

## Optimizing the role of stakeholders in the development of hexa-helix-based craft sector MSMEs to increase sustainable competitive advantage

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**Abstract:** This study aims to develop a model for optimizing the role of stakeholders in the development of the local wisdom-based craft sector of UMKM in order to increase sustainable competitive advantage in Central Java. This study uses a mixed methods approach. The data used are primary data obtained from key persons selected using purposive sampling techniques. Data collection was conducted through Focus Group Discussions (FGD) and questionnaires. The analysis method used in this study employs Mactor analysis (Matrix of Alliances and Conflicts Tactics, Objectives, and Recommendations). The research results show that the stakeholders who have the strongest influence in the development of MSMEs in the craft sector are investors, the Cooperatives and UMKM Office, and also Academics. Stakeholders with the highest competitiveness include investors, the Cooperatives and UMKM Office, Academics, and the Industry and Trade Office. The results of the analysis also show that all stakeholders support all the objectives that have been set; this is indicated by the fact that all the objective maps show yellow, which means all stakeholders support/agree with all objectives. The stakeholder groups of banking, UMKM actors, mass media, investors, and the Cooperatives and UMKM Office are groups that can form a very strong alliance for the success of developing UMKM in the craft sector. The Industry and Trade Office and the mass media have the strongest role in implementing the program to increase export promotion of craft products. Furthermore, banking has the strongest role in implementing the program to provide access to capital for Craft UMKM. Additionally, the Cooperatives and UMKM Office has the strongest role in implementing the UMKM education and training program, as well as the craft center and UMKM cluster development program. This research has limitations in the form of research objects that only focus on MSMEs in the craft sector, so further research can expand research objects beyond crafts.

**Keywords:** Actor, Stakeholder, Local Wisdom, MSMEs, Sustainable competitive advantage.

### 1. Introduction

Micro, Small, and Medium Enterprises (MSMEs) in the craft sector play an important role in the national economy, especially in contributing to job creation, increasing community income, and preserving local culture. Craft products that are full of cultural, artistic, and traditional uniqueness values have great potential to be further developed in facing increasingly tight market competition, both at the national and global levels. However, despite its great potential, MSMEs in the craft sector often face various challenges that hinder their growth. Some of these include limited access to capital, low adoption of technology and innovation, and minimal effective marketing networks. In addition, the inability to face the pressures of global competition and sustainability challenges are also significant problems. In order for MSMEs in the craft sector to survive and increase sustainable competitive advantage, a development strategy is needed that involves collaboration between various parties (stakeholders).

The Hexa-Helix model involving six main elements, namely government, academics, industry, society, media, and MSME actors is believed to be an effective framework to support the development of MSMEs in the craft sector. Each element in the Hexa-Helix model has a complementary strategic role, such as strengthening government policies, research and innovation from academics, technology and marketing support from industry, community participation in local consumption, and promotion by the media. With optimal synergy from all these elements, it is hoped that MSMEs in the craft sector can increase their capabilities in innovation, adapt to market dynamics, and develop sustainable and highly competitive products.

The importance of optimizing the role of stakeholders in the development of Hexa-Helix-based craft sector MSMEs is also in line with the need to maintain long-term business sustainability. The concept of sustainable competitive advantage includes the ability of MSMEs to not only excel in terms of cost, quality, and innovation, but also in creating added value through environmentally friendly practices, social responsibility, and cultural preservation. Effective collaboration between stakeholders will provide the necessary support for craft sector MSMEs to develop sustainably, both in terms of economy, social, and environment.

Central Java Province is one of the industrial centers with the largest number of MSMEs, around 3.5 million, with products that have good quality and have the potential to be exported. However, of that number, only 30% have exported. From the results of observations and initial interviews with several MSME managers in the craft sector in Central Java, it turns out that there are still many MSME actors who do not understand how to market their products, especially abroad. Many of the products produced by MSMEs are worthy of being marketed abroad, but because stakeholders do not know the procedures and methods for marketing these products, MSME products are only able to compete in the domestic market [1-3].

Craft businesses in Central Java have their own uniqueness, which lies in the combination of rich cultural heritage and modern creativity. Craftsmen in this area maintain traditional techniques such as batik tulis, Jepara carving, and ikat weaving, while continuing to innovate with designs and products that suit today's market tastes. These skills that have been passed down from generation to generation produce works of art that are not only beautiful, but also have deep historical and philosophical value. In addition, many craft businesses in Central Java have adopted environmentally friendly concepts by utilizing natural raw materials and sustainable production techniques. In an effort to increase the competitiveness of MSEs, they currently do not only focus on increasing MSE profits but must also prioritize aspects of environmental sustainability. There needs to be research that develops the concept of increasing the competitiveness of MSEs sustainably (Sustainable Competitive Advantage) [4, 5].

Based on previous research conducted by several previous researchers [6-9] there are still differences in developing micro and small businesses in order to sell their products abroad. These differences are generally influenced by existing policies in a country. Therefore, further research is needed related to the strategy for developing micro and small businesses. The novelty offered in this study is that if previous research only focused on increasing the competitiveness of micro and small businesses conventionally, this study offers a new concept of a sustainable micro business development strategy model (sustainable competitive advantage). This study aims to develop a model for optimizing the role of stakeholders in the development of MSMEs in the craft sector based on local wisdom in order to increase sustainable competitive advantage in Central Java.

## 2. Methods

This study uses mixed methods. The data used are primary data from keypersons selected using purposive sampling techniques. Keypersons in this study consist of six elements (Hexa-Helix) including academics, government, business, community, media, NGOs. Data were collected by means of Focus Group Discussion (FGD) and questionnaires. The analysis method used in this study uses Mactor analysis (Matrix of Alliances and Conflicts Tactics, Objectives and Recommendations). Mactor's working method is based on the influence between stakeholders (inter-stakeholder influence) which is

distinguished as direct influence, indirect influence, and potential influence. Direct influence occurs if stakeholder A has an effect on stakeholder B, while indirect influence occurs if stakeholder A influences stakeholder B and B influences stakeholder C, and with the transitivity process, stakeholder C is indirectly influenced by A.

With this concept, the input for MACTOR is through the position matrix (known as 1MAO [Matrix Stakeholder Objective] and 2MAO) which uses the Saliency variable from stakeholders to objectives (objectives). The third matrix is MID (Matrix of Influence Direct) which uses the influence variable. In the calculation with the software, the input from the user only requires the MID matrix, 1MAO, and 2 MAO matrices. Then it will be calculated by the computer through a mathematical algorithm process. Based on the MID matrix, MACTOR then calculates the direct and indirect effects of one stakeholder to another stakeholder.

### 3. Results and Discussion

Results stakeholder mapping and objectives in the development of Craft UMKM in Central Java are as follows:

**Table 1.**  
Stakeholder/Stakeholder Mapping.

Stakeholders/Actors	Issue	Objective
1. Investors (A1) 2. Academics from Higher Education (A2) 3. Indonesian Chamber of Commerce Central Java Branch (A3) 4. Department of Cooperatives and SMEs (A4) 5. Society (A5) 6. Banking (A6) 7. MSME actors (A7) 8. Department of Industry and Trade (A8) 9. Mass Media (A9)	Optimizing the Role of Stakeholders in the Development of Hexa-Helix-Based Craft Sector MSMEs to Increase Sustainable Competitive Advantage	1. Strengthening local artisan communities (O1) 2. Product Research and Innovation Program (O2) 3. Capacity Development and Marketing Network (O3) 4. MSME Education and Training (O4) 5. Craft-Based Ecotourism Development (O5) 6. Love Local Products Movement Campaign (O6) 7. Development of Craft Centers and MSME Clusters (O7) 8. Digital Production and Marketing Technology Assistance (O8) 9. Partnership and Collaboration with the Private Sector (O9) 10. Product Quality Improvement and Certification (O10) 11. Export Promotion Enhancement (O11) 12. Provision of Access to Capital (O12)

Table 1 explains that in Optimizing the role of stakeholders in the development of hexa-helix-based craft sector UMKM to increase sustainable competitive advantage, there are 12 related objectives and 9 stakeholders who can collaborate.

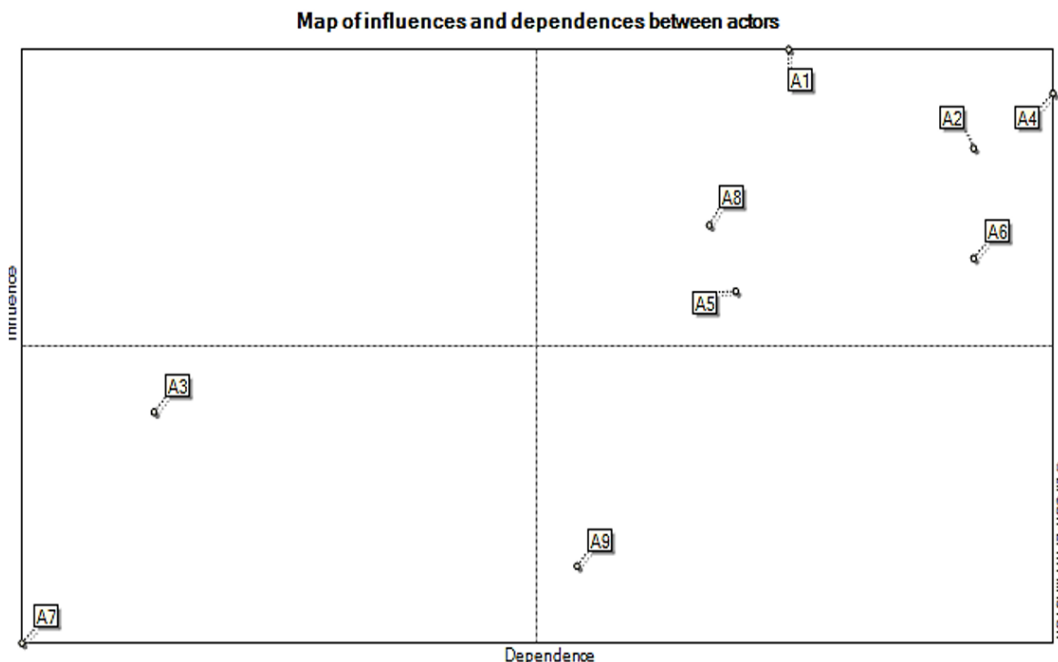
#### 3.1. Mapping the Relationship Between Stakeholders in the Development of Hexa-Helix Based Craft Sector UMKM to Increase Sustainable Competitive Advantage

Results Mactor's analysis shows that the stakeholders who have the highest influence in the development of hexa-helix-based craft sector MSMEs to increase sustainable competitive advantage are:

**Table 2.**  
Matrix of Influence and Dependence between Stakeholders.

MDII	A1	A2	A3	A4	A5	A6	A7	A8	A9	Ii
A1	25	26	20	27	24	25	18	22	22	186
A2	23	25	20	23	24	18	14	21	9	177
A3	20	20	25	22	19	17	12	18	0	153
A4	24	27	21	25	26	22	21	16	0	182
A5	27	24	19	26	25	21	23	17	0	182
A6	24	19	18	20	22	25	18	16	0	162
A7	22	18	15	19	23	21	25	19	0	162
A8	22	23	14	16	19	18	18	25	15	170
A9	7	7	12	6	13	8	14	12	50	139
DI	168	179	144	178	196	175	139	166	120	1470

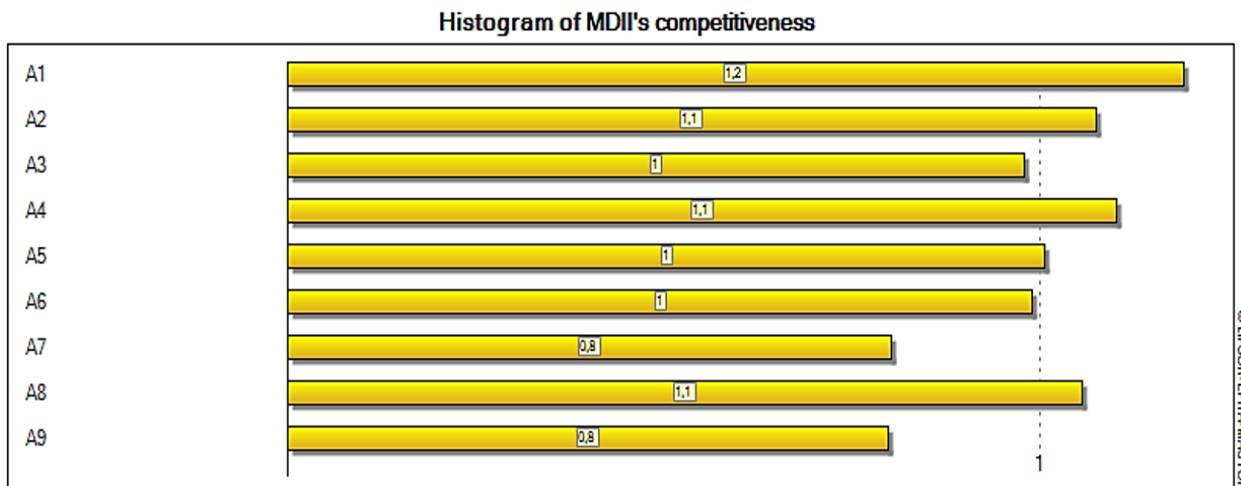
Table 2 explains that stakeholders who have a high influence in the development of Craft UMKM in Central Java are investors, the Cooperative and UMKM Service, and also Academics. Based on their strength, stakeholders are positioned in the stakeholder influence and dependency map and are divided into dominant stakeholders (high influence), dominated stakeholders (high dependency), isolated stakeholders (low influence and dependency), and relay stakeholders (high influence and dependency) as can be seen in Figure 1.



**Figure 1.**  
Map of Influence and Dependence Between Stakeholders.

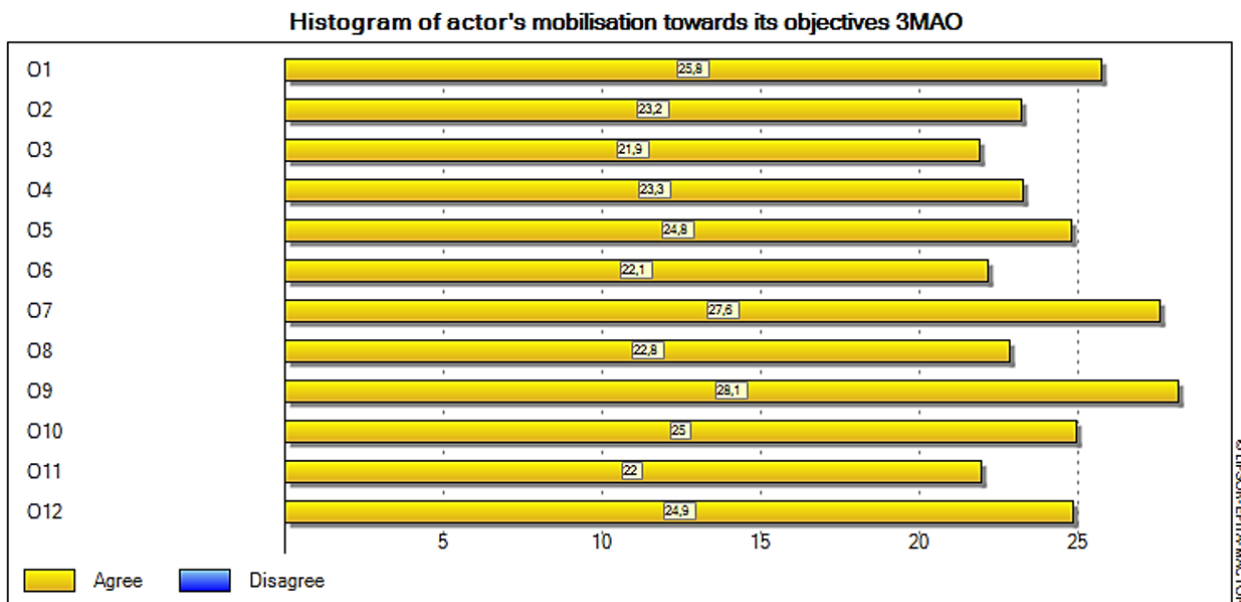
Based on Figure 1, it can be seen that the most influential stakeholders because their power to influence other stakeholders is high while their dependence is also high in the development of Craft MSMEs in Central Java include Investors, Academics from Universities, the Cooperatives and MSMEs Service, the Community, Banking, and the Industry and Trade Service.

The next result of Mactor's analysis is a map showing stakeholder competitiveness. This map illustrates the intensity of the power of stakeholder influence on other stakeholders which is determined by direct influence, direct dependence, indirect influence, and indirect dependence. The competitiveness map also illustrates the willingness of stakeholders to use their power to control other stakeholders.



**Figure 2.**  
Stakeholder Competitiveness.

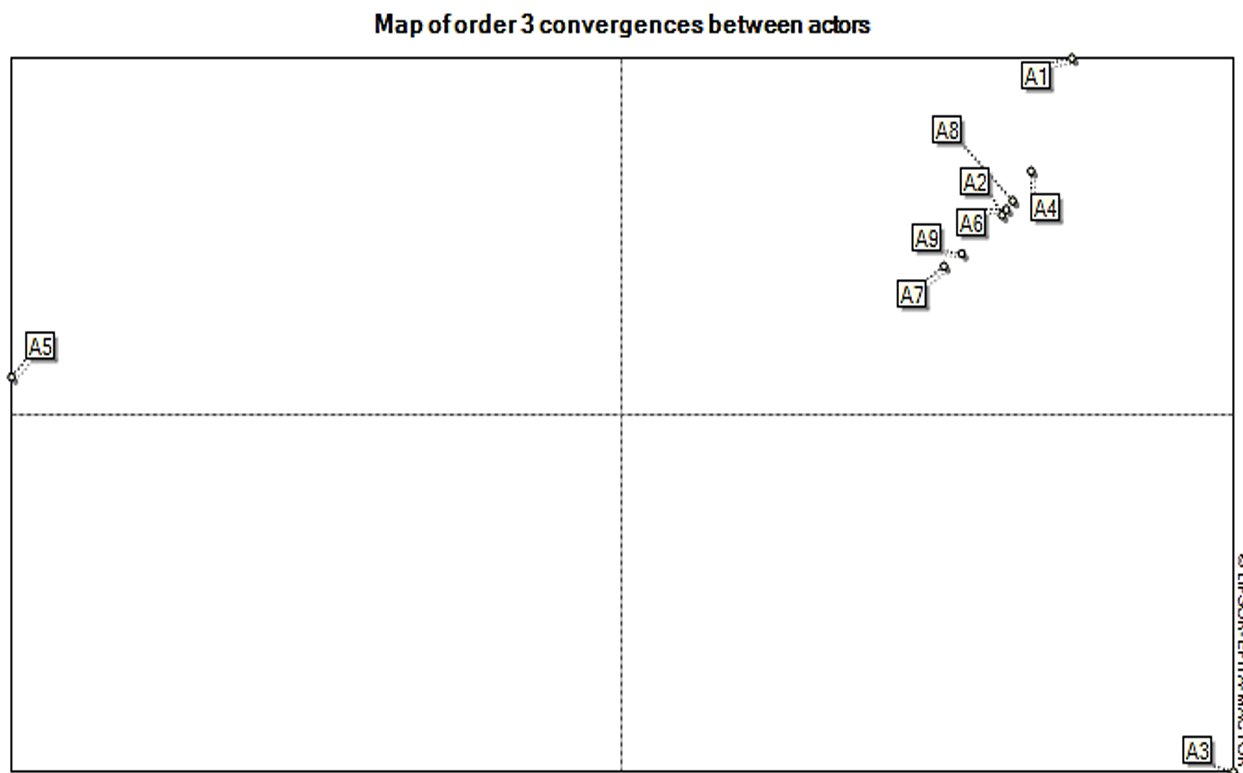
Figure 2 explains that stakeholders with the highest competitiveness include investors, the Cooperatives and MSMEs Service, Academics and the Industry and Trade Service. To find out the stakeholder support map for development goals, the goals to be achieved are mapped according to their level of importance. The more important a goal is, the stronger the stakeholder support for that goal. The results of the program goal map analysis can be seen in Figure 3.



**Figure 3.**  
Map of the Objectives of the Craft UMKM Development Program.

Figure 3 shows that all stakeholders support all the objectives that have been set, this is shown by all the objective maps showing yellow color which means all stakeholders support/agree with all objectives. The highest intensity of support is on the Partnership and Collaboration with the Private Sector objective.

The next analysis is stakeholder convergence mapping analysis. This map illustrates the similarity of stakeholder attitudes towards the objectives. Stakeholders who have the same attitudes and perceptions will converge, while those who have different attitudes will diverge. This convergence analysis aims to determine the possibility of potential stakeholder alliances.



**Figure 4.**  
Stakeholder Convergence Map.

Figure 4 explains that the potential alliances that can be built for the development of Craft UMKM are Investors, Academics from Universities, Cooperatives and UMKM Services, Banking, UMKM Actors, Industry and Trade Services, Mass Media, because the stakeholders are close to each other in the same quadrant. While the stakeholders of the Indonesian Chamber of Commerce and the Central Java Branch and the Community are in different quadrants.

The next analysis is the stakeholder convergence quadrant map. Which explains the intensity of stakeholder convergence. The red line shows the strongest relationship as can be seen in Figure 5.

Mactor's final analysis focuses on the relationship of each stakeholder to the stated objectives. This relationship provides crucial information, as it can indicate the direction of each stakeholder's attention and their readiness to use their strengths to achieve those objectives.

Graph of net distances between actors

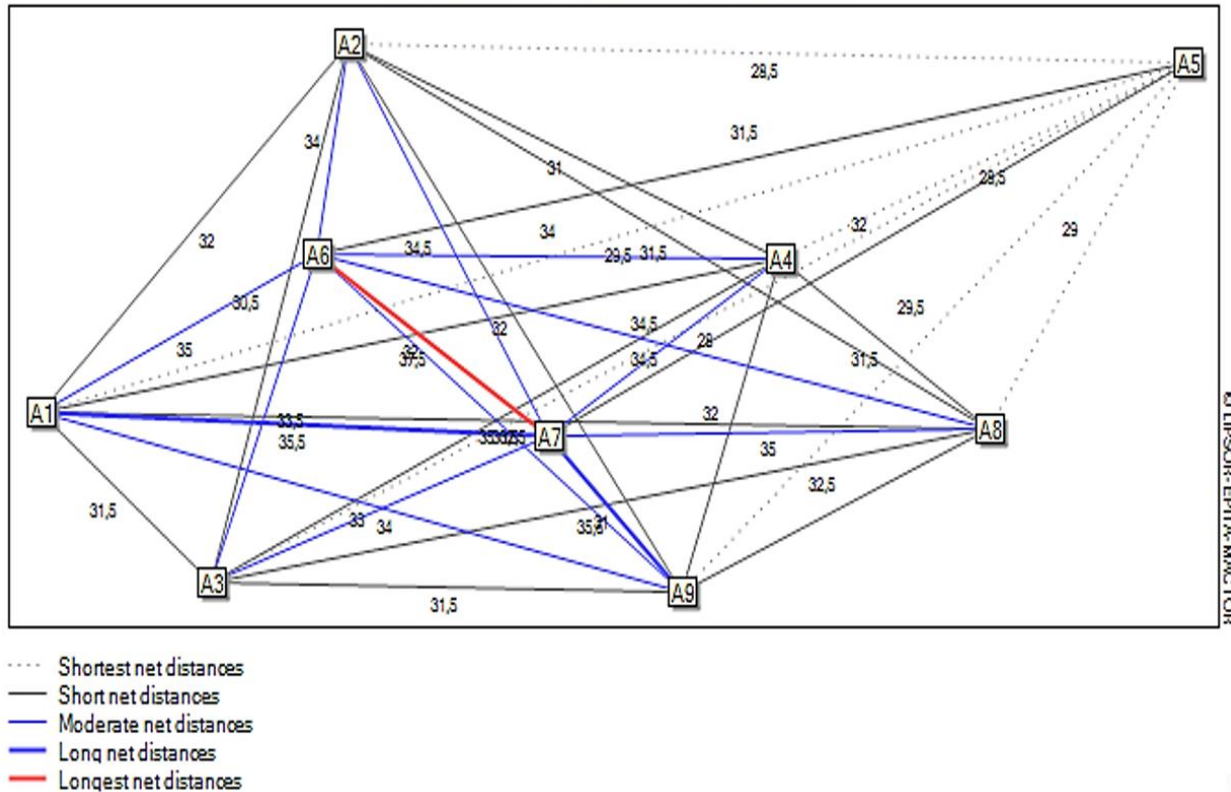
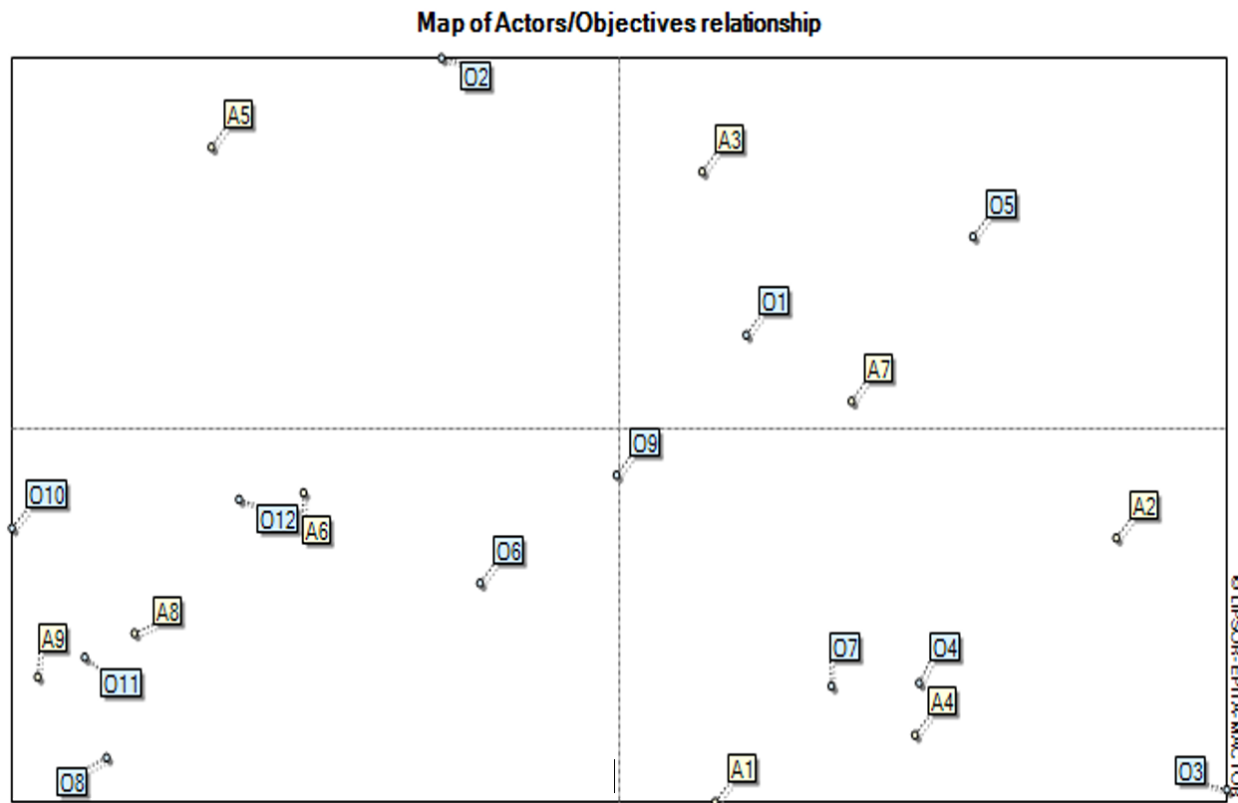


Figure 5. Intensity of Convergence Between Stakeholders.

Figure 5 explained that the banking stakeholder groups, MSME actors, mass media, investors, and the Cooperatives and MSME Service are groups that can form a very strong alliance for the successful development of MSMEs in the craft sector.



**Figure 6.**  
Stakeholder Relationship with Objectives.

Based on Figure 6, it can be explained that the Department of Industry and Trade (A8) and the mass media (A9) have the strongest role in implementing the program to increase export promotion of craft products (O11). Furthermore, banking (A6) has the strongest role in implementing the program to provide access to capital for Craft MSMEs (O12). Furthermore, the Department of Cooperatives and MSMEs has the strongest role in implementing the MSME education and training program (O4), and the program to develop craft centers and MSME clusters (A7).

#### 4. Discussion

Each stakeholder in the Hexa-Helix model of government, academics, industry, community, media, and MSME actors has a strategic role in supporting MSME development programs in the craft sector. One of the main programs is Strengthening Local Craftsmen Communities, where the community plays an active role in strengthening networks between craftsmen through the formation of communities that share knowledge, experience, and resources. This community can be a foundation for broader collaboration with various parties, including the government and the private sector, to improve product quality and expand market access [10, 11]. Product Quality Improvement and Certification are also important programs in increasing sustainable competitiveness. Here, the government and academics can play a role in providing standards and certification that guarantee the quality of craft products to meet the needs of national and international markets. Academics can also provide assistance through the Product Research and Innovation Program, where research on more efficient design, raw materials, and production techniques can be carried out to ensure that craft products not only maintain traditional values but also meet the demands of modernity and sustainability [12].



To expand the market and strengthen business networks, Capacity Development and Marketing Networks are essential. The role of the media here is vital in promoting craft products through digital platforms and creative campaigns [13]. The Love Local Products Movement campaign driven by the government, media, and the community can increase consumer awareness and pride in local products, thereby encouraging increased consumption of craft products. In addition, the government can support the Development of Craft Centers and MSME Clusters as centers for collaboration and joint production, equipped with better technological infrastructure and production facilities [14, 15]. Export Promotion Policy is also important to open up international market access for craft MSMEs, where the government provides incentives and facilitates participation in global exhibitions. Collaboration with the private sector through Partnerships and Collaborations is very important in providing access to capital and production technology [16, 17]. The private sector can help MSMEs to increase their production capacity by providing the latest technology and wider marketing opportunities through co-branding programs or integration into larger supply chains. Providing access to capital and production technology is also important to increase operational efficiency and productivity of craftsmen. On the other hand, academics and the private sector can also play a role in Assistance in Production Technology and Digital Marketing, where MSMEs are assisted in adopting e-commerce and digital marketing technology, so that they are able to reach a wider and more efficient market.

The Craft-Based Ecotourism Development Program can also be an innovative strategy to introduce craft products to local and foreign tourists, by making the craft-making process part of the tourism experience. In this case, the community and MSMEs act as hosts, while the government and industrial sector can support the development of ecotourism infrastructure and marketing. In order for craft MSMEs to be sustainable, MSME Education and Training are important stakeholders. Academics and the government play a role in providing entrepreneurship, management, and technology training to MSMEs, so that they are able to manage their businesses more professionally and innovatively. All of these programs are integrated within the Hexa-Helix framework, where strong collaboration between stakeholders will produce sustainable competitiveness, both in terms of economy, social, and environment.

## 5. Conclusion

Based on the results and discussion, it can be concluded that the stakeholders who have the strongest influence in the development of MSMEs in the craft sector are investors, the Cooperatives and UMKM Office and also Academics. Stakeholders with the highest competitiveness include investors, the Cooperatives and UMKM Office, Academics and the Industry and Trade Office. The results of the analysis also show that all stakeholders support all the objectives that have been set, this is indicated by the fact that all the objective maps show yellow which means all stakeholders support/agree with all objectives. The stakeholder groups of banking, UMKM actors, mass media, investors, and the Cooperatives and UMKM Office are groups that can form a very strong alliance for the success of developing UMKM in the craft sector. The Industry and Trade Office and the mass media have the strongest role in implementing the program to increase export promotion of craft products. Furthermore, banking has the strongest role in implementing the program to provide access to capital for Craft UMKM. Furthermore, the Cooperatives and UMKM Office has the strongest role in implementing the UMKM education and training program, and the craft center and UMKM cluster development program.

## Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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