR, 2023a). The number of internally displaced persons surged from 184,000 in 2003 to 3.4 million in 2022 (UNHCR, 2023b).

Figure 2. International Migration Stock of Afghan Migrants



Source: (United Nations, 2023b)

The Taliban's swift takeover of Afghanistan in August 2021 led to a significant increase in emigration, as shown in Figure 1. Thousands of Afghans fled the country to escape Taliban rule. According to reports by Julie Ray (2022), there was a 53% surge in people seeking to leave, and approximately 1.3 million new arrivals have been registered in neighboring countries (UNHCR 2023c). Factors such as political stability, security, and economic opportunities will determine the future extent of emigration waves from

Afghanistan. Studies indicate that socio-political instability, climate change, declining agricultural income, and demographic factors also influence emigration decisions. Further research with larger sample sizes and quantitative methods is needed to comprehensively understand the impact of economic factors on emigration decisions (Přívara, 2019a, 2019b; Přívara et al., 2020).

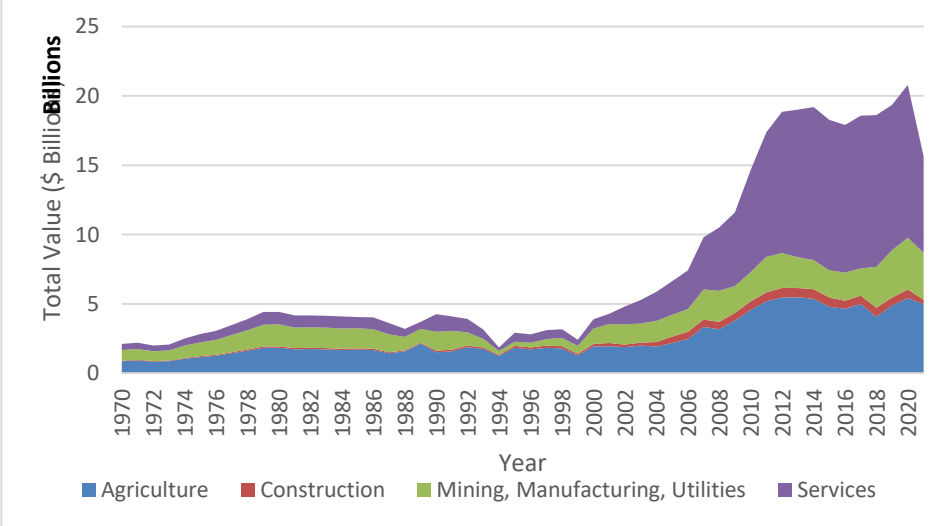
2.1.3. Unstable Economy

Afghanistan's economy has been shaped by war, state collapse, and a fragile recovery. Conflict and a weak central government have hindered economic growth and stability.

Initially, Afghanistan's 20th-century economy relied on struggling agriculture, stagnant population growth, regional autonomy, and British influence. Then, after gaining independence in 1919, the country prioritized nation-building and economic development. Next, 1919 to 1945, the country underwent a modernization program under Amanullah Khan, but political fragmentation and the Second World War disrupted progress. Subsequently, a new economic development paradigm emerged in the 1950s. Following that, 1950-1978 the country pursued modernization, focusing on infrastructure, trade, and agriculture. While weak institutions and political instability led to inequality and USSR invasion in 1979. Until 2001, the country experienced several civil wars and state collapse. During that period ethnic tensions, and weak governance hindered progress. Later, after removal of Taliban in 2001, from 2002 to 2013, it experienced an economic shift through foreign assistance, investments in infrastructure, healthcare, education, and agriculture. As result, the population grew, fertility rates declined, and development indicators improved. Following that, between 2013 and 2020, economic growth reversed due to weak government control, limited diversification of economy, high unemployment, and persistent poverty. In the meantime, the return of insurgency and the COVID-19 pandemic worsened the situation, causing increased stress and violence (T.Roy, 2020).

Eventually, the political crisis in August 2021 caused an economic downturn in the country, with job losses and a 20.7% GDP ($ 20.14 to 14.79 billion) contraction. Partial aid resumption in 2022 provided some stability, but challenges in livelihoods, inflation, and poverty remain. Efforts are needed for economic stability, revenue enhancement, private sector growth, and poverty alleviation (World Bank, 2023c).

Figure 2. GDP Aggregates and their Share 1970-2021



Source: UNDATA, 2022

3. Methodology

3.1. Model Specification

Based on the literature review, the author of this research is applying the logistic model to find the influence of land on emigration decision. The logistic regression model is used in this paper to estimate the probability of emigration decision occurring; it assumes that the relationship between the independent variables and the dependent variable is linear in the log-odds. The logit function is used to transform the linear relationship into a probability.

$$P(Y = 1) = \frac{e^{(\beta 0+\beta 1X1+\cdots+\beta kXk)}}{} \ldots\ldots\ldots\ldots \text{(Logistic model)}$$

where P(Y=1) is the probability of the dependent variable Y equaling 1 (the event occurring), X1, X2, ..., Xk are the independent variables, β0, β1, ..., βk are the coefficients to be estimated, and e is the base of the natural logarithm.

The coefficients stand for the effect of the independent variables on the probability of the event occurring (Hosmer et al., 2013). Additionally, several specification tests were applied such as linktest, Hosmer-Lemeshow goodness-of-fit test, and multicollinearity test called variance inflation factor (VIF) to ensure goodness-of-fit of the regression model. Additionally, the study used logistic regression with standard robust function to address the potential heteroskedasticity. Further, this research used various multi sub-samples for different level of variables to detect the influence of various factors and level on emigration decision and ensure the consistency of the result. STATA 17 is used for the analysis.

Suggested Model

$$Y = \beta_0 + \beta_1 Land_i + \beta_2 X_i + \varepsilon_i \text{ , } i=1,\ldots,n$$

Y represents the dependent variable, which corresponds to the emigration decision. Land serves as the primary variable under investigation in the study, while $X_i$represents the control variables. Furthermore, ε_i denotes the random disturbances or errors associated with the variables.

Detailed Model

$$\begin{aligned} &EmigrationDecision_i \\ &= \beta_0 + \beta 1Land_i + +\beta 2Livestock_i + \beta 3MonthlyIncomei_i \\ &+ \beta 4Employment_i + \beta 5FemaleIncome_i + \beta 6PublicServicess_i \\ &+ \beta 7Instability_i + \beta 8Insecurity_i + \beta 9Corruption_i + \beta 10Happiness_i \\ &+ \beta 11Violence_i + \beta 12InternetUse_i + \beta 13DiasporaAbroad_i \\ &+ \beta 14Age_i + \beta 15Male_i + \beta 16HHsize_i + \beta 17Single_i + \beta 18Education_i \\ &+ \beta 19Urban_i + \varepsilon_i \end{aligned}$$

3.2. Variables Description

In the model, the dependent variable is the binary emigration decision, while the primary independent variables are land, livestock, monthly income, employment, and female income, which represent economic factors. The remaining variables serve as controls for social and demographic factors that influence the emigration decision. The detailed description of all variables is presented in Table 2 as follows:

Table 2. Description of Variables

Variables	Questions	Type	Expected sign	Relevant literature
Emigration Intension	If given opportunity, would you leave Afghanistan and live somewhere else?	Binary (yes=1)		Brzozowski, & Nicola (2021)
Land	How many of the following does your household have?... hectar of Land (large, medium, and small)	Continuous	-/+	VanWey (2005)
Livestock	How many of the following does your household have?... Livestock (not poultry)	Continuous	-	Pradhan& Narayanan (2019)
Income	Can you estimate your average monthly household income on one of the following categories(AFN)?	Continuous	-	Brzozowski, & Nicola (2021)
Employment	Do you yourself do any activity that generates money?	Binary (yes=1)	-	Demirchyan & et al. (2021)
Female income	Do female members of the family contribute to this household income?	Binary (yes=1)	+	Ruyssen & Sara (2018)
Public services	How successful do you think the government has been in improving the living condition of people living in your area —a lot, a little, or not at all?	Binary (A lot=1)	-	Acharya (2020)
Instability	Generally speaking, do you think things in Afghanistan today are going in the right direction, or do you think they are going in the wrong direction?	Binary (Wrong direction=1)	+	Campos & et al. (1995)
Insecurity	In your view, does any group currently pose a threat to the security of this local area?	Binary(yes=1)	+	Conte & Silvia (2019)
Corruption	Please tell me whether you think that corruption is a major problem, a minor problem, or no problem at all in the following areas… In Afghanistan as a whole	Binary (Major=1)	+	Marie (2015)
Happiness	In general, in your life, would you say you are very happy, somewhat happy, not very happy or not at all happy?	Binary (very happy=1)	+	Brzozowski, & Nicola (2021)

Violence	Have you or has anyone in your family been a victim of violence or of some criminal act in your home or community in the past year?	Binary (yes=1)	+	Seven (2022)
Internet Use	Do you or do you not use any of the following for obtaining information? … The internet	Binary (yes=1)	-	Winkler (2017)
Diaspora	Do you have a family member or close relative that lives abroad?	Binary (yes=1)	+	Bellak et al. (2014)
Age	How old were you on your last birthday? / How old are you?	Continuous	-	Zhao & Hai (2019)
Gender	Male	Binary (male=1)	+	Adams & Richard (1993)
Household size	How many people live here at this address?	Continuous	-	Acharya (2020)
Marital Status	What is your marital status?	Binary (single=1)	-	Jasmina & et al. (2019)
Education	What is the highest level (grade) of school you have completed, not including schooling in Islamic madrasa?	Continuous	-	Acharya (2020)
Urban/rural	CSO Geographic Code	Binary (Urban=1)	+	Acharya (2020)

Source: Compiled by author

3.3. Data

In this research, the Survey of Afghan People, conducted by the Asia Foundation, was utilized. The Asia Foundation is an international nonprofit development organization. The data represents all provinces, ethnic groups, and genders residing in Afghanistan and the survey captures public opinion and perceptions of Afghan individuals regarding economic, political, and social matters. Data has been collected on an annual basis from 2006 to 2021. The survey sample was randomly selected using a multistage, systematic sampling approach, resulting in a total of 148,196 observations (Asia Foundation, 2021). For this paper, repeated cross-sectional time series data from 2016 to 2021 will be employed, excluding the year 2020 due to the unavailability of data caused by the COVID-19 pandemic. This time period was chosen based on the data's relevance to our variable of interest, comprising a total of 73,856 observations across the country.

3.4. Descriptive Statistics

Table 3. Households Demographic Characteristics

Category	No. of Respondents	Percentage	Category	No. of Respondents	Percentage
Gender			Rural/Urban		
Male	37380	50.61	Urban	16737	22.66
Female	36476	49.39	Rural	57119	77.34
Region			Education		
Central/Kabul	14849	20.11	No formal education	36860	49.91
East	8640	11.70	Primary school (1-6)	11656	15.78
Southeast	5435	7.36	Secondary School (7-9)	5417	7.33
Southwest	9973	13.50	High School (10-12)	13490	18.27
West	7867	10.65	University degree (12 +)	6188	8.38
Northeast	11478	15.54			
Central/Hazarjat	3901	5.28			
Northwest	11713	15.86			
Ethnicity			Age		
Pashtun	28587	38.71	Young (18-25)	20375	27.59
Tajik	25739	34.85	Adults (26-59)	49292	66.74
Hazara	8251	11.17	Old (60 plus)	4189	5.67
Uzbek	5422	7.34			
Others	5857	7.93			
Marital Status			Household size		
Married	59843	81.03	Small (1-5)	8257	11.18
Single	12329	16.69	Medium (6-10)	39003	52.81
Widow/divorced	1684	2.28	Large (10+)	26596	36.01
Total	73856	100 %	Total	73856	100 %

Source: Calculated by Author in STATA

Table 4. Percentage of Individual who Leaves the Country by Category

Category	% of "yes"	Category	% of "yes"	Category	% of "yes"
Land		Livestock		Income	
Small (0-1)	39.90	Small (0-5)	39.54	Low (0-5000)	41.02
Medium (1-5)	35.46	Medium (6-30)	37.07	Medium (5001-20000)	40.29
	30.24				

Large (5+)		Large (30+)	35.29	Large (20000+)	39.92
Employment		Female income		Public Services	
Yes	38.43	Yes	40.35	A lot	32.02
No	35.92	No	36.30	A little	37.87
				Not at all	41.69
Instability		Insecurity		Corruption	
Right direction	33.19	Yes	39.97	Major problem	39.63
Wrong direction	39.58	No	37.61	Minor problem	36.83
				Not a problem	33.87
Happiness		Victim of Violence		Access to internet	
Very happy	33.71	Yes	39.53	Yes	48.79
Somewhat happy	37.94	no	36.56	no	35.18
Not very happy	40.34				
Not at all happy	41.00				
Diaspora abroad		Age		Gender	
Yes	47.20	Youths (18-25)	42.67	Male	38.75
no	30.70	Adults (26-40)	38.96	Female	35.41
		Elders (40 plus)	35.45		
Household size		Marital Status		Education	
Small (1-5)	40.38	Married	35.88	No formal education	32.74
Medium (6-10)	38.71	Single	43.67	Primary school (1-6)	36.27
Large (10+)	33.72	Widow/divorced	32.36	Secondary School (7-9)	41.43
				High School (10-12)	44.60
				University degree (12 +)	44.44
Rural/Urban					
Urban	42.25				
Rural	35.59				

Source: Calculated by Author in STATA

4. Result

The purpose of the regression analysis was to investigate the impact of different sizes of agricultural land on the decision to emigrate in Afghanistan from 2016 to 2021. The dependent variable in this study is binary, indicating whether individuals had the intention to emigrate or not. To ensure dependable and consistent regression outcomes, the present study employed various model specifications and diagnostic tests. Subsequently, a multi-sample logistic regression with robust standard error was employed. The findings are presented in the following sequence.

4.1. Diagnostic Tests Results

To validate the assumptions of the logit regression model, such as the absence of perfect multicollinearity among the independent variables, we employed the VIF (Variance Inflation Factor) test. The findings indicate a mean VIF of 1.26 and a maximum of 2.47, both of which fall within the acceptable range below the lower threshold of 5. Furthermore, the linktest results for proper model specification indicate that the model is correctly specified (hatsq=0.521). Moreover, the Hosmer and Lemeshow's goodness-of-fit test (Prob > chi2 = 0.727) also confirms the adequacy of the logistic model in fitting the data. To account for potential heteroskedasticity and serial correlation, we conducted logistic regression while considering robust standard errors. The results of this analysis are presented and discussed in the subsequent section.

4.2. Discussion of the Regression Result

After controlling for additional variables, the logistic pooled regression analysis conducted in the appendixes (Table 1) indicates a substantial inverse correlation between land ownership and emigration. The marginal analysis indicates that a one-hectare increase in land decreases the likelihood of emigration by 0.3%. In Table 2, examining different levels of land within the sub-sample, both small and large land sizes exhibit a significant negative influence on emigration, whereas medium-sized land demonstrates a positive effect, although statistically insignificant. This hypothesis is further substantiated by the sub-sample analysis of income levels, specifically the medium and higher income groups. Likewise, the sub-samples pertaining to livestock levels and employment, as presented in Table 3 of the appendixes, reveal noteworthy outcomes. In other words, in the small and medium livestock, employment, and unemployment populations land exhibit notable adverse effects on emigration patterns.

Furthermore, in the sub-sample of rural areas, male and female in table 4 of the appendixes, land also have a significant negative influence on emigration decisions. These findings indicate that land holds a crucial role in diminishing the probability of emigration by providing sustenance and livelihood. To further mitigate emigration rates and augment land productivity, it is recommended to expand irrigation networks and invest in the distribution of arable land.

Among other factors, the impact of livestock ownership, as observed in the pooled logistic regression analysis presented in Appendix, table 1, demonstrates a non-significant negative effect. However, upon examining the subgroups of livestock ownership in Table 3, it becomes apparent that only individuals with a limited number of livestock exhibit a significant and negative influence on emigration. Furthermore, Table 2 reveals that owning livestock has a positive and significant effect on emigration among individuals with lower incomes. These findings imply that impoverished individuals with a small number of livestock are more inclined to contemplate emigrating from the country.

Our analysis of income's influence reveals that, in the pooled logistic regression, income has a negative impact on emigration, as demonstrated in Table 1. Further exploration of sub-samples in tables 2, 3, and 4 indicates that individuals belonging to the middle-income category, those who are employed, and females with income in their households exhibit a significant and negative influence on the decision to emigrate. However, when

examining income across different categories of land size, the relationship appears to be insignificant. This suggests that having land may not be a highly lucrative source of income, but rather serves as a means of subsistence.

The relationship between employment and emigration, as indicated by the pooled logistic regression, reveals a significant negative influence. This finding is further supported by the subsamples of individuals with different land sizes and lower incomes, as shown in Table 2. Moreover, when examining the subsamples of livestock ownership, rural residence, gender (males in Table 3 and females in Table 4), it consistently demonstrates a significant negative association with emigration and employment. Additionally, for individuals who are employed, their income has a significant negative influence on emigration. These results suggest that unemployment, from an economic perspective, is one of the primary factors influencing the decision to emigrate. To address this issue, it is crucial to focus on development projects and implement policies that promote job creation, as they will be more effective in tackling emigration.

The findings regarding female income (income contributed by female members of the households) suggest a significant and positive impact on the decision to emigrate across various regression results. This observation can be interpreted in two ways. Firstly, it suggests that higher female income reflects greater skills and the influence of skilled women on the emigration decisions within families, as noted by Docquier & et al. (2021). Secondly, the results indicate that, factors such as violence against women significantly and positively contribute to the emigration decision, along with other socio-demographic factors.

Among the social factors in our regression analysis, multiple variables exert a significant influence on the decision to emigrate. These empirical findings indicate that political instability, insecurity, the efficacy of public services, and the level of happiness within the country emerge as pivotal determinants for a substantial proportion of Afghan individuals contemplating emigration. Moreover, the findings indicate that possessing family or relatives residing abroad (diaspora) and obtaining information and updates via the internet exert a significantly positive impact on the propensity to opt for emigration. This underscores the significance of social networks and information dissemination in the migration process. A campaign on social media possesses the potential to influence the decision to remain in the home country instead of emigrating.

The analysis unveiled noteworthy findings concerning the demographic variables and their correlation with emigration intentions. Higher age and belonging to larger households were observed to have a substantial negative association with emigration. Conversely, the sub samples reveal that males residing in rural regions, possessing a limited number of livestock, having medium-sized land holdings, and earning lower incomes exhibited a significant likelihood of engaging in emigration. Additionally, the sub samples indicates that unmarried individuals living in rural areas, possessing medium-sized livestock, being employed, and having female household members who work were found to be more prone to emigrate. Moreover, education exerted a significant and positive influence on the decision to emigrate, except for individuals with higher incomes, larger land holdings, and those residing in urban areas.

It is important to note that these results are based on the specified time period and the variables included in the analysis. Further research is needed to gain a more comprehensive understanding of the factors influencing emigration decisions in Afghanistan.

5. Conclusion

This study aimed to investigate the influence of land on emigration decisions in Afghanistan from 2016 to 2021. Previous research has primarily focused on social and

political factors, neglecting the economic dimension. Therefore, this study aimed to bridge this gap by examining the impact of land ownership on emigration decisions, considering the significant dependence of Afghan economy on agriculture in rural areas. The data from 2016 to 2021 were analyzed using a binary logistic regression model, and diagnostic tests were conducted to ensure the model's reliability. The logistic model utilized a multi-sampling method, adjusted with robust standard error, and controlled for various socio-demographic factors, yielding significant findings.

The regression analysis revealed a significant negative relationship between land ownership and emigration. Specifically, both small and large land ownership sizes had a significant negative impact on emigration, while medium-sized land showed a positive but insignificant effect. Regarding livestock ownership, households with a small or medium number of livestock, regardless of employment status and rural residence, exhibited a significant negative influence on emigration. Furthermore, income played a role, particularly for individuals belonging to the middle-income category, being employed, and having a working female member in the household demonstrated a significant negative influence on emigration probability. Employment was found to decrease the probability of emigration, whereas female income increased it. These findings highlight the significance of land ownership, employment, and income in understanding the influence of economic factors on emigration patterns.

Social factors also significantly influenced the decision to emigrate among Afghan people. Political instability, insecurity, public service effectiveness, and happiness levels played pivotal roles. Additionally, having family abroad and access to internet-based news positively impacted the likelihood of emigration.

Demographic factors revealed that older individuals and larger households were less inclined to emigrate. On the other hand, males in rural areas with small livestock, medium-sized land, and lower income were more likely to emigrate. Single individuals in rural areas with medium-sized livestock, employment, and female income also exhibited a higher propensity for emigration. Education had a positive impact on emigration, except for those with higher incomes, larger land sizes, and urban residences.

In conclusion, emigration from Afghanistan can be described as a multidimensional phenomenon, influenced by factors such as economic and political instability. The research findings have implications that are expected to be relevant for public policy, academics, and international donor organizations aiming to address the challenges associated with migration from developing countries like Afghanistan. To further enhance the robustness of future studies, additional pull factors can be included, and research can be conducted using a panel of developing countries.

Appendixes

Table 1. Pool Regression Result

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Logit	Margin Logit	Probit	Margin Probit	Logit obust
Land(hectar)	-0.0170***	-0.00395***	-0.0105***	-0.00394***	-0.0170***
	(0.00507)	(0.00118)	(0.00298)	(0.00112)	(0.00503)
Livestock	-0.00013	-3.04e-05	-5.37e-05	-2.02e-05	-0.000131

	1				
	(0.00106)	(0.000246)	(0.000651)	(0.000245)	(0.00104)
Monthly Income	-1.71e-06**	-3.97e-07**	-1.06e-06**	-4.00e-07**	-1.71e-06**
	(8.47e-07)	(1.97e-07)	(5.17e-07)	(1.95e-07)	(8.55e-07)
Employment	-0.105***	-0.0244***	-0.0655***	-0.0247***	-0.105***
	(0.0360)	(0.00837)	(0.0223)	(0.00837)	(0.0361)
Female Income	0.167***	0.0389***	0.104***	0.0392***	0.167***
	(0.0317)	(0.00736)	(0.0196)	(0.00737)	(0.0318)
Public Services	-0.155***	-0.0360***	-0.0958***	-0.0361***	-0.155***
	(0.0364)	(0.00846)	(0.0223)	(0.00839)	(0.0365)
Instability	0.246***	0.0573***	0.151***	0.0570***	0.246***
	(0.0261)	(0.00603)	(0.0161)	(0.00601)	(0.0262)
insecurity	0.119***	0.0276***	0.0732***	0.0275***	0.119***
	(0.0255)	(0.00593)	(0.0158)	(0.00593)	(0.0256)
Corruption	-0.0424	-0.00985	-0.0267	-0.0101	-0.0424
	(0.0321)	(0.00746)	(0.0198)	(0.00745)	(0.0322)
Happiness	-0.242***	-0.0563***	-0.149***	-0.0561***	-0.242***
	(0.0263)	(0.00607)	(0.0162)	(0.00606)	(0.0263)
Violence	0.0411	0.00956	0.0257	0.00966	0.0411
	(0.0321)	(0.00746)	(0.0199)	(0.00747)	(0.0321)
Internet Use	0.351***	0.0815***	0.218***	0.0821***	0.351***
	(0.0330)	(0.00762)	(0.0205)	(0.00767)	(0.0331)

Diaspora Abroad	0.530***	0.123***	0.328***	0.123***	0.530***
	(0.0246)	(0.00554)	(0.0152)	(0.00560)	(0.0246)
Age	-0.00724***	-0.00168***	-0.00445***	-0.00167***	-0.00724***
	(0.00111)	(0.000258)	(0.000684)	(0.000257)	(0.00112)
Male Dummy	0.0511	0.0119	0.0318	0.0120	0.0511
	(0.0360)	(0.00837)	(0.0223)	(0.00838)	(0.0361)
Household Size	-0.0204***	-0.00473***	-0.0125***	-0.00469***	-0.0204***
	(0.00307)	(0.000711)	(0.00188)	(0.000705)	(0.00311)
Single Dummy	0.0583	0.0135	0.0368	0.0138	0.0583
	(0.0370)	(0.00861)	(0.0229)	(0.00863)	(0.0371)
Education	0.0122***	0.00283***	0.00752***	0.00283***	0.0122***
	(0.00248)	(0.000576)	(0.00153)	(0.000577)	(0.00249)
Urban Dummy	0.0919***	0.0214***	0.0568***	0.0214***	0.0919***
	(0.0288)	(0.00669)	(0.0178)	(0.00671)	(0.0288)
Constant	-0.327***		-0.205***		-0.327***
	(0.0632)		(0.0389)		(0.0634)
Observations	29,876	29,876	29,876	29,876	29,876

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2. Regression Result for Land and Income Subsamples

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Land<1	1<Land<5	Land>5	Income<5000	5000<income<20000	Income>20000
Land(hectar)	-0.245***	0.0104	-0.00833**	-0.00491	-0.0159***	-0.0252**

	(0.0455)	(0.0347)	(0.00360)	(0.00971)	(0.00613)	(0.0120)
Livestock	-0.00109	0.000173	0.00266	0.00405**	-0.00246	-0.000128
	(0.00187)	(0.00220)	(0.00196)	(0.00205)	(0.00161)	(0.00154)
Monthly Income	-1.40e-06	-2.20e-06	-1.10e-05	2.48e-05	-1.04e-05***	2.10e-09
	(9.35e-07)	(2.57e-06)	(1.16e-05)	(1.78e-05)	(3.77e-06)	(1.05e-06)
Employment	-0.0669*	-0.258**	-0.630**	-0.177**	-0.0663	-0.142
	(0.0390)	(0.105)	(0.296)	(0.0737)	(0.0446)	(0.119)
Female Income	0.132***	0.363***	0.374*	0.168***	0.169***	0.0476
	(0.0354)	(0.0809)	(0.209)	(0.0646)	(0.0395)	(0.106)
Public Services	-0.159***	-0.144	-0.462*	-0.0788	-0.162***	-0.247**
	(0.0403)	(0.0929)	(0.276)	(0.0783)	(0.0442)	(0.121)
Instability	0.240***	0.283***	0.112	0.291***	0.212***	0.353***
	(0.0287)	(0.0696)	(0.204)	(0.0546)	(0.0316)	(0.0945)
insecurity	0.152***	0.0268	-0.104	0.160***	0.101***	0.219**
	(0.0280)	(0.0688)	(0.199)	(0.0539)	(0.0308)	(0.0930)
Corruption	0.000237	-0.173**	-0.563**	-0.0505	-0.0161	-0.279**
	(0.0357)	(0.0806)	(0.244)	(0.0675)	(0.0386)	(0.123)
Happiness	-0.263***	-0.111	-0.616***	-0.237***	-0.227***	-0.362***
	(0.0287)	(0.0721)	(0.212)	(0.0556)	(0.0319)	(0.0894)
Violence	0.0809**	-0.153**	0.417*	0.112	0.0170	0.126
	(0.0360)	(0.076	(0.214)	(0.0723)	(0.0380)	(0.112)

		9)				
Internet Use	0.317***	0.439***	0.526**	0.279***	0.399***	0.269***
	(0.0359)	(0.0935)	(0.266)	(0.0816)	(0.0392)	(0.104)
Diaspora Abroad	0.525***	0.516***	0.859***	0.449***	0.575***	0.388***
	(0.0268)	(0.0672)	(0.191)	(0.0515)	(0.0296)	(0.0900)
Age	-0.00772***	-0.00559*	0.00269	-0.00859***	-0.00587***	-0.0123***
	(0.00121)	(0.00309)	(0.00865)	(0.00219)	(0.00138)	(0.00393)
Male Dummy	0.0306	0.255**	0.422	0.164**	0.00973	-0.0715
	(0.0388)	(0.109)	(0.312)	(0.0735)	(0.0446)	(0.122)
Household Size	-0.0184***	-0.0241***	0.0125	-0.0218***	-0.0179***	-0.00866
	(0.00351)	(0.00773)	(0.0205)	(0.00710)	(0.00402)	(0.00818)
Single Dummy	0.0514	0.0211	0.655**	0.0799	0.0390	0.181
	(0.0398)	(0.113)	(0.306)	(0.0801)	(0.0447)	(0.127)
Education	0.00973***	0.0231***	0.0525***	0.0204***	0.0149***	0.00142
	(0.00271)	(0.00690)	(0.0202)	(0.00571)	(0.00301)	(0.00889)
Urban Dummy	0.0572*	0.0687	-0.304	0.0700	0.118***	0.0496
	(0.0314)	(0.116)	(0.311)	(0.0627)	(0.0348)	(0.101)
Constant	-0.279***	-0.410**	-0.848*	-0.373***	-0.358***	0.0885
	(0.0696)	(0.189)	(0.485)	(0.141)	(0.0843)	(0.254)
Observations	25,111	4,117	648	6,847	20,678	2,351

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Income is in Afs (Afghan National Currency)

Land is measured by Hectar

Table 3. Regression Result for Livestock, employment and Female Income Subsamples

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Livestock <5	5<Livestock <30	Livestock> 30	Employed	Unemployed
Land(hectar)	-0.0190**	-0.0251***	0.00533	-0.0237***	-0.0106*
	(0.00795)	(0.00942)	(0.0143)	(0.00652)	(0.00590)
Livestock	-0.0226**	0.00580	-0.000601	-0.00121	0.00185
	(0.00934)	(0.00439)	(0.00176)	(0.00133)	(0.00172)
Monthly Income	-1.36e-06	-1.19e-06	1.70e-08	-3.20e-06**	-5.62e-07
	(8.91e-07)	(2.16e-06)	(7.23e-06)	(1.38e-06)	(1.13e-06)
Employment	-0.0949**	-0.110	-0.243		
	(0.0399)	(0.0808)	(0.274)		
Female Income	0.152***	0.189***	0.138	0.183***	0.152***
	(0.0370)	(0.0618)	(0.203)	(0.0427)	(0.0555)
Public Services	-0.178***	-0.0966	0.148	-0.188***	-0.116**
	(0.0406)	(0.0783)	(0.291)	(0.0498)	(0.0538)
Instability	0.257***	0.223***	0.214	0.275***	0.208***
	(0.0292)	(0.0561)	(0.216)	(0.0361)	(0.0381)
insecurity	0.152***	0.0250	-0.0313	0.153***	0.0803**
	(0.0287)	(0.0544)	(0.194)	(0.0352)	(0.0374)
Corruption	-0.0262	-0.0261	-0.704***	-0.146***	0.0678
	(0.0363)	(0.0669)	(0.228)	(0.0449)	(0.0463)
Happiness	-0.255***	-0.152**	-0.336	-0.233***	-0.250***
	(0.0290)	(0.0597)	(0.215)	(0.0364)	(0.0382)
Violence	0.0578	0.0388	-0.0275	0.0549	0.0273
	(0.0365)	(0.0648)	(0.233)	(0.0431)	(0.0483)
Internet Use	0.338***	0.399***	0.443	0.353***	0.369***
	(0.0360)	(0.0816)	(0.328)	(0.0425)	(0.0535)
Diaspora Abroad	0.519***	0.586***	0.554***	0.521***	0.538***
	(0.0274)	(0.0527)	(0.197)	(0.0344)	(0.0353)
Age	-0.00822***	-0.00413*	-0.00409	-0.00845***	-0.00563***

	(0.00125)	(0.00234)	(0.00862)	(0.00155)	(0.00162)
Male Dummy	0.0663*	0.0378	0.160	0.0905	-0.0188
	(0.0400)	(0.0817)	(0.291)	(0.0615)	(0.0503)
Household Size	-0.0208***	-0.0177**	-0.0212	-0.0182***	-0.0211***
	(0.00350)	(0.00690)	(0.0211)	(0.00422)	(0.00463)
Single Dummy	0.0228	0.184**	0.259	0.0913*	0.0179
	(0.0410)	(0.0835)	(0.293)	(0.0553)	(0.0521)
Education	0.0112***	0.0169***	0.00413	0.00660**	0.0231***
	(0.00277)	(0.00549)	(0.0213)	(0.00322)	(0.00407)
Urban Dummy	0.0800**	0.0182	0.426	0.0920**	0.0863**
	(0.0316)	(0.102)	(0.428)	(0.0415)	(0.0403)
Constant	-0.284***	-0.579***	0.0810	-0.332***	-0.475***
	(0.0712)	(0.143)	(0.512)	(0.107)	(0.0900)
Observations	24,010	6,582	510	15,406	14,470

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4. Regression Result for Rural, Urban, Male, and Female Subsamples

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Female Income	Rural	Urban	Male	Female
Land(hectar)	0.00342	-0.0246***	-0.00513	-0.0163***	-0.0184**
	(0.00917)	(0.00576)	(0.00326)	(0.00584)	(0.00932)
Livestock	2.12e-05	0.000714	-0.00296	-0.00121	0.00221
	(0.00191)	(0.00131)	(0.00239)	(0.00134)	(0.00203)
Monthly Income	-4.90e-06**	-1.56e-06	-1.50e-06	-3.35e-06**	-2.70e-07
	(2.03e-06)	(1.13e-06)	(1.25e-06)	(1.32e-06)	(1.21e-06)
Employment	-0.0958	-0.163***	0.00819	-0.0860*	-0.195***

	(0.0647)	(0.0438)	(0.0644)	(0.0464)	(0.0736)
Female Income		0.175***	0.116*	0.157***	0.199***
		(0.0363)	(0.0673)	(0.0407)	(0.0613)
Public Services	-0.106	-0.141***	-0.213***	-0.161***	-0.140**
	(0.0750)	(0.0413)	(0.0790)	(0.0492)	(0.0548)
Instability	0.266***	0.222***	0.304***	0.253***	0.232***
	(0.0571)	(0.0302)	(0.0529)	(0.0348)	(0.0400)
insecurity	0.103*	0.100***	0.201***	0.196***	0.0236
	(0.0563)	(0.0295)	(0.0520)	(0.0341)	(0.0390)
Corruption	-0.212***	-0.110***	0.248***	-0.125***	0.0584
	(0.0700)	(0.0360)	(0.0717)	(0.0438)	(0.0478)
Happiness	-0.165***	-0.198***	-0.366***	-0.243***	-0.238***
	(0.0576)	(0.0310)	(0.0498)	(0.0351)	(0.0400)
Violence	0.241***	-6.70e-05	0.211***	0.00633	0.0838*
	(0.0701)	(0.0365)	(0.0692)	(0.0424)	(0.0493)
Internet Use	0.165**	0.322***	0.415***	0.387***	0.284***
	(0.0693)	(0.0419)	(0.0551)	(0.0403)	(0.0596)
Diaspora Abroad	0.427***	0.548***	0.479***	0.483***	0.576***
	(0.0547)	(0.0289)	(0.0474)	(0.0331)	(0.0369)
Age	-0.00595**	-0.00411***	-0.0154***	-0.0109***	-0.000718
	(0.00241)	(0.00132)	(0.00210)	(0.00144)	(0.00180)
Male Dummy	0.0298	0.136***	-0.146**		
	(0.0583)	(0.0436)	(0.0658)		
Household Size	-0.0176**	-0.0216***	-0.0188***	-0.0165***	-0.0244***
	(0.00738)	(0.00363)	(0.00609)	(0.00397)	(0.00507)
Single Dummy	0.154*	0.106**	-0.0697	0.0824	0.0377
	(0.0797)	(0.0445)	(0.0678)	(0.0514)	(0.0555)

Education	0.0217***	0.0140***	0.00697	0.00648**	0.0228***
	(0.00514)	(0.00294)	(0.00477)	(0.00320)	(0.00411)
Urban Dummy	0.126*			0.0242	0.165***
	(0.0699)			(0.0395)	(0.0425)
Constant	-0.147	-0.391***	-0.138	-0.0693	-0.642***
	(0.147)	(0.0733)	(0.125)	(0.100)	(0.0972)
Observations	5,879	21,932	7,944	16,613	13,263

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

References

Abramitzky, Ran, Leah Platt Boustan, and Katherine Eriksson. "Have the poor always been less likely to migrate? Evidence from inheritance practices during the age of mass migration." Journal of Development Economics 102 (2013): 2-14

Acharya, Sabitri Devi. "Determinants of Outmigration: A Micro-econometric Analysis." Economic Journal of Development Issues (2020): 81-100.

Adams Jr, Richard H. "The economic and demographic determinants of international migration in rural Egypt." The Journal of Development Studies 30, no. 1 (1993): 146-167

Ashrafi, Afsaneh, and Haideh Moghissi. "Afghans in Iran: Asylum fatigue overshadows Islamic brotherhood." Global Dialogue 4, no. 4 (2002): 89

Asia Foundation. “Afghanistan in 2019 A Survey of Afghan People”, Kabul, Afghanistan, (2021).

Augustová, Karolína, and H. Karimi. "Migration from Afghanistan under the Taliban: Implications and Strategies in the Neighbourhood and Europe." Friedrich Ebert Stiftung (2021)

Azadi Radio. Land Seizing. 2017. https://da.azadiradio.com/a/28715333.html

Barkovic Bojanic. "Migration motives of university students: An empirical research." International migration 53, no. 1 (2015): 66-82.

BBC. “Afghanistan: How many people has the UK resettled?”. BBC(2022). Retrieved 05 7, 2022, from https://www.bbc.com/news/uk-58245684

Bellak, Christian, Markus Leibrecht, and Mario Liebensteiner. "Short-term labour migration from the Republic of Armenia to the Russian Federation." Journal of Development Studies 50, no. 3 (2014): 349-367.

Bodvarsson, Örn B., and Hendrik Van den Berg. The economics of immigration. New York, NY: Springer New York,2013.

Brzozowski, J., & Coniglio, N. (2021). International migration and the (un) happiness push: Evidence from Polish longitudinal data. International Migration Review, 55(4), 1089-1120.

Campos, Jose Edgardo L., and Donald Lien. "Political instability and illegal immigration." Journal of population economics 8, no. 1 (1995): 23-33.

Chandrasekhar, S., and Soham Sahoo. "Land-holding, participation in agriculture and short-term migration in rural India." Asian Population Studies 15, no. 2 (2019): 209-227.

Conte, Alessandra, and Silvia Migali. "The role of conflict and organized violence in international forced migration." Demographic Research 41 (2019): 393-424.

Daniel Garrote-Sanchez. “International Labor Mobility National: Experience and Evidence for Afghanistan at macro level”. World Bank Project on “Afghanistan: Managed International Labor Mobility as Contribution to Economic Development and Growth”. World Bank Washington DC (2017). http://documents.worldbank.org/curated/en/536541530196136716/pdf/International-Labor-Mobility-of- Nationals-Experience-and-Evidence-for-Afghanistan-at-the-Macro-Level.pdf

Demirchyan, Anahit, Haroutune K. Armenian, Yevgenya J. Paturyan, and Vahe Khachadourian. "Predictors of permanent emigration in a long-term cohort of Spitak earthquake survivors in Armenia." International Journal of Disaster Risk Reduction 61 (2021): 102337.

Docquier, Frédéric, Abdeslam Marfouk, Sara Salomone, and Khalid Sekkat. "Are skilled women more migratory than skilled men?." World development 40, no. 2 (2012): 251-265.

Dolinayova, A., & Domeny, I. (2022). Competition on the Railway Market in a Segment of Public Service Obligations in Terms of Effectiveness: Study in V4 Countries. Journal of Competitiveness, 14(3), 41–58. https://doi.org/10.7441/joc.2022.03.03

Durana, P., Michalkova, L., Privara, A., Marousek, J., & Tumpach, M. (2021). Does the life cycle affect earnings management and bankruptcy? Oeconomia Copernicana, 12(2), 425–461. https://doi.org/10.24136/oc.2021.015

Eche, David, and Ramiro Vivas Vivas. "Farming, Education and Migration: Understanding Rural Youth in Northern Ecuador." Migrations 54 (2022): 9.

Eiman Massoud Shaheer Aris, Pete Spink, and Mujeb Adel. “ CLIMATE CHANGE DRIVES MIGRATION IN CONFLICT-RIDDEN AFGHANISTAN”. ActionAId Internationl (2020). Accessed 04,20, 2023. Climate change induced migration in Afghanistan Final_0.pdf (actionaid.org)

Esipova, N., & Ray, J. 700 Million Worldwise Desire to Migrate Permanently. Gallup (2009) . Retrieved 04 22, 2023, from https://news.gallup.com/poll/124028/700-MillionWorldwide-Desire-Migrate-Permanently.aspx

Galanska, Nina. “FORCED MIGRATION AS A CONSEQUENCE OF ARMED CONFLICT - A CASE STUDY OF AFGHANISTAN”. 15th International Scientific Conference on International Relations - Contemporary Issues of World Economics and Politics (2014). Accessed 04,27,2023. https://www.webofscience.com/wos/woscc/full-record/WOS:000363790100019

Garrote-Sanchez, D. International Labor Mobility of Nationals: Experience and Evidence for Afghanistan at Macro Level . World Bank. (2017).

Goldbaum, Christina, and Yaqoob Akbary. "Over a million flee as Afghanistan’s economy collapses." The New York Times (2022).

Government of Afghanistan. Comprehensive Agriculture Development National Priority Program. INTERMINISTERIAL IMPLEMENTATION PLAN: 2019-2023, Kabul: Ministry of Finance. 2018. https://www.gafspfund.org/sites/default/files/inline-files/6b.%20Afghanistan_Agriculture%20and%20Food%20Security%20Strategy.pdf.

Gray, Clark L. "Environment, land, and rural out-migration in the southern Ecuadorian Andes." World Development 37, no. 2 (2009): 457-468.

Group, World Bank. Islamic Republic of Afghanistan Agricultural Sector Review. Agricultural Sector Review, Washington, DC 20433, USA: World Bank. 2014. https://documents1.worldbank.org/curated/en/245541467973233146/pdf/AUS9779-REVISED-WP-PUBLIC-Box391431B-Final-Afghanistan-ASR-web-October-31-2014.pdf.

Gul, Ayaz. “More than 300,000 Afghans Flee to Pakistan Since Taliban Takeover of Afghanistan”. VOA (2021). Accessed 04, 27, 2023, .https://www.voanews.com/a/more-than300-000-afghans-flee-to-pakistan-since-taliban-takeover-of-afghanistan-/6357777.html

Hosmer Jr, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). Applied logistic regression. John Wiley & Sons.

http://online.kottakkalfarookcollege.edu.in:8001/jspui/bitstream/123456789/3052/1/The%20Economics%20Of%20Immigration.pdf

IOM. “Movement in and out of Afghanistan”. UN Migration (2022). Accessed 04, 27, 2023. https://www.iom.int/sites/g/files/tmzbdl486/files/documents/2023-01/afg-movements-in-and-out-01-15-dec-2022-v3.pdf

Iqbal, Mohammad Wasim, Somchai Donjadee, Bancha Kwanyuen, and Shi-yin Liu. "Farmers' perceptions of and adaptations to drought in Herat Province, Afghanistan." Journal of Mountain Science 15, no. 8 (2018): 1741-1756.

Istudor, N., Constantin, M., Ignat, R., Chiripuci, B.-C., & Petrescu, I.-E. (2022). The Complexity of Agricultural Competitiveness: Going Beyond the Balassa Index. Journal of Competitiveness, 14(4), 61–77. https://doi.org/10.7441/joc.2022.04.04

Jacobs, Michael J., Catherine A. Schloeder, and Philip D. Tanimoto. "Dryland agriculture and rangeland restoration priorities in Afghanistan." Journal of Arid Land 7 (2015): 391-402.

Kessler, Glenn. “The Afghan Evacuation and the War by the Numbers”. The Washington Post(2021). Retrieved 04 27, 2023. https://www.washingtonpost.com/politics/2021/09/02/afghan-evacuation-war-by-numbers/

Koser, Khalid, and Peter Marsden. "Migration and Displacement Impacts of Afghan Transitions in 2014: Implications for Australia." Migration Research Program Occasional Paper Series 3 (2013).

Kubik, Zaneta, and Mathilde Maurel. "Weather shocks, agricultural production and migration: Evidence from Tanzania." The Journal of Development Studies 52, no. 5 (2016): 665-680.

Loschmann, Craig, and Melissa Siegel. "Revisiting the motivations behind remittance behavior: Evidence of debt-financed migration from Afghanistan." Migration Letters 12, no. 1 (2015): 38-49.

Loschmann, Craig, Katie Kuschminder, and Melissa Siegel. "The root causes of movement: Exploring the determinants of Irregular Migration from Afghanistan." Irregul. Migr. Res. Programme Occas. Pap. Ser (2014).

Mallick, Bishawjit, Kimberly G. Rogers, and Zakia Sultana. "In harm's way: Non-migration decisions of people at risk of slow-onset coastal hazards in Bangladesh." Ambio 51, no. 1 (2022): 114-134.

Marchand, Katrin, Melissa Siegel, Katie Kuschminder, Nassim Majidi, Michaella Vanore, and Carla Buil. “Afghanistan Migration Profile”. International Organization for Migration, 2014.

McHenry, Peter. "Does Low Wealth Constrain Long-Distance Migration?." ILR Review 68, no. 1 (2015): 79-119.

Monsutti, A. “Afghan Transnational Networks: Looking Beyond Repatriation. Synthesis Paper Series, Afghanistan Research and Evaluation Unit, Kabul. (2006)

Mumuni, Eliasu, Pokuaa Yaa, and O. Idowu Oladele. "Household welfare among migrant rice farmers in Ashanti Region of Ghana." Journal of Food, Agriculture & Environment 11, no. 2 (2013): 747-750.

Obeng-Odoom, Franklin. "Unequal access to land and the current migration crisis." Land Use Policy 62 (2017): 159-171.

Okicic, Jasmina, Amila Pilav-Velic, Hatidza Jahic and Meldina Kokorovic Jukan. Why Young People Want to Leave Bosnia and Herzegovina: Aspiration or Desperation?. The Sixth Scientific Conference With International Participation “Economy of Integration” , Icei 2019, (E)Migration and Competitiveness of South-Eastern European Countries at: Tuzla, Bosnia and Herzegovina (2019).

Oláh, J., Novotná, A., Sarihasan, I., Erdei, E., & Popp, J. (2022). Examination of The Relationship Between Sustainable Industry 4.0 and Business Performance. Journal of Competitiveness, 14(4), 25–43. https://doi.org/10.7441/joc.2022.04.02

Omerkhil, Najibullah, Praveen Kumar, Manisha Mallick, Lungyina B. Meru, Tara Chand, P. S. Rawat, and Rajiv Pandey. "Micro-level adaptation strategies by smallholders to adapt climate

change in the least developed countries (LDCs): insights from Afghanistan." Ecological Indicators 118 (2020): 106781

Poprawe, Marie. "On the relationship between corruption and migration: empirical evidence from a gravity model of migration." Public Choice 163, no. 3-4 (2015): 337-354

Pradhan, Kalandi Charan, and Krishnan Narayanan. "Intensity of labour migration and its determinants: insights from Indian semi-arid villages." Asia-Pacific Journal of Regional Science 3 (2019): 955-994.

Přívara, A. (2019a). Citizenship-for-sale schemes in Bulgaria, Cyprus, and Malta. Migration Letters, 16, 245–254. https://doi.org/10.33182/ml.v16i2.735

Přívara, A. (2019b). Explaining emigration patterns in Estonia, Lithuania, Slovenia and Slovakia. Geografický Časopis - Geographical Journal, 71(2). https://doi.org/10.31577/geogrcas.2019.71.2.09

Přívara, A. (2021). Labour market efficiency and emigration in Slovakia and EU neighbouring countries. Economic Research-Ekonomska Istraživanja, 34(1), 1850–1869. https://doi.org/10.1080/1331677X.2020.1858131

Privara, A. (2022a). Competitiveness of Germany and the Labour Market: A Migration Perspective. Journal of Competitiveness, 14(2), 116–134. https://doi.org/10.7441/joc.2022.02.07

Privara, A. (2022b). Economic growth and labour market in the European Union: Lessons from COVID-19. Oeconomia Copernicana, 13(2), 355–377. https://doi.org/10.24136/oc.2022.011

Přívara, A., Rievajová, E., & Barbulescu, A. (2020). Attracting High Skilled Individuals in the EU: The Finnish Experience. Migration Letters, 17(2), 369–377. https://doi.org/10.33182/ml.v17i2.927

Privara, A., Rievajová, E., & Dziura, B. (2018). Unemployment Aspects of Regional Development (The Cases of the Czech and Slovak Republics). Advanced Science Letters, 24(9), 6320–6322. https://doi.org/10.1166/asl.2018.13042

Privara, A., Rievajová, E., & Yüceşahin, M. M. (2019). Labour Market Disadvantages Faced by Migrant Workers from Czech Republic, Hungary, and Slovakia in Britain. Migration Letters, 16(4), 585–594. https://doi.org/10.33182/ml.v16i4.720

Přívara, Andrej, and Magdaléna Přívarová. "Nexus between climate change, displacement and conflict: Afghanistan case." Sustainability 11, no. 20 (2019): 5586.

Ray, Juile. “Taliban Returns, Majority of Afghans Seek an Exit”. gallup (2022). Accessed 04,15,2023. https://news.gallup.com/poll/391499/taliban-returns-majority-afghans-seek-exit.aspx

Reuters. (2021). Factbox: Evacuations from Afghanistan by Country. Retrieved 05 27, 2022, from https://www.reuters.com/world/evacuations-afghanistan-by-country-2021-08-26/

Robinson, Sarah, and Tanya Guenther. "Rural livelihoods in three mountainous regions of Tajikistan." Post-Communist Economies 19, no. 3 (2007): 359-378.

Roy, T. "Reading the Economic History of Afghanistan." Working paper. 2020. http://eprints.lse.ac.uk/106957/1/Roy_reading_the_economic_history_of_afghanistan_published.pdf.

Rupelle, Maëlys De La, Deng Quheng, Li Shi, and Thomas Vendryes. "Land rights and rural-urban migration in China." China Perspectives 2008, no. 2008/2 (2008): 25-35.

Ruyssen, Ilse, and Sara Salomone. "Female migration: A way out of discrimination?." Journal of Development Economics 130 (2018): 224-241.

Sadiddin, Ahmad, Andrea Cattaneo, Marinella Cirillo, and Meghan Miller. "Food insecurity as a determinant of international migration: evidence from Sub-Saharan Africa." Food Security 11 (2019): 515-530.

Saura, J., R., Skare, M., & Riberio-Navarrete, S. (2022). How Does Technology Enable Competitive Advantage? Reviewing State of the Art and Outlining Future Directions. Journal of Competitiveness, 14(4), 172–188. https://doi.org/10.7441/joc.2022.04.10

Seven, Ümit. "Armed conflict, violence, and the decision to migrate: explaining the determinants of displacement in Syria." Migration and Development 11, no. 3 (2022): 1029-1045.

Sirkeci, I., Cohen, J. H., & Přívara, A. (2017). Towards a Migration Letters Index: the most influential works and authors in Migration Studies. Migration Letters, 14(3), 397-424.

The World Bank. Afghanistan Capacity Development for Natural Resource Management. Analysis, Washington DC 20433: World Bank. 2018. https://documents1.worldbank.org/curated/pt/870281529935471121/pdf/Rangelands-and-Forests-in-Afghanistan-The-Foundation-of-Sustainable-Rural-Development.pdf.

The World Bank. The World Bank Data. 05 29. 2023a. https://data.worldbank.org/indicator/AG.LND.ARBL.HA?locations=AF.

The World Bank. World Bank Data. 05 28. 2023b. https://data.worldbank.org/indicator/NV.AGR.TOTL.CD?locations=AF.

The World Bank. World Bank, Afghanistan. 05 28. 2023. https://www.worldbank.org/en/country/afghanistan/overview.

UNHCR Regional Bureau for Asia and Pacific. External Update: Afghanistan Situation #23. UNHCR. 2023c. https://reporting.unhcr.org/document/4216.

UNHCR. Operational Data Portal. Afghanistan. 2023a. https://data.unhcr.org/en/situations/afghanistan/location/7535

UNHCR. Refugee Data Finder. 05 28. 2023b. https://www.unhcr.org/refugee-statistics/download/?url=82LTtq.

United Nations. “Total net migration”. Data portal (2023). Accessed 05,15, 2023. https://population.un.org/dataportal/data/indicators/65/locations/4/start/1950/end/2023/line/linetimeplot

United Nations. International Migration Stocks. 05 29. 2023b. https://www.un.org/development/desa/pd/content/international-migrant-stock.

United Nations. UN News Global perspective Human stories. 11 1. 2022. https://news.un.org/en/story/2022/11/1130057.

United Nations. UNDATA. 11 1. 2022. http://data.un.org/datamartinfo.aspx

United Nations. World migration report 2022. International Organization for Migration (2022). https://publications.iom.int/books/world-migration-report-2022

USAID. Property Rights and Resource Governance. Profile, Kabul: USAID Country Profile. 2018. https://www.land-links.org/wp-content/uploads/2010/07/USAID_Land_Tenure_Afghanistan_Profile.pdf.

VanWey, Leah K. "Land ownership as a determinant of international and internal migration in Mexico and internal migration in Thailand." International Migration Review 39, no. 1 (2005): 141-172

Vavrečka, V., Zaušková, A., Přívara, A., Civelek, M., & Gajdka, K. (2021). The Propensity of SMEs Regarding the Usage of Technology Enabled Marketing Channels: Evidence from the Czech, Slovak and Hungarian SMEs. Transformations in Business & Economics, 20(2), 223–240.

Winkler, Hernan. "How does the internet affect migration decisions?." Applied Economics Letters 24, no. 16 (2017): 1194-1198

World Bank. “Unlocking the Potential of Agriculture for Afghanistan’s Growth”. The World Bank (2018a). Accessed 04,15,2023. https://www.worldbank.org/en/country/afghanistan/publication/unlocking-potential-of-agriculture-for-afghanistan-growth

Zhao, Jianmei, and Hai Zhong. "A demographic factor as a determinant of migration: what is the effect of sibship size on migration decisions?." Journal of Demographic Economics 85, no. 4 (2019): 321-345