

# ABSORPTIVE CAPACITY AND INNOVATION OF WOMANPRENEUR: THE ANALYSIS OF HUMAN CAPITAL AND SOCIAL CAPITAL

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## ABSTRACT

*This paper analyzes from an individual approach namely education, experience, knowledge, skills called human capital, also wants to examine the values of trust, relationships, collective work known as social capital. This research was conducted in North Minahasa Regency, especially in Wori, East Likupang, West Likupang, and Kema Districts. The research was carried out for six months from March to August 2021. The target population was women entrepreneurs with a total of 187 respondents. Data was collected through a questionnaire to collect data on Human Capital, Social Capital, Absorptive capacity and Innovation Capability. The analysis technique used is SEM PLS. The results showed that Human Capital was positively related to Innovation Capability, Social Capital is negatively related to Innovation Capability, Absorptive Capacity is positively related to Innovation Capability, Human Capital is positively related to Absorptive Capacity, Social Capital is positively related to Absorptive Capacity. Absorptive Capacity is partially able to mediate the indirect effect of Human Capital on Innovation Capability on women entrepreneurs.*

**Keywords:** Womanpreneur, Human Capital and Social Capital, Absorptive Capacity

## INTRODUCTION

Women entrepreneurs are increasingly recognized for their strong role in improving the family economy but also to assist the government in efforts to expand job opportunities and reduce poverty. Even though the number of women is higher than that of men in Indonesia, the contribution of women entrepreneurs has indeed increased along with the openness of thinking, the demands of family life, but also the level of business motivation that has started to rise. Success as an entrepreneur in leading a business so that he is able to survive in the face of business competition is closely related to his innovation.

Innovation from women entrepreneurs is an intangible asset that not only affects business performance but also the ability to survive in the face of competition. A business without the entrepreneurial innovation ability is like a human body without blood, gradually it cannot survive so it will die. Innovation can be in the form of imitation, invention, discovery, imagination, ingenuity, Cultural Change, Organizational Change, political innovation, creativity, Technological Change, Technological Innovation, Commercialized Innovation (Benoit, 2008). Other researchers study it from the aspect of product innovation, process innovation and organizational innovation (Boer & During, 2001).

Innovation can increase profitability and business growth (Geroski et al., 2013; Tehseen, 2016). Reduce wastage, increase product reliability and also facilitate life through better utilization of resources (Cierniak-emerych et al., 2018). Economic activity really requires the innovation ability of an entrepreneur so that he can create different products and services, new work behavior, dare to display something different as his trademark. Through innovation, new products and new qualities will be created which can also reduce production

costs and speed up work processes (Boer & During, 2001). Innovation is an interdisciplinary approach (Cierniak-emerych et al., 2018) discussed in social science theories such as sociology, economics, psychology, management, humanities and arts (Benoit, 2008). What can encourage increased innovation for a business? The research findings show that there are 2 main factors, namely internal resources and external resources. Internal resources such as professional background of founder/manager(s), skills of workforce, internal efforts to improve technology and external resources such as intensity of networking, proximity advantages related to networking and receipt of institutional support (Romijn & Albaladejo, 2002).

Innovation will not occur in a business without the support of a number of new knowledge and information from business actors, therefore the role of absorptive capacity is needed. Absorptive capacity is made as a prerequisite for unlocking innovation (Spithoven et al., 2010). The role of absorptive capacity with innovation has been carried out by previous studies with analysis on organizational level (Cohen & Levinthal, 1990; Mariano & Walter, 2015) with objects in big companies (Kostopoulos et al., 2011) and traditional industry (Spithoven et al., 2010). A high level of absorptive capacity will make it easier to innovate so that it is possible for changes to occur in a fast way of working, new applications in products and services and even in services. Business is adaptive, so it requires updated information and external knowledge to be able to adapt to the demands of an increasingly competitive business environment that requires the role of absorptive capacity.

In addition to absorptive capacity, previous researchers have also assessed that innovation is influenced directly or indirectly, among others by: intellectual capital (Subramaniam & Youndt, 2005), human capital and social capital (Lee et al., 2010), market orientation and learning organization (Hurley et al., 1998), Human capital and creativity (Lee et al., 2010), social capital and knowledge (Pérez-Luño et al., 2011), organizational and social capital (Aribi & Dupouët, 2015). The study of absorptive capacity on knowledge management and intellectual capital is a study that has been suggested to be researched (Mariano & Walter, 2015) Innovation is very important because it requires an organization's ability to recognize, assess and utilize external knowledge about new technologies and customer needs (Schweisfurth & Raasch, 2018). A business that has good human capital is predicted to make a positive contribution to its innovation as well as its social capital. Some posts previously studied on large enterprises but in this paper it focuses on the informal sector at the individual level so that the results of this study become a starting point to open wider future research that focuses on informal enterprises.

Informal businesses managed by women in North Minahasa Regency are categorized as small-scale, self-owned businesses, the majority using local potential with the availability of simple tools and technology and limited area and marketing strategies. Some of these businesses were very resilient in the face of the economic crisis when all countries were facing the Covid 19 outbreak, although some did not survive in business activities. The human resource approach becomes a knife that will dissect the problems of women's entrepreneurial innovation in the informal sector with the determining variables being absorptive capacity, human capital and social capital. The question in this research is how the absorptive capacity and innovation of womanpreneur can develop their business.

## **LITERATURE REVIEW AND HYPOTHESIS**

### **Absorptive Capacity and Innovation**

Absorptive capacity also determines the increase in innovation (Chen et al., 2009; Cohen & Levinthal, 1990; Mariano & Walter, 2015; Spithoven et al., 2010). The original concept of absorptive capacity is the ability of a firm to recognize new values and external information, assimilate it and apply it to corporate objectives (Cohen & Levinthal, 1990).

Writing about absorptive capacity continues to grow by sorting it out as an asset and a capability. As an asset related to intangible resources (invisible assets), knowledge base and an extension of prior knowledge (Von, 2007; Zellner & Fornahl, 2002). As a capability, it is directed at process and dynamic learning capability (Easterby-Smith et al., 2008; Gebauer et al., 2012). Another view divides absorptive capacity as the ability and the motivation to learn (Von, 2007). Knowledge Intensive Business Sector (KIBS) research on absorptive capacity and innovation found that in the manufacturing sector, access to knowledge from business partners (external knowledge) is very helpful in completing incremental and radical innovations (Koch & Strotmann, 2008). Based on the capability aspect, there are 3 different capabilities, namely recognition, assimilation and application (Lane & Lubatkin, 1998). Research on 221 Small and Medium Industries in Germany proves that absorptive capacity with indicators of acquisition, assimilation, transformation, exploitation of knowledge enables companies to engage in exploration and exploitative innovation strategies (Müller et al., 2020).

An entrepreneur who has absorptive capacity will be able to make changes in thinking, adapting work that is dynamic, creative and innovative. On the other hand, an entrepreneur who is weak in absorptive capacity will face difficulties in adapting, changing and developing towards business progress. A strong level of absorptive capacity of an entrepreneur will make it easier for him to innovate in his work. Absorptive capacity in this paper focuses on the ability of a woman entrepreneur to acquire new information and external knowledge, assimilate and apply it to innovate in her business. The first hypothesis in this study is that absorptive capacity affects women's entrepreneurial innovation

### **Human capital, Absorptive Capacity and Innovation**

The strength of human capital is very strategic in business management (Díaz-Fernández et al., 2014) also become a strategic source of innovation and renewal for organizations in the form of intelligence, as well as explicit and implicit knowledge that will provide value to the organization (Bontis & Fitz-enz, 2002). In a company, human capital includes the knowledge and skills of professionals to produce professional services (Pennings et al., 1998), can also be in the form of creativity, knowledge and idea development skills (Subramaniam & Youndt, 2005). Basically, human capital is a self-profile of human resources that have added value for the organization. Human capital in this paper is a set of capital owned by entrepreneurs in the form of education, knowledge, experience, entrepreneurial skills that can add value to work innovation in the form of products and marketing.

Other studies have linked how the level of education as a dimension of human capital also has an effect on higher increases in absorptive capacity (Gray, 2006). The high and low relationship between human capital and innovation is also influenced by absorptive capacity (Vinding, 2006., Ahmed et al., 2019; Lee et al., 2010). Research on entrepreneurial innovation with antecedent absorptive capacity and knowledge management variables on 1500 young entrepreneurs who own SMEs proves that there is a significant effect between age, education and size on the acquisition and assimilation of knowledge of entrepreneurs. Likewise, research conducted on 138 wine industries in Spain strengthens the management theory that human capital and absorptive capacity increase innovation (Pradana et al., 2020).

Referring to the concept and previous findings, the hypothesis in this study is that human capital will further increase the innovation of women entrepreneurs in the informal sector through the role of absorptive capacity.

### **Social capital, Absorptive Capacity and Innovation**

The topic of social capital was initially discussed at the national level in the form of

informal norms such as the cooperation of two or more individuals as well as the product of religion, tradition, shared historical experience and other types of cultural norms (Fukuyama & Khan, 2000). Social capital exists in society, in public organizations and businesses and becomes an important asset in the form of social relations and associability (Leana & van Buren, 1999; Yu, 2013), in the form of organizational bonding, regional bridging, personal creative (Kallio et al., 2010), also characterized in the form of informality, mutual adjustment, and little managerial intervention (Aribi & Dupouët, 2015). Social capital is an asset in the form of social relations and networks (Leana & van Buren, 1999), while other authors have discussed it from structural aspects (network ties, network configuration, network stability), cognitive aspects (shared goals and shared culture) and trust (Inkpen & Tsang, 2005). The study of social capital from the social network aspect is an important source to improve the company's innovation performance which is moderated by absorptive capacity (Yu, 2013).

How many researchers recommend that social capital has maximized organizational goals such as business performance (Micheels & Nolan, 2016), performance organization (Dess & Shaw, 2001), financial performance (Kostopoulos et al., 2011) even more broadly for the welfare of society (Lee & Lee, 2012). Even though the research areas are different, research in the field of agricultural technology also strengthens the support for absorptive capacity for innovation by explaining that the ability to assimilate and integrate product and process information and the extent to which companies are integrated into formal and informal knowledge have an influence on the level of innovation adoption. (Micheels & Nolan, 2016).

Other studies have seen that social capital also greatly contributes to increased innovation (Kallio et al., 2010; Pérez-Luño et al., 2011; Yu, 2013) and this contribution will be strengthened through the role of absorptive capacity. (Aribi & Dupouët, 2015; Pradana et al., 2020; Ahmed et al., 2019). Research conducted on 221 Small Businesses based in China with a focus on social capital, sustainable innovation, absorptive capacity, marketing capability and organizational learning concluded that social capital is positively related to new product development mediated by absorptive capacity. (Xin et al., 2020). This research also provides empirical support for the sustainable development of small businesses. In this paper, it is assumed that social capital influences business innovation through the strong role of absorptive capacity.

## METHOD

### Research Design

The research method used is a survey method. This research was conducted in North Minahasa Regency, especially in Wori, East Likupang, West Likupang, and Kema Districts. The research was carried out for six months from March to August 2021.

### Variables, Research Indicators, And Measurement Scales

The variables studied consisted of four variables, namely X1 Human Capital consisting of four indicators, X2 Social Capital three indicators, X3 Absorptive capacity four indicators, and Variable Y Innovation Capability two indicators.

### Population, Sample, and Data Collection Methods, and Data Analysis Tools

The target population is women entrepreneurs with a total of 187 respondents. Data was collected through a questionnaire to collect data on Human Capital, Social Capital, Absorptive capacity and Innovation Capability. The analysis technique used is SEM

PLS.

## RESEARCH RESULTS AND DISCUSSION

### Research Results

In the evaluation of convergent validity the indicator is considered valid if the value of the outer loading is above 0.5 and or the T-Statistic is above 1.96 (Ghozali, 2011). In this study, I removed several indicators from the model because they did not meet the research model, indicators that met the research model were continued to be analyzed until direct or indirect testing. The results of the Path coefficient validation test on each path for a direct effect can be presented in Table 1.

Table 1 DIRECT EFFECT TEST RESULTS				
No	Relationship between Variables	Coefficient Track	P Values	Information
1	Human Capital -> Innovation Capability	0.228	0.017	Significant
2	Social Capital ->Innovation Capability	-0.159	0.083	Not significant
3	Absorptive Capacity ->Innovation Capability	0.817	0.000	Significant
4	Human Capital -> Absorptive Capacity	0.203	0.038	Significant
5	Social Capital -> Absorptive Capacity	0.222	0.048	Significant

Table 1 shows the results of hypothesis testing which are described in the following description:

- Hypothesis Testing 1: There is a positive influence between Human Capital to Innovation Capability on women entrepreneurs in Wori, East Likupang, West Likupang, and Kema sub-districts. These results can be seen in path coefficient value of 0.228 with a p-value of 0.017. The p-value is less than 0.05 (alpha 5%). Based on this, hypothesis 1 is declared accepted.
- Hypothesis Testing 2: There is a negative influence between Social Capital to Innovation Capability on women entrepreneurs in Wori, East Likupang, West Likupang, and Kema sub-districts. These results can be seen in path coefficient value of -0.159 with a p-value of 0.083. The p-value is more than 0.05 (alpha 5%). Based on this, hypothesis 2 is declared rejected.
- Hypothesis Testing 3: There is a positive influence between Absorptive Capacity to Innovation Capability on women entrepreneurs in Wori, East Likupang, West Likupang, and Kema sub-districts. These results can be seen in path coefficient value of 0.817 with a p-value of 0.000. The p-value is less than 0.05 (alpha 5%). Based on this, hypothesis 3 is declared accepted.
- Hypothesis Testing 4: There is a positive influence between Human Capital to *Absorptive Capacity* on women entrepreneurs in Wori, East Likupang, West Likupang, and Kema sub-districts. These results can be seen in path coefficient value of 0.203 with a p-value of 0.038. The p-value is less than 0.05 (alpha 5%). Based on this, hypothesis 4 is declared accepted.
- Hypothesis Testing 5: There is a positive influence between Social Capital to *Absorptive Capacity* on women entrepreneurs in Wori, East Likupang, West Likupang, and Kema sub-districts. These results can be seen in path coefficient value of 0.222 with a p-value of 0.048. The p-value is less than 0.05 (alpha 5%). Based on this, hypothesis 5 is declared accepted.

In testing this hypothesis, the mediating role of the variable. Will be studied Absorptive Capacity on indirect influence Human Capital and Social Capital to Innovation Capability. The indirect effect hypothesis testing in this study is presented in Table 2

Table 2 RECAPITULATION OF INDIRECT EFFECTS TEST RESULTS						
No	Variable Mediation	(a)	(b)	(c)	(d)	Note:
1	Human Capital -> Absorptive Capacity -> Innovation Capability	0.115 (Sig)	0.410 (Sig)	0.203 (Sig)	0.817 (Sig)	Partially mediated
2	Social Capital -> Absorptive Capacity -> Innovation Capability	0.003 (N.Sig)	0.317 (Sig)	0.222 (Sig)	0.817 (Sig)	Fully mediated
Informatio : Significant (Sig)=T-statistic>1.96 at: 5% Not Significant (N.Sig)=T-statistic<1.96 at: 5%						

Table 2 shows the results of testing the mediating variables that can be submitted are as follows:

- Absorptive Capacity able to mediate the indirect influence of Human Capital on Innovation Capability. These results are shown from the mediation test carried out, it appears that the effect of a; b; c; and d has a significant value. The results of this test determine that Human Capital can affect Innovation Capability through Absorptive Capacity can be proven empirically. Based on these results, it can be interpreted that the higher the Absorptive Capacity possessed by Human Capital, the higher Innovation Capability will increase. Other information that can be conveyed is the mediating effect of the Absorptive Capacity variable on the indirect influence of Human Capital on Innovation Capability is partial (partial mediation). This finding is an indication that the Absorptive Capacity variable is not a determining variable on the influence of Human Capital on Innovation Capability.
- Absorptive Capacity able to mediate the indirect influence of Social Capital on Innovation Capability. This result is shown from the mediation test carried out, it appears that the effect of b; c; and d has a significant value while the effect of a has a non-significant value. The results of this test determine that Social Capital can affect Innovation Capability through Absorptive Capacity can be proven empirically. Based on these results, it can be interpreted that the higher the Absorptive Capacity of Social Capital, the Innovation Capability will increase. Other information that can be conveyed is the mediating effect of the Absorptive Capacity variable on the indirect effect of Social Capital on Innovation Capability character fully mediated. This finding is an indication that the Absorptive Capacity variable is a determining variable on the influence of Social Capital on Innovation Capability.

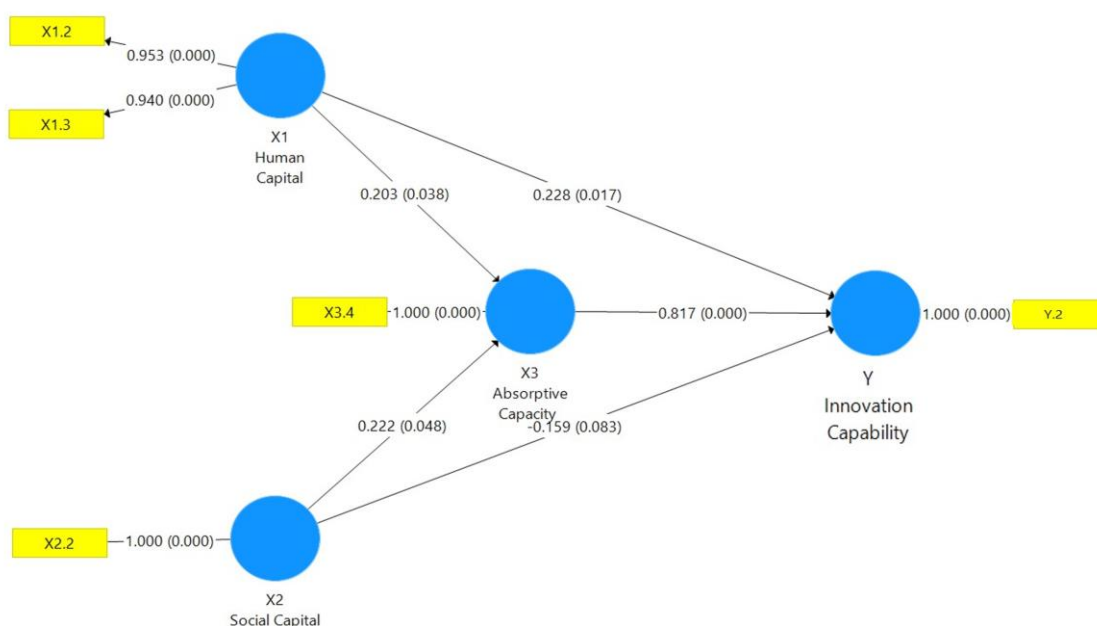


FIGURE 1  
PLS ANALYSIS RESULT

## DISCUSSION

Based on the results of the analysis, this section will discuss the results of the calculations that have been carried out. This study aims to determine the effect of Human Capital and Social Capital on Innovation Capability through Absorptive Capacity as an intervening variable women entrepreneurs in Wori, East Likupang, West Likupang, and Kema sub-districts. Testing shown through the existing hypotheses so as to find out how the influence of each variable on the other variables.

### **Human Capital Influence to Innovation Capability on Entrepreneur Woman in Wori, East Likupang, West Likupang, and Kema Sub-Districts**

The results of statistical data analysis show that Human Capital has a positive and significant effect on Innovation Capability on entrepreneur woman in Wori, East Likupang, West Likupang, and Kema . sub-districts, with path coefficient value of 0.228 and the p-value is 0.017. The analysis of this research model shows that good Human Capital will lead to Innovation Capability which increases. The results of this study are supported by research that conducted by Pradana, et al., (2020) which states that the Wine Industry in Spain strengthens the management theory that Human capital increases innovation.

### **Social Capital Effect to Innovation Capability on Entrepreneur Woman in Wori, East Likupang, West Likupang, and Kema . Sub-DISTRICTS**

The results of statistical data analysis show that Social Capital has a negative and insignificant effect on Innovation Capability on entrepreneur woman in Wori, East Likupang, West Likupang, and Kema . sub-districts, with path coefficient value of -0.159 and the p-value is 0.083. The analysis of this research model shows that good Social Capital will lead to Innovation Capability which increases. The results of this study are supported by research conducted Wulandari & Malik (2014) huhng states social capital does not significantly influence the adoption of shallot cultivation innovations.

### **Effect of Absorptive Capacity to Business Development Innovation on Entrepreneur Woman in Wori, East Likupang, West Likupang, and Kema . Sub-DISTRICTS**

The results of statistical data analysis show that Absorptive Capacity has a positive and significant effect on Innovation Capability on entrepreneur woman in Wori, East Likupang, West Likupang, and Kema sub-districts, with path coefficient value of 0.817 and the p-value is 0.000. The analysis of this research model shows that a high Absorptive Capacity will lead to Innovation Capability The results of this study are supported by research conducted Mariano & Walter (2015) that state Absorptive Capacity also determine the occurrence of increased innovation.

### **Human Capital Influence to Absorptive Capacity on Entrepreneur Woman in Wori, East Likupang, West Likupang, and Kema Sub-districts**

The results of statistical data analysis show that Human Capital has a positive and significant effect on Absorptive Capacity in entrepreneur woman in Wori, East Likupang, West Likupang, and Kema . sub-districts, with path coefficient value of 0.203 and the p-value is 0.038. The analysis of this research model shows that good Human Capital will lead to *Absorptive Capacity* tall one. The results of this study are supported by research conducted by Gray (2006) which states that the level of education as a dimension of human capital also provides influence on a higher increase in Absorptive Capacity.

### **Social Capital Effect to Absorptive Capacity on Entrepreneur Woman in Wori, East Likupang, West Likupang, and Kema sub-districts**

The results of statistical data analysis show that Social Capital has a positive and significant effect on Absorptive Capacity in entrepreneur woman in Wori, East Likupang, West Likupang, and Kema . sub-districts, with path coefficient value of 0.222 and the p-value is 0.048. The analysis of this research model shows that good Social Capital will lead to high Absorptive Capacity. The results of this study are supported by research conducted Yu (2013) that state social capital from the social network aspect becomes an important source to improve the company's innovation performance moderated by Absorptive Capacity.

### **Human Capital Influence to Business Development Innovation through Absorptive Capacity on Entrepreneur Woman in Wori, East Likupang, West Likupang, and Kema Sub-districts**

The results of data analysis indirectly on the Human Capital variable on Innovation Capability through Absorptive Capacity on women entrepreneurs in Wori, East Likupang, West Likupang, and Kema . sub-districts, shows that it is partial (partial mediation) this result is seen from the effect of a; b; c; and d in Table 2 has a significant value. This finding is an indication that the Absorptive Capacity variable is not a determining variable on the influence of Human Capital on Innovation Capability. The results of this study are supported by research conducted by Ahmed, et al., (2019) which states that the high and low relationship between Human Capital and innovation is also influenced by Absorptive Capacity.

### **Social Capital Effect to Business Development Innovation through Absorptive Capacity on Entrepreneur Woman in Wori, East Likupang, West Likupang, and Kema sub-districts**

The results of data analysis indirectly the Social Capital variable on Innovation Capability through Absorptive Capacity on women entrepreneurs in Wori, East Likupang, West Likupang, and Kema . sub-districts, shows that it is partial (partial mediation) this result is seen from the effect of b; c; and d in Table 2 has a significant value, and the effect of a in Table 2 has a non-significant value. This finding is an indication that the Absorptive Capacity variable is a determining variable on the influence of Social Capital on Innovation Capability. The results of this study are supported by research conducted by Ahmed, et al., (2019) that state social capital too really contributes to the increase in innovation and this contribution will be even stronger through the role of Absorptive Capacity.

## **CONCLUSIONS AND SUGGESTIONS**

### **Conclusion**

Based on the concept and literature, it can be concluded that theoretically there are:

1. Positive relationship between Human Capital to Innovation Capability on entrepreneurial women.
2. Negative relationship between Social Capital to Innovation Capability on entrepreneurial women.
3. Positive relationship between Absorptive Capacity to Innovation Capability on entrepreneurial women.
4. Positive relationship between Human Capital to Absorptive Capacity on entrepreneurial women.
5. Positive relationship between Social Capital to Absorptive Capacity on entrepreneurial women.
6. Absorptive Capacity partially able to mediate the indirect influence of Human Capital on Innovation Capability on entrepreneurial women.



7. Absorptive Capacity is a determining variable on the influence of Social Capital on Innovation Capability on entrepreneurial women.

## Suggestion

The availability of tools and technology in Wori, East Likupang, West Likupang, and Kema Districts should be improved again in order to increase the existing social network there, so as to increase the role of Social Capital to Innovation Capability.

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