

# The Role of Quadruple Helix in Supporting Sustainability of Culinary Business

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## The Role of Quadruple Helix in Supporting Sustainability of Culinary Business

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### ABSTRACT

The number of food and beverage MSEs in East Java occupies the second highest position in Indonesia with a total of 746,732. But unfortunately, during the pandemic, food/beverage MSMEs (both packaged food/beverage home industries as well as coffee shop businesses, depots, and cafes) experienced an average decline of 63%. The condition of uncertainty due to the pandemic, which has forced the Government in each region to periodically issue PPKM policies, according to the level of conditions for the spread of Covid-19, has caused MSME actors to experience ups and downs in income. Therefore, to help minimize business losses in addition to creativity and innovation, business actors also need support from various parties, including the government, academics, and the community (Quadruple Helix). This study aims to analyze how big the role of government, academics, and the community has been shown so far and what business actors need for the role of government, academics, and the community.

**Keywords:** Academics, Business Actors, Community, Government, Quadruple Helix

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### 1. Introduction

Based on data from the Ministry of Cooperatives and Small and Medium Enterprises (Kemenkop and UKM), 1,875 cooperatives and 163,713 MSME actors were affected by the Covid-19 pandemic (Balitbang, 2020). The number of food and beverage MSEs in East Java occupies the second highest position in Indonesia with a total of 746,732. In particular, in the field of food and beverage SMEs (both home industries and coffee shop businesses, depots, and cafes) in East Java, East Java experienced an average decline of 63% (Soetciptio, 2020). The condition of uncertainty due to the pandemic, which has forced the Government in each region to periodically issue PPKM policies, according to the level of conditions for the spread of Covid-19, has caused MSME actors to experience ups and downs in income. Based on the survey results of Windhyastiti, it is known that at level 4 of PPKM (WFH 100%), most business actors (37%) experienced a decline of sales more than 50%, while at level 3 (WFH 50%), most business actors (43%) experienced a decrease of sales as 25% to 50% (Windhyastiti, Khouruh, & Aristanto, 2022). Therefore, to help maintain the sustainability of the culinary business, one of which is a collaboration between various parties, including academics, government, and communities (Quadruple Helix). This study aims to analyze how big the role of government, academics, and the community has been shown so far and what business actors need for the role of government, academics, and the community.

### 2. Literature Review

In the context of research in the field, the Quadruple Helix model is certainly more relevant when compared to the Triple Helix model because there are more than three actors (government, industry, and universities). The fourth actor is the community which is often also referred to as the user. Delman and Madsen (2007) stated that the fourth helix actor leading to the Quadruple Helix structure is an independent, non-profit and member-based organization (Delman & Madsen, 2007). Even Yawson (2009) states that innovation arises because of the needs of users (user-driven innovation) so users are then formalized as the fourth helix (Yawson, 2009). Triple Helix is conceptually defined as an approach that shows that the emergence of innovation arises from the existence of reciprocal, balanced, and sustainable relationships between business people, academics, and government and how they transform

through these relationships (Leydesdorff, 2012). Furthermore, this model developed into a Quadruple Helix with the addition of media as the 4th helix (Carayannis, Barth, & Campbell, 2012) (Ivanova, 2014) (Leydesdorff, 2012). Meanwhile, Carayannis & Campbell (2012) define the fourth helix into two things, namely the first is culture and media, and the second is the participation of civil society in producing innovation and knowledge. This Quadruple Helix model requires more strategic community involvement. The role of the community is positioned as an important source of innovation. As a concept, the Quadruple Helix is a development of the Triple Helix by integrating civil society and integrating innovation and knowledge (Oscar, Monterino, & Thomson, 2010)

The results of Muzaqi and Hanum's research in a tourist village in Trenggalek Regency show that the Quadruple Helix synergy is the main capital in generating creativity and innovation (Muzaqi & Hanum, 2020). Likewise, research in the MSME sector in Malang Regency also shows the Quadruple Helix Model, being a feature that allows the presence of more effective and optimal innovations between actors in the helix (Khouroh, Rahayudi, & Sri Ratnaningsih, 2021)

### 3. Method

Respondents in this study were members of the Samudra Jaya group of SMEs. The Samudra Jaya MSME group was established in 2019. This MSME group accommodates small business actors engaged in fish processing such as shredded tuna, catfish nuggets, shrimp dumplings, catfish rambak, catfish amplang, catfish bone sticks, tuna tofu, and others. . The number of registered members is 45 business actors. The sample of respondents was taken from active members with a total of 30 business actors. The research was conducted with a quantitative descriptive analysis

## 4. Result and Discussion

### 4.1. Respondent's Description

**Table 1. Business Age**

Business Age	Total	%
< 2 years	2	7%
2 - 4 years	8	27%
4 - 6 years	9	30%
6 - 8 years	6	20%
8 - 10 years	3	10%
> 10 years	2	7%
<b>Total</b>	<b>30</b>	<b>100%</b>

Based on Table 1, the majority of business actors have been in business for 4 to 6 years (30%) and only 2 business actors have been in business for more than 10 years. Meanwhile, when viewed from the average turnover of income per month (Table 2), most of the business actors (50%) have an average income of Rp. 2,500,000 to Rp. 5,000,000 per month and only 2 business actors have income above Rp. 10,000,000

**Table 2. Average of Income per Month**

Average of Income per Month (Rp)	Total	%
< 2,500,000	11	37%

<b>2.,500,000 - 5,000,000</b>	15	50%
<b>5,000,000 - 7,500,000</b>	1	3%
<b>7,500.,000- 10.000.000</b>	1	3%
<b>&gt; 10,000,000</b>	2	7%
<b>Total</b>	30	100%

#### 4.2. Result

**Table 3. Analysis results**

Respondent statement	The Role					
	Academics		Government		Community	
	Existing	Need	Existing	Need	Existing	Need
<b>Strongly agree</b>	7%	50%	23%	47%	42%	53%
<b>Agree</b>	50%	33%	47%	47%	45%	40%
<b>Quite agree</b>	37%	17%	30%	6%	10%	7%
<b>Disagree</b>	3%	0%	0%	0%	3%	0%
<b>Strongly disagree</b>	3%	0%	0%	0%	0%	0%

Based on the survey results (Table 3), regarding the role of academics in assisting business actors, shows that most of the respondents strongly agree and agree (83%) that they need the role of academics. Although with a smaller percentage (57%), most of the respondents also stated that they strongly agree and agree that so far academics have shown their role. The role of academics is shown through business assistance such as helping to make financial reports and digital marketing. Only 6% of respondents stated that academics have not shown their role. The survey results show the role of academics needed, among others, in facilitation in terms of obtaining business permits/legalities such as halal certificates and copyrights as well as helping to provide ideas related to innovation, business assistance with student internship programs, market mapping and product marketing

Based on the results of the survey (Table 3), regarding the role of the government in assisting business actors, shows that most of the respondents strongly agree and agree (94%) that they need the role of the government. Although with a smaller percentage (70%), most of the respondents also stated that they strongly agree and agree that so far the government has shown its role. The role of the government in this regard has been shown in assisting business licensing/legality, halal certification, capital assistance, marketing assistance (involvement in bazaar/exhibition events), and various pieces of training. Meanwhile, the role of the government that is still needed is in terms of expanding the marketing network and business capital, as well as increasing public awareness of using MSME products.

Based on the results of the survey (Table 3), regarding the role of the community in assisting business actors, shows that most of the respondents strongly agree and agree (93%) that they need the role of the community. Most of the respondents also stated that so far the community has shown its role (87%). The role of the community so far that has been done is to share knowledge and carry out joint marketing such as promoting each other's products and sharing bazaar/exhibition stands. Furthermore, for the role of the community what is needed is exchanging information about MSME programs, helping each

other in marketing, and as a means of communication to provide solutions. In addition, during a pandemic, the community becomes a means to strengthen each other

## 5. Discussion

In the community aspect, in addition to cooperation in the field of marketing, which can be done for example through the community web. It can also cooperate in the form of joint purchasing of raw materials (to get a cheaper price if you buy in larger quantities) or also joint storage of inventory (e.g. if a frozen product that is stored in the refrigerator will save electricity costs). This is in line with the results of Mulyaningsih's research addressing the fourth helix as a community with the main role of encouraging the innovation process, by creating demand for goods and services (Mulyaningsih, 2015). In addition, the community can also be a forum for bridging cooperation or approaches with the government. As with the elements in the Quadruple Helix, it will be more optimal if collaboration is carried out between academics, government, and communities. This is because the government's involvement in assisting has proven to be indispensable to increase the competitiveness of MSMEs (Khouroh, Rahayudi, & Sri Ratnaningsih, 2021) (Hidayatullah S. , Windhyastiti, Aristanto, & Rachmawati, 2022). In this case, the government will play a role in collaboration between the various parties (Hidayatullah S. , Windhyastiti, Aristanto, & Rachmawati, 2022)

## 6. Conclusion

Based on the results of the study, shows that academics, government, and communities have been involved in helping MSMEs but not yet optimal. The role of academics, government, and communities is still needed to help the sustainability of small business actors in some aspects. Furthermore, it is hoped that there will be a collaboration between small business actors and academics, government, and communities to get more optimal results.

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