IDEAS
INSTITUTE FOR DEMOCRACY AND ECONOMIC AFFAIRS

Executive Summary

Youth Voices, Future Choices: Comparing Agriculture Aspirations, Perceptions, and Career Preferences Across Education Pathways in Malaysia

Malaysia's agriculture sector stands at a critical turning point. Despite its continued importance to national food security, rural livelihoods, and economic resilience, the sector faces a persistent challenge in attracting young people to pursue agricultural careers. As Education Ministry Technical and Vocational Education and Training (TVET) Division Director Ts. Zulkernai Fauzi, highlighted, addressing issues related to "perception, industry collaboration and resource constraints will be crucial for increasing youth engagement and ensuring agriculture's sustainability as a vibrant career sector in the future" (The Star, 2025).

This challenge is becoming increasingly important as Malaysia seeks to transform agriculture into a more productive, technology-driven, and high-value sector. National initiatives such as the Digital AgTech programme, the New Industrial Master Plan (NIMP 2030), and the 13th Malaysia Plan (13MP) (2026-2030) seek to modernise the sector through technological adoption, precision farming, automation, and innovation.

However, these ambitions depend on the availability of a skilled and future-ready workforce. The sector currently faces a "double whammy" of an ageing agriculture workforce and limited youth participation, creating a significant barrier to sustaining long-term agricultural transformation. Although agriculture is becoming increasingly technology-intensive, many young people continue to associate the sector with traditional farming, physically demanding work, low wages, and limited opportunities for career advancement. These perceptions are often formed well before labour market entry and continue to shape educational choices and career aspiration.

Education pathways are central to this process. Following lower secondary education, students enter either the academic pathway leading to the *Sijil Pelajaran Malaysia (SPM)* or the Technical and Vocational Education and Training (TVET) pathway. Beyond developing technical competencies, these pathways expose students to different learning environments, career opportunities, and expectations that may influence how they perceive agriculture and the careers they aspire to pursue. Understanding how youths develop aspirations, how education pathways shape these perceptions, and what factors encourage and discourage agricultural careers is therefore essential to addressing both agriculture workforce challenges and Malaysia's broader human capital development goals.

This study examines how education pathways influence youth perceptions and career aspirations towards agriculture among Public Secondary School students (*Sekolah Menengah Kebangsaan, SMK*) and Vocational College (*Kolej Vokasional, KV*) students aged

15–16. The study is based on a large-scale survey of 14,305 students across 88 schools to examine differences between students in TVET and non-TVET pathways. The analysis explores how educational exposure, family background, and perceptions of agricultural careers shape young people's willingness to participate in the sector. Qualitative interviews in four sample schools provided supporting evidence and validation. However, qualitative data is not used in this report.

The findings reveal four key insights:

First, despite TVET playing an important role in increasing agricultural career interest, its potential remains underutilised. TVET students demonstrate stronger preferences toward agriculture careers compared to non-TVET students. Even after accounting for differences in student backgrounds, TVET students are more likely to identify agriculture as an ideal employment sector and express greater willingness to pursue agriculture careers. However, this advantage does not extend to modern agri-tech occupations, suggesting that this vocational pathway has yet to fully reposition agriculture as a high-skilled, technology-driven career option.

Second, classroom exposure is one of the strongest drivers of agricultural aspirations. TVET students who have prior exposure to agriculture-related subjects in secondary school emerge as one of the strongest predictors across outcomes, significantly increasing the likelihood that students identify agriculture as an ideal sector, express general openness towards agricultural careers, and consider agri-tech occupations.

Third, youth interest in agriculture is increasingly oriented towards specialised careers rather than traditional farming. TVET students are more likely to aspire towards engineering and machinery-related agriculture careers, while non-TVET students show stronger preferences for plant and animal science pathways, reflecting differences in education exposure. However, nearly 30% of students across both pathways remain uninterested in any agricultural occupation, highlighting the need to promote agriculture as a diverse, modern career sector with opportunities beyond primary production.

Fourth, agriculture career choices are shaped by skills development, parental attitudes, and social stigmas, not financial and physical labour concerns alone. Parental encouragement remains limited, with fewer than one in five students reporting family support for agriculture careers, highlighting the important role families play in shaping young people's career aspirations. Broader societal perceptions also continue to constrain interest, with only 51.3% of students recognising agriculture as a modern, high-tech sector. Although TVET students are less likely to associate agriculture with negative stereotypes than non-TVET students, these perceptions remain prevalent among many young people. At the same time, TVET students place greater emphasis on training opportunities, suggesting that clear pathways for skills development and career progression could strengthen the sector's appeal, particularly among vocational students.

Policy Recommendations:

To build a future-ready agriculture workforce, Malaysia should strengthen the connection between education, skills development, and agriculture career opportunities through the following measures:

1. **Strengthen agriculture integration across education pathways:** Improve how agriculture is introduced across TVET and non-TVET pathways by strengthening career guidance, experiential learning, and industry engagement. Better connections between education institutions and the agriculture sector can help students understand the range of career opportunities available and the skills needed for future roles.

2. **Build a future-ready agricultural skills ecosystem:** Ensure agricultural TVET remains responsive to industry transformation through stronger industry collaboration and forward-looking curriculum development. Training pathways should equip youth with relevant capabilities to support a modern and evolving agricultural sector.

3. **Expand access to agriculture career pathways:** Create more inclusive routes into agriculture by reducing barriers for youth without existing agriculture backgrounds. Stronger links between education, training opportunities, entrepreneurship support, and industry pathways can broaden participation in the sector.

4. **Reposition agriculture as a competitive career choice for youth:** Move beyond traditional perceptions of agriculture by highlighting the sector as a modern, skilled, and rewarding career pathway. Youth-focused communication should emphasise career prospects, skills development, and opportunities within a transforming agricultural sector.

Malaysia's ambition to build a modern, productive, and resilient agricultural sector will ultimately depend not only on investment in technology, but also on investment in people. The decisions young Malaysians make today will shape the sector's capacity to innovate, compete, and safeguard national food security in the decades ahead. By creating an ecosystem where agriculture is recognised as a skilled, innovative, and rewarding profession, Malaysia can cultivate a new generation of talent capable of driving the country's agricultural transformation and sustainable development.