

## Model for Developing Student Entrepreneurial Intentions to Anticipate Educated Unemployment

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### Abstract

This research addresses the pressing issue of increasing unemployment among college graduates in Palu City, arising from the lack of opportunities in the formal job market. To combat this problem, the study proposes fostering creativity, initiative, innovation, and independence among graduates through entrepreneurial activities. The research aims to design and develop a model that stimulates students' entrepreneurial intentions to preempt the rise in educated unemployment in Palu City. The specific objectives are as follows: 1) Identify the level of entrepreneurial interest among students; 2) Test and analyze the implementation of the Student Entrepreneurial Intention Model, considering entrepreneurship education, achievement needs, and self-efficacy among students at Tadulako University, Palu; 3) Develop a Student Entrepreneurial Intention Model based on the Theory of Planned Behavior, tailored to the unique characteristics of Tadulako University students. Employing a survey method with a quantitative and qualitative descriptive approach, the research utilizes primary and secondary data, including questionnaires, interviews, and observations. The unit of analysis comprises students who took the Entrepreneurship Course during the Even Semester of 2014-2015 at Tadulako University. Data analysis employs descriptive and inferential techniques, specifically Partial Least Square (PLS). This research is expected to contribute to addressing the growing issue of educated unemployment by empowering students to embrace entrepreneurship as a viable career option and pave the way for a more sustainable and enterprising economy in Palu City.

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**1. Introduction**

The fundamental issue of employment in Indonesia, besides wage and occupational safety problems, is the high level of unemployment. This is caused by the increase in the new workforce exceeding the growth of available job opportunities (Puspajuita, 2018). In general, the number of the labor force in Indonesia was 125.3 million people in February 2014, which increased by 5.2 million from August 2013 (ILO, 2015). However, this growth is not accompanied by a proportional increase in job opportunities to accommodate the expanding labor force every year. As a result, many people are left without work or fall into the category of unemployment, either as disguised unemployment or underemployment (Yunikawati et al., 2018).

According to data from the Central Bureau of Statistics in 2015 (bps.go.id), the number of unemployed people in Indonesia reached 7.6 million in August 2015, with the open unemployment rate (TPT) increasing from 5.81 percent in February 2015 to 6.18 percent in August 2015. Among these figures, 6.40 percent were bachelor's degree holders, and 7.54 percent were diploma holders.

**Table 1.** The Highest Education Open Unemployment Rate in Palu City, Central Sulawesi

Education	Agust 2011	Agust 2012	Agust 2013
Elementary school	982	867	795
Middle school	1.954	263	1.778
Senior High School	4.686	5.954	6.777
Diploma I/II/III/Academy	122	398	0
University	487	3.190	3.389

Source: <http://pusdatinaker.balitho.depnakertrans.go.id/>

Formal education level does not always guarantee someone's ability to be absorbed into the workforce. Ironically, the higher someone's education level, the higher the probability or likelihood of them becoming unemployed as well (Saputra et al., 2020). Entering a period of high free competition, graduates in Indonesia are expected to possess and develop competitive advantages to become pioneers in the job market. They must have adequate capacity to be agents of change through creating new job opportunities, rather than being job seekers (Núñez & Livanos, 2010).

Entrepreneurial activities are one of the solutions to anticipate the limited job opportunities, especially in the formal sector. However, the low quality of human resources (HR) and the lack of interest or entrepreneurial intention among college graduates are significant obstacles (Firman & Putra, 2020). Entrepreneurship offers opportunities for the workforce to create or open job opportunities and manage them independently. Supported by a strong work ethic and determination, job seekers can optimize their potential. Entrepreneurship is a determining factor and a driving force in achieving economic development and job creation (Khan et al., 2021).

Palu City has plenty of potential that can be developed through entrepreneurial activities. However, the current challenge is the low entrepreneurial intention, especially among students, to actively participate as economic agents. Therefore, a suitable development model is needed to enhance the understanding of how to foster and encourage interest and entrepreneurial behavior from the time students are still in college (Pusriawan & Soenarto, 2019).

Intention is one of the supporting factors for the emergence of entrepreneurial interest (Neves & Brito, 2020). According to the Theory of Planned Behavior (TPB), if someone thinks with a positive attitude and aligns their thoughts with their desires, they can develop a strong desire to take actual actions (Ajzen, 1991). Entrepreneurial intention has been proven to be the best predictor of entrepreneurial behavior (Krueger et al., 2000). Therefore, intention can be used as an approach to encourage someone's desire to become an entrepreneur. An individual's entrepreneurial intention can be influenced by factors such as personality traits, educational background, demographic factors, social and cultural aspects (Liñán et al., 2011). The purpose of this research is to analyze, study, and establish a formulation to explore students' entrepreneurial interest through a student entrepreneurial intention model to anticipate the increase in educated unemployment in Palu City.

## **2. Literature Review**

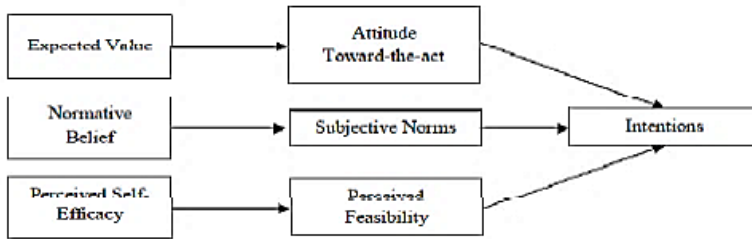
### **2.1 Concept of Entrepreneurial Intention**

One of the theories related to intention is the Reasoned Action Theory, which is considered a dominant intention model in social psychology. This theory emphasizes that if someone evaluates themselves with a positive attitude and aligns their thoughts with what they desire (subjective norm), it can lead to high intentions, and they will gladly act accordingly. This will be evident in their behavior. The development of this theory was refined by Ajzen (1991) with the Theory of Planned Behavior by adding a third component as an additional key, which is Perceived Behavior Control (PBC), representing a strong desire to perform a behavior that may not be entirely under a person's control. The Theory of Planned Behavior defines intention as a function of three factors: attitude toward behavior, subjective norm, and perceived behavior control (Krueger et al., 2000).

1. Attitude toward behavior refers to an individual's interest in a specific behavior. Generally, if someone believes that engaging in a certain behavior will lead to the most positive outcomes, they will have a supportive attitude towards that behavior.
2. Subjective norm refers to the social pressure received to perform a desired behavior. This pressure can come from others, such as family, friends, role models, or mentors.
3. Perceived behavior control refers to an individual's belief in their ability to carry out a task or behavior that is under their control. The measurement of behavior control is similar to the concept of self-efficacy, as intention and behavioral determinants are rooted in perceptions, gradually developed from beliefs. The model can be seen in Figure 1.

One of the factors that gives rise to entrepreneurial behavior is the desire to do something new through self-effort. Intention is a crucial component in the Theory of Reasoned Action and is a successful predictor of behavior because it bridges attitudes and actions. Thus, intention can be seen as a specific part of an individual's beliefs as the object and behavior as the attribution (Ajzen & Fishbein, 1975). According to

Hisrich (1990), intention indicates motivational factors that influence behavior and the level of effort a person is willing to exert, as well as how much effort they plan to use in carrying out that behavior.



Source: Krueger, et al., 2000.

**Figure 1.** Model Theory of Planned Behavior (TPB)

## 2.2 Concept of Need for Achievement

The concept of achievement needs is derived from cognitive motivation theory. This theory is based on the emergence of a need. Motives are defined as internal psychological drives that facilitate the emergence of specific behavioral patterns (Kim & Noh, 2016). According to Huitt (2001), motivation is the process in which individuals recognize their needs and take action to satisfy them. The brief definition above highlights two important points. First, motivation is a process that can explain the occurrence of behavior directed towards achieving goals. Second, motivation is the drive for individuals to take action in an effort to satisfy their needs. Individuals tend to become more active when they are motivated. One theory that aligns with this is McClelland's Achievement Theory (1965), which divides human motives into three groups, namely: [the specific groups are not mentioned in the provided text:

1. The need for power (power need, N Pow)
2. Affiliation needs (N-Aff)
3. Achievement needs (N-Ach).

The need for achievement views that in essence humans have the ability to excel. High individual needs affect the need for achievement and are required to take advantage of opportunities. The need for achievement is one of the personality characteristics that will encourage someone to have entrepreneurial intentions. There are four attributes attached to someone who has a high need for achievement, namely:

1. Likes high responsibility for the implementation of a task or finding a solution to a problem. As a result, they prefer to work alone than with others.
2. Willing to take risks according to his ability.
3. Have a strong desire to always learn from the decisions that have been made.
4. Always optimistic in unfavorable situations.

Based on the explanation above, it can be concluded that individuals who have a high need for achievement are individuals who want to solve their own problems, or set goals, and try to achieve goals through their own efforts. They enjoy showing higher performance in challenging and innovative tasks and to seek new and better ways to improve their performance.

### **2.3 Self Efficacy Concept**

Self-efficacy is a concept derived from Bandura's Social Cognitive Learning Theory (1997). This theory refers to an individual's belief in their ability to perform a specific task. Self-efficacy is a social learning concept that entails the understanding that human thoughts and activities originate from what is learned in society. In short, this theory states that most of an individual's knowledge and behavior are driven by their environment and continuously undergo thinking processes based on the received information.

Individual cognitive processes vary depending on their unique personal characteristics. According to Bandura (1997), self-efficacy is an individual's belief in their ability to perform tasks or actions required to achieve specific outcomes. Essentially, self-efficacy is a result of cognitive processes in the form of decisions, beliefs, or expectations about the extent to which individuals estimate their own abilities to perform tasks or actions to achieve desired outcomes. Perceptions of self-efficacy in each individual develop gradually through continuous accomplishments of specific abilities and experiences. Bandura (1997) further argues that self-efficacy is a significant contributor to forming intentions and behaviors. Moreover, it is explained that self-efficacy is not only related to a set of skills a person possesses but also concerns the belief in successfully performing tasks based on their abilities under various conditions.

The concept of self-efficacy acquired from the social learning theory plays a vital role in the development of entrepreneurial intentions and actions. Individuals with high self-efficacy will have a strong intention for self-improvement through entrepreneurship. This can be interpreted that high self-efficacy can result in better initiative and persistence, thereby enhancing performance. Conversely, low self-efficacy tends to lower performance. People with high self-efficacy think and behave differently compared to those with low self-efficacy. Self-efficacy influences the choice of actions and the amount of effort exerted to achieve entrepreneurial success (Zulkosky, 2009).

### **2.4 Entrepreneurship Education Concept**

Entrepreneurship is the spirit of an individual expressed through creative and innovative attitudes and behaviors to undertake an enterprise. Thus, it needs to be emphasized that the goal of entrepreneurship education is not only directed towards producing business entrepreneurs but encompasses all professions based on an entrepreneurial spirit. According to a broader conception, entrepreneurship education is a set of teaching and training activities within the education system focused on developing the intention to become an entrepreneur, identifying elements influencing that intention, such as entrepreneurial knowledge, interest in entrepreneurial activities, or the possibility to engage in them (Linan, 2004).

Entrepreneurship education includes activities in the learning and training process that provide knowledge about entrepreneurship and how to engage in entrepreneurial activities. According to Bell (2008), traditional entrepreneurship education focuses on business plan development, securing financing, the process of business development, and small business management. It also imparts knowledge of entrepreneurial principles and technical skills in running a business.

Entrepreneurship education programs at Indonesian universities, particularly at Tadulako University, encompass: (1) Entrepreneurship Culture Development Program, which includes entrepreneurship lectures, entrepreneurship internships, business study lectures, business consultations, and new entrepreneurial incubators; (2) Student Creativity Program; (3) Retooling Program, and (4) Student Entrepreneurship Program.

### 3. Methods

The research method used is a quantitative and qualitative descriptive approach with a survey method. Data obtained from the Entrepreneurship Course Unit of Tadulako University shows that the number of students who took the Entrepreneurship course in the Even Semester of the academic year 2015/2016 was 1,952. The sample size was determined using the Slovin formula, with a significance level ( $\alpha$ ) of 5%. Thus, the minimum sample size obtained is 387 individuals. This research consists of two variables, namely independent variables and dependent variables. The independent variables are Achievement Needs (X1), Self-Efficacy (X2), and Entrepreneurship Education (X3). The dependent variable is Entrepreneurial Intention (Y). The methods used are Descriptive Statistical Method and Inferential Statistical Method (Partial Least Square).

In summary, the flowchart of this research is depicted in a Fishbone Diagram (Figure 2).

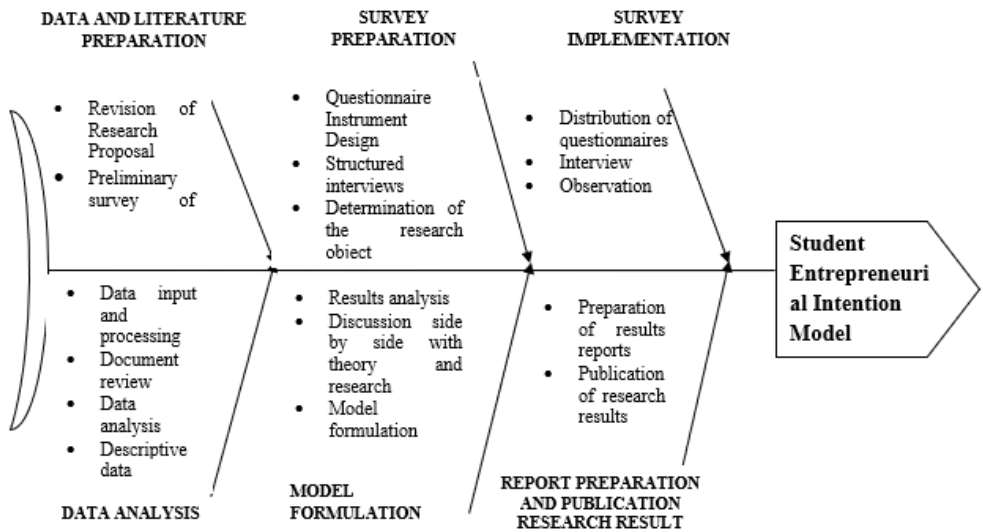


Figure 2. Research flowchart (Fishbone Diagram) Competitive Grants

### 4. Results

#### 4.1 Entrepreneurial Intention

The following is a description of respondents' perceptions regarding their entrepreneurial intentions. This variable indicator includes several aspects, namely 'desire to become an

entrepreneur' (Y1), 'desire to have own business' (Y2), 'convenience' (Y3), 'capital' (Y4), 'freedom in work' (Y5), 'not dependent on others' (Y6), 'utilizing resources' (Y7), 'parental support' (Y8), and 'future security' (Y9).

**Table 2.** Respondents' Perception Descriptive of Entrepreneurial Intention (Y)

Indicators and Items	1		2		3		4		5		Average (Means)
	f	%	f	%	f	%	f	%	f	%	
Becoming an Entrepreneur (Y.1)	4	1,03	14	3,62	79	20,41	118	30,49	172	44,44	4,14
Own Business (Y2)	5	1,29	14	3,62	96	24,81	161	41,60	111	28,68	3,93
More Comfortable Entrepreneurship (Y3)	4	1,03	31	8,01	139	35,92	119	30,75	94	24,29	3,69
Enough Capital to Open a Business (Y4)	6	1,55	11	2,84	15	3,88	138	35,66	217	56,07	4,42
Freedom at Work (Y5)	5	1,29	17	4,39	64	16,54	151	39,02	150	38,76	4,10
Not Dependent on Others (Y6)	5	1,29	10	2,58	45	11,63	98	25,32	229	59,17	4,39
Utilizing All Resources (Y7)	3	0,78	8	2,07	79	20,41	177	45,74	120	31,01	4,04
Parental Support (Y8)	5	1,29	11	2,84	92	23,77	137	35,40	142	36,69	4,03
Entrepreneurs Guarantee the Future (Y9)	3	0,78	13	3,36	102	26,36	138	35,66	131	33,85	3,98
<b>Average (Y)</b>											<b>4,08</b>

Based on the table above, it shows that entrepreneurial intention among students can be built through several indicators. Additionally, the students have a good understanding of high entrepreneurial intention, as indicated by the average perception score of 4.08.

The most prominent indicator of entrepreneurial intention is the 'sufficient capital' indicator to start a business, with an average respondent's score of 4.42. According to the respondents, capital, in this case referring to financial resources, is still the primary indicator in fostering entrepreneurial intention. The availability of capital is still considered a 'major' requirement that must be fulfilled by anyone who wants to engage in entrepreneurial activities. On the other hand, there are several other indicators that can be considered in fostering or strengthening an individual's entrepreneurial intention beyond financial matters.

Meanwhile, the indicator in second place is 'not depending on others,' with an average score of 4.39. Not relying on others signifies the independence of entrepreneurs, which respondents believe to be a catalyst for the emergence of entrepreneurial intention. Respondents' answers based on 'comfort in entrepreneurship' show an average score of 3.69. Overall, the table above also illustrates various factors that influence entrepreneurial intention.

#### 4.2 Achievement Needs

Table 3 above presents the description of respondents' responses regarding the achievement needs variable among students from Tadulako University (Untad). Regarding the intensity of achievement needs, Untad students show high motivation in achieving success and consider this

need important in fostering entrepreneurial intention. The average perception score of respondents towards achievement needs is 4.08.

**Table 3.** Descriptive Respondents' Perceptions of the Need for Achievement (X1)

Indicators and Items	1		2		3		4		5		Average (Means)
	f	%	f	%	f	%	f	%	f	%	
Doing Tasks Well (X1.1)	6	1,55	2	0,52	38	9,82	179	46,25	162	41,86	4,26
Dare to Take Risks (X1.2)	5	1,29	5	1,29	34	8,79	197	50,90	146	37,73	4,22
Optimistic (X1.3)	6	1,55	7	1,81	66	17,05	173	44,70	135	34,88	4,10
Attempting to Improve unsatisfactory results (X1.4)	5	1,29	4	1,03	22	5,68	151	39,02	205	52,97	4,41
Ability to Manage Business (X1.5)	4	1,03	15	3,88	137	35,40	150	38,76	81	20,93	3,75
Entrepreneurship is Accepted by Many People (X1.6)	3	0,78	10	2,58	152	39,28	147	37,98	75	19,38	3,73
<b>Average (X1)</b>											<b>4,08</b>

The most prominent indicator of achievement needs is 'striving to improve unsatisfactory results,' with an average respondent's score of 4.41. This indicates the individual's determination to continuously strive for self-improvement and strengthen their commitment to achieving success in their field of pursuit. When observed from the perspective of evaluation and improvement, students show enthusiasm in continuous evaluation and improvement without being easily satisfied with the achieved results. The indicator 'completing tasks well' has an average score of 4.26, and the indicator 'willing to take risks' has an average score of 4.22.

The indicator 'entrepreneurship being widely accepted' shows an average of 3.73, which means most respondents agree with the acceptance of entrepreneurship in society as an alternative occupation. Overall, respondents' responses depict a spirit and inspiration in achieving success, particularly in the context of entrepreneurship. This indicates that success in entrepreneurship requires a commitment to fulfill achievement needs and enthusiasm in evaluation, improvement, and a willingness to face challenges and risks. The desire for continuous self-improvement and the spirit of achieving success will be crucial factors in developing and sustaining independent ventures.

The description of respondents' responses in Table 4 shows the confidence and abilities of students in performing tasks well, although their level of confidence has not reached a high level (average of 3.80). The prominent indicator is 'rising after failure' in entrepreneurship with an average of 4.08, reflecting the potential of respondents' abilities to develop an optimistic attitude and learn from failures.

Furthermore, the indicator 'ability to generate new business ideas' also stands out with an average of 4.02, illustrating the creativity of respondents in developing business ideas. The indicator 'confidence in facing uncertainty in entrepreneurship' with an average of 3.61 shows the readiness of respondents to face uncertainty, which is an important asset in managing independent ventures.

Interestingly, there are two indicators, 'resource management' and 'required skills,' with the same average score of 3.78, indicating the ability of respondents to manage resources and their awareness of the importance of mastering skills.

**Table 4.** Respondents' Perception Descriptive on Self-Efficacy (X2)

Indicators & Items	1		2		3		4		5		Average (Means)
	f	%	f	%	f	%	F	%	f	%	
Managing Others (X2.1)	3	0,78	33	8,53	130	33,59	155	40,05	66	17,05	3,64
Ability to Create New Business Ideas (X2.2)	2	0,52	11	2,84	79	20,41	179	46,25	116	29,97	4,02
Finding Market Information (X2.3)	4	1,03	16	4,13	118	30,49	195	50,39	54	13,95	3,72
Searching for Information and Sources of Funds (X2.4)	5	1,29	18	4,65	116	29,97	192	49,61	56	14,47	3,71
Responding to Others (X2.5)	2	0,52	13	3,36	103	26,61	188	48,58	81	20,93	3,86
Confidence in Facing Uncertainty in Entrepreneurship (X2.6)	5	1,29	21	5,43	148	38,24	159	41,09	54	13,95	3,61
Managing Resources (X2.7)	2	0,52	14	3,62	113	29,20	195	50,39	63	16,28	3,78
Required Skills (X2.8)	2	0,52	15	3,88	130	33,59	161	41,60	79	20,41	3,78
Facing Risk (X2.9)	2	0,52	13	3,36	103	26,61	196	50,65	73	18,86	3,84
Rise up when Failed in Entrepreneurship (X2.10)	4	1,03	9	2,33	77	19,90	160	41,34	137	35,40	4,08
<b>Average (X2)</b>											<b>3,80</b>

### 4.3 Entrepreneurship Education

Table 5 explains that the most prominent indicator of entrepreneurship education is 'improving communication skills with others' with an average respondent's score of 4.26. The majority of respondents stated their agreement or strong agreement on the importance of communication skills in the process of identifying, implementing, and evaluating stakeholders involved in entrepreneurship.

The second-ranked indicator is 'enhancing creativity in finding business ideas' with an average of 4.25. This creativity includes the ability to identify and exploit emerging business opportunities and is considered a key success factor in entrepreneurship. Next, 'business management skills' have an average of 4.24, indicating the importance of mastering skills in managing a business for achieving success. However, the indicator 'highly applicable entrepreneurship discussions' has an average of 3.89, indicating the need to complement entrepreneurship education with applications

to strengthen the understanding of theory. Thus, students can develop experience in running businesses even on a small scale and with simple methods.

**Table 5.** Respondents' Perception Descriptive on Entrepreneurship Education (X3)

Indicators and Items	1		2		3		4		5		Average (Means)
	f	%	F	%	f	%	F	%	f	%	
Self Confidence (X3.1)	5	1,29	9	2,33	43	11,11	184	47,55	146	37,73	4,18
Business Management Skills (X3.2)	8	2,07	6	1,55	32	8,27	180	46,51	161	41,60	4,24
Improving Ability to Communicate with Others (X3.3)	5	1,29	9	2,33	34	8,79	173	44,70	166	42,89	4,26
Experience in running a business (X3.4)	6	1,55	5	1,29	44	11,37	177	45,74	155	40,05	4,21
Increasing Creativity in Finding Business Ideas (X3.5)	5	1,29	10	2,58	32	8,27	177	45,74	163	42,12	4,25
Material as Required (X3.6)	3	0,78	6	1,55	56	14,47	169	43,67	153	39,53	4,20
Good method (X3.7)	6	1,55	11	2,84	81	20,93	177	45,74	112	28,94	3,98
Very Applicative Entrepreneurship Discussion (X3.8)	5	1,29	10	2,58	100	25,84	180	46,51	92	23,77	3,89
Strengthening Entrepreneurial Will (X3.9)	5	1,29	9	2,33	88	22,74	162	41,86	123	31,78	4,01
<b>Average (X3)</b>											<b>4,13</b>

Overall, the results in the table above show that entrepreneurship education needs to emphasize communication skills, creativity, and business management skills, while also providing an applied approach to practice theories in business development.

The results of the initial stage of the research show a relatively high level of intention among Tadulako University students to engage in entrepreneurship. However, there are doubts regarding business security, sustainability, and their business's ability to ensure the future. The availability of venture capital is the primary concern. Students who come from entrepreneurial family backgrounds tend to have a higher intention to start their own businesses. Support and the role of parents (role models) significantly impact the development of students' entrepreneurial intentions. Communication skills, creativity, independence, achievement, and willingness to take risks are also factors that influence entrepreneurial intentions. High dispositional optimism among students also plays a crucial role in building entrepreneurial intentions. Entrepreneurship programs and applied education, along with an integrated approach connecting classroom activities with real-life experiences outside of the campus, can enhance students' entrepreneurial interest.

## 5. Conclusion

Preliminary results of this study have identified several variables that are considered to trigger Tadulako students' interest in entrepreneurship. These results will be used to build a model of entrepreneurial interest that is expected to be adopted at the university level to reduce youth unemployment in the Central Sulawesi region. Overall, these findings call for a holistic approach to understanding entrepreneurial interest that includes the dimensions of need for achievement, self-efficacy, and entrepreneurial education. An important finding from this study is that Tadulako University students show a relatively strong interest in starting their own new business, even though there are still doubts about the uncertainty of the business climate.

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