

## Research Article

# Are the Undergraduate Students Ready for K-economy?

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**Abstract.**

In this era, the knowledge-based economy (k-economy) is becoming increasingly popular and widely discussed in various circles because it is an economic concept in which knowledge and information are the main factors in generating economic value and creating progress. Students' k-economy readiness is expected to help students prepare well, one of which is with the accounting education they get. This study uses a quantitative approach that examines the effect of accounting education, students have on k-economy readiness. This study uses an online questionnaire distributed to 150 undergraduate students in East Java, Indonesia. The results of this study showed a positive influence of students' accounting education on their k-economy readiness. This study can be used as a basis for developing a learning plan or curriculum for high schools and universities, so that the younger generation can prepare well and participate in the K-economy.

**Keywords:** accounting education, k-economy, economics education, undergraduate students, quantitative

## 1. Introduction

In this modern era, the term knowledge-based economy is becoming increasingly popular and much discussed in various circles. Knowledge-based economy (k-economy) is an economic concept where knowledge and information are the main factors in generating economic value and creating progress (Amirat & Zaidi, 2020; Salman et al., 2020). In the knowledge economy, knowledge and information are the most valuable resources and form the basis for innovation, creation of new products, and improvement of production processes. Information and communication technology development plays a vital role in developing a knowledge-based economy (k-economy). Access to information and technology, as well as the ability to use it, is an essential factor in achieving success in

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the K-economy era (Bano & Taylor, 2015; Toimbek, 2021; Wirba, 2021). Improving skills, education, and learning and adapting is key to facing competition in this era. Overall, the knowledge economy plays a vital role in creating economic progress and improving the quality of life. Knowledge and information are the main factors in creating added value and contributing to sustainable economic growth. In an increasingly connected era and technology is growing, it is essential for individuals and organizations to understand and exploit the potential of the k-economy to achieve success.

Indonesia needs to prepare a knowledge-based economy (k-economy) due to a shift in the economic paradigm from a natural resource-based economy to a knowledge-based economy. In the era of globalization and the Industrial Revolution 4.0, a country's success is determined not only by the wealth of its natural resources but also by the ability to produce, manage, and utilize knowledge. Indonesia needs to prepare the K-economy because currently, countries are competing to attract investment and create quality products and services (E. M. Ahmed, 2018; Zhu & Chou, 2020). By preparing for the knowledge economy, Indonesia can increase its competitiveness and become more attractive to investors. In addition, Indonesia can reduce dependence on natural resources, because Indonesia has abundant natural resource wealth, but dependence on natural resources can have a negative impact on the economy if commodity prices fall or supply decreases. Therefore, by preparing a knowledge economy, Indonesia can reduce dependence on natural resources and create new, unlimited resources.

The K-economy can improve the quality of human resources in Indonesia because it makes quality human resources in technology, science, and creativity. By preparing a knowledge economy, Indonesia can improve the quality of its human resources and create better job opportunities (Bano & Taylor, 2015; Martínez-Martínez et al., 2022; Salman et al., 2020). In addition, increasing the added value of products and services increases competitiveness in the global market. The K-economy enables Indonesia to use technology and information to increase efficiency and productivity in various economic sectors and improve people's welfare.

From the point of view of education in Indonesia, accounting education is critical in preparing for a knowledge-based economy or the k-economy. Accounting education is essential in preparing for k-economy because accounting education can provide a qualified workforce by providing the necessary training to produce a skilled workforce in accounting. A force trained in this field can manage company finances and make the right operating assets and liabilities decisions. The knowledge economy is expected to encourage business growth in Indonesia. Accounting education can be crucial in measuring a company's financial health (Al-Hazaima et al., 2020; Phan et al., 2020).

By understanding accounting principles, entrepreneurs can monitor their business performance and take the necessary actions to improve the efficiency and effectiveness of their business operations. Accounting also helps increase transparency in business. With a sound accounting system, companies can provide clear and accurate financial reports to investors and related parties. This can increase investor confidence and help create a healthy business environment (Boyce 2004; Sharma & Stewart 2022).

Then, in the k-economy, companies often conduct transactions electronically and use information technology. Security risks and financial fraud are becoming increasingly high. Accounting education can help reduce this risk by providing training in properly using accounting and auditing systems. Accounting also helps in making business decisions. By understanding the financial information in financial reports, managers can make better decisions in managing company resources (Hsu et al., 2015; Zapp, 2022). In the k-economy, where technology and information are becoming increasingly important, accounting education is essential to prepare a qualified workforce and help manage business more effectively and efficiently (Mentari et al. 2021; Sharma & Stewart 2022). Better accounting education is expected to improve the quality of company financial information so that it can positively influence economic performance through more informed decision-making by investors and other users of financial information.

From the various theoretical studies, it can be seen that no one has discussed what accounting students should prepare in preparing K-Economy. In fact, by preparing well, accounting students can participate well in the k-economy so that it is useful for them in the present and the future. Then from previous research and facts that happened, above, a problem arises: "Does accounting education have a role in determining the factors that influence student K-economics?". From these problems, the purpose of this article is more focused on the perceptions of accounting education students, because they are the younger generation who are expected to play an active role in k-economy preparation.

## 2. Literature Review

### 2.1. K-economy (Knowledge-Based Economy) in Indonesia

K-economy, also known as knowledge-based economy, refers to a form of economy in which knowledge, information, and technology act as the main factors of production in creating wealth and economic growth (A. Ahmed & Al-Roubaie, 2012; Andrés et al., 2021; Toimbek, 2021). This concept relates to the use of information and communication

technology (ICT) and advances in science and technology to increase productivity and efficiency in all economic sectors. The K-economy differs from the traditional economic model, where the main factors of production are labor, capital, and natural resources. Knowledge and information are considered the main production factors in the K-economy because they can increase productivity and generate higher added value (Al-Busaidi, 2020; Siddiqui & Afzal, 2022). The K-economy can include technology industries, such as software, hardware, telecommunications, and the internet, where technological innovation and knowledge are critical factors in creating value and economic growth.

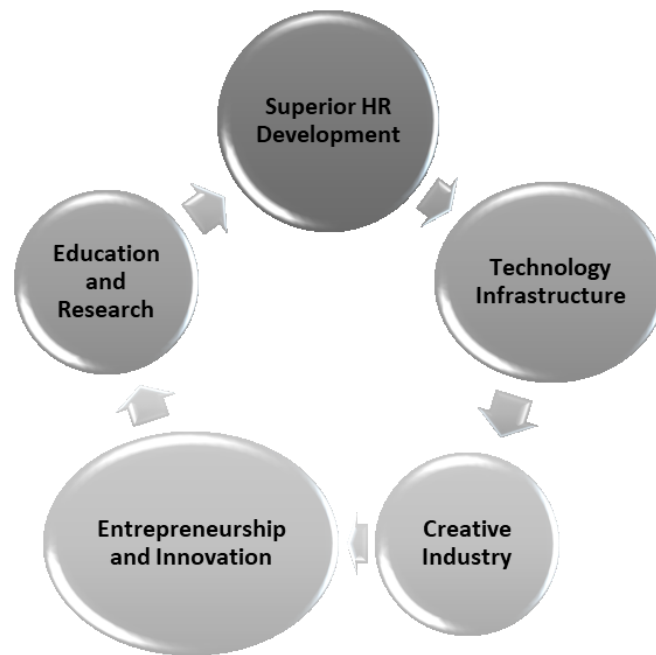
A k-economy or knowledge-based economy is based on the production, distribution, and utilization of knowledge (Ahmadi & Taghizadeh, 2019; Hadiwattege et al., 2018). K-economy is also often dubbed the digital or technology-based economy (Al-Busaidi, 2020; Koolivand et al., 2023). K-economy involves utilizing information and communication technology (ICT) to collect, process, and manage data in producing and distributing goods and services. In a knowledge-based economy, the ability to generate and use knowledge becomes an essential factor in creating value and competitiveness. The K-economy provides many opportunities for economic growth and technological advancement. Still, it also poses several challenges, such as the digital divide between different regions and groups, data privacy, and cybersecurity. Therefore, appropriate arrangements and policies are needed to promote inclusive and sustainable economic growth.

K-economy refers to an economic concept that emphasizes the role of knowledge and information in creating economic growth, innovation, and progress. This concept recognizes that knowledge and information are essential resources in modern society (E. M. Ahmed, 2018; Moos et al., 2019). In a k-economy, the main focus is on developing, producing, and utilizing knowledge and information. This involves investing in education, research and development, and information and communication technologies. The K-economy also emphasizes the importance of collaboration, knowledge exchange, and technology transfer between various economic sectors and institutions. One of the main aspects of a k-economy is innovation. Innovation is the result of developing new knowledge, which is then applied to production processes, products, or services that are more efficient and effective (Zapp, 2022; Ziafati Bafarasat & Oliveira, 2021). Innovation can emerge through scientific research, new technologies, and creative solutions to problems.

In a k-economy, companies and countries seek to increase their capacity to generate and manage knowledge. Education and training are critical factors in developing a k-economy, as they help create a skilled and educated workforce that can contribute to technological innovation and development. Information and communication technology application also plays an essential role in the knowledge-based economy (Kurantin & Osei-Hwedie, 2021; Lee & van der Heijden, 2019). The Internet and digital communications have enabled a faster and broader exchange of knowledge and information between individuals, companies, and institutions. With easy access to information, the knowledge-based economy encourages collaboration, partnerships, and exchanging ideas between various stakeholders. In the context of governance, the k-economy promotes the development of policies based on evidence and accurate data (Koolivand et al., 2023; Ponce et al., 2021). This approach enables more innovative and more effective decision-making in solving economic and social problems. In addition, the government also plays a role in creating a conducive environment for innovation and economic growth through supporting policies, protecting intellectual property rights, and promoting entrepreneurship.

Overall, the K-economy places knowledge and information as valuable assets in the economy. By leveraging knowledge and technology, a k-economy aims to increase efficiency, productivity and competitiveness and promote long-term growth and sustainable development (Denkyirah, 2017; Rottleb & Kleibert, 2022). In Indonesia, the government and various stakeholders have recognized the importance of a K-economy and have taken steps to promote its development. Several aspects that are the focus of building a K-economy in Indonesia are described in Figure 1.

Education and research are improving the quality of education as a top priority in building a knowledge-based economy (Afzal et al., 2012; Rottleb & Kleibert, 2022). The Indonesian government has carried out education reforms involving curriculum reform, developing flagship schools, and increasing access to higher education. In addition, investment in research and development was also intensified to encourage innovation and new discoveries. Technology infrastructure is the development of information and communication technology infrastructure which is the key in driving a k-economy (Afzal et al., 2012; Lee & van der Heijden, 2019). The government has launched programs to expand internet access, improve connectivity, and build technology centers in various regions in Indonesia. This enables wider dissemination of information and knowledge and facilitates collaboration and innovation. The creative industry can be in the form of developing the creative industry to become one of the sectors considered to have great potential in a k-economy (Afzal et al., 2012; Shah et al., 2022). The creative industries



**Figure 1:** Focus on k-economy in Indonesia (Afzal et al., 2012; World Bank, 2021).

cover fields such as art and culture, design, fashion, film, music and digital games. The government provides support in the form of tax incentives, access to financing, and training to encourage the growth of creative industries and generate added economic value through knowledge and creativity.

The Indonesian government also needs entrepreneurship and innovation to encourage the growth of entrepreneurship and innovation as part of a k-economy (Afzal et al., 2012; Lee & van der Heijden, 2019; Muthmainnah et al., 2022). Steps have been taken to facilitate the establishment of startups and new technology companies and provide access to finance and a conducive business environment. In addition, innovation policies and programs were introduced to encourage collaboration between the public, private, and academic sectors in generating new solutions and technologies. The development of superior human resources can also be in the form of investment in the development of excellent human resources which is very important in building a k-economy (Afzal et al., 2012; Rottleb & Kleibert, 2022). The government realizes the need to improve workforce quality through training, vocational education, and skills development programs. With competent and knowledgeable human resources, Indonesia can be better prepared to face challenges and opportunities in the global economy. Although efforts have been made to promote a K-economy in Indonesia, some challenges still need to be overcome, such as the digital divide, low levels of innovation, and limited access to education and training. However, with a strong commitment from the government, cooperation with

the private sector, and active participation from the community, Indonesia has great potential to achieve sustainable knowledge-based economic growth in the future.

H1: Accounting education significantly influences the students k-economy readiness.

## 2.2. Accounting Education in Indonesia

Accounting education is a field of education that aims to develop knowledge and skills in accounting (Ebaid, 2022; Sangster et al., 2020). This involves learning about basic accounting principles, methods of financial recording, analysis of financial statements, and application of relevant accounting regulations and standards. Accounting education aims to train individuals in correctly recognizing, analyzing, and recording company financial transactions. In addition, this education also aims to develop skills in preparing accurate financial reports and understanding the resulting financial information (Al Mallak et al., 2020; Behn et al., 2012; Ebaid, 2022). Accounting education curricula typically cover subjects such as financial accounting, management accounting, taxation, auditing, accounting information systems, and company law. During the educational program, students will also learn techniques of financial analysis, use of accounting software, and understand important concepts such as balance sheet, income statement, cash flow, and calculation of financial ratios. Accounting education is usually available in both undergraduate and postgraduate forms at colleges and universities. In addition, there are also professional bodies that offer additional training and certification for accounting professionals.

After completing accounting education, graduates have broad career opportunities. They can work as public accountants, internal accountants, financial analysts, tax consultants, or auditors. Some also choose to open their own accounting practices or work as lecturers or researchers in academia. Accounting education is very important in business and finance because accurate and reliable financial information is needed to make good decisions (Alshurafat et al., 2021; Boyce, 2004; Xie et al., 2023). With the knowledge and skills acquired through accounting education, individuals can assist organizations in managing their finances effectively and meeting the needs of applicable accounting regulations and standards.

Accounting education is essential for students who want to prepare themselves to face an increasingly complex global economy. Accounting education is important in preparing one's finances and economics. Accounting education provides a solid foundation of knowledge about finance's basic concepts and principles (Al Mallak et al., 2020; Ebaid, 2022; Xie et al., 2023). Students learn about bookkeeping, financial



reports, financial analysis, and measurement of financial performance. This knowledge will help students understand the financial aspects that underlie all economic activities. Accounting provides tools and techniques for collecting, analyzing, and interpreting financial information. Students studying accounting will have the ability to use financial data to make more informed decisions. They can analyze the financial health of a company or entity, evaluate investments, or make strategic decisions based on available financial information. Accounting education equips students with important financial management skills (Daff, 2021; Russo et al., 2021). They will learn about budget planning, cash flow management, cost control, and making smart financial decisions. These skills are indispensable in the world of business and organizations where sound financial decisions can contribute to the growth and sustainability of a company.

In the financial and economic context, transparency and accountability are very important. Accounting education teaches students about accounting ethics, financial reporting standards, and principles of accountability (Al-Hazaima et al., 2020; Sangster et al., 2020; Sharma & Stewart, 2022). By understanding the importance of transparency and accountability in financial reporting, students will be able to maintain integrity in the financial reporting process and comply with applicable regulations. Accounting education provides a strong foundation for a variety of careers in finance and accounting (Irsyadillah & Bayou, 2022; Lubbe, 2020). Students studying accounting will have opportunities to work as accountants, auditors, financial analysts, tax consultants, or financial managers. The demand for highly qualified accounting professionals continues to increase, so accounting education can open up promising career opportunities.

### 3. Method

A descriptive method will be used to answer the problems of this research. The choice of this method was due to the desire to explore the type of education students have capable of contributing to the readiness for economic knowledge. The population and sample in this study were all accounting minor economics students at Universitas Negeri Malang and Universitas Negeri Surabaya, with a total sample of 150 respondents. Researchers chose Universitas Negeri Malang and Universitas Negeri Surabaya because they are the best educational universities in East Java, Indonesia (Pangkalan Data Pendidikan Tinggi 2022). Determination of the number of samples using the Krejcie formula (Krejcie & Morgan, 1970). The instrument used to answer the research problem was collected using an online Jootform survey with a 7-point Likert scale. As for the data analysis, this study will use multiple regression analysis with the condition that



the decision-making is a significance value of F value  $< 0.05$  (Bougie & Sekaran 2016; Creswell & Clark 2017). The prerequisite test will be carried out first before carrying out the multiple regression analysis test, while the prerequisite test used is the normality test with Asymp decision-making. Sig (2-tailed)  $> 0.05$ , Multicollinearity test with decision-making VIF  $< 10$ , Linearity test with decision-making dL  $> 0.05$ , and heteroscedasticity test with decision-making the distribution of all data is above and below zero (Bougie & Sekaran 2016; Creswell & Clark 2017).

### 4. Result

The results of calculations using the SPSS program show that all instrument items have normality, multicollinearity, linearity (table 1), and heteroscedasticity (Figure 1) which meet the requirements of the classical assumption test.

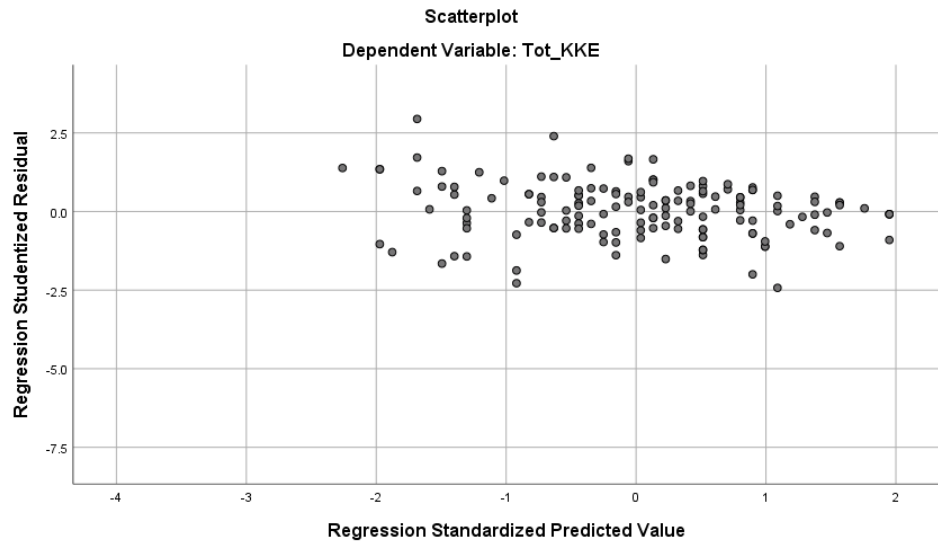
TABLE 1: Summary of Normality, Multicollinearity and Linearity Results.

No.	Types of Classical Assumptions Test	Calculation Results	Basic Decision	Making Conclusions	Decision
1.	Normality	0.087	Asymp. Sig (2-tailed) $> 0.05$	Data is normally distributed	
2.	Multicollinearity	2.371	VIF $< 10$	There are no symptoms of multicollinearity	
3.	Linearity	0.625	dL $> 0.05$	There is a linear relationship between the condition of student education and the students' K-economy readiness	

Source: Bougie & Sekaran (2016)

From Table 1 it is known that the results of the classical assumption test, both of the types of normality, multicollinearity, and linearity, the value of the calculation results is by the basis for decision making, namely for normality it has a value of Sig. (2-tailed)  $> 0.05$  [ $0.087 > 0.05$ ], multicollinearity has a value of VIF  $< 10$  [ $2.371 < 10$ ], and linearity has a value of Deviation from Linearity (dL)  $> 0.05$  [ $0.625 > 0.05$ ].

As for the results of the heteroscedasticity test, it is known that all data are spread above and below zero, besides that the data also does not form a special pattern or pattern, so that it can be said that the results of the heteroscedasticity test indicate that a good and ideal regression model can be fulfilled. That is, all instrument items have classical assumption test results that are in accordance with the basis for decision making, so that all instrument items can be used as a further analysis tool, namely



**Figure 2:** Heteroscedasticity Test Results. Source: Result of Research Data Using SPSS.

to measure and determine the magnitude of the influence of the educational conditions of students in the accounting minor economics education program on economic knowledge readiness.

After all the data has passed the classical assumption test, the next step is to test the hypothesis. As for the results of testing the hypothesis with the help of SPSS (table 2), it is known that the value of the correlation coefficient (R) is equal to 0.873 so that it can be explained that the relationship between the two research variables is in a category that has a strong correlation that is equal to 87.3%. While the resulting coefficient of determination (R Square) is 0.801 or 80.1%, meaning that the type of education students have in the accounting minor economics education program (independent variable) has a significant contribution to the readiness of the economic knowledge they have in supporting economic growth country in the future.

TABLE 2: Summary of Hypothesis Testing Results.

	Model	R	R Square	F	Sig.
1	Regression	.873	.801	142.007	.001
Dependent Variable: Tot_K-economy Predictors: (Constant), Tot_Accounting education					

Source: Result of Research Data Using SPSS

In addition, in table 2 above it is also known that the significance value in the F test used to determine how much the linearity of this regression model is 0.001, because the significant results of the F test have a Sig value. < 0.05 it means that the regression model can be used to predict the economic knowledge readiness variable. From the results of the R, R-Square and also Sig. F test can be concluded that the variable type

of education owned by students is able to predict in influencing the readiness of the economic knowledge they have. That is, the type of education they have will be able to influence their behavior in accessing broader and more complex knowledge.

## 5. Discussion

The test results can be stated that there is a very strong influence between students' Accounting Education and K-economy. By having a K-economy students will have wider career opportunities because in the K-economy there is a high demand for digital skills, technology and knowledge related to innovation (Bano & Taylor, 2015; Boyce, 2004). Students who already have K-economy have acquired skills in seizing opportunities in rapidly growing sectors such as information technology, creative industries, research and development and start-ups (European Commission, 2004; Xie et al., 2023).

In the K-economy era, competition in the job market is getting tougher. So that, students who already have K-economy with relevant skills will have a competitive advantage in finding work because they already have adaptations to technological change and innovation. Not only the potential to capture wider job opportunities but also the potential for entrepreneurship. Having a K-economy provides opportunities for students to become entrepreneurs because they already have the right skills to identify business opportunities that arise from technological developments and innovation. Innovating and adapting quickly will help students deal with risks and develop successful businesses (Martínez-Martínez et al., 2022; Toimbek, 2021; Wirba, 2021).

The K-economy owned by students allows them easier access to relevant resources and information. This is because they can easily access online learning platforms which are balanced by participating in digital skills training and professional communities and are supported by business networks that can assist them in developing their careers and understanding industry trends. By having a higher K-economy, you will have a higher level of innovativeness, resulting in a more creative economy (Cvetanovic et al., 2015; Jabbari et al., 2022).

Having a K-economy is also capable of developing innovation potential and technological development as seen from involvement in research activities, product development, or development of applications and technological solutions that can have a positive impact on society and the business world (Hassen, 2020; Moos et al., 2019; Švarc & Dabić, 2017). Stimuli such as creative processes and problem solving encourage the development of creative and unique solutions related to factual issues. Through collaboration in the research field, knowledge, resources, and experiences can be

shared, encouraging innovation and better technology development (Choong & Leung, 2021; Zapp, 2022).

## 6. Conclusion

The K-economy differs from the traditional economic model, where the main factors of production are labor, capital, and natural resources. In the k-economy, knowledge and information are considered the main production factors because they can increase productivity and generate higher added value. In Indonesia, the government and various stakeholders have recognized the importance of a K-economy and have taken steps to promote its development. Accounting education is expected to be meaningful support for students' K-economy readiness because mastering accounting education will give students the skills needed for K-economy readiness. The results of this study also explain that accounting education positively influences students' economic willingness.

This research implies that there will be an adjustment to the undergraduate-level education curriculum so that it is more relevant to the demands of K-economy. Educational institutions must update their curricula to include courses teaching digital skills, technology, innovation, collaboration, and creativity. In addition, learning strategies that encourage problem-solving and analytical thinking need to be strengthened. The implication is that educational institutions must be committed to continuously updating and improving their curricula to prepare students to face the K-economy. There is also a need for collaboration between educational institutions and industry. This collaboration can include internships, research collaborations, joint curriculum development, or the organization of events and seminars involving industry professionals.

Suggestions for further research need to be re-examined for other factors that might be other determining factors for k-economy readiness. It is also necessary to study factors other than in the fields of education and the economy so as to make a more concrete basis for determining factors in student k-economy readiness. It is hoped that this research can be used as material for consideration for compiling and revising economic-laden curricula, especially accounting.

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