

## The Influence of Economic Literacy, Financial Efficacy, and Decision Making Factors on Economic Rationality

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### Abstract

*This research aims to analyze the economic rationality of economics students, which is influenced by economic literacy, financial efficacy, and decision-making factors. Using a quantitative type of research, this research uses a questionnaire as a data collection method. The population of this study was economic education students at Makassar State University, and the sample consisted of 187 students who answered the survey. This study analyzes the data using Structural Equation Modeling (SEM) analysis. Based on the findings, it is shown that the tests given to students on the three variables, namely (1) economic literacy (X1), have a significant effect on the economic rationality of Makassar State University economic education students (Y), (2) financial efficacy (X2) have a significant effect on the economic rationality of economic education students at Makassar State University (Y), and (3) has a significant effect on the economic rationality of economic education students at Makassar State University (Y). Meanwhile, the economic rationality of economic education students at Makassar State University has a significant effect on financial efficacy (X2), the decision factor decision (X3), and economic literacy (X1) variables, according to the partial significance test (Y).*

**Keywords:** *Students, Financial Efficacy, Economic Rationality, and Economic Literacy.*

### INTRODUCTION

Humans sometimes make routine life choices with or without thinking about them. The art of psychology is the study of human behavior, traits, and attitudes, as well as the mechanisms by which people deviate from rational decisions. People are expected to have a certain level of economic literacy to maximize profits with limited resources. According to (Jappelli, 2012), literacy is a tool to achieve the goals you want to achieve. This need is becoming increasingly apparent with shifts in the demographic structure of society and financial markets. Economic literacy is also becoming increasingly important due to the increasing diversity of financial instruments (Kahya & Mamoolu, 2015). The problem is that not all of these people know economics, which reduces the chances of prosperity; therefore, according to (Kotte & Witt, 2015), economic knowledge is necessary to solve economic problems such as money and business. Economic literacy is one of the most critical areas of literacy in the information era because good economic awareness and understanding can help individuals survive and develop various businesses in the face of challenging economic conditions (Lewin, 2012). A person can be independent and quickly decide about entrepreneurship if they have good economic literacy. This makes it

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easier for them to find solutions and opportunities, which makes them critical and intelligent (Parker, 2018).

People's decisions about what they buy and what they consume are influenced by various factors (Kotler & Armstrong, 2019). Cultural, social, personal, and psychological factors all influence this motivation. People who know economics can innovate and read opportunities to prosper (Ananda 2020 & Prasetyo 2019). The impact on individual purchasing decisions includes economic literacy, financial efficacy, and decision-making factors. Basic economic knowledge or economic literacy is essential in student life. If someone has poor economic literacy, their economic activities are generally irrational (Kanserina, 2015).

Economic literacy is a condition that can describe a person able to master economic problems well related to everyday life in fulfilling every need (Daroin, 2013). Economic literacy recognizes economic problems, alternatives, costs, and benefits (Young, 2018). Economic literacy also examines the effects of changes in public policies and economic conditions (Kharizmi, 2015). Economic literacy is the ability to utilize economic concepts to make decisions regarding income, savings, expenditure, and allocation of funds to increase welfare. Economics can encourage someone to survive their economic problems; economic literacy is necessary for global competitiveness (Pandey & Bhattacharya, 2015).

Economic knowledge, or literacy, is one of the most essential skills that can be learned through experience and education. Most human behavior results from a learning process, according to (Simamora, 2002). The learning process describes changes in a person's behavior that result from experience. One definition of economic literacy is a person's understanding of the economy. The study of how individuals and societies decide how to use limited resources provided by nature and previous generations is known as economics (Case 2020).

As defined by (Brandon Smith, 2017), financial efficacy is a positive belief in one's capacity for effective money management. Therefore, proper money management improves with increasing financial efficacy. According to (Perry Morris, 2019), increasing responsibility, including financial responsibility, requires efficacy. Viability is a singular belief in one's capacity and demonstrated in behavior to accomplish one's responsibilities effectively. It describes the belief that serious effort is required to achieve goals. Therefore, self-efficacy is necessary to manage income and know one's financial responsibilities. According to (Brandon Smith, 2012), self-efficacy is needed to motivate someone to work towards success. Of course, this will be beneficial when managing money as it will increase awareness that what a person does determines whether they manage their money successfully or not. Similar to gender differences in future financial behavior and expectations, gender differences affect money management patterns. This is influenced by family teachings (Danes, 2016).

Emotional factors are divided into two categories from the perspective of financial decision-making: loss aversion and regret aversion. According to (Kahneman, 2019), one of the factors that influences investment decisions is loss aversion. Meanwhile, (Thaler, 2013) introduced the concept of loss aversion in risky decision-making in prospect theory. This involves holding shares longer when they are losing money and selling them when they are making money. This was reaffirmed by (Kahneman et al., 2017) and (Haigh & List, 2015), who found that even though gains were also achieved, a person's sensitivity to losses more than doubled. Loss aversion significantly influences investment decisions, especially when determining whether an investor prefers to be risk-seeking or risk-averse. Investors with loss aversion tend to act alone when making investment decisions, especially regarding herding.

In addition, investors who experience continuous losses often lack confidence, which causes them to follow other people's decisions in the herding process (Pompian & Wood,

2016). Excellent and optimal financial literacy skills can balance psychological factors in investment decisions (Kim, 2014; Jagongo & Akims, 2017). Financial literacy is the capacity and knowledge to manage income and expenses through monetary exchange and management techniques (Sarigul, 2014).

## LITERATURE REVIEW

### Economic Literacy Against Economic Rationality

Economic literacy is knowledge about economic concepts used to decide on savings, income, expenses, and others (Pandey & Bhattacharya, 2012). Meanwhile, according to (Mathews, 2019), every person can apply economics to increase welfare and achievement. Another definition of economic literacy is the evaluability of economic development and its impact (Santas & Demirgil, 2015). Economic literacy can also be defined as using related knowledge and skills to manage financial resources effectively (Unal et al., 2015). Economic knowledge or economic literacy is one of the most critical skills that can be learned through experience and education. Most human behavior results from a learning process, according to (Simamora, 2012). The learning process describes changes in a person's behavior that result from experience. One definition of economic literacy is a person's understanding of the economy.

H1: Economic literacy has a positive and significant effect on economic rationality

### The Efficacy of Finance on Economic Rationality

Financial efficacy is related to financial self-efficacy, defined as belief in one's capacity to improve financial behavior (Danes & Haberman, 2017). In Bandura's social cognitive theory, self-efficacy or self-confidence describes an individual's confidence in his or her capacity to complete a task successfully. Financial behavior can be significantly influenced by financial efficacy. People who lack financial literacy are more likely to have debt problems (Lusardi & Tufano, 2019), participate less in the stock market (Van Rooij, Lusardi, and Alessie, 2017), choose low-cost mutual funds (Hastings & Tejada-Ashton, 2018), and unable to manage their wealth effectively (Stango & Zinman, 2016). Financial efficacy directly impacts an individual's financial management, which may be positive or negative (Bhargava et al., 2017). Individuals who have received financial education are more likely to have adequate financial management skills. Good financial literacy can help in safe financial management. Research findings (Napitupulu et al., 2021) reveal that financial literacy plays a role and influences how a person manages their finances.

H2: Financial efficacy has a positive and significant effect on economic rationality

### Decision Making Factors on Economic Rationality

Terlalu percaya diri berdampak pada keputusan individu dan bisnis. Individu cenderung salah menilai kapasitas mereka dan tidak membantu orang lain dalam siklus dinamis. Orang-orang ini sangat percaya pada keterampilan mereka. Akibatnya, mereka kurang mencari bimbingan dan bantuan saat mengambil keputusan. "Ini terkait dengan seberapa baik orang memahami kemampuan mereka sendiri dan batas pengetahuan mereka," seperti yang diungkapkan oleh (Shefrin, 2019). Kemampuan untuk mengelola informasi untuk membuat keputusan akan dipengaruhi oleh transisi dari ekonomi industri ke ekonomi berbasis modal manusia. Dalam hal ini, informasi memainkan peran penting dalam membantu mereka memenuhi kebutuhan mereka (Jondry A. Hetharie, 2012). Dalam paradigma ekonomi perilaku yang dipelopori oleh Simon, meskipun individu pada umumnya rasional, yaitu cerdas, namun ketika terlibat dalam pengambilan keputusan, kesalahan atau kesalahan dapat terjadi, yang dapat disebut sebagai kesalahan rasional (Altman, 2012).

H3: Decision making factors have a positive and significant effect on rationality

Economic Literacy, Financial Efficacy, and Decision-Making Factors

A person's attitude in managing incoming and outgoing money, loans, and investments indicates healthy financial behavior (Layli, 2013). They are essential because behavioral aspects of finance significantly impact students' lives after graduation. To focus on developing good financial behavior among students. The theory of rationality is based on two assumptions, namely, "Rules of rationality" and "actions of rationality." In a situation of rules of rationality, an individual adopts a mode of behavior that maximizes expected utility. In contrast, in the case of acts of rationality, investors choose to act in such a way that results in maximum utility. Investors make choices that maximize profits and minimize costs (Ahmad et al., 2017). The evidence and explanations proposed in bounded rationality theory explain that individuals cannot always obtain all the necessary information to make possible decisions (Kinoshita et al., 2013). Bounded rationality is comprehensively concerned with how the decision-making process impacts the decisions that come (Kinoshita et al., 2013).

H4: Economic literacy, financial efficacy, and decision-making factors have a positive and significant effect

**RESEARCH METHODS**

Descriptive research with a quantitative approach is the focus of this research, which applies quantitative research methods. According to Margono, quantitative exploration can be interpreted as an examination that applies a quantitative strategy, where the examination is expected to be able to describe and break down friendly characteristics or characteristics in which the public sees quantitatively and interprets the relationship between these characteristics and each other (Sudaryono, 2017). As reported in Descriptive research it is research that does not make comparisons or relationships with other variables to identify the value of the independent variable, which can be one or more independent variables (Sugiyono, 2012). This study was attended by 187 students of the Makassar State University Economic Education Program from 2019 to 2022. Because the number of respondents to this study was minimal, this research is considered a population study. Therefore, researchers included 187 Economic Education students from the 2019-2022 class, or 100 percent of the population, in this study. A questionnaire that utilizes Google Forms as an internet-based data collection option is the instrument used in this research. Inspection instruments aim to find data that matches the problems or characteristics that need attention. Researchers use rating scales, especially Likert scales, to ensure that the data obtained is accurate and reliable. This instrument will later provide quantitative data by giving a score or value for each statement item. The instruments used in this research will be explained in the following section:

Table 1. Research Instruments

Variable	Indicator	Scale
Economic Literacy (X1)	1. Scarcity Economics 2. Economic Exchange 3. Incentive 4. Economic management <b>Kotte and Witt (2015)</b>	<i>Likert</i>
Financial Efficacy (X2)	1. Size 2. Strength 3. Consensus <b>Bandura (2013)</b>	<i>Likert</i>

Decision Making Factors (X3)	<ol style="list-style-type: none"> <li>1. Alternative Identification</li> <li>2. Identify previously unknown factors</li> <li>3. Measuring the results achieved requires a method</li> </ol> <p><b>Ibnu Syamsi (2012)</b></p>	<i>Likert</i>
Economic Rationality (Y)	<ol style="list-style-type: none"> <li>1. Rational decision logic based on its impact</li> <li>2. Rational decision logic based on feasibility</li> <li>3. Rationality</li> </ol> <p><b>Frederickson dan Smith dalam Novita Resina (2015)</b></p>	<i>Likert</i>

Source: Secondary Data

This research uses Structural Equation Modeling (SEM) analysis to analyze the data. Analysis is used to measure the relationship between the independent variable and the dependent variable. This research will investigate the impact of economic literacy (X1), financial efficacy (X2), and decision-making factors (X3) on economic rationality (Y) in economics education students at Makassar State University.

## RESULTS AND DISCUSSION

### Respondent Characteristics Analysis Test

In this study, respondents' characteristics based on age were used. The number of respondents in this research was 187, represented by economics education students at Makassar State University.

Table 2. Characteristics of Respondents

Respondent Characteristics	Frequency	Percentage (%)
<b>Gender</b>		
Woman	59	69,8
Man	28	30,2
<b>Age</b>		
17-18 Years	18	20,5
19-20 Years	47	51,3
21-22 Years	22	28,2

Source: Researcher data processing 2023

The table above shows that the variables in this study which include economic literacy (X1), financial efficacy (X2), decision making factors (X3) and economic rationality (Y) are in the medium category average.

### Model Analysis Results

Structural model that shows the relationship between the four latent variables, namely economic rationality (Y), and independent variables, namely economic literacy (X1), financial efficacy (X2), and decision-making factors (X3) in this study which is equipped with manifests construct it, is as follows:

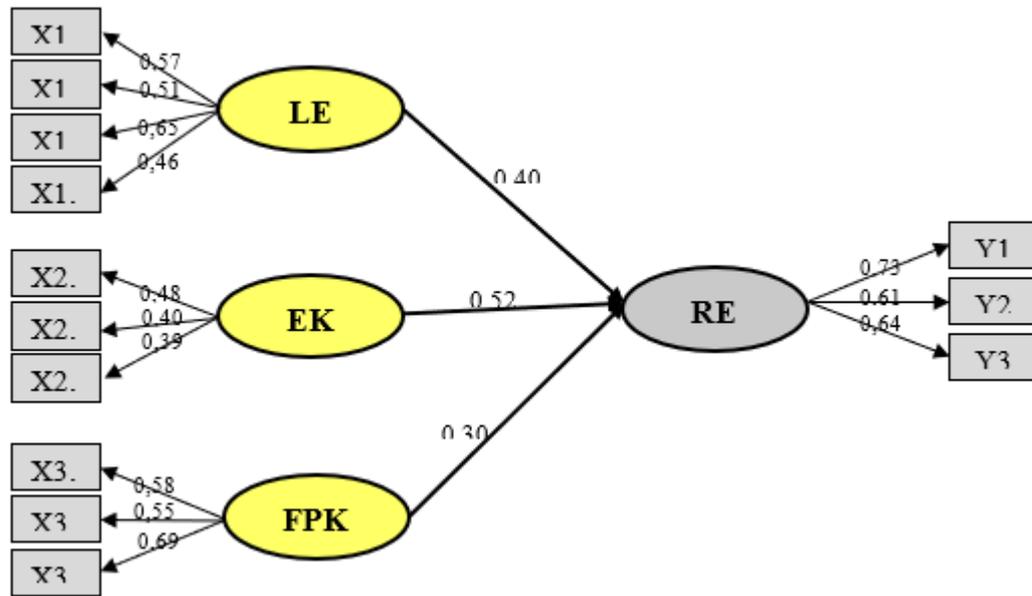


Figure 3. Structural Model Fit

Based on the image, the suitability of the structural model shows that the suitability requirements have been met according to the criteria. This can be shown by the significance of the influence of the independent variable on the dependent variable. Fulfillment of the structural model criteria can be seen as follows:

Table 6. Structural Model Fit

Model Alignment	Coefficient	Criteria	Information
Chi-square ( $X^2$ )	47,36	Kecil (non signifikan)	Fulfilled
P-Value	0,68	$\geq 0,05$	Fulfilled
Df	52	-	
Cmin ( $X^2/Df$ )	0,	$\leq 2,00$	Fulfilled
RMR (standardized)	0,03	$\leq 0,08$	Fulfilled
RMSEA	0,02	$\leq 0,08$	Fulfilled
GFI	0,93	$\geq 0,90$	Fulfilled
AGFI	0,94	$\geq 0,90$	Fulfilled
CFI	0,95	$\geq 0,94$	Fulfilled
IFI	0,98	$\geq 0,94$	Fulfilled
NNFI atau TLI	0,98	$\geq 0,94$	Fulfilled
AIC (Model)	62,06	Kecil, relative	Fulfilled

Source: Researcher data processing 2023

Based on the coefficient table that meets the standard criteria. The lambda coefficient ( $\lambda$ ), determination ( $R^2$ ), and T-Value of each manifest variable which constructs the independent and dependent variables are as follows:

Table 7. Manifest of the Structural Model Construct

No.	Variable	Manifest	$\lambda$	$R^2$	T-value
1	LE	X1.1	0,57	0,05	5,81
		X1.2	0,51	0,05	5,25
		X1.3	0,63	0,06	6,60
		X1.4	0,46	0,04	4,56
2	EK	X2.1	0,48	0,04	4,80
		X2.2	0,40	0,04	4,04
		X2.3	0,39	0,03	4,01
3	FPK	X3.1	0,58	0,05	5,91

		X3.2	0,55	0,05	5,63
		X3.3	0,69	0,06	7,06
4	RE	Y1	0,73	0,07	7,54
		Y2	0,61	0,06	6,22
		Y3	0,64	0,06	6,56

Source: Researcher data processing 2023

The indicator variables that construct the four latent variables meet the validity criteria, this can be shown by the nominal standard loading ( $\lambda \geq 0.40$ ) and nominal  $R^2 \leq \lambda$ . In accordance with the results of the analysis and structural model in Table 8, the coefficients of direct influence and indirect influence between variables can be described.

Table 8. Conclusion of Direct Influence between Variables

No.	Testing	Influence Coefficient		T-value	Conclusion
		Direct			
1.	LE → RE	0,409		6,21	Significant
2.	EK → RE	0,526		7,57	Significant
3.	FPK → RE	0,306		5,68	Significant

Source: Researcher data processing 2023

#### The Influence of Economic Literacy on Economic Rationality

Economic education students at Makassar State University experienced a significant positive effect of economic literacy on their economic rationality. This indicates that students majoring in economics at Makassar State University have excellent economic literacy. As (Simonara, 2012) said, most human behavior results from the learning process. Research results (Oktafi et al., 2017), which confirm that a person's consumption behavior is primarily influenced by their economic knowledge, support these findings. According to research, People with a high level of economic literacy can choose which products they will consume, prioritize their needs, and adapt these choices to their abilities and interests (Kanserina & Nuridja, 2016). Complexity, risk, and uncertainty impact every area of life, including consumption, savings, and investment preferences (Şantaş & Demirgil, 2015). Economic literacy is critical in making decisions to invest wealth and manage finances (Japelly, 2012).

Economic literacy is an essential characteristic of economic behavior (Potrich & Vieira, 2018). Economic literacy is also needed for everyone in making choices as a source of income (Mitchell, 2014). In addition, the findings of this research contradict the results of research (Septiana, 2015), which found that the level of economic literacy has a significant direct and negative impact on economic behavior. Meanwhile, research (Palmer et al., 2019) found that students taking economics courses did not start their introductory economics courses with much more knowledge or learned significantly more throughout the semester. These students scored significantly lower than those who did not take economics in their classes.

Additionally, (Reid, 2013) found that students who took economics classes scored significantly lower on introductory economics than students who had not taken any previous economics classes. According to (Efendi et al., 2019), economic literacy in a person can help people become wiser in using economic resources to increase prosperity in life. In other words, economic literacy is a valuable tool for changing behavior from unintelligent to intelligent (Sina, 2012). Economic learning can extend beyond specific student groups, such as the workforce or those who will become government leaders. However, universities must also equip students with economics and business (Hashim et al., 2013).

On the other hand, based on pre-and post-testing, (Becker et al., 2013) believe that high school economics helps students better understand economics in college. A significant positive correlation exists between high school economics courses and students' college grades (Myatt & Waddell, 2020). Using an extensive national database, a more recent study (Lopus, 2015) found that someone exposed to macroeconomics or microeconomics in high school was better prepared than students without a high school economics background for principles classes. Additionally, as measured by the National Council on Economic Education's Test of Economic Literacy (Dale & Allen, 2019), found no significant differences in basic economic knowledge between students enrolled in principles of microeconomics and elementary education majors. With different approaches and materials, this is proven to happen. Additionally, because major requirements vary, one might anticipate differences based on differences in other courses.

#### The Influence of Financial Efficacy on Economic Rationality

Financial efficacy refers to financial literacy, or the capacity to manage one's finances. Research results (Al-Tami mi and Kalli, 2019) found that financial literacy positively correlates with education level. Research shows that knowledgeable people also have a positive attitude toward financial management (Perry & Morris, 2015). Research by Napitupulu et al. (2021) revealed that financial literacy has a role and influences how a person manages their finances. Moreover, Prihatingsih's research (2021) concluded that financial education obtained at universities has proven to influence how students manage their finances. What is the influence or role of the level of financial literacy on how an individual manages, where financial education fundamentally influences financial behavior (Selcuk, 2015).

According to research conducted by (Lusardi, 2009), knowledge and psychological aspects, including motivation and self-efficacy, which influence financial literacy, are very necessary; some variables link financial education with financial literacy. This emerging phenomenon is supported by variables that link financial education with financial literacy. The relationship between financial education and financial literacy has been the subject of some contradictory research in the past. One of them is based on research (Bestari, 2012), which found that student financial literacy is influenced by faculty and education level. According to (Sugiono, 2016), lifestyle patterns explain how people plan their money and how lifestyle dramatically influences a person, which influences how they spend their money.

According to (Chan & Volpe, 2018), financial knowledge is an individual's understanding of finances, which can influence a person's financial opinions and decisions. Financial management behavior is an individual's ability to manage money and assets in a way that is considered productive (Robb & Woyard, 2012). A person's financial behavior and financial management will be more effective if their level of financial literacy is higher (Huston, 2010). Financial literacy, defined as mastery of knowledge, attitudes, and behaviors, has played an essential role in enabling individuals to make responsible decisions when trying to achieve financial prosperity (Potrich et al., 2016).

Financial efficacy has previously been found to affect financial behavior significantly. People who lack financial literacy are more likely to struggle with debt (Lusardi & Tufano, 2019), participate less in the stock market (Van Rooij, Lusardi, and Alessie, 2017), choose more expensive mutual funds (Hastings & Tejada-Ashton, 2018), and fail to manage their wealth effectively (Stango & Zinman, 2016). To overcome these obstacles, it is essential to understand why financial education outcomes are disappointing. According to (Pappalardo, 2012), excessive reliance on one-size-fits provisions is problematic, as most financially disadvantaged individuals often need access to adequate financial education (De Meza et al., 2018). In this way, the opportunity to obtain better financial behavior to improve individual well-being increases (Coskun & Dalziel, 2020).

## Decision Making Factors on Economic Rationality

Students' economic rationality is influenced in part by financial efficacy variables. Therefore, students will be able to use a variety of financial information, which will help them make smart financial choices and behaviors. Based on previous research (Dorner, 2013), we make the assumption that decision makers do not seek to obtain all the information necessary to solve the problem, do not need to use algorithms that can calculate optimal solutions, or have a consistent and persistent goal structure.

Peers are a primary source of financial information and advice in several decision-making studies (Hong et al., 2014). For example, most respondents reported consulting friends and colleagues when asked how they make financial decisions (Lusardi & Mitchell, 2016). Peers are important in retirement participation and contribution decisions (Duflo & Saez, 2014). It has also been criticized for assuming a rational decision-making process in which consumers systematically evaluate information to make economically rational choices that fit their financial constraints. This runs counter to the suggested relationship between financial literacy and financial capability. The role of strong emotions and other behavioral factors in meeting long-term financial goals in practice, according to (Dean & Croft, 2019). So, it can complicate decision-making; multiple and conflicting decisions often need to be navigated due to complex information reconciliation (Hausman, 2012).

According to the conventional economic view of rational decision-making (Blume & Easley, 2016), people will make choices that will produce the best outcomes, regardless of their financial constraints (Coleman & Fararo, 2016). According to this viewpoint, consumers seek to maximize utility based on preferences, time, and other resources, but not necessarily wealth or money (Bryant & Zick, 2016). Therefore, better information (more knowledge/awareness) and more choices must be available to increase behavioral choices (Goode, 2014). As a result, consumers are more likely to invest in expanding their knowledge until the anticipated marginal benefit from doing so equals the anticipated marginal cost (Pappalardo, 2012). Scrambling is a method that recognizes the limitations of rational decision-making models and the potential obstacles posed by emotions (Lindblom, 2019). The strategy recognizes the complexity of decision-making and the challenges consumers face in achieving multiple goals simultaneously (Kopecka et al., 2012).

## CONCLUSION

Considering the consequences of this research, experts consider that there is a significant impact at the same time on economic literacy, financial efficacy, and decision-making factors on the economic rationality of Makassar State University's economic education students. Economic rationality directly influences economic literacy, financial efficacy, and decision-making factors. Based on the conclusions, the suggestions in this research are: 1) Students can further improve economic literacy; 2) increase knowledge about financial efficacy and decision making; 3) in the future, research will be carried out to improve this research due to the limitations of the authors in this research.

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