

Innovating Service and Marketing to Succeed Market-Based Marketing Performance Adoption

Hendra Riofita

Teacher Training and Education Faculty, State Islamic University Sultan Syarif Kasim, Riau, Indonesia

Abstract. *This study aims to mediate network empowerment effect on market-based marketing performance of Indonesian private Islamic higher education (PIHE) through e-service & marketing. The respondents of this survey study are 265 elements of the leaders organizing Indonesian PIHE taken using purposive, multi-stage, and simple random sampling methods. The data is taken using the questionnaire sent via Google form link to the respondents through the assistance of 15 coordinators of Coordination of Indonesian PIHE and analyzed using SPSS and SEM with Amos program. e-service & marketing mediates network empowerment effect on market-based marketing performance fully. Network empowerment positively influences market-based marketing performance and e-service & marketing does either. In addition, network empowerment also positively influences e-service & marketing. The findings confirm that network empowerment and e-service & marketing are the resources and capabilities intended by resources-Based View Theory (RBV) which can enhance institutional market-based marketing performance as well as prospective students. As implication, PIHE must plan and employ the constructs to be marketing strategy in highly competitive market.*

Keywords: *Network, e-marketing, e-service, Marketing Performance, and Higher Education*

1. Introduction

Marketing performance of Private Islamic Higher Educations (PIHE) in recruiting prospective students in Indonesia has continued decrease. Many PIHE experience a shortage of prospective students.

On the contrary, the number of PIHE continues to increase therefore the competition among them to recruit prospective students is high and cannot be hindered. This is demonstrated by Table 1 below:

Table 1.
Portrait of the Number of PIHE and Students

Academic Year	Number of PIHE	Number of Students
2019/2020	786	229.217
2020/2021	806	213.763
2021/2022	821	206.803

Source: *Dashboard of the Education Management Information System (EMIS) of Indonesian Islamic higher education*

PIHE must make a marketing adjustment to address the issue (Rafidinal et al., 2022). Adaptation to market conditions must be carried out to enhance marketing performance as well as the number of

prospective students. PIHE must carry out a marketing strategy driven by prospective students. Planning and employing the strategy can be a competitive advantage required to address the issue of the highly

*Corresponding author. Email: hendrariofita@yahoo.com

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competitive market (Barton et al., 2016). PIHE must adopt market-based marketing performance approach to maintain stability for sustainability. Therefore PIHE adaptive capability must be encouraged to identify and learn prospective student needs and forge relationships with networks to meet the needs (Varadarajan, 2020).

PIHE can drive students and their parents, academic staff, lecturers, as well as the organizers of institutions as networks to manage the prospective students as market share. RBV confirms that they are the resources and capabilities which do not only differentiate PIHE from competitors but also are the competitive advantage which can be employed to reach and maintain as well as improve institutional sustainability (Penrose, 2009). Therefore, PIHE can empower the networks as the professional partners to convey all information associated with institution required by their relatives and colleagues who will continue their study to higher education (Dlouha et al., 2017), considering the information about higher educational services and products is the strong determinant of prospective student decisions to join (Hassan & Shamsudin, 2019).

Empowering the networks is a very effective and efficient strategy for prospective student recruitment. The networks can be trusted agents to deliver the information. The networks can work to convince the prospective students that the information disseminated is the valuable information the prospective students require to make decisions to join. To strengthen the dissemination, the networks can share their pleasant experiences with the services and products PIHE have during their interaction with the PIHE. The networks can also identify their relatives and colleagues' needs and then make an information adjustment for the needs. Conversely PIHE can then use the information revealed by the networks to develop marketing materials and strategies oriented towards prospective students.

Therefore, empowering the networks is a customer-oriented marketing strategy to enhance market-based marketing performance. The condition is required by PIHE to increase the number of prospective students. For the reason, PIHE must exploit their networks to capitalize relational assets to enhance the market-based marketing performance as well as the number of prospective students (Dorson et al., 2018). The more the networks can be empowered, the greater the PIHE have the opportunities to enhance the number of the prospective students (Trischler et al., 2017).

However, PIHE requires an extra capability to empower their networks as the marketing strategy oriented to prospective student recruitment, since Cui and Wu (2016) find an inconclusive result for the effect of the network empowerment on market-based marketing performance. Even considering the networks is employed to succeed a customer oriented-marketing strategy, the strategy in some previous studies also provides inconclusive results on market-based marketing performance (Dorson et al., 2018; Menguc et al., 2014). This means that the relationship between network empowerment and market-based marketing performance elaborated in the context of RBV is not adequate. Even, improving the market-based marketing performance through the strategy cannot be implemented for all conditions. To address the issue, service innovation must be conducted. PIHE can design the service innovation technologically all the time (Santati et al., 2022). Fortunately, this is supported by the fact that innovation always keeps going on to follow the advance of technology. Therefore, this study modifies RBV for the need.

Majid et al., (2022) confirm that PIHE can be linked and communicate with prospective students during marketing their products and services using an innovative service media supported by technology. The effective media is the one which can detect the changes made by prospective students regarding their needs which must be

provided by PIHE. The media must integrate system, coordination, and socialization capability (Feng et al., 2017) for the interest of the services and marketing for recruitment process. This is the manifestation of RBV considering the media can represents PIHE resource and capability, as well as can be designed in the form of e-service & marketing to drive prospective students to serve themselves for information and registration interest (Davis et al., 2000). PIHE can allow their networks to control the media for recruitment process to convince and encourage the prospective students to join. Through the e-service & marketing, the networks will be the most important source for competitive advantage in adopting the market driven approach (Del Vecchio et al., 2020; Punel et al., 2019). Furthermore, the e-service & marketing mediates their empowerment effect on market-based marketing performance.

This study aims to mediate network empowerment effect on market-based marketing performance of PIHE through e-service & marketing. Both network empowerment and e-service & marketing are PIHE capitals which can be employed to improve the number of prospective students. Both are the constructs which can distinguish PIHE from competitors and therefore can work as the identic capitals to achieve market-based marketing performance. Both are the resources and capabilities as meant by RBV (Penrose, 2009). The constructs are even the competitive advantage which can be driven to maintain PIHE stability for sustainability. The contributions made by this current study are (1) to provide a marketing insight in enhancing the number of prospective students generally; (2) to address the research gap occurred on the effect of network empowerment on market-based marketing performance as found in Cui and Wu (2016); (3) be a solution for higher educations to improve the number of prospective students in today highly competitive market. Some research questions are proposed as follows: (1) Does e-service & marketing enhance

network market-based marketing performance? (2) Does network empowerment enhance market-based marketing performance? (3) Does network empowerment enhance e-service & marketing? And (4) Does e-service & marketing mediate network empowerment affect market-based marketing performance?

2. Literature Review/ Hypotheses Development

Resource Based View Theory (RBV)

Market based marketing performance is required by PIHE to improve prospective students. In today's highly competitive market, PIHE must employ their own resources and capabilities to do so as confirmed by RBV (Penrose, 2009). Therefore, PIHE can empower their networks to drive their relatives and colleagues to join. The networks are the trusted "marketers" for them. Empowering the networks is a crucial way to convince them to be prospective students. In other words, the network empowerment is employing the valuable assets to do so and always required to positively influence market based-marketing performance (Cooper et al., 2023).

However, the capability of the network empowerment to invite prospective students must be justified in all condition to meet the need of PIHE marketing and service (Riofita, 2024a). Using technological innovation supporting their works for the need is a must. Providing e-service & marketing is the manifestation for the need. The media must be designed to be controlled by the networks to inform everything the prospective students require to make decision to join and even to assist them to make the decision and to register. Through the innovative media, the networks can work anytime and anywhere to recruit prospective students. Therefore, together with network empowerment, the e-service & marketing does not only function as the valuable asset but also has the uniqueness providing

competitive advantage as meant by RBV to improve market-based marketing performance. In other words, both constructs implement RBV in a new context since are carried out digitally for sustainability, are the new concept proposed for resource redeployment and market shaping, and are the new method involving machine learning, formal models and policy capturing in making marketing decisions (Helfat et al., 2023).

Market-Based Marketing Performance

Market-based marketing performance in this study is defined as the performance of PIHE in recruiting their networks' relatives and colleagues to be prospective students through the employment of the marketing strategy oriented to the needs of the prospective students (Muijs et al., 2010; Best, 2008). To employ the strategy, PIHE networks are empowered to find and convey the information which relates to the factors influencing their relatives and colleagues to join. The active involvements and experiences in many activities conducted by PIHE can encourage the networks as the trusted agents to disseminate the information required by their relatives and colleagues to make decision to join. The networks can even be relied on to assist their relatives and colleagues to do registration to PIHE at any time on e-service & marketing media they can control for the purpose. Therefore the network empowerment can function as PIHE resources and capabilities to predict market-based marketing performance as meant by resource based view theory (Penrose, 2009).

Effective and efficient network empowerment must be carried out with mutual benefits and professional principles (Muijs et al., 2010). Through the principles, PIHE can implement the philosophy of everyone who becomes PIHE networks is the marketer who takes responsibility to succeed market-based marketing performance. PIHE can empower the networks to focus on prospective student movements and demands and process the

information gained from the condition into marketing strategy, to convey all information gained from the prospective students to PIHE, and to prioritize the responses of the needs of the prospective students. However, the capability of the network empowerment to enhance market-based marketing performance still requires many studies to prove (Cui and Wu, 2016). Therefore, to work effectively and efficiently, a previous study suggests that the networks must be supported by the technological innovation which can integrate services and marketing in one electronic media, called in this study as e-service & marketing. The media is designed to provide self-services for prospective students even though is controlled by the networks. The features of the media are based on the needs of the prospective students (Riofita, 2024a). Employing the media can provide the potential to enhance market-based marketing performance therefore can also function as PIHE resources and capabilities to predict the market-based marketing performance as intended by resource based view theory (Penrose, 2009) as well as by PIHE market-based resources as intended by Varadarajan (2020).

E-Service & Marketing

e-service & marketing is a technological innovation for an integrated, effective, efficient, fast, precise and accurate electronic service facility designed for PIHE service and marketing media, and aimed to trigger PIHE network empowerment effect on market-based marketing performance (Riofita, 2024a). As an integrated electronic media, the e-service & marketing must provide a consistent and high-quality service and marketing which can distinguish PIHE from competitors. Therefore the e-service & marketing can provide competitive value (Kotler, 2000), is the asset and capability to deliver prospective student needs and functions to achieve competitive positional advantage (Varadarajan, 2020).

However, since the capability of technological innovative media to improve marketing performance still requires many

investigations (Davis et al., 2000), this study considers that the e-service & marketing must be designed to integrate all types of the characteristics of the prospective students; provide fast, precise and accurate services; emphasize impressive design and convenience; and prioritize empathy, privacy, reliability, system availability and a wealth of trusted information (Kotler and Armstrong, 2017). This will build the capability of the e-service & marketing to enhance market-based marketing performance (Mahmoud et al., 2019). The hypothesis proposed is:

H1: e-service & marketing positively influences market-based marketing performance.

Network Empowerment

PIHE Networks for this study are students and their parents, academic staff, lecturers as well as PIHE organizers (Dlouha et al., 2017). Network empowerment for market-based marketing performance is their involvement in recruiting their relatives and colleagues to be PIHE prospective students. A previous study indicates that higher educations can empower their networks in an extraordinary way to improve competitiveness capability for the enhancement of the number of prospective students (Muijs et al., 2010). However the networks cannot only be mobilized as professional partners to do recruitment process but must also be invited to recruit the prospective students in a mutually beneficial collaborative relationships (Dlouha et al., 2017). Their superior skills must be facilitated to understand prospective student needs to identify and develop the necessary capabilities to achieve superior long-term performance (Varadarajan, 2020). Therefore, the network must be treated as the capital to compete and to recruit their relatives and colleagues to be prospective students. PIHE must carry out the treatment as an essential effort to compete with competitors. The hypothesis proposed is:

H2: Network empowerment positively influences market-based marketing performance.

To empower networks in recruiting their relatives and colleagues to be prospective

students, PIHE must do innovation (Sharma et al., 2016). This innovation can be conducted by bringing up electronic service technology, the use of which is increasingly in demand. The condition provides positive impact for the employment of e-service & marketing, since the media has the system, coordination and socialization capability presenting high convenience for PIHE to provide services and marketing in recruiting their networks' relatives and colleagues to be prospective students. However, how PIHE treats their networks is the determinant to succeed the e-service & marketing since the use of the media is under their system, coordination, and socialization capability to control (Riofita, 2024a). Therefore their care must be synchronized with the values provided and created for them (Alton, 2017; Miller, 2015; Vaughan, 2016). PIHE capability to do so will keep and improve their orientation to run the e-service & marketing for prospective student recruitment (Babu et al., 2019). The hypothesis proposed is:

H3: Network empowerment positively influences e-service & marketing.

The Role of E-Service & Marketing as a Mediator
PIHE can enhance the number of prospective students through the marketing strategy aimed at enhancing market-based marketing performance (Varadarajan, 2020). For effective results, the marketing strategy is aimed at recruiting the relatives and colleagues of PIHE networks' and is carried out by the networks in a mutually beneficial collaborative relationships (Muijs et al., 2010). However, although a previous study reveals that the network empowerment can determine market-based marketing performance (Dorson et al., 2018), another does not (Menguc et al., 2014). To address the inconclusive fact, PIHE must facilitate the process the networks do to solidify the market-based marketing performance (Dorson et al., 2018). As an internal capacity working for a conclusive result, the process the networks do must be supported by technological innovation that can integrate service and marketing activities. The

technology innovation is e-service & making, a media which can be controlled and operated efficiently and effectively (Davis et al., 2000) to assist prospective students to find the information they require to make decision to join and to do registration process. The hypothesis proposed is:

H4: e-service & marketing mediates network empowerment effect on market-based marketing performance fully.

3. Methodology

Respondents

This is a survey study with cross-sectional design conducted for two months. This is to analyze the relationship between the constructs employed cheaply, fast and easily and without any intervention (Franken & Wallen, 2008). Respondents are taken using purposive sampling method since they must be the elements of the leaders of Indonesian PIHE. The categories of the PIHE are university, institute and college. However, the respondents are also taken using multi-stage sampling method since the PIHE are in 3 levels of accreditations namely A (Superior), B (Very good), and C (good).

This study also uses simple random sampling method to take 30 PIHE at each level therefore then collects 90 PIHE. Three elements of leaders for each level are taken. They can be rector or vice rector, dean or vice dean of university or institute, chairman or vice chairman of college and head of department or head of study program. The minimum respondents are 5 x the number of the indicators employed considering this study uses Amos program to process data. Since this study employs 10 indicators, the minimum respondents are 5 x 10 indicators or 50 respondents (Hair et al., 2017). To reach the respondents, researcher sends an email to 15 coordinators of Coordination of Indonesian PIHE and requires their assistance to send a questionnaire in the form of Google link to the respondents determined by this study for convenience in submitting questionnaires, reducing costs

and shortening time in collecting data (Zikmund & Babin, 2010; Toerien et al., 2016).

Research Instruments

The instrument of this study is a questionnaire containing closed questions. The answers for the questionnaire use a Likert scale in the range of 1 to 5, where 1 represents strongly disagreement and 5 represents strongly agree. The questionnaire is adapted from the indicators of each variable. For e-service & marketing variable, 4 indicators is adapted from Kotler & Armstrong (2017), namely, integrating all types of the characteristics of the prospective students; providing fast, precise and accurate services; emphasizing impressive design and convenience; and prioritizing empathy, privacy, reliability, system availability and a wealth of trusted information. For network empowerment variable, 3 indicators are adapted from Dlouha et al., (2017), namely, student and the parent of student participation to recruit prospective students; academic staff participation to recruit prospective students; and lecturer and institutional organizer participation to recruit prospective students. For market-based marketing performance variable, 3 indicators are adapted from Riofita (2024b), namely, the enhancement of the number of prospective student registrations; the enhancement of the percentage of prospective student market shares; and the enhancement of the income of prospective student enrollments.

Data Analysis

This study uses SPSS and Amos programs to process data. To analyze normality, multivariate normality and critical ratio for skewness and kurtosis are used in the controlled range of $-2.548 \leq \text{normality value} \leq + 2.548$. α Cronbach's of 0.7 is used to analyze model reliability. Model validity is based on Confirmatory Factor Analysis (CFA) consisting of factor loadings and Average Variance Extracted (AVE) which may not be less than 0.5, and Composite Reliability (CR) which may not be less than

0.7. Meanwhile HTMT ratio which may not be more than 0.9 is used to determine discriminant validity. Model fit analysis is based on the critical values of Chi-Square (CMIN/DF): 1 to 3; Probability (P): ≥ 0.05 ; Root Mean Square Error Approximation (RMSEA): ≤ 0.08 ; Goodness of Fit Index (GFI): ≥ 0.90 ; Comparative Fix Index (CFI): ≥ 0.95 and Tucker-Lewis Index (TLI): 0.95. Model will be declared fit if the analysis shows that 1 or more of the critical values can be achieved (Hair et al., 2010).

The results of hypothesis test are analyzed through structural model analysis. If p value ≤ 0.05 , the hypothesis will be supported significantly. Cohen's f^2 is calculated using SPSS Amos to determine the effect size declared weak when Cohen's f^2 is between 0.00 - 0.20, small when between 0.21 and 0.50, moderate when between 0.51 – 1.00 or strong when greater than 1.00 (Cohen et al., 2018). Sobel Test is used to analyze the mediation effect of e-service & marketing on network empowerment and market-based marketing performance at the significance level of 0.05 or 5%. The e-service & marketing will be declared as mediator if the construct has Z value larger than the critical value of 1.96 (Hair et al., 2017). To measure the effect size of the mediation, this study uses upslon (v), the squared standardized regression weights of the pathway of

independent variable to mediating variable times the squared standardized regression weights of the pathway of mediating variable to dependent variable or $\beta^2_{MX} \beta^2_{YM.X}$. The standardized regression weights resulted by Amos. The effect size is weak when the value of Upsilon (v) is less than 0.01, is moderate when the value of upslon (v) is between 0.01 and 0.175, or is strong when the value of upslon (v) is greater than 0.175 (Ogbeibu et al., 2021).

4. Findings and Discussion

294 respondents participated in questionnaire, but research data can only be verified from 265 respondents. The number of the respondents is well above the number of the respondents required by Amos program to process data (Hair *et al.*, 2010). Table 1 shows that 15.09% or 40 of the respondents are from universities, 15.47% or 41 are from institutes, and 69.43% or 184 are from colleges. Meanwhile the accreditation of 34.6% or 83 of the respondents' institutions are A (superior), 35.7% or 98 of them are B (very good), and the rest or 29.7 or 84 of them are C (good). 77% or 204 of the respondents are males and 23% or 61 are females.

Table 2.
Respondents' Profile

Institutions			Accreditation of Institutions			Genders		
Category	Freq.	%	Level	Freq.	%	Criteria	Freq.	%
University	40	15.09%	A	83	34.6%	Male	204	77 %
Institute	41	15.47%	B	98	35.7%	Female	61	23%
College	184	69.43%	C	84	29.7%			
Total	265	100%	Total	265	100%	Total	265	100%

Source: Author' own work

Table 2 demonstrates that multivariate normality and the partial normality for each indicator measured using the critical ratio for skewness and kurtosis are in the controlled range $\pm 2.548 < \text{normality value} < \pm 2.548$. Therefore, the normality is satisfied. The values of α Cronbach's for

each variable vary from 0.733 to 0.836 therefore the model has good reliability. Based on Confirmatory Factor Analysis (CFA), model validity is also satisfied, since factor loadings, AVE and CR respectively vary from 0.637 to 0.802; 0.628 to 0.753; and 0.735 to 0.834. Meanwhile discriminant validity is satisfied since HTMT ratio is well below 0.9 as demonstrated in Table 3. Model is also declared fit since the critical value of Chi Square (CMIN/DF): 129.128/96 = 1.345; RMSEA: 0.036; GFI: 0.942; AGFI: 0.917; TLI: 0.975; and CFI: 0.980, although Probability: 0.014 is in a marginal fit position (Hair et al., 2010). Based on these results, the data used by this study can be used to analyze hypotheses using SEM with Amos program.

Table 2.
Instrument Measurement Validity

Indicators	Indicator Test					AVE	CR
	CR Skewness	CR Kurtosis	α Cronbach	Factor Loading			
E- Service & Marketing			0.800			0.628	0.804
ESM1	-0.299	-0.053		0.796			
ESM2	-0.016	-0.338		0.689			
ESM3	-0.264	-0.029		0.719			
ESM4	-0.207	0.725		0.637			
Network Empowerment			0.836			0.753	0.834
NE1	-0.060	-0.649		0.782			
NE2	-0.133	-0.381		0.802			
NE3	0.019	-0.677		0.790			
Market-Based Marketing Performance			0.733			0.653	0.735
MBMP1	-0.208	-0.262		0.711			
MBMP2	-0.044	-0.274		0.729			
MBMP3	-0.259	-0.216		0.638			
Multivariate Normality		0.560					

Source: Author' own work

Table 3.
Discriminant Validity

Monotrait correlation		Heterotrait correlation		HTMT ratio			
ESM	0.504	ESM – MP	0.330		NE	ESM	MP
NE	0.626	NE - MP	0.367	NE			
MP	0.479	NE - ESM	0.376	ESM	0.670		
				MP	0.669	0.672	

Note:

ESM : E-Service & Marketing
NE : Network Empowerment
MP : Marketing Performance

Source: Author' own work

Table 4 shows that the effect of e-service & marketing on market-based marketing performance has a standardized estimate value of 0.099 and a p value of 0.006. This suggests that hypothesis 1 or H1 is accepted positively. The finding indicates that as an integrated electronic media, e-service & marketing can be perceived by PIHE leaders as a highly competitive value to enhance targeted market shares, especially the number of networks' relatives and colleagues to be prospective students (Mahmoud et al., 2019). The e-service & marketing can be relied on and managed as a unique service to assist their networks' relatives and colleagues to find the information they require to make decision, and to go to registration process.

Therefore, e-service & marketing is the resource and capability as meant by RBV and required to build PIHE capability to strategize and implement the market driven marketing programs. The finding confirms that the e-service & marketing enhances market-based marketing performance (Santati et al., 2022). However, Table 5 demonstrates that the e-service & marketing only has the effect size of 0.039 on the market based-marketing performance. The small effect size must be followed up by PIHE leaders by disseminating the role of the media aggressively. The capability of the media in bridging the needs of prospective students toward the products and services offered by PIHE with their decision-making strategy must be maximized. Therefore, the media must provide complete information regarding marketing as well as the service treatment they can perceive as a measurement tool for their complete decision making. In addition, the e-service & marketing cannot only minimize promotional budgets but can also maximize marketing outcomes (Angulo-Ruiz et al., 2018). Through the way, e-service marketing can be an urgent need for PIHE service and marketing activities in recent highly competitive market.

Table 4 demonstrates that the effect of network empowerment on market-based

marketing performance has a standardized estimate of 0.091 and a p-value of 0.013. This suggests that hypothesis 2 or H2 is accepted positively. The finding indicates that PIHE capability to invite networks as professional partners is a must. For marketing purposes, empowering the networks must be driven tactically. All elements of PIHE leaders, from Rector until head of department or head of study program must be involved to empower the networks (Endo et al., 2019). This aligns with Dorson et al., (2018) indicating that PIHE must exploit their networks to capitalize relational assets to enhance market-based marketing performance as well as the number of prospective students. The networks are PIHE resource and capability as meant by RBV, the other institutions do not have.

However, Table 5 demonstrates that the effect size of 0.009 shown by the effect of the network empowerment on the market-based marketing performance is weak. This means that PIHE must make their networks closer to institutional activities to build their strong sense of belonging therefore their good perception toward PIHE programs can be well-established. Good perception will align with the increase of PIHE competitiveness. The increase of competitiveness will encourage the potential of the networks to invite more relatives and colleagues to be prospective students. Competitiveness even provides an ease for PIHE to empower the networks professionally to conduct service and marketing works effectively and efficiently. Furthermore, the empowerment must also be in a mutually beneficial relationship for professional reward (Mujis et al., 2010).

Table 4 shows that the effect of network empowerment on e-service & marketing has a standardized estimate of 0.119 and a p value of 0.006. This suggests that hypothesis 3 or H3 is accepted positively. Therefore the finding confirms that network empowerment can drive e-service & marketing to realize system, coordination and socialization

capability (Babu et al., 2019). The finding shows that the networks are the resource and capability meant by RBV since can be the trusted agents for their relatives and colleagues therefore can drive them to use the e-service & marketing functions to make decision and to do registration effectively and efficiently. However, Table 5 demonstrates that the effect size of 0.161

shown by the effect of network empowerment on e-service & marketing is weak. This means that PIHE leaders must also design the e-service & marketing to provide the quality service experiences to generate image competitiveness for their prospective students (Gadot and Cohen, 2015) therefore can be a powerful media encouraging them interested in joining.

Table 4.
Structural relationship output

Relationship Between Variables	Standardized Estimate	P	Results
E- Service & Marketing and Market-Based Marketing Performance	0.099	0.006	H1 is accepted
Network Empowerment and Market-Based Marketing Performance	0.091	0.013	H2 is accepted
Network Empowerment and E- Service & Marketing	0.119	0.006	H3 is accepted

Source: Author' own work

Table 5.
Effect Size of Exogenous Variables on Endogenous Variable

Exogenous Variable	RE ²	(RI ² - RE ²)	(RI ² - RE ²)/ (1 - RI ²)	Effect Size
E-Service & Marketing	0.549	0.017	0.039	Small)*
Network Empowerment	0.562	0.004	0.009	Weak)*
Network Empowerment	0.532	0.065	0.161	Weak)**

Note:)* The endogenous variable is marketing performance
)** The endogenous variable is e-service & marketing
RI² is R² including
RE² is R² excluding

Source: Author' own work

Based on the results of the Sobel test shown in Table 6, e-service & marketing mediates network empowerment effect on market-based marketing performance fully, since at a significance level of 0.05 or 5%, the mediation value or Z value is 4,950, greater than the critical value of 1.96. Therefore, hypothesis 4 or H4 is accepted fully. The effect size of 0.065 is moderate therefore the finding shows that PIHE performance is as well as the achievement that is inseparable from the capability of e-service & marketing

in providing a system for service and marketing, coordinating all product and marketing activities, and educating the product and marketing services to networks. Sequentially, they are system, coordination, and socialization capability (Santati et al., 2022). Therefore, the finding confirms that e-service & marketing is the resource and capability as meant by RBV which can be relied on to strengthen the effect of network empowerment on market-based marketing performance. The capability of the media

even provides competitive value which can attract the networks' relatives and colleagues to be prospective students. In short, the e-service & marketing can be the media providing the needs of the service and marketing for the networks' relatives and

colleagues (Hassan & Shamsudin, 2019). The finding confirms that the media mediates network empowerment effect on market-based marketing performance (Dlouha et al., 2017).

Table 6.
Mediation Test Analysis

Mediation Variable Relationship	Regression Coefficient			Z Value (Mediation Value)	Conclusion
	Variable Relationship	Value	Standard Error		
Network Empowerment → E- Service & Marketing → Market-Based Marketing Performance	Network Empowerment → E- Service & Marketing	0.398	0.041	4.947	Full Mediator
	Network Empowerment → E- Service & Marketing → Market-Based Marketing Performance	0.253	0.044		

Note: significance level of 0.05 or 5%.

Source: Author' own work

Table 7.
Effect Size of Mediation

Pathway	Mediation Statistic of Upsilon (v) ($\beta^2_{MX} \beta^2_{YM.X}$)	Upsilon (v)	Effect Size
Network empowerment → E-Service & Marketing → Marketing performance	$(0.410)^2 \times (0.321)^2$	0.065	Moderate

Source: Author's own work

5. Conclusions

This study aims to mediate network empowerment effect on market-based marketing performance of PIHE through e-service & marketing. The findings show that the aim can be achieved. Other findings demonstrate that network empowerment and e-service & marketing respectively positively influence market-based marketing performance and network empowerment positively influence e-service & marketing. All findings confirm that both network empowerment and e-service & marketing are PIHE capitals that can be employed to improve the number of prospective students. Both are PIHE resources and capabilities that can be driven to enhance market-based marketing performance as well as the number of prospective students. Therefore, this study can implement resource-based view theory through both constructs to maintain PIHE stability for sustainability.

Under the frame of the theory, the constructs can be driven to make strategic marketing decisions for a superior market-based marketing performance. For the reason, it is clear that PIHE requires the constructs to take the strategic actions based on internal resources band capabilities, especially to enhance the number of prospective students (Babu et al., 2019). Based on the findings, this study can provide a marketing insight in enhancing the number of prospective students and can address the

research gap occurred on the effect of network empowerment on market-based marketing performance, therefore can be a solution for private higher educations to improve the number of prospective students in today highly competitive market.

As practical implications, the findings of this study encourage all private higher education's having highly competitive market to proactively empower students and their parents, academic staff, lectures as well as institutional organizers to enhance market-based marketing performance and the number of prospective students. The empowerment must be driven professionally. In addition, the private higher educations must employ e-service & marketing to integrate services and marketing on one website. The e-service & marketing must be designed to be operated easily, quickly, precisely and accurately therefore can facilitate all types of users, can promote empathy, privacy, reliability, system availability and a wealth of trusted information. To invite prospective students highly interest and enthusiasm, the private higher education must also provide a good and impressive design for the e-service & marketing. Meanwhile, government policymakers should support the capability of the private higher educations to employ the e-service & marketing by providing the assistances in the forms of facilities and infrastructures.

This study still has limitation since the networks empowered to predict market-

based marketing performance only students and their parents, academic staff, lectures as well as higher education organizers. They are internal networks of PIHE. Future study is recommended to investigate the role of external network empowerment such as: community leaders, student organizations, youth leaders, and senior high schools to enhance the market-based marketing performance, considering the external networks provides a considerable contribution to the UN Decade of Education for Sustainable Development as revealed by Dlouha et al., (2017).

Declarations

Author contribution

The Author is the main contributor of this paper. Author read and approved the final paper.

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Competing interest

The author declares that he has no conflicts of interest regarding the present study.

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APPENDIX

QUESTIONNAIRE

Dear Respondents,

I am Hendra Riofita, lecturer of State Islamic University Sultan Syarif Kasim, Indonesia. I need your help to fill in questionnaire designed to collect research data. All information is only filled in by the elements of the leaders of Indonesian Private Islamic Higher Education or PIHE (Rector or vice rector, dean or vice dean of university or institute, chairman or vice chairman of college and head of department or head of study program). This study aims to mediate network empowerment effect on market-based marketing performance of PIHE through e-service & marketing. Unless you are not the element of the leaders or your institution does not use e-service & marketing, you can ignore this questionnaire.

Best regards,

Hendra Riofita

I. Identity

Name :
Sex :
Occupation :
Structural Position :
Name of Institution :
Address :

II. Instruction

Please relate the statements you read with the real condition you find or conduct in your institution. Please rate them on a scale of 1 - 5 by ticking "V" in the space provided in Table. 1 means Strongly Disagree and 5 means Strongly Agree.

Sample:

NO.	STATEMENT	RATE				
		1	2	3	4	5
		SD	D	SWA	A	SA
1.	My institution supports institutional image development to improve marketing performance				V	

Description:

STS : Strongly Disagree
TS : Disagree
S : Somewhat Agree
SS : Agree
SSS : Strongly Agree

III. Questionnaire Statements

NO.	STATEMENT	RATE				
		1	2	3	4	5
		SD	D	SWA	A	SA
1.	My institution integrates all types of characteristics for e-service & marketing therefore the media can be accessed by anyone who needs the facilitations regarding the service and marketing.					
2.	My institution facilitates e-service & marketing to provide fast, precise and accurate services.					
3.	My institution emphasizes impressive design and convenience for e-service & marketing.					
4.	My institution facilitates e-service & marketing to prioritize empathy, privacy, reliability, system availability and a wealth of trusted information.					
5.	My institution encourages students and their parent participation to recruit prospective students.					
6.	My institution encourages academic staff participation to recruit prospective students.					
7.	My institution encourages lecturer and institutional organizer participation to recruit prospective students.					
8.	My institution always seeks to enhance the number of prospective student registrations.					
9.	My institution always seeks to enhance the percentage of prospective student market shares.					
10.	My institution always seeks to enhance the income of prospective student enrollments.					

THANK YOU