

THE ECONOMICS OF TOBACCO FARMING IN NORTH MACEDONIA

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ORIGINAL MOTIVATION OF THIS RESEARCH

- Before embarking on reform of tobacco excise taxes, North Macedonia's government wanted a better understanding of the economics of tobacco farming in the country, a longstanding sub-sector in agriculture
- The purpose of this research stemmed from our 2021 analysis, which found that subsidies for tobacco accounted for 25% of total agricultural subsidies or 1% of central budget expenditures
- The goal was to determine the impact of the allocated subsidies for tobacco
- This need for analysis was also emphasized by the Agency for Financial Support in Agriculture and Rural Development, **highlighting the absence of prior evidence-based analysis on the effect of agricultural and tobacco subsidies**
- **Understanding the effects of tobacco subsidies is crucial for informing tobacco tax policy.**

General Facts about Tobacco cultivation in North Macedonia

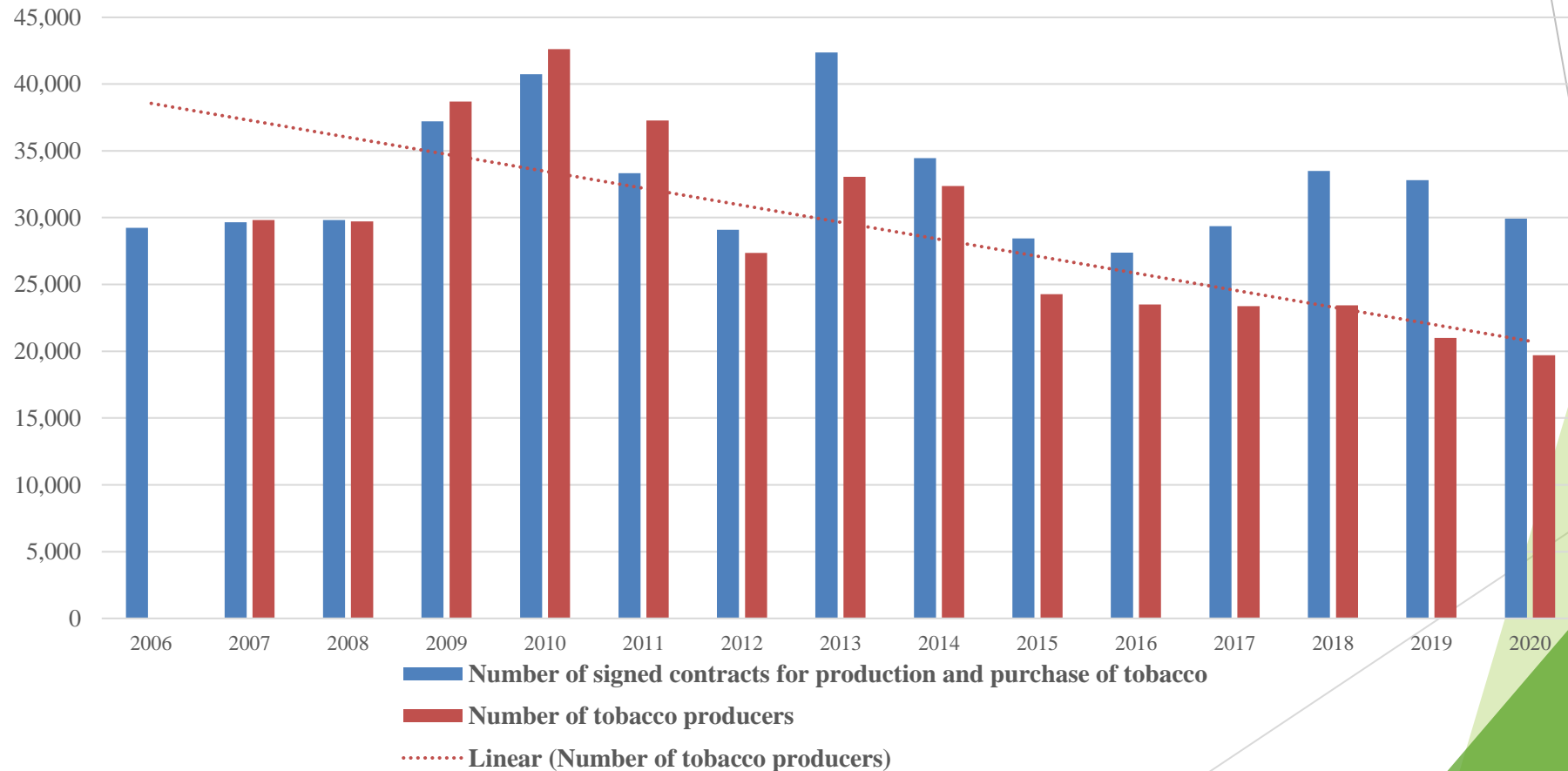
- North Macedonia is a major tobacco leaf producer.
- Recent annual production was 26,234 tons, representing nearly 14% of European production. It is among the top 30 tobacco-producing countries in the world, top 20 exporters of raw tobacco and the second largest producer of oriental type tobacco (after Turkey).
- Around 90% of the tobacco leaf is exported (comprising 20.4% of the total export value of agricultural and food products, or around 1% of GDP).
- 20,000 agricultural households (80,000 family members) are engaged in tobacco production, which is about 4% of the total population, though it is not fulltime for most.
- Tobacco production and its financing are regulated by the Law on Tobacco, Tobacco Products, and Related Products, the Law on Agriculture and Rural Development; Strategies and annual Programmes for financial support of agriculture

General Facts about Tobacco cultivation in North Macedonia

- Contract tobacco farming is supported by subsidies as direct payments from the government
- **Tobacco receives the largest amount of subsidies compared to other crops (25% of the total agricultural subsidies and 40% of the crop subsidies).**
- North Macedonia made a legal commitment through the ratification of the Framework Convention on Tobacco Control (FCTC) in 2006 to decrease tobacco production and increase excise taxes.
- North Macedonia as an EU candidate country will have to comply with the CAP restrictions on tobacco production and the obligation to eliminate direct subsidies, places significant constraints on tobacco production in North Macedonia.
- As part of the National Strategy for Tobacco (2021-2027), North Macedonia is considering reforming direct payments to tobacco farmers and providing alternatives for other crop cultivation

The number of tobacco farmers and cultivated area with tobacco is decreasing

...because of continuing **migration from rural areas**, **abandonment of tobacco cultivation because it is labour-intensive**, the **younger population** in rural areas leaving agriculture and **migrating to industry** (mostly automotive).



IMPLEMENTATION OF A HOUSEHOLD ECONOMIC SURVEY OF FARMERS IN MAJOR TOBACCO GROWING AREAS

- ▶ Nationally representative sample comprising 806 farming households – conducted in 14 municipalities, urban and rural settlements, in the top tobacco-producing regions in North Macedonia
- ▶ Target groups:
 - ▶ **Tobacco farmer** (farmer that grew tobacco in 2021)
 - ▶ **Former tobacco farmer** (farmer that grew tobacco in any year before 2021 and now cultivates other agricultural crop)
 - ▶ **Farmers that never grew tobacco** (farmer that cultivates any agricultural crop different from tobacco and never cultivated tobacco before)



ECONOMICS OF TOBACCO GROWING

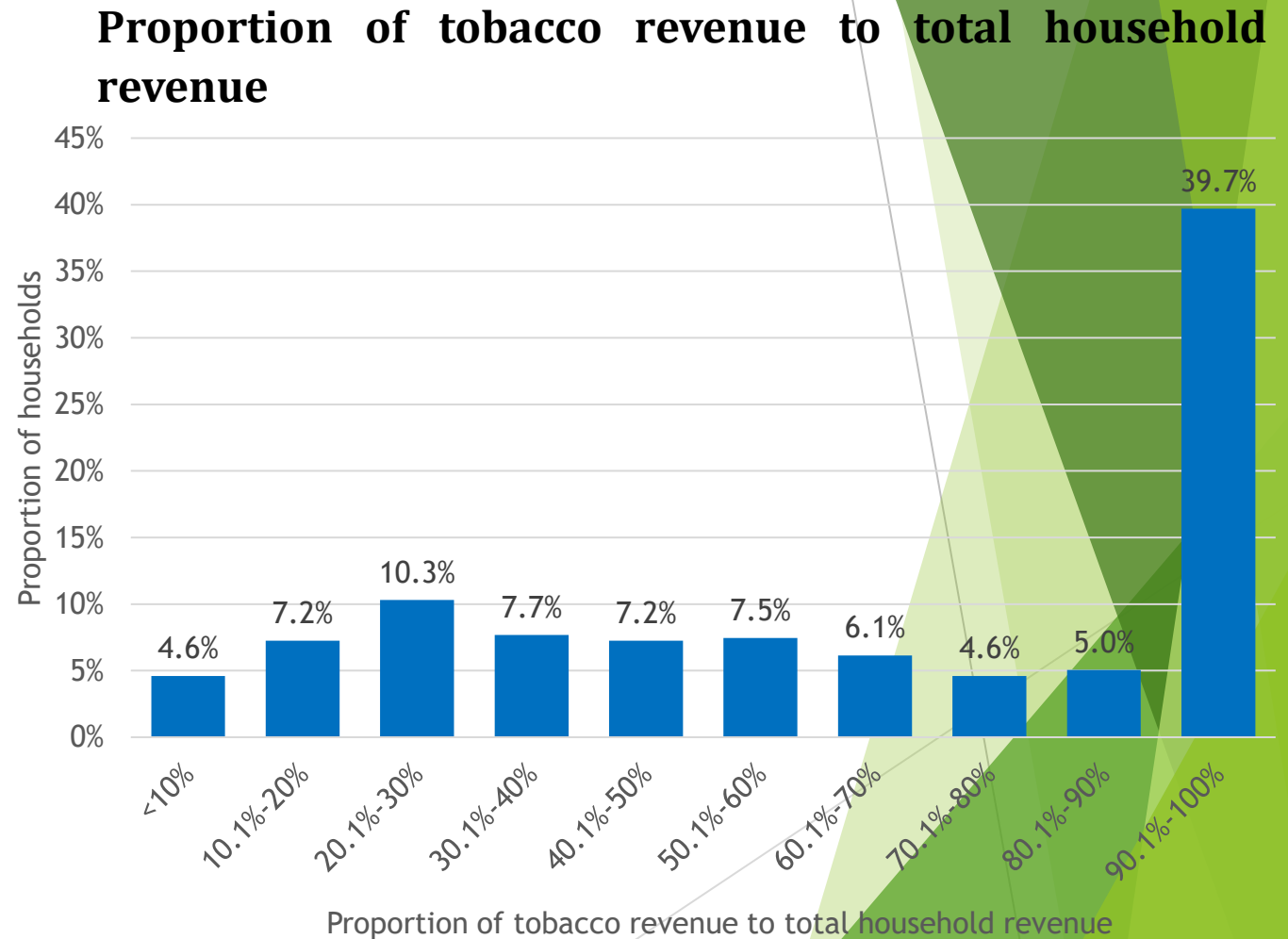
- ▶ A vast majority of farmers reported having a contract with a leaf buyer (95%), stating purchase price and the agreed upon quantity.
- ▶ Nevertheless, most surveyed tobacco farmers were not satisfied with the amount received from tobacco sales.
- ▶ Tobacco farming is input intensive, both in terms of direct inputs such as fertilizers and chemicals, but also farm labor, both hired and household.
- ▶ Compared to former tobacco workers or never tobacco workers, the median current tobacco farmer devotes significantly more time to growing crops.
- ▶ Due to the exceptional labor-intensity of tobacco growing (larger number of hours) and large engagement of household labor, tobacco farming incurs high opportunity costs.

Median hours worked by farming household members by gender, age and tobacco/nontobacco crops

Age	Tobacco farmers				Former tobacco farmers		Never tobacco farmers	
	Tobacco		Nontobacco		Nontobacco			
	Male	Female	Male	Female	Male	Female	Male	Female
<15	207.5	1800	8	400	90	n/a	10	n/a
15-20	1278	1260	120	150	144	750	135	112.5
21-35	1230	1152	336	396	800	700	270	600
36-60	1536	1350	808	730	900	990	1540	1500
>60	1455	1155	912	740	1200	960	1200	960
All	1400	1260	640	640	1000	900	1260	1080

Tobacco farmers rely heavily on tobacco revenue to provide their livelihood

- For the majority of tobacco farmers (around two thirds), tobacco revenue represents a large share of total household revenue
- This supports the notion that **most tobacco-farming households are focused on growing tobacco as a main source of their livelihood**
- Survey respondents **attributed their growing of tobacco to tradition, generous subsidies provided by the government (91.4% received them) and the contract market for tobacco leaf.**



ESTIMATING THE REAL ECONOMIC LIVELIHOODS OF TOBACCO FARMERS

- Current tobacco farmers' median “perceived” profits (without considering household labor costs) per hectare from tobacco are higher than perceived profits from nontobacco crops
- When opportunity costs are considered, median real profits from tobacco turn negative, **while tobacco farmers' real profits from nontobacco crops are higher than former and never tobacco farmers' real profits per hectare.**
- This illustrates emphatically that **tobacco is not highly profitable.**
- **Results from the survey show that farmers who grow other crops earn higher incomes than tobacco farmers.**
- On average, **former tobacco farmer generated much higher household income than current tobacco farmer:**
USD 16451.56 versus 12072.40
 - The higher household income of former tobacco farmers can be explained, among others, by shifting to non-agricultural activities (incl. wage work).
- Tobacco growing households have **lower asset accumulation.**
- Tobacco farming households often **rely considerably more on remittances.**
- **Children are more likely to contribute to tobacco growing than other crops.**

Tobacco growing and poverty

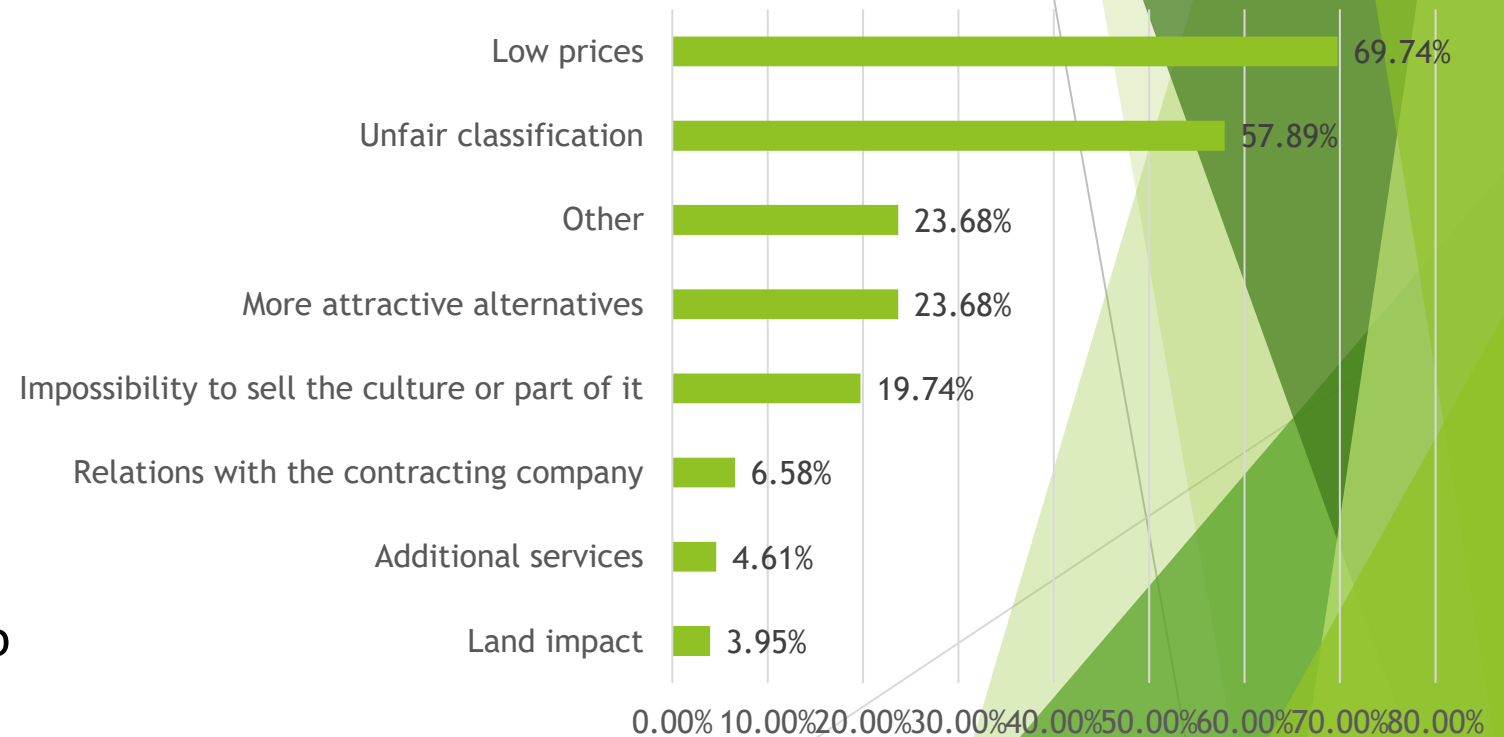
- The nationwide poverty rate in North Macedonia was 21.8% in 2020 but jumps to 30.6% for tobacco-growing households (using the national poverty line of \$3,842.75 annual revenue for a four-person household).
- Current farmers showed a much larger incidence of poverty compared to never tobacco farmers.

Poverty status	Poverty at \$1.90 a day per person, PPP 2011			Poverty at national poverty line 211,351 MKD (\$3,842.75), annual revenue for four-person household (2020)		
	Current farmer	Former farmer	Never farmer	Current farmer	Former farmer	Never farmer
Headcount ratio measured per capita revenue (for all farmers N=745)	2.30% (N=479)	4.72% (N=106)	5.00% (N=160)	6.47% (N=479)	18.81% (N=106)	13.75% (N=160)
Headcount ratio measured by per capita income (for all farmers N=546)	22.59% (N=363)	10.81% (N=74)	12.84% (N=109)	30.58% (N=363)	31.08% (N=74)	22.02% (N=109)

Farmers are moving away from tobacco growing...

- The main reason stated for switching away from tobacco leaf production was **the low prices they received for their product** (69.7% of respondents)
- The second major explanation was **unfair grading of their tobacco leaves** (57.89%) – this has been repeatedly subject to dissatisfaction of tobacco farmers
- Almost 20% said that **the inability to sell the crop** or part of it discouraged them from continuing to grow tobacco

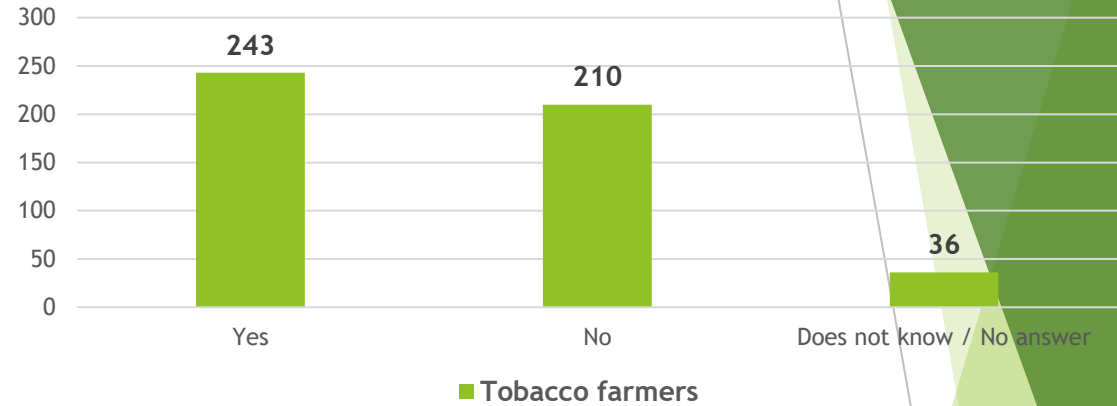
Reasons for former tobacco farmers to switch to growing other crops



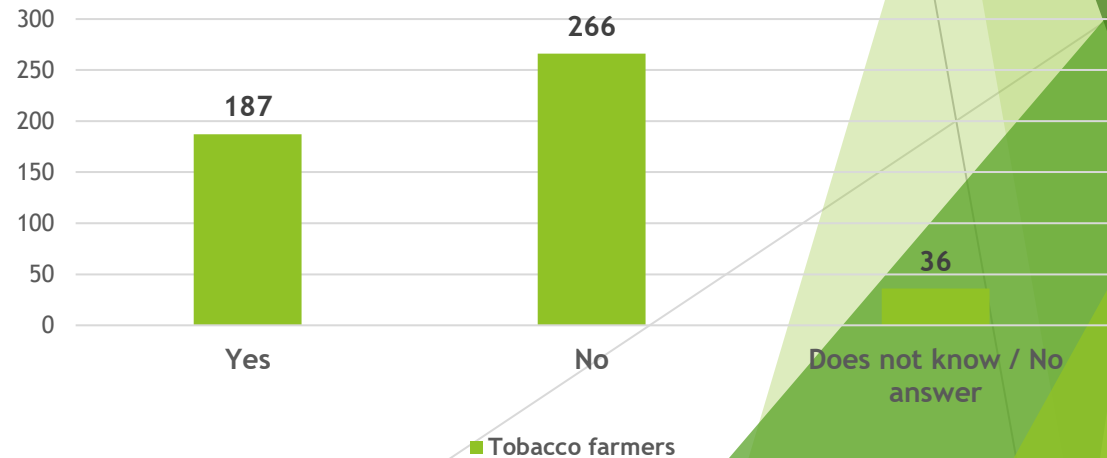
Satisfaction of tobacco farmers

- ▶ Subsidies for tobacco farming encourage farmers to continue or to increase production
- ▶ 50% of tobacco farmers based their decisions to grow other crops upon the amounts of subsidies they receive for those crops
- ▶ Over half of tobacco farmers (54.3%) claim that the **subsidies did not improve their standard of living**

Do subsidies affect your decision to grow other crops?



Has the increase in subsidies improved your standard of living?



CONCLUSIONS

- ▶ Tobacco cultivation is not as profitable as has been traditionally suggested → **Around half tobacco farmers are not turning a real profit.**
- ▶ **Growing tobacco is extremely labor intensive requiring many hours of work** thereby generating very high household—i.e., **unpaid— labor costs** (→ a typical current tobacco farmer dedicates a lot more time to growing tobacco than a former or never tobacco farmer dedicates to their crops).
- ▶ Former tobacco farmers have greatly shifted to other economic activities, rather than agriculture and have more diversified economic profiles.
- ▶ Current tobacco farmers had the highest incidence of poverty compared to former and never tobacco farmers.
- ▶ **Input costs for growing tobacco are typically very high in North Macedonia compared to most other crops.**
- ▶ **77% of tobacco farmers stated that if the subsidies are taken away, they would stop growing tobacco.**

RECOMMENDATIONS

The government should develop and implement comprehensive evidence-based policies to incentivize farmers to shift away from tobacco farming.

- ▶ Educational programs on different crop alternatives that bring higher income and are suitable for local conditions.
- ▶ Financial incentives to encourage cultivation of non-tobacco crops including low interest credit programs and allocation of state agricultural land for other crops.
- ▶ Enhance supply and value chains – e.g., connecting farmers to processing factories to establish long-term relationships for non-tobacco crops.
- ▶ Increase investments in improvement of the quality of soil and irrigation systems.

Government Actions

True to the government's word, after our comprehensive research on the economics of tobacco farming, North Macedonia considered tobacco tax reform and significantly accelerated the timeline to reach the EU Tobacco Tax Directive minimum benchmark of 90 Euros per 1000 cigarettes.

Key Findings of the study motivated Government actions:

- ▶ **Low Profitability:** High input costs and labor intensity make tobacco farming unprofitable.
- ▶ **High Poverty Rates:** Tobacco farmers face higher poverty levels than those growing other crops.
- ▶ **Subsidy Dependency:** 77% of farmers would stop growing tobacco without subsidies.

Government Actions:

- ▶ **Aligning with EU Standards:** Accelerating tax reform to comply with the EU Tobacco Tax Directive.
- ▶ **Public Health Improvement:** Increase of excise leads to increase of cigarette prices leading to a potential decrease of tobacco consumption and improve public health.
- ▶ **New National Plan for Food Security:**
 - ▶ Introduction of **new additional subsidies for wheat, corn, barley, and sunflower farmers - Motive for farmers to divert to cultivation of these crops**
 - ▶ Pilot measure - Change in the subsidy payment model in the interest of farmers, aligning with European regulations - **"decoupling" measure, which implies a linear payment for arable agricultural areas independent of the crop.**

Thank you for your attention!

