

Evaluating the Improvement of East Java IWAPI Member Satisfaction Through Information Sharing in SukaCuan: A Digital Forum Based on the Pentahelix Model

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ABSTRACT

Introduction: The rise of women entrepreneurs in East Java, Indonesia, is increasingly supported by collaborative frameworks such as the Pentahelix model. However, a lack of effective digital communication media often hinders information sharing and support among stakeholders. The IWAPI (Indonesian Women Entrepreneurs Association) East Java chapter exemplifies the need for a digital solution to improve member satisfaction and collaboration.

Objectives: This study aims to evaluate whether the use of SukaCuan—a digital forum based on the Pentahelix model—can significantly improve member satisfaction among IWAPI East Java members across multiple business-related aspects.

Methods: A quantitative approach was employed using a paired t-test to compare member satisfaction before and after the implementation of the SukaCuan platform. Data were collected via structured questionnaires from 150 IWAPI East Java members. Satisfaction was measured across 11 dimensions, including service quality, licensing, marketing, taxation, and training.

Results: The results revealed a statistically significant improvement ($p < 0.05$) across all measured aspects. Each dimension showed a positive increase in post-usage satisfaction scores, indicating that SukaCuan effectively addressed communication gaps and fostered collaborative interactions among members and stakeholders.

Conclusions: The SukaCuan platform proved to be a successful digital medium for enhancing IWAPI member satisfaction in East Java. The integration of the Pentahelix model within the platform facilitated multi-stakeholder collaboration and knowledge exchange. These findings support the broader adoption of digital forums for empowering women entrepreneurs and fostering sustainable community-based business growth.

Keywords:

Community Member Satisfaction; Digital Forum; IWAPI East Java; Information Sharing; Pentahelix Model

INTRODUCTION

The growth of Micro, Small, and Medium-Sized Enterprises (MSMEs) in Indonesia has gained prominence in the country's economic debate in recent years due to the extensive use of digital technology and regulations that encourage this industry [1]. In reaching a wide and more competitive audience, MSMEs need to improve infrastructure, skills, capital availability, and technology [2]. However, MSMEs are constrained in realizing this, such as limited access to technology, business sustainability, and change in consumer behavior still need to be addressed to ensure sustainable growth.

Women entrepreneurs have an important role in the global economy by contributing in innovation, job creation, and social progress [3]. In spite of confronting challenges such as sex predisposition and constrained monetary get to, the number of ladies business visionaries proceeds to rise [4]. They frequently prioritize supportability and inclusivity, and engaging them through instruction, mentorship, and custom fitted bolster programs not as it were improves their person victory but too drives broader financial development and sex balance [5].

Pentahelix is a collaborative concept including five key partners, there are government, industry, the scholarly community, gracious society, and media [6]. Collaboration among these divisions is basic for improving competitiveness, quickening financial development, and advancing feasible advancement. Through this participation, inventive arrangements can be actualized, comprehensive arrangements can be defined, and information can be traded, making an environment that bolsters development and financial development at nearby, territorial, and national levels [7].

The Pentahelix concept has critical suggestions for the financial maintainability of women business people [8]. Governments can back sex correspondence and monetary get to, businesses can give association openings, the scholarly world can offer preparing and investigate, whereas gracious society and media can raise mindfulness and construct strong communities [9]. This collaboration permits ladies business people to access the resources and support they ought to flourish reasonably and emphatically affect the economy.

However, the need of communication media and advanced discourse gatherings that interface all Pentahelix partners presents a major obstruction to improving financial maintainability for ladies business visionaries [10]. Digital forums could facilitate interaction, allowing women entrepreneurs to share knowledge and resources, and enabling governments, industries, academia, and civil society to engage more actively in supporting them [11]. An effective forum would help women entrepreneurs feel more connected and supported within an ecosystem that fosters their growth and sustainability [12].

As described above, authors propose current study to increase the competitiveness of women entrepreneurs in IWAPI organizations in East Java and strengthen sustainable economic growth, with the hope of fostering more robust enterprises in the future.

LITERATURE REVIEW

The gap that will be exposed and solved is investigated in the second part. The flow of all the ideas is required to be made clear, linked, well-crafted, and well-developed. It serves as a source of information for research questions, specifically as evidence or hypotheses to meet the research objectives. This study uses primary and current sources from trusted international reference or top tier-journal.

2.1 Development of Women Entrepreneur

Women entrepreneurs represent a growing phenomenon in the realm of entrepreneurship and reflect the increasing participation of women in the business landscape [13]. The increase indicates a change in the global business landscape. Various factors that influence women's participation in entrepreneurship are important areas of focus in this study such as education, family support, access to capital and an inclusive business environment play a prominent role in women's decisions to engage in entrepreneurship [5].

Previous studies have investigated these factors extensively. For example, women's decisions are significantly influenced by family support, especially partners [4]. Women education and previous work experience are able to shape women's entrepreneurial intentions (Madawala et al., 2023). In addition, business owned by women tend to have a longer survival rate and mature more quickly than men-owned business [9].

Empirical studies show on factors influencing women's participation in entrepreneurship and the improvement of strategies and policies that support women's entrepreneurship driving economic prosperity. However, behind the potential of women entrepreneurs, there are several challenges and obstacles that they face with further attention. Grabowska & Saniuk (2022) explained that limited access to financial resources, inadequate effective business networks, and gender bias in the business world are significant obstacles faced by women entrepreneurs [14].

So to overcome these challenges, there needs to be family welfare, women's empowerment, and reducing gender gaps [15]. Then stakeholders such as governments, academic institutions, and civil society are important to support by creating a conducive environment for women's entrepreneurship and promoting inclusive economic sustainability.

2.2 Impact of Pentahelix Model to Sustainable Economy

Pentahelix model is a collaborative framework that involves five key actors in the innovation ecosystem: government, industry, academia, civil society, and media [6]. The framework emphasizes the importance of cross-sectoral collaboration in addressing complex challenges and fostering sustainable innovation [16]. Various studies have outlined the role of each stakeholder group in the Pentahelix model and their impact on inclusive economic development.

Previous studies have emphasized supporting knowledge-based economic growth, but not without the important role of governments in coordinating innovation activities and formulating policies [7]. Government involvement is important to create an environment that fosters innovation and ensures that policies are aligned with broader economic goals [17]. Industry is considered a key driver of innovation and economic growth, playing a central role in integrating new technologies into existing products and services, thereby driving economic progress [8].

Science is crucial for generating new knowledge through research and development and providing a trained workforce to meet the needs of industry and governments (Wu, 2022). The contributions of the academic sector, to connect the gap between conceptual knowledge and practical applications, supporting both innovation and economic development [15]. Civil society, as well as government agencies and local communities, present significant insights into the demands and aspirations of society, helping to disseminate innovation more broadly and inclusively [6].

Finally, the media plays a key role in communicating information about innovations and shaping public perceptions of technology and social change [7]. By understanding the dynamics of collaboration between these five stakeholders, Pentahelix model can be an effective tool in shaping policies and strategies for sustainable growth, including in the context of empowering and promoting women entrepreneurs.

2.3 Collaboration Media by Leveraging Digital Forum

Mulyani et al., 2022 point out that ICT acts as a link between the government, industry, academia, society and the media, as well as between the various voices within the Pentahelix model [17]. Apart from knowledge, these platforms allow for an effective exchange of experience, resources and inter-sectoral collaboration to solve pressing problems and promote innovation [11].

Based on Wouters et al., 2023, they point out that digital forums also help to promote the involvement of different stakeholders in the innovation ecosystem. Citizens can then express their contributions and request, which it turn can contribute to the creation of policies that are inclusive and responsive to the needs of the people [18]. These interactions allow industry actors to explore new business possibilities as well as partnership and relationships [19].

Academia can also use digital forums as a platform to exchange research results and new insights, and collaborate with industry and government partners on applied research projects [10]. Civil society and non-governmental organizations can use these forums to voice community interests, needs, and collaborate with other sectors to address complex societal issues.

Media plays an important role in digital forums by connecting information with the public. Through these platforms, media channels can reach more people and influence public perception on various topics [11]. Moreover, the Pentahelix model allows for the creation of effective partnerships across sectors, which saw active participation in forums aimed at promoting sustainable development in communities.

2.4 Hypothesis Development

Interacting is important in communication. Prior studies have indicated that communication is a basic requirement for effective interaction within a community [19]. Understanding the needs and desires of individual requires a higher quality of communication. Communication can be achieved through direct or indirect means. Direct communication

can occur face-to-face, while indirect communication can be facilitated through communication media, such as digital forums [10].

In a community, it is crucial to maintain quality relationships among members. Effective communication supports the development of high-quality interactions, which, in turn, enhances coordination within the community [21]. Good coordination can improve member satisfaction, as effective collaboration among members helps the community achieve its goals, ultimately benefiting the well-being of its members.

Member satisfaction within a community is an important aspect to consider. When community members are satisfied, a mutual support system is established. This mutual assistance among members can further enhance the overall satisfaction within the community [20]. Ultimately, this will drive the community towards achieving its primary objectives. Several studies have found that the merit of a community is inspired by the fulfillment of its members [20]-[22]. Therefore, by focusing on member satisfaction, the quality of the IWAPI East Java community can be improved.

Quality improvement can be achieved through various methods, one of which is providing a communication platform that facilitates interaction among members. This platform can take the form of a digital forum. Utilizing a digital platform offers convenience and comfort for members in communicating [20],[23]. Several studies suggest that digital communication platforms can enhance communication quality [20],[24]. It is hoped that this can be effectively utilized in communication among community members.

According to the explanation above, this study intends to determine whether the digital forum platform SukaCuan can enhance member satisfaction within the IWAPI East Java community. According to previous studies and preliminary research, several aspects are identified as essential in ensuring member satisfaction within the IWAPI East Java community [24]. Therefore, this research proposes the following hypothesis:

There is a marked difference in East Java IWAPI members' satisfaction before and after using the SukaCuan Digital Forum with the aspect of:

H1: Service and General Information

H2: Business Capital and Investment

H3: Regulations and Licensing

H4: Marketing and Export

H5: Taxes and Legalities

H6: Events and Training

H7: Technology and Employment

H8: Environment and Social

H9: Employee Development and Production

H10: Safety and Infrastructure

H11: Agriculture and Food

METHODS

The primary objective of this research is to determine whether there is an increase in member satisfaction within the IWAPI East Java community through the implementation of the SukaCuan digital forum as a medium for communication and collaboration. To examine this phenomenon, the study adopts a quantitative approach by assessing member satisfaction ratings measured through a questionnaire. This research utilizes quantitative data on community member satisfaction across several aspects that influence overall satisfaction within the community.

3.1 Sampling and Data Collection

This analysis involved several respondents who are members of the IWAPI East Java community. Respondents were selected based on the criterion of being permanent members of the community. However, participation in the questionnaire was not mandatory. By the end of the data collection period, a total of 150 responses were obtained. All collected questionnaires were valid for further processing, as the study utilized a digital platform that required the questionnaire to be fully completed before submission. This approach was taken to enhance the usability of the responses.

3.2 Measures

This exploration purposes to examine this phenomenon through the involvement of the SukaCuan digital forum application. SukaCuan is a digital forum platform leveraging communication technology to facilitate interaction and coordination among members of the IWAPI East Java community. The primary feature of SukaCuan is its forum platform, which provides various topics relevant to the members' communication needs. Additionally, the application offers integrated services for business licensing and business support. Figure 1 shows the homepage of the SukaCuan digital forum application.



Figure 1. SukaCuan Homepage

The SukaCuan digital forum application offers several topics relevant to the needs of its community members. These topics include business licensing, intellectual property management, mentorship and training, market information and events, social and employment issues, regulations and legal matters, and customer service and complaints. Additional topics can be added based on the evolving needs of the IWAPI East Java members. Figure 2 displays the forum page of the SukaCuan digital forum application.

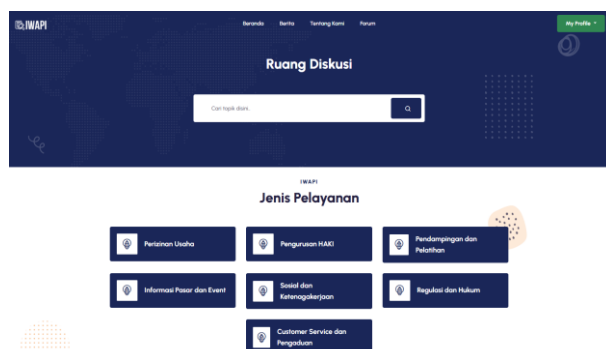


Figure 2. SukaCuan Topics Forum Page

Within each available topic, community members can engage by commenting on specific topics, allowing other members or relevant stakeholders to discuss the matter further. This collaborative interaction facilitates communication among community members. Figure 3 displays the forum page of the SukaCuan digital forum application.

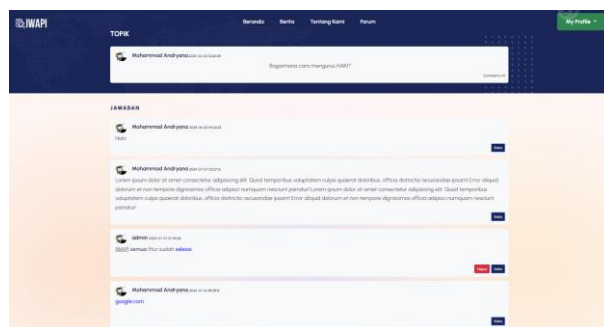


Figure 3. SukaCuan Digital Forum Page

The data used in this study comprises the satisfaction levels of IWAPI East Java community members before and after using the SukaCuan application. Data was collected through a digital questionnaire in which respondents were asked to rate their satisfaction across various aspects they considered important. These aspects include Service and General Information, Business Capital and Investment, Regulations and Licensing, Marketing and Export, Taxes and Legalities, Events and Training, Technology and Employment, Environment and Social, Employee Development and Production, Safety and Infrastructure, and Agriculture and Food. These aspects were selected based on a preliminary study conducted to identify the coordination needs of IWAPI East Java community members. Table 1 illustrates aspects considered in this analysis, along with the coding used in the data analysis.

Table 1. Aspect Coding

| Aspect | Coding | |
|-------------------------------------|--------|-------|
| | Before | After |
| Service and General Information | SGI | SGIA |
| Business Capital and Investment | BCI | BCIA |
| Regulations and Licensing | RL | RLA |
| Marketing and Export | ME | MEA |
| Taxes and Legalities | TL | TLA |
| Events and Training | ET | ETA |
| Technology and Employment | TE | TEA |
| Environment and Social | ES | ESA |
| Employee Development and Production | EDP | EDPA |
| Safety and Infrastructure | SI | SIA |
| Agriculture and Food | AF | AFA |

Source: Author decision

RESULTS

Processing stages commence with an analysis of respondent demographics, followed by descriptive testing and normal distribution analysis. The final stage requires a paired t-test. Through these processing steps, it is anticipated that any increase in the satisfaction of IWAPI East Java members can be determined. The following are the findings of the data analysis that has been conducted.

Based on the demographic analysis of the respondents, it was found that the largest age group is >43 years (68%), followed by the 35-43 years group (26%) and the 26-34 years group (6%). In terms of monthly revenue, the highest proportion of respondents fall within the >Rp. 8,000,001 category (40%), followed by Rp. 4,000,001 – Rp. 6,000,000 (34%), Rp. 1,000,000 - Rp. 4,000,000 (16%), and Rp. 6,000,000 – Rp. 8,000,000 (10%). The most prevalent business sector among the respondents is Food & Beverage (40%), followed by Art, Fashion, and Technology (28%), Services (20%), and other sectors (12%). Related the length of business operations, the majority of respondents have been in operation for >36 months (60%), followed by 24-36 months (18%), 12-24 months (14%), and 0-12 months (8%). Table 2 summarizes the demographic data of the respondents collected in this investigation.

Table 2. Respondent Demographics

| Profile | n | % |
|-------------------------------------|-----|-----|
| Age | | |
| 26-34 years old | 9 | 6% |
| 35-43 years old | 39 | 26% |
| >43 years old | 102 | 68% |
| Monthly Revenue | | |
| Rp. 1.000.000 - Rp. 4.000.000 | 24 | 16% |
| Rp. 4.000.001 – Rp. 6.000.000 | 51 | 34% |
| Rp. 6.000.000 – Rp. 8.000.000 | 15 | 10% |
| Rp. >Rp. 8.000.001 | 60 | 40% |
| Field of Business | | |
| Food and Beverage | 60 | 40% |
| Art, Fashion, and Technology | 42 | 28% |
| Services | 30 | 20% |
| Other | 18 | 12% |
| Length of Business Operation | | |
| 0-12 months | 12 | 8% |
| 12-24 months | 21 | 14% |
| 24-36 months | 27 | 18% |
| > 36 months | 90 | 60% |

Source: Data analyzed by author using SPSS 25

After conducting a demographic analysis of the respondents involved in this study, a descriptive analysis and normality distribution test were performed to determine the characteristics of the recorded data. The descriptive analysis was conducted to determine the mean and standard deviation of the data, indicating the spread of the collected data. The normality distribution test was performed to assess whether the collected data are normally distributed, which is essential for determining whether the data can be analyzed using parametric or non-parametric methods. In this, study, the Kolmogorov-Smirnov test was used to assess normal distribution. A significance value (Sig.) higher than 0.05 suggest that the data is normally distributed.

Table 3 summarize the results of the descriptive analysis and normally test. The mean and standard deviation values for the data before and after treatment are presented in the table. As for the normality distribution test results, it was found that the data for all constructs involved in this study had K-S sig. values greater than 0.05. Therefore, it can be concluded that the data for all constructs are normally distributed, allowing the study to proceed with a parametric analysis approach.

Table 3. Descriptive Analysis and Normality Distribution Test Result

| Aspect | Mean | Std Deviation | K-S Test Sig. |
|-------------------------------------|--------|---------------|---------------|
| Before | | | |
| Service and General Information | 20.020 | 5.047 | 0.127 |
| Business Capital and Investment | 7.460 | 2.078 | 0.088 |
| Regulations and Licensing | 11.84 | 3.573 | 0.089 |
| Marketing and Export | 18.49 | 5.500 | 0.181 |
| Taxes and Legalities | 15.21 | 4.858 | 0.118 |
| Events and Training | 14.15 | 5.428 | 0.162 |
| Technology and Employment | 11.21 | 3.358 | 0.260 |
| Environment and Social | 11.39 | 3.291 | 0.085 |
| Employee Development and Production | 7.340 | 2.317 | 0.269 |
| Safety and Infrastructure | 7.407 | 2.226 | 0.171 |
| Agriculture and Food | 7.433 | 2.196 | 0.208 |
| After | | | |

| | | | |
|-------------------------------------|-------|-------|-------|
| Service and General Information | 24.44 | 1.947 | 0.174 |
| Business Capital and Investment | 9.633 | 0.737 | 0.156 |
| Regulations and Licensing | 14.5 | 1.501 | 0.160 |
| Marketing and Export | 23.95 | 2.307 | 0.105 |
| Taxes and Legalities | 19.15 | 2.006 | 0.091 |
| Events and Training | 18.81 | 2.274 | 0.191 |
| Technology and Employment | 14.41 | 1.337 | 0.173 |
| Environment and Social | 14.45 | 1.319 | 0.120 |
| Employee Development and Production | 9.560 | 0.980 | 0.164 |
| Safety and Infrastructure | 9.547 | 0.952 | 0.127 |
| Agriculture and Food | 9.660 | 0.866 | 0.109 |

Source: Data analyzed by author using SPSS 25

After conducting the descriptive analysis and normality distribution test, it was determined that a parametric statistical approach is appropriate. The objective of this study is to assess whether there is a difference in customer satisfaction before and after using the SukaCuan platform. To address this research question, a Paired t-test was utilized. The Paired t-test is a parametric analysis used to compare two data sets originating from the same source. A significant difference between the two data sets is indicated if the Sig. value is less than 0.05.

As shown in Table 4, all paired data constructs have Sig. values less than 0.05. Therefore, it can be concluded that the satisfaction of IWAPI East Java members for each aspect in hypotheses H1, H2, H3, H4, H5, H6, H7, H8, and H9 is supported, indicating a significant difference between before and after using the SukaCuan application.

Regarding the direction of increase or decrease, this can be observed in the t-value. It is noted that all t-values are negative, indicating that the post-treatment data are higher than the pre-treatment data. Thus, it can be concluded that the satisfaction of IWAPI East Java members for each aspect in hypotheses H1, H2, H3, H4, H5, H6, H7, H8, and H9 increased after using the SukaCuan application. This indicates that the SukaCuan digital forum application successfully enhanced the satisfaction of IWAPI East Java members.

Table 4. Paired t-Test Result

| Pair | t-value | Sig. | Result |
|----------------|---------|-------|-----------|
| H1: SGI - SGIA | -12.136 | 0.000 | Supported |
| H2: BCI - BCIA | -14.686 | 0.000 | Supported |
| H3: RL - RLA | -11.196 | 0.000 | Supported |
| H4: ME - MEA | -14.486 | 0.000 | Supported |
| H5: TL - TLA | -12.552 | 0.000 | Supported |
| H6: ET - ETA | -12.769 | 0.000 | Supported |
| H7: TE - TEA | -13.382 | 0.000 | Supported |
| H8: ES - ESA | -12.745 | 0.000 | Supported |
| H9: EDP - EDPA | -13.397 | 0.000 | Supported |
| H10: SI - SIA | -13.641 | 0.000 | Supported |
| H11: AF - AFA | -13.843 | 0.000 | Supported |

Source: Data analyzed by author using SPSS 25

DISCUSSION

The demographic data collected indicate that the majority of respondents are women aged over 43 years, with an income greater than Rp. 8,000,001, operating businesses in the Food and Beverage sector that have been in operation for more than 36 months. These characteristics suggest that the respondents require a two-way communication service, which can be effectively leveraged through a digital forum platform. Parahiyanti et al. (2023) stated that digital forum platforms can enhance member satisfaction in cooperative groups which supports the necessity of the SukaCuan digital forum platform to improve the satisfaction of IWAPI East Java members [25].

This study demonstrates significant differences across all aspects examined. These aspects include Service and General Information (H1), Business Capital and Investment (H2), Regulations and Licensing (H3), Marketing and Export (H4), Taxes and Legalities (H5), Events and Training (H6), Technology and Employment (H7), Environment and Social (H8), Employee Development and Production (H9), Safety and Infrastructure (H10), and Agriculture and Food (H11). This is in line with Han & Hyun (2018) who reported that the digital forum platform could improve member's satisfaction. Thus, it is evident that the SukaCuan digital forum platform has proven effective in improving the satisfaction of IWAPI members in East Java.

CONCLUSION AND SUGGESTION

The SukaCuan digital forum platform has proven to be effective in increasing IWAPI East Java member's satisfaction in information sharing. This study contributes to both academic knowledge and practical applications.

In terms of academic knowledge, the result show that digital forum platform significantly increasing member's satisfaction in various areas such as service and general information, business capital and investment, regulation and license, marketing and export, tax and law, events and training, technology and employment, environment and society, workforce development and production, security and infrastructure, agriculture and food. This knowledge can be valuable for other researchers exploring whether a digital forum platform can influence the satisfaction of group members.

Beyond its academic contribution, this study also offers practical implications. It demonstrates that a digital forum platform can effectively enhance member satisfaction in information sharing. Therefore, similar groups aiming to improve member satisfaction in information exchange can benefit from utilizing a digital forum platform tailored to their members' needs

In its implementation, this study has several limitations. The satisfaction aspects investigated are limited to 11 aspects that align with the needs expressed by the respondents. Expanding the scope to include additional satisfaction aspects would enhance comprehension understanding of the respondents' actual needs and enable the provision of better services, thereby enhancing group member satisfaction. Another limitation is the number of respondents involved, which did not encompass all members of the IWAPI East Java group. As a result, this study has not captured the aspirations of all group members. This limitation arose because participation in the study was voluntary, depending on whether members chose to be respondents.

Given these limitations, the author suggests that further research should analyze a broader range of aspects, such as collaboration with other institutions, to gain a deeper understanding of the group members' actual conditions. Additionally, involving all group members would provide a more comprehensive perspective on the issues at hand.

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