

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(The Relationship Between the Lack of Economic Opportunities and the Cultivation of Narcotic Crops in Rural Areas.)

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Abstract

This study investigates the factors influencing narcotic cultivation in Kandahar Province, focusing on economic opportunities, labor market access, agricultural alternatives, and government policy effectiveness. Due to ongoing economic hardship, narcotic crop cultivation persists because of its high profitability, contributing to health risks and social instability. Using a mixed-methods approach, data were collected from 300 participants in Maiwand, Zharai, and Dand districts through stratified random sampling and structured questionnaires. Statistical analysis revealed a significant relationship between limited economic opportunities and narcotic cultivation. Regression results show that a one-unit decrease in labor market access increases cultivation by 0.323 units, while reduced agricultural alternatives and weak government policies raise it by 0.35 and 0.299 units, respectively. The study recommends expanding employment, promoting sustainable agriculture, strengthening policies, and improving data systems to support effective reduction and sustainable development.

Keywords: Access to job Market, Agriculture, Agriculture policy, Alternatives, Government policies, Drug Production

په کندهار ولایت کې د اقتصادي فرصتونو د کمښت او په کلیوالي سیمو کې د

مخدره موادو د کړکېلي تر مینځ اړیکه څیړل

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لنډيز

دغه څېړنه په کندهار ولایت کې د مخدره موادو د کښت پر اغېزمنو عواملو تمرکز کوي، چې په کښي اقتصادي فرصتونه، د کار بازار ته لاسرسی، کرنیز بدیلونه او د حکومتي پالیسیو اغېزمنتوب شامل دي. د اقتصادي ستونزو له امله د نشه یي توکو کرڼه د لوړې ګټې له کبله دوام مومي، چې د روغتيايي خطرونو او ټولنيزې بې ثباتۍ لامل ګرځي. څېړنه د مختلط میتود له لارې د مېوند، ژړې او ډنډ ولسوالیو له ۳۰۰ ګاونډوالو څخه د طبقه یي تصادفي نمونې او جوړښتي پوښتليکونو په وسیله عددي او کيفي معلومات راټول کړي دي. احصايوي تحلیلونو څرګنده کړه چې د اقتصادي فرصتونو کمښت او د مخدره موادو کښت تر مینځ مهمه اړیکه سته. د رېګرېشن پایلې ښيي چې د کار بازار ته د لاسرسي یو واحد کموالی د کښت ۰.۳۲۳ واحد زیاتوالي سره تړاو لري، او د کرنیزو بدیلونو او کمزورو حکومتي پالیسیو کمښت په ترتیب سره ۰.۳۵ او ۰.۲۹۹ زیاتوالی رامنځته کوي. څېړنه د کارموندنې پراختیا، دوامدارې کرنې ملاتړ، د پالیسیو پیاوړتیا او د معلوماتو ښه راټولولو سپارښتنه کوي.

کلیدي کلیمې: د کار بازار، کرڼه، کرنیزې پالیسی، بدیلونه، حکومت پالیسی، مخدره مواد

Introduction

The lack of economic opportunities in rural areas of Afghanistan is a significant issue that adversely affects the quality of life for its inhabitants(Published et al., n.d.). Due to this scarcity, many individuals turn to alternative means of income generation, with the cultivation of narcotic crops being one of the primary choices(Richardson et al., 2010). This practice leads to various individual and societal challenges, including health problems, increased criminal activities, and weakened community stability(UNODC, 2021).

The 2021 opium harvest, completed in July, marked the fifth year in a row with production at historic highs of more than 6,000 tons, potentially yielding up to 320 tons of pure heroin to be trafficked to markets around the world. Income from opiates in Afghanistan amounted to some \$1.8-\$2.7 billion in 2021(Byrd & Ward, 2004). However, much larger sums are accrued along illicit drug supply chains outside Afghanistan(Mamolos et al., 2011). Taxes on opiates cultivation, production and trafficking represent a lucrative potential source of financing for non-state actors in the country(UNODC, 2021). Shifting trends in opium cultivation and production in Afghanistan have far-reaching impact on global illicit drug markets and organized criminal activity. Afghanistan accounted for some 85 per cent of global opium production in 2020, supplying some 80% of all opiate users in the world(Buxton, 2015).

Given that Afghanistan is a developing country still in a state of growth, it is common for developing nations to experience higher levels of poverty compared to more developed countries(Pereira & Cotas, 2024). Consequently, individuals often face significant economic challenges(Byrd & Ward, 2004). In many provinces of Afghanistan, particularly in Kandahar, people in rural areas are confronted with severe economic difficulties(Donnenfeld et al., 2019). As a result, they turn to the cultivation of narcotic crops as a means of generating income and escaping economic hardships(Thakur & Mittal, 2021). Considering these issues, we aim to explore the relationship between the lack of economic opportunities and the cultivation of narcotic crops in the rural areas of Kandahar province(Thakur & Mittal, 2021).

In this research, we aim to explore the relationship between the lack of economic opportunities and the cultivation of narcotic crops. We will examine various factors such as access to the job market, government support, agricultural alternatives, and the availability of educational

opportunities. Our goal is to enhance understanding of this issue and propose effective solutions. This study is not only crucial for academic knowledge but also offers foundational pathways for community development and economic improvement. We hope that by addressing the expansion of economic opportunities and reducing narcotic crop cultivation, we can bring about a positive change in the lives of people in rural areas.

Regarding to the above research topic we have considered the following objectives;

- Access to labor markets and its relationship with Narcotic crops cultivation.
- Exploring the relationship between alternative agricultural practices and Narcotic crop cultivation.
- Government policies and its relationship with Narcotic crops cultivation.

This research will help identify economic dynamics related to the cultivation of narcotic substances in rural areas. By understanding these economic factors, policymakers can clarify the fundamental causes associated with this issue. Additionally, it will contribute to sustainable development, leading to increased employment, food security, and overall growth within rural communities.

Overall, research on the above topic is integral and crucial for devising effective strategies to combat narcotic crop cultivation, improve rural livelihoods, enhance quality of life, and promote sustainable development in Kandahar and similar regions. Moreover, the conducted research identifies social and economic factors that drive farmers to cultivate narcotic crops, providing insights into poverty, unemployment, and market access. The findings can guide policymakers in crafting targeted interventions that address the specific needs of rural communities, promoting sustainable agricultural practices and reducing narcotic cultivation. Drug abuse and poverty are linked in multiple ways (Nuridin & Yusuf, 2020). Drug abuse may occur as a means to relieve the stress associated with poverty, chronic social strain, and other difficult events. In poorer neighborhoods, there is often less access to support systems, healthcare, and community organizations (Learning & Reading, n.d.). Additionally, the relationship between drugs and poverty can also work in the inverse direction: drug abuse can deplete users' income, leading to neglect of family, loved ones, and other responsibilities. Insights from the conducted research

can lead to investment in infrastructure and resources that enhance economic growth, fostering a shift towards legitimate agricultural practices(Bellair et al., 2018).

By conducting of the following research we will deliberate the integral and crucial part of the community, which refers to the individuals and workforces. Drug abuse has a tremendous impact on workforce(Almutairi et al., 2023). Young people normally pick up the bad habit of drug consumption between the age group of 15 to 35. Sometimes unemployment leads to drug abuse(Pereira & Cotas, 2024). Frustrated young and even older people who lose their job become addicts(Byrd & Ward, 2004). The reverse is also true. Those who become drug addicts lose their job and remain unemployed(Richardson et al., 2010). It is evident that there is a strong relation between unemployment and drug taking habits. As per British Crime Survey Report 1992 the life time prevalence of drug abuse among the unemployed was 60% higher than among the employed(Khursheed et al., 2021). The recent survey by International Labor Organization (ILO) and the Europeans Commission finds drug 15 and alcohol abuse in the workplace negatively affects productivity. The organizations were forced to dismiss the addicted employees(Burns-Edel, 2016). The effect of drug is also reflected in the performance of workforce. Drug abuses in the workforce impose heavy costs in different service sectors. They are reducing the competiveness and performance of the organization(Ter Laak & Emke, 2023).

The drug abusers suffering from ill-health and being in disciplined have low performance(NATIONS, 2003). They are less productive and add to the cost of production(Nurdin & Yusuf, 2020). Unable to perform well they create additional pressure on their colleagues(Thao et al., 2023). In this process everyone suffers. Loss of Earning and Livelihood Potentials The family depends on the earning of the head of the family(Donnenfeld et al., 2019). The income which comes in terms of salary, wage or remuneration is used to fulfill the needs of the family members. If the head of the family will be a drug addict, then a major portion of income will be spent on the purchase of drugs(Commission on Narcotic Drugs, 2019). A drug abuser never thinks about the need of the children, future of the children, educational expenses, health expenses of the children and also never takes care of the spouse. He cannot even save the money for future requirement i.e. marriage of the

children, settlement during retirement life etc. In this way he loses the livelihood earning ability(Carrier & Klantschnig, 2016). His potential for earning slowly decreases and he can't control his spending on alcohols/drugs(Pereira & Cotas, 2024). Ultimately he loses his earning and livelihood potential(Nuridin & Yusuf, 2020).

It has been suggested that the employability of problem drug users is compromised by a range of personal, health and behavioral issues (Burns-Edel, 2016). While this may be the case for some IDU, the difference between the employment rate at any one point in time and the total number of respondents reporting employment over the course of the study period indicates that there is a dynamic group of IDU who are successful at engaging in formal vocational activity(Bellair et al., 2018). A further cost of drug abuse that is one cited is the loss in productivity that can occur when drug users are under the influence of drugs or are experiencing the consequences of their drug use (e.g., while in treatment, incarceration or hospital)(Mamollos et al., 2011). Studies have put the costs of lost productivity borne by employers at tens of billions of dollars. Drug abuse and poverty are one linked in multiple ways (Carrier & Klantschnig, 2016). Drug abuse may occur to relieve the stress associated with poverty, chronic social strain and other difficult events (Steinmetz & Kohek, 2022). In poorer neighborhoods, there is one less access to support systems, health care and community organizations (Blackwell, 2014). Additionally, the relationship between drugs and poverty can also work in the inverse direction: drug abuse can deplete users' income, leading to a lack of care for family and loved ones and other responsibilities(Buxton, 2015).

1. Research Location and Timeframe

This study was conducted in the rural districts of **Maiwand**, **Zharai**, and **Dand** in Kandahar Province, Afghanistan—regions historically known as significant centers for opium poppy cultivation. Kandahar has long been at the heart of Afghanistan's narcotic economy, where agricultural communities are often compelled to grow opium poppy as a means of economic survival. The research took place over the course of one month, providing sufficient time to capture relevant data and analyze the contributing factors to narcotic cultivation in these key districts.

To ensure efficient management and coordination of the research tasks, a **Gantt chart** was utilized. The Gantt chart served as a valuable tool in organizing the research timeline, allowing for clear monitoring of progress and the timely achievement of key milestones. Given Kandahar's central

role in Afghanistan's narcotic production, this location was strategically chosen for its direct relevance to the study's objectives. The economic implications of opiate production are immense, with the 2023 harvest alone estimated to yield opiate exports valued between **US\$190-260 million**, a significant reduction from the **US\$1.4-2.7 billion** in 2021, but still a formidable source of income. These figures underscore the overwhelming influence of the narcotics trade, which continues to exceed the value of Afghanistan's licit exports. Thus, studying the factors behind narcotic cultivation in Kandahar offers critical insight into the broader economic challenges facing rural Afghanistan.

2. Research Design

This study employed a **mixed-methods research design**, integrating both **quantitative** and **qualitative** approaches. This design was specifically chosen for its ability to provide a comprehensive understanding of the multifaceted issues surrounding narcotic cultivation in rural Kandahar. Mixed-methods research offers the flexibility to examine both the measurable aspects of the problem (such as economic factors and agricultural trends) and the lived experiences of individuals affected by these issues (through qualitative insights).

As a **mixed-methods** approach, this design allows for the triangulation of data from both **quantitative surveys** and **qualitative interviews**, fostering a deeper, more nuanced understanding of the underlying causes of narcotic cultivation. According to de Theije et al. (1998), this approach is particularly valuable in addressing complex research problems by integrating diverse data sources. Taylor (1964) further supports the use of mixed methods to uncover relationships and contradictions that might not be evident through a single research method. By combining these methodologies, this study allows for a fuller exploration of the socio-economic factors influencing narcotic cultivation and provides richer insights into the lived realities of rural Afghan farmers.

The research design not only facilitates a deeper exploration of the topic but also empowers participants, providing them with a platform to voice their experiences and perspectives. As Richardson et al. (2010) note, mixed-methods research offers opportunities to capture the complexities of human experience and enhances the robustness of findings by integrating multiple forms of evidence.

3. Sampling and Data Collection

Given that the exact population of interest was unknown, a **stratified random sampling** technique was employed, ensuring that the sample of

300 participants was representative of the diverse demographic groups within the selected districts. This sampling method allows for more accurate inferences by ensuring that various subgroups (such as age, gender, and socio-economic status) were appropriately represented.

Data collection was carried out using a **structured questionnaire** designed to capture both quantitative and qualitative data. The questionnaire was divided into five sections:

Demographic Information – This section aimed to gather basic background data on participants, ensuring that the sample covered a broad range of socio-economic and demographic characteristics.

Access to the Labor Market – This section explored the availability of employment opportunities outside of agriculture, providing insight into the economic alternatives available to rural households.

Alternative Agricultural Programs – Questions in this section assessed the extent to which farmers had access to viable alternatives to narcotic crop cultivation, such as fruit or vegetable farming.

Government Policies and Support – This section aimed to gauge the effectiveness of government policies aimed at curbing narcotic cultivation and supporting rural agriculture.

Cultivation of Narcotic Crops – The final section focused on the participants' engagement in narcotic crop production, exploring the reasons behind their decisions to grow opium poppies or other illicit narcotic plants.

Within the structured questionnaire, we focused on three **independent variables**—**access to the labor market**, **agricultural alternatives**, and **government policy**—and one **dependent variable**, which was **narcotic cultivation**. For each of these variables, **six questions** were designed to capture relevant data, ensuring that the survey was both comprehensive and targeted in addressing the core research questions.

1. Data

In the following research we have use primary data, Primary data refers to information collected directly from original sources for a specific research purpose. This data is gathered firsthand through methods such as surveys, interviews, experiments, or observations. Unlike secondary data, which is obtained from existing sources like books, articles, or databases, primary data is unique to the research project and can provide more accurate and relevant insights tailored to specific questions or hypotheses.

2. Data Collection techniques

We used several statistical techniques regarding to the research for obtaining a good finding.

Pilot Study

A pilot study, also known as a feasibility study or trial run, is a small-scale preliminary investigation conducted before the main research study. Its purpose is to evaluate the research design, procedures, and tools for data collection, ensuring their feasibility and reliability. Typically, it involves a smaller sample size and aims to identify potential issues and make necessary adjustments before carrying out the full-scale study (Unegbu and Onuoha, 2013).

KMO and Bartlett's Tests

The KMO test evaluates the suitability of variables for factor analysis. The KMO statistic ranges from 0 to 1, with values closer to 1 indicating better appropriateness for conducting factor analysis (Jayawardhena and Foley, 2000). The KMO statistic does not have a specific formula; instead, it is calculated based on the correlations between the variables in the dataset. It is derived as the ratio of the sum of the squared partial correlations to the sum of the squared correlations(Ayuni & Sari, 2018).

Correlation

Correlation measures the relationship between two or more variables. Correlation analysis is a statistical method that quantifies the strength and direction of the relationship between two variables. It helps determine whether a statistical association exists between variables and to what extent they differ (Becker, 2001).

The most commonly used correlation coefficient is Pearson's correlation coefficient (r), which assesses the linear relationship between two continuous variables.

Regression Analysis

Regression analysis is a statistical modeling technique used to understand and predict the relationship between a dependent variable and one or more independent variables. It is often used for forecasting, trend analysis, and assessing the effects of various factors on outcomes (Ayuni & Sari, 2018).

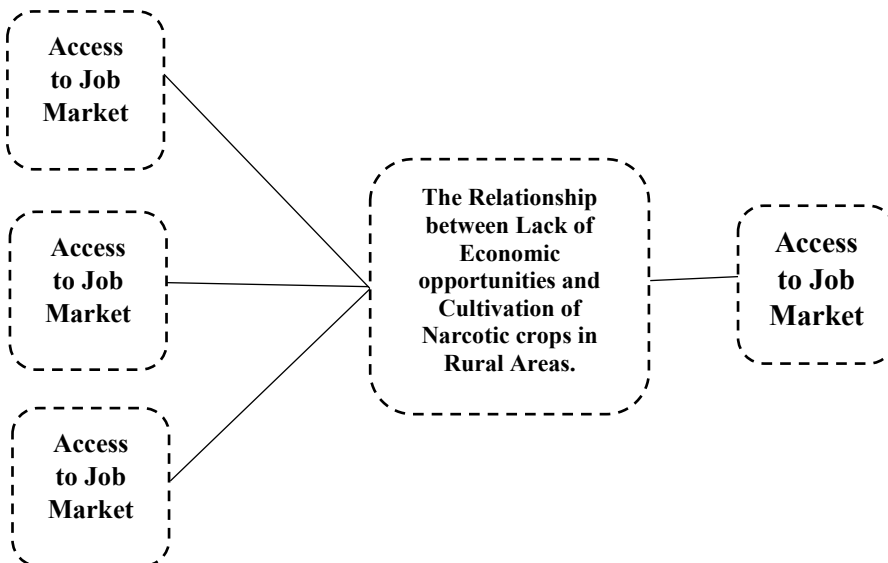
Research Hypothesis

Access to) job (Market	H0: The access to job market shortcomings don't have an impact on drug cultivation.	(Richardson et al., 2010)
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Agriculture Alternative (s)	H0: The Agriculture Alternatives shortcomings don't have an impact on drug cultivation.	(Bellair et al., 2018)
	H1: The Agriculture Alternatives shortcomings have an impact on drug cultivation.	
	H1: The access to job market shortcomings have an impact on drug cultivation.	

Government (ent Policy)	H0: The government's policies shortcomings don't have impacts on drug cultivation.	(Thakur & Mittal, 2021)
	H1: The government's policies shortcomings have an impact on drug cultivation.	

Conceptual Framework



Results and Discussion

In this chapter, the results of the data analysis have been examined. The data analysis techniques were discussed in the previous chapter. Before delving into the data analysis section, the reliability test was conducted. This chapter provides a detailed examination of the responses related to the dependent and independent variables. Additionally, factor analysis and multiple regression techniques were utilized to derive the results. Finally, a comprehensive discussion has been presented in alignment with the research objectives.

Reliability test

Reliability is an assessment of the degree of steadiness between multiple measurements of variables(Riege, 2003). In this study Cronbach’s alpha was utilized to test internal consistency of 24 items for four dimensions. Cronbach’s alpha score ranged from 0 to 1, with value close to 1 signifying high consistency(Riege, 2003). Table 4 demonstrates the Cronbach’s alpha for three factors of drug productions about Narcotic cultivation in Kandahar. The alpha value ranged from 0.36 to 0.72, more than the minimum criterion of 0.60, which represent the rule of thumb for a reliability test according to(de Theije et al., 1998).

4.1 Reliability test table

Reliability Statistics			
Cronbach's Alpha	Cronbach's Alpha Based on		N of Items
	Standardized Items		
	.784	.760	27

Respondents demographic profile

In the descriptive analyses, male respondents comprised 100%, while female made up 0%, The age groups were below 18-25 (33%), 26-35 years (27%), 36-45 years (22%) and above 45 years 17%. Regarding the Family Income, 49% of the respondents had under 5000 incomes, 41% of respondents had income from 5000-15000, 9% respondents had income from 15000-25000 and 1% respondents had income above 25000. According to educational level, in this survey 23% of respondents had a certificate, 1% respondents had a bachelor degree diploma, 0.3% respondents had master’s degree and 75% of them were uneducated. Table 1 indicated that in this survey,

questionnaire respondents were asked “Family Income “It was found that 49% respondents indicated that their family income was under 5000, 41% of the respondents had income 5000-15000, 9% of the respondents admitted that they had income 15000-25000 and 1% of respondents had income above 25000.

4.2 Descriptive statistics table

Description	Frequency	%
Gender		
Male	300	100%
Female	0	0
Age Group		
18-25	99	33
26-35	82	27
36-45	68	22
Above 45 years	41	17
Family Income		
Under 5000	147	49
5000-15000	124	41
15000-25000	26	9
Above 25000	3	1
Level of Knowledge		
School Graduate	69	23
Bachelor	3	1
Master	1	0.3
Not Educated	227	75

Normality Test

Skewness demonstrate the eccentricity of the data from the mean, while kurtosis reflects the relative peakedness of the distribution(Taylor, 1964). For a normal distribution, the skewness value must be within ± 3 and within ± 5.00 standard error of kurtosis, high kurtosis in a data set is an indicator that data has heavy tails, low kurtosis is an indicator that data has light tails(Thao et al., 2023). Statistics for skewness for access to job market of drug product was 0.326, while kurtosis was -0.457. Agriculture Alternative had statistics for skewness -0.085 and kurtosis was -0.272. Government policy showed statistics for skewness of -0.275 and kurtosis was -1.041. Drug Production showed statistics for skewness 0.042 and kurtosis was -0.267. Table 3 provides the skewness and kurtosis data for all variables.

4.3 Normality Test table

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Access to job Market	300	.326	.141	-.457	.281
Agriculture Alternatives	300	-.085	.141	-.272	.281
Government policy	300	-.275	.141	-1.041	.281
Drug Production	300	.042	.141	-.267	.281

KMO and Bartlett’s test of Sphericity

KMO is a test conducted to examine the strength of the partial correlation (how the factors explain each other) between the variables(Ayuni & Sari, 2018). KMO value closer to 1.0 are consider ideal while values less than 0.5 are unacceptable(Ayuni & Sari, 2018). Recently, most scholars argue that a KMO at least 0.80 are good enough for factor analysis to commence(Kardoyo et al., 2020), While Bartlett’s test of Sphericity is used to test the null hypothesis that the correlation matrix is an identity matrix (Akbar et al., 2012). An identity correlation matrix means your variables are unrelated and not ideal for factor analysis. In this study we have considered those factors that their MSA level is higher than (0.3), It indicates that data is appropriate for factor analysis. Table 4 shows that factors which are appropriate for factor analysis.

4.4 KMO Analysis table

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.852	
Bartlett's Test of Sphericity	Approx. Chi-Square	1139.800
	df	211
	Sig.	.000

4.5 verimax Rotation table

Variables	Items No	Items	Factor Loading
Drugs Production	DP1	How widespread is drug cultivation in your area?	0.364
	DP5	DO you consider drug cultivation as a source of income?	0.302
Access. J. M	AJM3	In your area, in which sector do most people work?	0.381

AA	AA2	Do you have information about agricultural projects from the government?	0.616
	AA5	Does the government provide support for alternative agricultural projects?	0.702
Gov. Pol	GP1	Does government have any specific policies for agriculture in your area?	0.688
	GP2	Are you satisfied with the governments support?	0.404
	GP3	Has the government initiated any economic development projects in your area?	0.748
	GP4	Does the government have specific programs to prevent drug cultivation?	0.519
	GP5	Has the government provided any assistance to solve your economic problems?	0.810

Correlation matrix result

The overall results indicate that there is satisfactory degree of relationship between variables in the model. In particular, it was noted that Access to job Market of Kandahar has a Moderate relationship with drug production ($P=0.221^{**}$), moderated relationship with Agricultural Alternatives ($P=0.165^{**}$) and with Government policy ($P=0.224^{**}$). Therefore, the assumption can be made that linearity and homoscedasticity between the variable are attained (as variables are not highly correlated). This correlation matrix result also indicates the absence of any multi-collinearity among independent variables. The rule of thumb in judging the presence of multi-collinearity among the independent variables.

4.6 correlation table

Variables	Drugs Production	Access. Job. M	Agricultural. Al	Government. Pol
Drug Production	1.000			
Access. Job. M	.221**	1.000		
Agricultural. AL	0.165**	0.43**	1.000	
Government. Po	0.224**	0.442**	0.493**	1.000

Regression

Regression is a statistical technique that allows us to show the effects of independent variables on a dependent variable (Riege, 2003). In our research, we consider three independent variables: access to the job market, agricultural alternatives, and government policies. The dependent variable is the cultivation of narcotic substances. Through this regression analysis,

we examine the effects of the independent variables on the dependent variable.

In addition, to avoid multicollinearity, we utilized the Variance Inflation Factor (VIF) in our study. This is a statistical concept that measures the correlation among different independent variables within a model (Alwi & Khotijah, 2022). The goal in regression is to determine whether two or more variables are highly correlated. A VIF value below 5 indicates that the variable can be included in the model. Some studies have shown that a VIF value below 10 is acceptable, but if it exceeds 10, we do not include that variable in the model (Ayuni & Sari, 2018).

<i>VARIABLES</i>	<i>STANDARDISED BETA</i>	<i>P-VALUE</i>	<i>VIF</i>
<i>ACCESS. JOB. M</i>	0.324	0.000	1.092
<i>AGRICULTURE.A</i>	0.355	0.000	1.773
<i>GOVERNMENT.P</i>	0.299	0.000	1.827
<i>F</i> →	11.139		
<i>R²</i>	0.234		
<i>ADJUSTED R²</i> →	0.229		

The primary objective of this research, as outlined in the first chapter, is to explore the relationship between limited access to the job market and narcotic cultivation in Kandahar Province. We found that the effectiveness of this objective was significant at a 1% level according to the T-Test, indicating that our H1 hypothesis is valid and accepted. This leads us to conclude that limitations in access to the job market (an independent variable) significantly impact the cultivation of narcotic substances. In other words, as job opportunities become scarcer and individuals face unemployment, the production and cultivation of narcotics tend to rise.

The results of the study regarding the lack of agricultural alternatives have also been supported by other researchers, including Erike Make, Leonel Pereira, Joao Cotos, Tom Kramer, and (Almutairi et al., 2023)(2015), as well as Thomas L. ter Lack. These researchers conducted studies in various countries and found that the decline in agricultural alternatives has a positive relationship with the cultivation and production of narcotic substances. This indicates that as the availability of agricultural alternatives decreases, the cultivation of narcotics tends to increase correspondingly.

The second objective of this research, as outlined in the first chapter, focuses on examining the relationship between the lack of agricultural

alternatives and narcotic cultivation in the rural areas of Kandahar Province. Our findings indicate that we cannot accept the H_0 hypothesis regarding the lack of agricultural alternatives, meaning that the decline in agricultural alternatives (an independent variable) has a significant and positive relationship with the cultivation of narcotic substances. Specifically, for every unit increase in the lack of agricultural alternatives, the cultivation of narcotics is expected to rise by 0.35 units.

The results of the study regarding the lack of government policy have also been validated by other researchers, such as (Taylor, 1964)), (Bellair et al., 2018)), and Evan Wood and Richardson. These researchers have conducted studies in various countries and found that a decrease in economic opportunities, particularly related to the lack of government policy, is positively and significantly associated with the cultivation of narcotic substances. This suggests that as the deficiencies in government policy increase, the cultivation of narcotics also rises.

In this study, the beta coefficient was found to be 0.299. This indicates that for every one-unit increase in the lack of government policy, the cultivation of narcotics is expected to increase by 0.299 units. Conversely, if the government reduces its policies by one unit, the cultivation of narcotics will decrease by the same amount, 0.299 units. Therefore, the H_0 hypothesis is rejected, while the H_1 hypothesis is accepted, meaning that the lack of government policy significantly impacts narcotic cultivation.

Research limitations

Access to accurate and comprehensive data in rural areas can be challenging. Government and non-governmental organizations may have limited resources for data collection. Humans are not always in a normal state; their condition can change based on certain circumstances. This means that their psychological state may vary when responding to a questionnaire, which can, in turn, affect their answers. Additionally, the reality may not be accurately represented. Therefore, we cannot be completely confident in the responses given in the questionnaire. Limited funding and time for comprehensive field research may restrict the depth and breadth of the study. Another limitation of the research may be that individuals in rural areas might withhold information from us, and we may also struggle to collect accurate data related to our topic from them.

Conclusion

The findings of this study provide critical insight into the complex dynamics of narcotic cultivation in Kandahar Province, shedding light on the key factors that perpetuate this issue in rural Afghanistan. The results

unequivocally demonstrate that economic insecurity, limited job market access, a decline in agricultural alternatives, and insufficient government intervention are intricately linked to the persistent cultivation of narcotics in the region.

Notably, the regression analysis reveals that **lack of access to the job market** ($\beta = 0.323$), **decline in agricultural alternatives** ($\beta = 0.35$), and **weak government policies** ($\beta = 0.299$) are all significant predictors of increased narcotic production. These relationships underscore the harsh economic realities faced by rural communities, where the absence of viable livelihood options forces many farmers to turn to opium poppy cultivation as a means of survival. For every unit decline in economic opportunities, the likelihood of narcotic cultivation rises proportionately, highlighting the critical need for structural changes in the local economy.

The study's conclusions make it clear that addressing narcotic cultivation cannot be achieved through enforcement alone. Instead, a comprehensive approach is needed—one that emphasizes economic diversification, job creation, and more robust, contextually aware government policies that support sustainable agricultural practices and development. Only by tackling these root causes of economic vulnerability will it be possible to break the cycle of narcotic cultivation and foster long-term peace and stability in Afghanistan's rural areas.

In sum, the research demonstrates that narcotic cultivation in Kandahar is not merely a product of criminal intent but a direct response to economic hardship and systemic failures. If Afghanistan is to move forward, it must urgently invest in policies that offer farmers viable, sustainable alternatives and create pathways to economic security—both of which are essential in combating the narcotics trade.

Recommendations

1. Enhance Economic Opportunities

- **Job Creation Initiatives:** Develop job training and creation programs tailored to the specific skills and needs of local communities, offering viable alternatives to narcotic cultivation.
- **Support for Small Enterprises:** Promote entrepreneurship by providing financial support, microloans, and business development training to stimulate local economic growth.

2. Diversify Agricultural Alternatives

- **Promote Sustainable Crop Cultivation:** Invest in research and development to identify and promote the

cultivation of sustainable, high-value crops that can serve as alternatives to narcotics.

- **Ensure Resource Accessibility:** Guarantee that farmers have access to necessary resources such as seeds, fertilizers, and technical assistance for alternative crops.

3. Strengthen Government Policies

- **Develop an Integrated Policy Framework:** Create comprehensive policies that address both economic development and narcotic cultivation, ensuring coordination across various sectors.
- **Engage the Community:** Involve local communities in the policy-making process to ensure their needs and viewpoints are taken into account.

4. Enhance Education and Awareness

- **Conduct Public Awareness Campaigns:** Implement campaigns to inform communities about the risks associated with narcotic cultivation and the advantages of pursuing alternative livelihoods.
- **Offer Training Programs:** Provide educational opportunities focused on agricultural practices, financial literacy, and business management to empower individuals.

5. Improve Data Collection and Research

- **Implement Longitudinal Studies:** Conduct longitudinal studies to gain insights into the long-term effects of economic opportunities on narcotic cultivation.
- **Utilize Mixed Research Methods:** Combine quantitative and qualitative research approaches to gain a comprehensive understanding of the factors influencing narcotic cultivation.

6. Strengthen Collaboration

- **Foster Multi-Stakeholder Partnerships:** Build partnerships among government bodies, NGOs, international organizations, and local communities to coordinate efforts against narcotic cultivation.
- **Encourage Regional Cooperation:** Promote collaboration between neighboring countries to address cross-border narcotic trade and its underlying economic issues.

7. Monitor and Evaluate Programs

- **Conduct Regular Assessments:** Establish mechanisms for ongoing monitoring and evaluation of programs aimed at reducing narcotic cultivation to determine their effectiveness and make necessary adjustments.
- **Create Feedback Channels:** Develop avenues for communities to voice their concerns and provide input on the effectiveness of interventions.

Recommendations for future researchers

- **Combine Qualitative and Quantitative Approaches:** Use a mix of qualitative interviews and quantitative surveys to capture a more comprehensive view of the factors influencing narcotic cultivation.
- **Participatory Research Techniques:** Engage communities in the research process to better understand their perspectives and challenges.

3. Focus on Policy Analysis

- **Evaluate Existing Policies:** Assess the effectiveness of current government policies aimed at reducing narcotic cultivation and identify areas for improvement.
- **Develop Policy Recommendations:** Provide evidence-based recommendations that can guide policymakers in crafting more effective strategies.

4. Explore Economic Alternatives

- **Investigate Viable Alternatives:** Research specific alternative livelihoods and agricultural practices that could effectively replace narcotic cultivation.
- **Assess Market Opportunities:** Analyze market demands for alternative crops and products to ensure that proposed solutions are economically viable.

5. Enhance Data Collection Methods

- **Utilize Technology:** Leverage technology for data collection, such as mobile surveys or geographic information systems (GIS), to improve accuracy and accessibility.
- **Collaborate with Local Institutions:** Partner with local universities and organizations to enhance data collection efforts and ensure cultural sensitivity.

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