To: ACME Corporation Board of Directors
From:
Date: June 4, 2025
Re: Determinants of Agricultural Profit in Ghana, 1998/99 - Key Findings

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Purpose

This memorandum summarizes the key findings from our analysis of the data generated by the 1998/99 Ghana Living Standards Survey. Our analysis focussed on the determinants of agricultural profit to inform ACME Corporation's considerations on moving into agricultural inputs in Ghana. The model that best fits our purposes is a linear regression that quantifies the effect of household education and local area characteristics on household agricultural income per acre.

Explanation of Variables

- **Agricultural Income:** Household agricultural income was measured explicitly from sale of crops or livestock products, and implicitly from consumption of homegrown produce. Estimated total input costs of these sources, including wages paid to non-household members and depreciation of capital assets, was deducted from the estimated gross household income. The measure of income used for this analysis was generated to represent a combination of returns from labor and productive capital owned and operated by the household. Income was measured with the unit of cedis, the currency of Ghana, represented with ¢.
- **Education:** A measure of the household's average years of formal schooling.
- **Household Size:** A measure of the number of individuals permanently residing in the household, regardless of their contribution to agricultural income.
- **Access to Road:** Binary measure of the household's access to a motorable road.
- **Extension Visit:** Binary measure of whether the household is visited by agricultural extension officers.

Key Findings

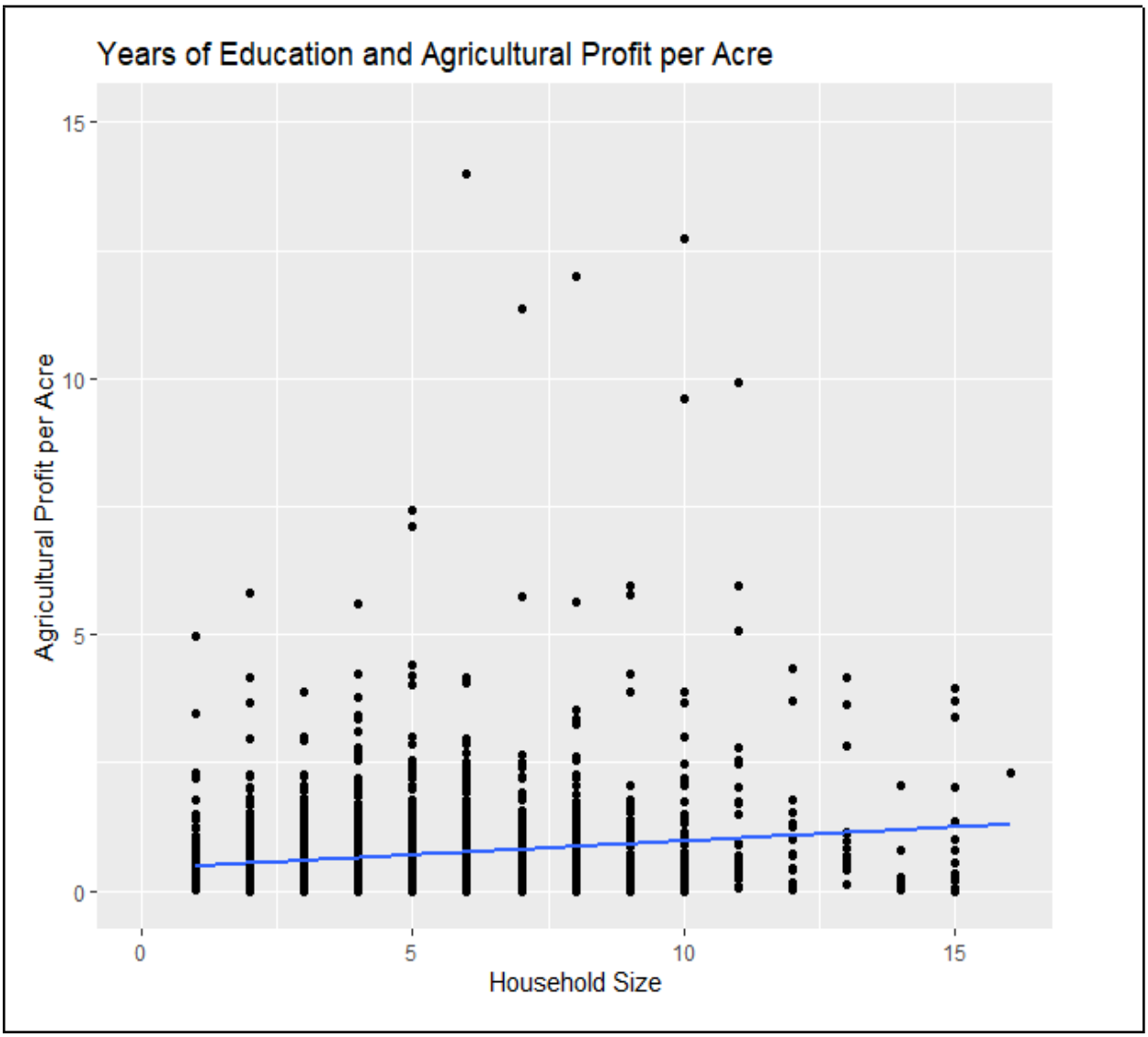
- Education is not a reliable predictor of farm profit. Contrary to expectations, households with more years of formal schooling do not have higher agricultural income. This finding held across all versions of the analysis.
- Larger households tend to earn more agricultural income. Each additional household member increases agricultural profit per acre by ¢.055,
- Households with road access earn ¢.519 less agricultural profit per acre when compared to farms without road access. Additionally, households with extension services earn ¢.094 less agricultural profit per acre when compared to farms without. While counterintuitive, this may reflect that these services are targeted toward struggling or less productive areas.

Summary Table: What Affects Agricultural Profit?

Factor	Impact on Profit	Interpretation
Household size	Positive	More labor likely boosts productivity
Education (avg. years)	None	No clear benefit from more formal schooling
Road access	Negative	May serve lower-performing or more remote areas
Extension visits	Negative	Possible inefficiencies in outreach effectiveness

Visual Highlight: Profit and Household Size

A clear upward trend: households with more members generally earn more from farming.



Recommendation for ACME

Based on these findings, we recommend ACME consider the following:

- Focus initial sales efforts on larger households as they appear more capable of turning inputs into profit
- Do not use education levels alone as a targeting strategy, it is not a reliable indicator of farm success.
- Be cautious with conventional infrastructure assumptions. Areas with roads and extension services may not always be the most productive; these features may be serving underperforming communities.

Final Note

While infrastructure and education are important development goals, they do not currently appear to drive higher farm profits in Ghana. ACME should instead focus on practical indicators of productivity, like household labor capacity, when designing its outreach and input distribution strategies.