

DIGITAL MARKETING COMMUNICATION, CAREER PROSPECTS, AND STUDENTS' INTENTION TOWARD AGRO-MARITIME HIGHER EDUCATION

Retna Widayawati^{1*}, Ujang Sumarwan¹, Lilik Noor Yuliati²

¹School of Business, IPB University
Jl. Pajajaran, Bogor 16128, Indonesia

²Department of Family and Consumer Sciences, Faculty of Human Ecology, IPB University
Jl. Kamper Kampus IPB Dramaga, Bogor, Indonesia

Article history:

Received
13 April 2026

Revised
30 June 2026

Accepted
16 July 2026

Available online
30 September 2026

This is an open access
article under the CC BY
license (<https://creativecommons.org/licenses/by/4.0/>)



Abstract:

Background: The declining interest in agro-maritime higher education has become a strategic concern for Indonesia's sustainable development agenda. As universities increasingly use digital marketing communication to attract prospective students, limited attention has been given to how digital communication, career-related perceptions, and the Theory of Planned Behavior (TPB) constructs jointly shape students' educational choices.

Purpose: This study investigates students' intentions toward agro-maritime higher education by examining the role of digital marketing communication within an extended Theory of Planned Behavior (TPB) framework.

Design/methodology/approach: A cross-sectional survey was administered to 1,424 Grade XII science-track students from 44 senior high schools across six regions in Indonesia. The proposed model was analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS).

Findings/Results: The model explains a substantial proportion of the variance in students' intentions ($R^2 = 0.588$). Digital marketing communication was identified as the strongest determinant of intention ($\beta = 0.447$, total effect), influencing students both directly ($\beta = 0.345$) and indirectly through perceived career and employment prospects and attitude. Subjective norms and perceived behavioral control also showed significant positive effects on students' intentions.

Conclusion: The findings highlight the strategic role of digital marketing communication in shaping students' educational choices by influencing their perceptions of future career opportunities and attitude toward agro-maritime study programs.

Originality/value (State of the art): By integrating psychological, economic, and informational factors within a single framework, this study offers a more comprehensive explanation of higher-education choice behavior. The findings extend the TPB by demonstrating a communication-driven mechanism in which digital marketing communication shapes perceived career and employment prospects, which subsequently influences attitudes and intentions toward agro-maritime higher education.

Keywords: agro-maritime higher education, career and employment prospects, digital marketing communication, higher education choice, students' intention

How to Cite:

Widayawati, R., Sumarwan, U., & Yuliati, L. N. (2026). Digital marketing communication, career prospects, and students' intention toward agro-maritime higher education. *Jurnal Aplikasi Bisnis dan Manajemen*, 12(3), 991. <https://doi.org/10.17358/jabm.12.3.991>

* Corresponding author:

Email: rwidayawati@gmail.com

INTRODUCTION

The agro-maritime sector plays a strategic role in supporting food security, natural resource management and sustainable economic development in Indonesia. As an agrarian and archipelagic country, Indonesia relies heavily on agriculture, fisheries, livestock, and forestry as key economic drivers, contributing significantly to its economic stability and environmental sustainability (FAO, 2017; World Bank, 2021). Consequently, the sector requires a competent and adaptive workforce capable of addressing global challenges, including climate change and sustainable resource management (FAO 2017).

However, the agro-maritime sector is currently facing serious challenges related to workforce regeneration. Recent data indicate a growing trend in labor aging, which may threaten the long-term sustainability of agriculture and related subsectors (BPS, 2023). This phenomenon is consistent with global findings showing declining interest among younger generations in agricultural and related fields, leading to concerns about future shortages of skilled labor (FAO, 2014; OECD, 2019). Previous studies have also highlighted that the younger generation tends to perceive agriculture as less attractive than other modern sectors (White, 2012; Jayne et al. 2014).

The declining interest of young people in agro-maritime fields is also reflected in higher-education choices. Agro-maritime study programs tend to be less competitive than disciplines such as health sciences, engineering, and business. Prior studies suggest that students' choice of study program is largely influenced by perceived career prospects, economic returns, and alignment with future career goals (Chapman, 1981; Cabrera & La Nasa, 2000; Montmarquette et al. 2002; Altonji et al. 2016). A similar pattern was observed at IPB University, where agro-maritime programs consistently showed lower application rates than non-agro-maritime programs (DAPPMB IPB, 2024). These conditions indicate a mismatch between the strategic importance of the agro-maritime sector and students' educational preferences.

Students' intentions to choose a study program are shaped by a complex process involving both psychological and contextual factors. The Theory of Planned Behavior (TPB) explains that intention is influenced by attitude, subjective norms, and

perceived behavioral control (Ajzen, 1991, 2005). This framework has been widely applied in educational decision-making contexts (Suharti and Sirine, 2012; Paul et al. 2016). Recent applications of the TPB demonstrate its continued relevance and adaptability in explaining decision-making processes in evolving educational environments (Broadbent et al. 2025). However, students' decision-making is not solely driven by internal factors.

From the perspective of Human Capital Theory, education is viewed as an investment that generates future economic returns, including job opportunities, career advancement, and income potential (Becker, 1993; Psacharopoulos & Patrinos, 2018). Empirical studies consistently show that perceived economic returns significantly influence students' educational choices (Altonji et al. 2013; Altonji et al. 2016). In the context of agro-maritime education, the limited visibility of career prospects may reduce students' interest in choosing such programs. For many prospective students, educational choices are evaluated not only based on academic interest but also on how clearly a field of study is associated with future career opportunities, professional identity, and long-term career development.

The rapid advancement of digital technology has fundamentally changed the way students search for, evaluate, and interact with information. Rather than acting as passive recipients, prospective students increasingly engage with personalized and interactive content on multiple digital platforms (Chong et al. 2024).

Against this backdrop, digital marketing communication has become an important source of information for higher education decision-making (Constantinides & Zinck Stagno, 2011; Rutter et al. 2016; Dwivedi et al. 2021). Beyond increasing information accessibility, effective digital communication can foster customer engagement, which in turn shapes perceptions, preferences, and subsequent decisions (Lim et al. 2022).

Recent evidence shows that social media marketing influences university choice by shaping institutional image, trust, and educational preferences (Arief & Brabo, 2025). This trend is particularly evident among Generation Z, who rely heavily on social media platforms to explore educational opportunities. For

this generation, message credibility, relevance, visual attractiveness, and interactive features play important roles in shaping preferences and information-processing behavior (Appel et al. 2020).

Despite the extensive use of TPB in explaining educational choices, prior studies have generally examined psychological, economic, and communication-related factors independently (Juhaidi, 2024). While TPB studies primarily focus on attitude, subjective norms, and perceived behavioral control as predictors of intention, research on career prospects and digital communication often treats these variables as separate external influences. Consequently, little is known about the mechanism through which digital communication shapes students' perceptions of future career opportunities and how these perceptions subsequently translate into favorable attitudes and educational intentions. Understanding this process is particularly important in agro-maritime education, where career pathways are often perceived as less visible than those in more popular fields of study.

This limitation is particularly relevant in the context of agro-maritime education. Although the agro-maritime sector plays a strategic role in national development, student interest in agro-maritime study programs is relatively low. This suggests the existence of a perception gap, where the strategic importance of the sector is not necessarily accompanied by equally positive perceptions of future career opportunities and professional prospects among students.

To address this gap, this study proposes an extended TPB model by integrating digital marketing communication and perceived career and employment prospects into the intention-formation process. In this model, digital marketing communication is positioned not only as a promotional tool but also as an upstream cognitive antecedent that shapes students' perceptions of future career opportunities in the field. These perceptions subsequently influence attitudinal evaluation and ultimately affect students' intentions toward agro-maritime higher education. This integrative approach provides a more comprehensive explanation of how internal psychological factors, career-related perceptions, and external informational stimuli interact to shape students' educational decisions.

Therefore, this study aims to explain students' intentions toward agro-maritime higher education

by examining (1) the effect of digital marketing communication on perceived career and employment prospects, (2) the influence of perceived career and employment prospects on attitude, (3) the effect of attitude, subjective norm, and perceived behavioral control on students' intention, and (4) the direct effect of digital marketing communication on students' intention. In addition, this study provides a descriptive overview of students' demographic characteristics and interest patterns as contextual support for interpreting the findings rather than as primary variables in the structural model.

This study offers three contributions to the literature on higher education choice. First, it extends the Theory of Planned Behavior by proposing a sequential communication-driven mechanism in which digital marketing communication shapes perceived career and employment prospects, which subsequently influences attitude formation and educational intention. Second, this study provides empirical evidence from the underexplored context of agro-maritime higher education, where educational decisions are closely linked to perceptions of future career pathways and professional opportunities. Third, the findings highlight the importance of communication strategies that foster future-oriented perceptions of career prospects, professional identity, and societal relevance of agro-maritime education.

METHODS

A quantitative cross-sectional survey design was adopted to investigate the factors influencing students' intentions toward agro-maritime higher education. This approach allows for a systematic examination of the relationships among variables within a structural model (Creswell & Creswell, 2018). Data collection was conducted across multiple regions of Indonesia between November and December 2025, during which Grade XII students actively explored higher education options.

The data used in this study were primary data collected directly from the respondents through a structured questionnaire. The respondents consisted of Grade XII science-track (IPA) students, as they represent the primary population eligible to enrol in agro-maritime study programs. The questionnaire was designed to measure students' perceptions of digital

marketing communication, perceived career and employment prospects, attitude, subjective norm, perceived behavioral control, and students' intention. All constructs were measured using a five-point Likert scale ranging from strongly disagree to strongly agree, which is widely used in behavioral research to capture individual perceptions and attitudes (Hair et al. 2021). The questionnaire items were adapted from established theoretical constructs and previously validated measurement scales. To ensure conceptual consistency and contextual relevance to agro-maritime higher education, the research supervisors reviewed the initial instrument. A pre-test involving more than 30 Grade XII students was subsequently conducted to assess item clarity, readability, and comprehension. The instrument was further evaluated through a pilot study in a senior high school in Bogor to examine the data collection procedures and overall readability. Feedback from these stages informed revisions to the item wording and questionnaire structure prior to nationwide distribution. This study applied a multistage sampling technique to ensure adequate representation. Indonesia was first divided into six major regions, followed by the selection of schools using a cluster sampling approach. Subsequently, respondents were purposively selected from Grade XII science-track students in each selected school. A total of 1,424 valid responses were collected from 44 senior high school students.

Data were gathered using a self-administered online questionnaire distributed through KoBoToolbox, with prior coordination and supervision from the school counselors (Guru Bimbingan Konseling). Providing respondents with brief exposure to digital promotional content ensured a shared understanding of agro-maritime study programmes and reduced the likelihood of response bias resulting from differences in prior knowledge.

The research model integrates constructs from the Theory of Planned Behavior (TPB), Human Capital Theory, and consumer behavior perspective. Digital marketing communication was operationalized through three dimensions: source credibility, message relevance, and visual attractiveness, which reflect the key elements of effective communication (Kotler & Keller, 2016; Sumarwan, 2014). Perceived career and employment prospects were measured through perceived job opportunities, career prospects, and potential earnings, in line with the concept of return to education in Human Capital Theory (Becker, 1993;

Psacharopoulos & Patrinos, 2004). The TPB constructs attitude, subjective norm, and perceived behavioral control represent the core determinants of intention (Ajzen, 1991, 2005), while students' intention was positioned as the dependent variable. All constructs were measured reflectively using multiple indicators adapted from previous studies.

Digital marketing communication and perceived career and employment prospects were specified as second-order reflective constructs to capture their multidimensional nature within the Structural Equation Modeling-Partial Least Squares (SEM-PLS) model. This hierarchical specification provides a more comprehensive representation of the underlying concepts while maintaining the relationships between their respective dimensions.

Data analysis was conducted using SEM-PLS, which is suitable for analyzing complex models involving multiple constructs and latent variables (Hair et al. 2021). The analysis was conducted using a two-stage approach. First, the measurement model was evaluated to assess reliability and validity, including indicator loadings, composite reliability, average variance extracted, and discriminant validity using the Fornell-Larcker criterion. Second, the structural model was assessed to examine the relationships among constructs using path coefficients, the coefficient of determination (R^2), and bootstrapping procedures to test the significance of both direct and indirect effects. The hypotheses in this study were developed based on established theoretical foundations and were supported by prior empirical findings. Within the TPB framework, attitude, subjective norm, and perceived behavioral control are recognized as direct determinants of behavioral intention (Ajzen, 1991). Accordingly, these constructs are expected to positively influence students' intentions toward agro-maritime higher education. Drawing on Human Capital Theory, educational choices are often evaluated based on expected economic returns. Therefore, perceived career and employment prospects are expected to positively shape students' attitudes toward agro-maritime study programs (Becker, 1993). From a marketing communication perspective, digital marketing communication functions as an external informational stimulus that shapes belief structures and influences decision-making processes (Kotler & Keller, 2016; Sumarwan 2014). Effective communication is expected to enhance perceived value, reduce uncertainty, and strengthen evaluative judgments. Consequently,

digital marketing communication is expected to enhance perceived career and employment prospects while directly influencing students' intentions.

Based on these relationships, this study adopts an extended Theory of Planned Behavior framework by incorporating digital marketing communication and perceived career and employment prospects as external variables. In this framework, digital marketing communication is positioned as an antecedent that shapes perceived career and employment prospects, which subsequently influences attitudes. Attitude, subjective norm, and perceived behavioral control serve as direct determinants of students' intentions. In addition, digital marketing communication is also hypothesized to have a direct effect on intention. This integrative framework reflects the interaction between psychological, economic, and informational factors in explaining students' decision-making processes in selecting agro-maritime higher education. Figure 1 presents the conceptual framework of this study, illustrating the relationships among variables within the extended Theory model.

RESULTS

This section presents the descriptive statistics, measurement model assessment, and structural model results of the study. The findings provide evidence regarding the relationships among digital marketing communication, perceived career and employment prospects, and students' intentions toward agro-maritime higher education.

The descriptive analysis provides an overview of respondents' characteristics and information-seeking behavior in the context of higher-education decision-making. As shown in Table 1, the sample is predominantly female (62.22%) and largely originates from urban areas (58.85%), indicating that the respondents generally have relatively high exposure to educational information and decision-making environments. This profile suggests that students are not constrained by access to information but rather by how they interpret and evaluate the available information when forming their educational preferences.

In terms of information behavior, digital platforms play a central role in students' exploration of higher education options. A substantial proportion of respondents (60.60%) reported actively searching for information about IPB University through online channels. Among these, Instagram (54.11%) and TikTok (41.71%) emerged as the most dominant platforms, while a large majority (73.59%) perceived social media as an important medium for university promotion (Table 1). These findings confirm that digital media have become the primary information source for Generation Z, who tend to rely on visual, interactive, and easily accessible content. However, despite this high level of digital engagement and interest in reputable universities, agro-maritime study programs are not among the most preferred choices. This suggests that the challenge lies not in information availability but in the effectiveness of communication in shaping the perceived value and relevance of agro-maritime education.

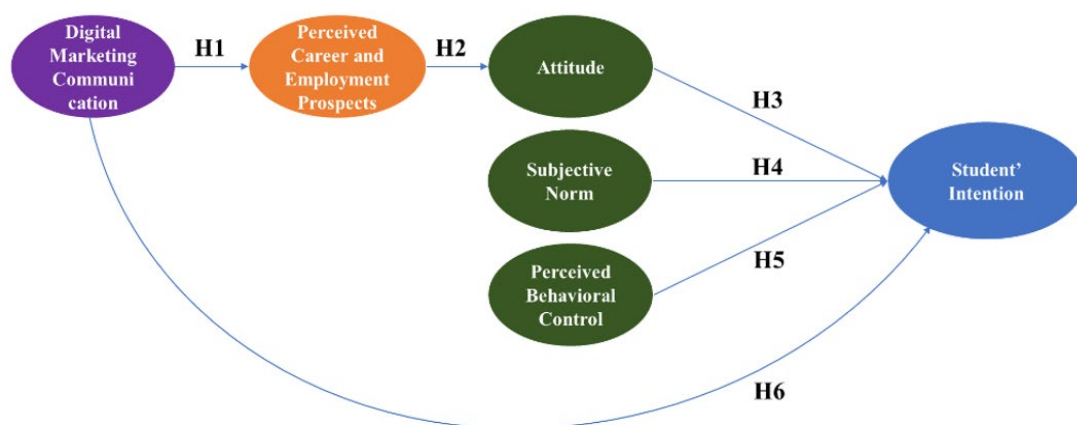


Figure 1. Conceptual framework of the study

The evaluation of the measurement model demonstrated that all constructs met the required criteria for reliability and validity (Table 2). The average variance extracted (AVE) values ranged from 0.525 to 0.915, while the composite reliability (CR) values ranged from 0.845 to 0.970, all exceeding the recommended thresholds. These results confirm that the measurement model exhibits adequate convergent validity and internal consistency. Furthermore, discriminant validity was established, indicating that each construct captured distinct conceptual dimensions. These results indicate that the constructs were measured with a high degree of reliability and validity, ensuring that subsequent structural analyses provided meaningful and robust insights.

The structural model exhibited substantial explanatory power, with an R^2 value of 0.588 for students' intention, indicating that 58.8% of the variance in intention could be explained by the model (Figure 2). This value can be considered moderate to strong, suggesting that the proposed extended TPB model has a satisfactory predictive capability in explaining students' intentions toward agro-maritime higher education. The remaining variance may be influenced by factors not included in the model.

The structural model results revealed a clear hierarchical pattern of influence, where digital marketing communication emerged as the primary driver, followed by social influence (subjective norm) and individual cognitive factors (attitude and perceived behavioral control). This indicates that students' intentions are more strongly shaped by external informational and social factors than by internal evaluation alone.

As presented in Table 3, all hypothesized relationships are positive and statistically significant ($p < 0.001$), confirming the robustness of the proposed framework. These findings indicate that both the core constructs of the Theory and the additional variables incorporated in the extended model contribute meaningfully to explaining students' intentions toward agro-maritime higher education.

Digital marketing communication significantly and positively affects perceived career and employment prospects ($H1: \beta = 0.789$). Perceived career and employment prospects, in turn, had a strong positive effect on attitude ($H2: \beta = 0.815$), indicating that students' evaluation of agro-maritime study programs was strongly influenced by their expectations regarding future career opportunities.

Table 1 Descriptive Statistics of Respondents

Category	Item	n	Percentage (%)
Gender	Male	538	37.78
	Female	886	62.22
Residence	Urban	838	58.85
	Rural	586	41.15
Digital Behavior	Searched IPB information online	864	60.6
	Instagram as main source	467	54.11
	TikTok as main source	360	41.71
	Social media perceived as important	1048	73.59

Table 2. Construct reliability and validity

Construct	AVE (>0.50)	CR (>0.70)
Digital Marketing Communication	0.876	0.955
Perceived Career and Employment Prospects	0.915	0.970
Attitude	0.610	0.904
Subjective Norm	0.525	0.845
Perceived Behavioral Control	0.560	0.863
Students' Intention	0.724	0.940

Attitude has a significant positive effect on students' intention (H3: $\beta = 0.158$), although its relatively smaller coefficient suggests that it must be reinforced by other factors. Subjective norms showed a stronger influence on intention (H4: $\beta = 0.286$), highlighting the importance of the social environment in shaping students' educational decisions. Perceived behavioral control also has a significant positive effect on students' intention (H5: $\beta = 0.138$), indicating that perceived capability contributes to intention, albeit to a lesser extent.

In addition to its indirect effects, digital marketing communication also has a significant direct effect on students' intention (H6: $\beta = 0.345$), suggesting that digital communication can directly enhance students' interest by increasing their awareness and perceived attractiveness of agro-maritime programs.

The total effect analysis further highlights the dominant role of digital marketing communication in shaping students' intentions toward agro-maritime higher education, with the largest total effect of 0.447 among all variables included in the model (Table 4). This effect exceeded those of subjective norms (0.286), attitude (0.158), perceived behavioral control (0.138), and perceived career and employment prospects (0.129). These findings indicate that digital marketing communication influences students' intentions directly and indirectly through perceived career and

employment prospects and attitudes. By shaping students' perceptions of future career opportunities and strengthening favorable evaluations of agro-maritime study programs, digital marketing communication emerges as the most influential leverage point in students' educational decision making.

Taken together, these findings suggest that students' intention formation follows a sequential process, where digital marketing communication shapes perceived career prospects, which in turn influences attitude, and ultimately intention. This process is further reinforced by social influence, highlighting that students' decisions are not purely individual but socially embedded and information-driven.

The findings of this study provide strong empirical support for the extended Theory of Planned Behavior (TPB) models in explaining students' intentions toward agro-maritime higher education. The model demonstrates substantial explanatory power, indicating that students' intentions are shaped not only by core TPB constructs but also by contextual informational factors, particularly digital marketing communication. This finding is consistent with prior studies suggesting that behavioral intention is influenced not only by internal psychological factors but also by external informational stimuli that shape belief structures (Ajzen, 1991; Conner and Armitage, 1998).

Table 3. Results of hypothesis testing

Hypothesis	Path	Coefficient (β)	p-Value	Result
H1	Digital Marketing Communication $\rightarrow$ Perceived Career and Employment Prospects	0.789	0.000	Supported
H2	Perceived Career and Employment Prospects $\rightarrow$ Attitude	0.815	0.000	Supported
H3	Attitude $\rightarrow$ Students' Intention	0.158	0.000	Supported
H4	Subjective Norm $\rightarrow$ Students' Intention	0.286	0.000	Supported
H5	Perceived Behavioral Control $\rightarrow$ Students' Intention	0.138	0.000	Supported
H6	Digital Marketing Communication $\rightarrow$ Students' Intention	0.345	0.000	Supported

Table 4. Total Effects on Students' Intention

Variable	Direct Effect	Indirect Effect	Total Effect	Rank
Digital Marketing Communication	0.345	0.102	0.447	1
Subjective Norm	0.286	-	0.286	2
Attitude	0.158	-	0.158	3
Perceived Behavioral Control	0.138	-	0.138	4
Perceived Career and Employment Prospects	-	0.129	0.129	5

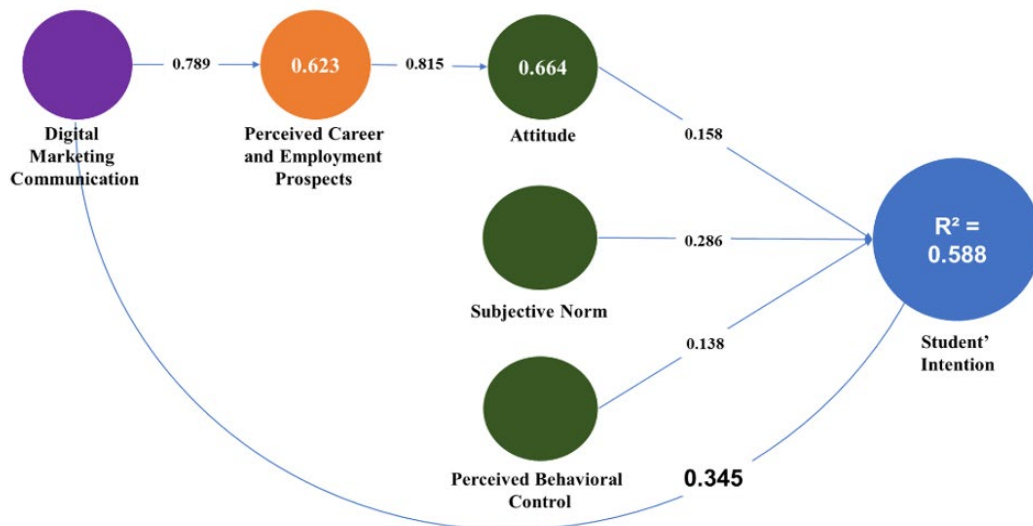


Figure 2 Structural Model Result

A key insight from this study is the central role of digital marketing communication in the formation of intention. Rather than functioning solely as a promotional tool, digital communication has emerged as a critical antecedent that shapes how students evaluate the value and outcomes of higher education. This finding suggests that digital marketing communication plays a fundamental role in influencing students' cognitive evaluation, particularly regarding perceived career and employment prospects.

One possible explanation for this result is that most senior high school students have limited direct exposure to agro-maritime professions and the realities of the labor market. Consequently, their understanding of career opportunities is largely constructed through mediated information sources. In such circumstances, digital communication becomes more than a promotional instrument; it serves as a mechanism through which students develop expectations regarding future occupations, professional identities, and career opportunities associated with agro-maritime education. This result aligns with prior research highlighting the importance of digital media in shaping students' perceptions and decision-making processes in higher education (Constantinides & Zinck Stagno 2011; Rutter et al. 2016). This finding reinforces the growing recognition that digital communication plays a central role in shaping consumer decision-making, particularly in information-intensive contexts such as the higher education sector. Emerging evidence suggests that digital communication influences decision-making by increasing information accessibility and fostering

customer engagement through interactive and personalized content experiences (Kulikovskaja et al. 2023). In the context of higher education, such engagement may strengthen students' emotional connections with academic programs and enhance the perceived relevance of future career opportunities. This role is particularly important in agro-maritime education, where career pathways are often perceived as less visible, making digital marketing communication essential for reducing uncertainty and enhancing perceived value.

The descriptive findings suggest that the issue is not a lack of access to information. Most respondents actively sought university-related information and regarded social media as an important source of educational information. Therefore, the challenge facing agro-maritime higher education may lie less in information availability and more in the ability to communicate future career relevance and professional opportunities in ways that resonate with younger generations.

This study further extends the TPB framework by demonstrating that informational exposure, particularly through digital channels, can shape the underlying belief structures that influence intention formation. While TPB traditionally emphasizes attitude, subjective norm, and perceived behavioral control as immediate determinants of intention (Ajzen, 1991), the present study's findings highlight the importance of upstream factors that shape these cognitive evaluations. Specifically, perceived career and employment prospects significantly influenced attitudes, indicating

that students' evaluations of agro-maritime programs were strongly driven by their expectations regarding future career opportunities and economic benefits.

This finding reinforces the relevance of the Human Capital Theory, which posits that education is evaluated based on expected returns in the labor market (Becker, 1993; Psacharopoulos & Patrinos, 2004). It also supports prior empirical studies showing that perceived economic returns significantly influence students' educational choices (Altonji et al. 2013; Altonji et al. 2016).

Another important finding is the relatively strong influence of subjective norms compared to other TPB constructs. This indicates that students' educational decisions remain socially embedded, where parents, teachers, and peers play a significant role in shaping intentions. This result aligns with previous studies suggesting that adolescents and Generation Z are highly influenced by their immediate social environment in making educational decisions (Soares et al. 2017).

At this stage, students often have limited experience and information regarding higher education and future careers, making them more likely to rely on guidance and reassurance from parents, teachers, and significant others. Consequently, intention formation appears to be not only an individual cognitive process but also a socially validated process, in which educational choices gain legitimacy through social support and approval.

Although attitude and perceived behavioral control significantly influenced students' intentions, their effects were relatively smaller than those of subjective norms and digital marketing communication. This finding suggests that personal evaluation and perceived capability remain important in educational decision-making, but they may be shaped and reinforced by external information and social influences. One possible explanation is that senior high school students often have limited direct experience and incomplete information regarding higher education and future career pathways, making them more reliant on information cues and social endorsement when evaluating their educational options. This tendency may also reflect Indonesia's collectivist cultural context, where parental expectations, teacher recommendations, and peer influence play important roles in shaping educational choices. Collectively, these findings indicate that educational decision-making among adolescents is influenced not only by

individual evaluation but also by social validation and information exposure, highlighting the importance of considering sociocultural factors when applying and extending the TPB in higher-education research.

Theoretically, this study extends the Theory of Planned Behavior by demonstrating that intention formation may be influenced by communication-driven mechanisms operating through career-related perceptions and attitudinal evaluation. By integrating digital marketing communication and perceived career and employment prospects into a single framework, this study broadens the explanatory scope of the TPB in the context of higher education choice.

Managerial Implications

From a strategic marketing perspective, the findings emphasize that digital marketing communication should be positioned as a core driver of student acquisition strategies in higher education. Rather than merely functioning as a promotional tool, digital marketing communication acts as a behavior-shaping mechanism that influences how students construct their perceptions, evaluations, and intentions. Given its dominant total effect, universities should reposition digital communication as a central strategic function in student recruitment rather than as a peripheral activity. First, universities should strengthen career pathway visibility by explicitly linking academic programs to tangible career outcomes and professional trajectories. Communication strategies should clearly demonstrate how students' progress from specific study programs to future occupations, professional roles, and career opportunities. The use of career pathway maps, alumni career stories, industry partnerships, and real-world applications can help students understand the long-term value and relevance of agro-maritime education. Second, considering the strong influence of subjective norms, communication strategies should extend beyond student-centered messaging to actively engage key social influencers, particularly parents, teachers, and school counselors. This can be implemented through targeted informational campaigns, testimonial-based narratives, and collaborative outreach programs with schools, thereby reinforcing positive social support for agro-maritime education.

Third, universities should optimize the use of high-engagement digital platforms, particularly Instagram and TikTok, which serve as primary information sources for prospective students. Communication

formats should prioritize short-form, visually engaging, and interactive content that enhances message clarity, emotional resonance, and retention among Gen Z audiences.

Finally, an integrated strategic approach is required, in which digital marketing communication is aligned with institutional positioning. Agro-maritime education should be repositioned as a future-oriented strategic sector that offers meaningful career opportunities, technological innovation, and societal contributions. This repositioning should be supported by communication strategies that enhance career pathway visibility, strengthen future-oriented perceptions, and reinforce social legitimacy among students, parents and educators. Through this approach, digital marketing communication can function as a strategic lever to simultaneously shape perceptions, strengthen social influence, and ultimately increase students' intention to pursue agro-maritime study programs.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study demonstrates that students' intentions toward agro-maritime higher education are shaped by the interaction of digital marketing communication, perceived career and employment prospects, and the core constructs of the Theory of Planned Behavior. Among the factors examined, digital marketing communication emerged as the most influential determinant of students' intentions, both directly and indirectly, through career-related perceptions and attitudinal evaluation. In addition, social influence remains an important consideration in students' educational decision making.

From a theoretical perspective, this study extends the Theory of Planned Behavior by incorporating digital marketing communication and perceived career and employment prospects into the intention formation process. The findings demonstrate a communication-driven mechanism in which digital marketing communication shapes career-related perceptions, which subsequently influence attitudes and educational intentions. By integrating psychological, economic, and informational factors within a single framework, this study provides a more comprehensive explanation

of higher-education choice behavior, particularly in the context of agro-maritime education.

From a practical perspective, the findings suggest that increasing students' interest in agro-maritime higher education requires more than just conventional promotional activities. Higher education institutions should strengthen the visibility of career pathways, communicate future professional opportunities more effectively, and engage key social influencers, such as parents, teachers, and school counselors. Such efforts are essential not only for increasing students' interest but also for supporting the long-term sustainability of agro-maritime education in Indonesia as a whole.

Recommendation

Several limitations should be considered when interpreting these findings. First, the cross-sectional design does not capture changes in students' intentions over time, limiting the ability to examine causal dynamics in educational decision-making. Second, the study focused exclusively on Grade XII science-track students, who represent the primary target population for agro-maritime higher education programs in Indonesia. This sampling focus may limit the generalizability of the findings to students from other academic backgrounds, educational tracks or institutional contexts.

From a practical perspective, universities are encouraged to adopt more strategic and evidence-based digital communication approaches by increasing the visibility of career pathways and explicitly linking academic programs with future professional opportunities. Digital communication should be viewed not merely as an informational channel but as a strategic mechanism for shaping students' perceptions of career prospects, professional identity, and the future relevance of agro-maritime education in the curriculum.

Future research should further investigate how message characteristics, platform dynamics, and user engagement influence information processing and educational decision-making within the extended TPB framework. Longitudinal studies are also needed to examine whether intention translates into actual enrolment behavior, thereby providing a more comprehensive understanding of students' decision-making processes over time.

DECLARATION OF GENERATIVE AI IN SCIENTIFIC WRITING: During the preparation and revision of this manuscript, the authors used ChatGPT for grammar checking and text polishing. After using this tool, the authors carefully reviewed, revised, and edited the manuscript as required. The use of artificial intelligence was limited to editorial assistance and did not involve the study design, data collection, data analysis, interpretation of results, or development of research conclusions. The authors take full responsibility for the content and integrity of this publication.

FUNDING STATEMENT: This research did not receive any specific grants from funding agencies in the public, commercial, or not-for-profit sectors.

CONFLICTS OF INTEREST: The authors declare no conflicts of interest.

REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2005). *Attitudes, personality, and behavior* (2nd ed.). Open University Press.
- Altonji, J. G., Blom, E., & Meghir, C. (2016). Heterogeneity in human capital investments. *Annual Review of Economics*, 8, 185–223. <https://doi.org/10.1146/annurev-economics-080315-015327>
- Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48(1), 79–95. <https://doi.org/10.1007/s11747-019-00695-1>
- Arief, Z., & Brabo, N. A. (2025). The Influence of Word of Mouth and Social Media Marketing on Students' Decision to Choose a University with Brand Image as a Mediating Variable. *Journal of Economics, Management, Business and Accounting (JECOMBI)*, 6(3). <https://doi.org/10.58471/jecombi.v6i03.140>
- Badan Pusat Statistik. (2023). *Hasil pencacahan lengkap Sensus Pertanian 2023 – Tahap I* [Berita resmi statistik]. <https://www.bps.go.id/id/pressrelease/2023/12/04/2050/hasil-pencacahan-lengkap-sensus-pertanian-2023>
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis* (3rd ed.). University of Chicago Press.
- Broadbent, J., Sharman, S., Panadero, E., & Fuller-Tyszkiewicz, M. (2025). Academics' intention to sustain new teaching practices after COVID-19: A theory of planned behaviour approach. *Higher Education. Advance online publication*. <https://doi.org/10.1007/s10734-024-01326-7>
- Cabrera, A. F., & La Nasa, S. M. (2000). Understanding the college choice process. *New Directions for Institutional Research*, 2000(107), 5–22. <https://doi.org/10.1002/ir.10701>
- Chapman, D. W. (1981). A model of student college choice. *Journal of Higher Education*, 52(5), 490–505. <https://doi.org/10.1080/00221546.1981.11778120>
- Chong, S.-E., Ng, S.-I., Basha, N. K., & Lim, X.-J. (2024). Social commerce in the social media age: Understanding how interactive commerce enhancements navigate app continuance intention. *Journal of Research in Interactive Marketing*, 18(5), 865–899. <https://doi.org/10.1108/JRIM-06-2022-0203>
- Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28(15), 1429–1464. <https://doi.org/10.1111/j.1559-1816.1998.tb01685.x>
- Constantinides, E., & Zinck Stagno, M. C. (2011). Social media in higher education marketing. *Journal of Marketing for Higher Education*, 21(1), 7–24. <https://doi.org/10.1080/08841241.2011.573593>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications, Inc.
- Direktorat Admisi dan Pengembangan Program Mahasiswa Baru (DAPPMB) IPB University. (2024). *Data keketatan program studi IPB University tahun 2024* [Laporan internal]. IPB University.
- Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., et al. (2021). Setting the future of digital marketing. *International Journal of Information Management*, 59, 102168. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>
- FAO. (2014). *Youth and agriculture: Key challenges and concrete solutions*. Food and Agriculture

- Organization of the United Nations. <https://www.fao.org/3/i3947e/i3947e.pdf>
- FAO. (2017). *The future of food and agriculture: Trends and challenges*. Food and Agriculture Organization of the United Nations. <https://www.fao.org/3/i6583e/i6583e.pdf>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Jayne, T. S., Chamberlin, J., & Headey, D. (2014). Land pressures. *Journal of Agricultural Economics*, 65(1), 1–25. <https://doi.org/10.1111/1477-9552.12021>
- Juhaidi, A. (2024). Social media marketing of Islamic higher education institution in Indonesia: A marketing mix perspective. *Cogent Business & Management*, 11(1), 2374864. <https://doi.org/10.1080/23311975.2024.2374864>
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education Limited.
- Kulikovskaja, V., Hubert, M., Grunert, K. G., & Zhao, H. (2023). Driving marketing outcomes through social media-based customer engagement. *Journal of Retailing and Consumer Services*, 74, 103445. <https://doi.org/10.1016/j.jretconser.2023.103445>
- Lim, W. M., Rasul, T., Kumar, S., & Ala, M. (2022). Past, present, and future of customer engagement. *Journal of Business Research*, 140, 439–458. <https://doi.org/10.1016/j.jbusres.2021.11.014>
- Montmarquette, C., Cannings, K., & Mahseredjian, S. (2002). How do young people choose college majors? *Economics of Education Review*, 21(6), 543–556. [https://doi.org/10.1016/S0272-7757\(01\)00054-1](https://doi.org/10.1016/S0272-7757(01)00054-1)
- OECD. (2019). *Innovation, agricultural productivity and sustainability in food and agriculture*. OECD Publishing. <https://doi.org/10.1787/92d60c4a-en>
- Oreopoulos, P., & Petronijevic, U. (2013). Making college worth it: A review of research on the returns to higher education. *The Future of Children*, 23(1), 41–65. <https://doi.org/10.1353/foc.2013.0001>
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using TPB. *Journal of Retailing and Consumer Services*, 29, 123–134. <https://doi.org/10.1016/j.jretconser.2015.11.006>
- Psacharopoulos, G., & Patrinos, H. A. (2004). Returns to investment in education: A further update. *Education Economics*, 12(2), 111–134. <https://doi.org/10.1080/0964529042000239140>
- Psacharopoulos, G., & Patrinos, H. A. (2018). Returns to investment in education: A decennial review of the global literature. *Education Economics*, 26(5), 445–458. <https://doi.org/10.1080/09645292.2018.1484426>
- Rutter, R., Roper, S., & Lettice, F. (2016). Social media interaction and university brand. *Journal of Business Research*, 69(8), 3096–3104. <https://doi.org/10.1016/j.jbusres.2016.01.025>
- Soares, A. M., Pinho, J. C., & Nobre, H. (2017). From social to marketing interactions: The role of social networks in higher education. *Journal of Marketing for Higher Education*, 27(1), 1–18. <https://doi.org/10.1080/08841241.2016.1269038>
- Suharti, L., & Sirine, H. (2012). Factors influencing students' entrepreneurial intention. *Journal of Indonesian Economy and Business*, 27(2), 168–184.
- Sumarwan, U. (2014). *Perilaku Konsumen: Teori dan Penerapannya dalam Pemasaran*. Edisi Kedua. Ghalia Indonesia.
- White, B. (2012). Agriculture and youth. *Journal of Peasant Studies*, 39(3–4), 725–748. <https://doi.org/10.1080/03066150.2012.681614>
- World Bank. (2021). *World development report 2021: Data for better lives*. World Bank. <https://doi.org/10.1596/978-1-4648-1600-0>