Abstract: This study investigates whether information technology students participation within factors such as desirability and feasibility affects Creativity and Technopreneurship Intentions before or after their graduation. Using a sample of 187 students within computer science faculty, Brawijaya University, this study finds that participation in desirability and feasibility and Creativity is positively associated with measured Technopreneurship Intentions. Sem-pls analysis methods with SPSS and Warp-PLS is implemented. Further analysis arising from desirability and feasibility reveals that is fully mediated with Creativity and Technopreneurship Intentions. Overall, these findings offer empirical evidence on the importance of desirability and feasibility of the relationship between Creativity and Technopreneurship Intentions.

Keywords: Desirability, Feasibility, Creativity, Technopreneurship, Technopreneurship Intentions, SEM-PLS.

PRELIMINARY

Young people have a harder job-finding level than adult workers because the availability of employment for the younger generation in Indonesia is declining. Based on World Bank data in 2014, the number of unemployed is quite worrying where in the next decade is expected to increase 1 billion job seekers entering the global job market so that requires at least 5 million new jobs each month. Even young people in Indonesia today are on average more than three times as likely to get jobs as adults (ANTARA, 2015). Changing the current paradigm or mindset of job seekers into job creators is very important to be constantly improved continuously for the younger generation.

The high unemployment rate in Indonesia is caused by the mindset of young people who prefer to pursue their education for working in an institution or company later so that only small amount of young people become entrepreneurs or job creators, which then affect the unavailability of employment.

Changing this mindset is not an easy thing to run. Entrepreneurship is one way to change the existing paradigm. Entrepreneurship is the practice of consistently or constantly changing good ideas
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into profitable commercial endeavors (Drucker, 1985).

The process of opportunity identification is a deliberate intentional process so it is necessary to get special attention in the formation and development of the organization. In developing a business of course we do not start automatically and just made suddenly. We can respond to conditions that are happening and are around us, such as an attractive niche from the market and then act by making a new effort based on it. However, at least we will think about it first by processing the instructions from the environment around us and arranging them to build an opportunity to be a business advice that can go well in the future (Krueger, et al., 2000).

Many new companies these years are engaged in the interface (interface) customers. It is inevitable that companies such as: Uber, Instacart, Alibaba, Airbnb, Seamless, Twitter, Whatsapp, Facebook, Society One, Apple and Google are in an inexplicable thin layer easily occupy a vast supply system (where costs are always incurred) and interface with a large number of people (where the money is located) (Goodwin, 2015).

What's happening today is an application like Uber and Gojek is a big company that runs in public transportation even though it does not have a vehicle, Facebook is the most popular media owner in the world despite never creating content, Alibaba is the most valuable retail store even without inventory, Airbnb Is the largest accommodation provider in the world despite not owning property (Goodwin, 2015).

It cannot be denied that something interesting is happening, thus making the industrial world, banking and other financial services to rethink how to run their business today. Customers are beginning to use mobile and digital channels more frequently every year, and to be superior in today’s competition must use these channels. This is part of the disruptive technology that replaces established technology and evokes innovative industries or products that create new industries and begin to change the world (Christensen, 2013). This certainly cannot be kept away from the technopreneurship which using the latest technology to change and reach the market.

Conducting this research, examines factors affecting the nature of a person’s involvement with technopreneurship, then predicting user behavior and examining their goals will open up existing research into the relationship between application of technopreneurship to information technology and its users, thereby giving researchers an interest in this topic and involved in additional research in the future.

One of the locations that need to be held research related to the evaluation of the application of technopreneurship is in the environment of Brawijaya University as Entrepreneurship University. This declaration is not an easy thing to do because there are still many factors that continue to be developed by the university in succeeding part of higher education that produces young entrepreneurs and technopreneur candidates.

This research was conducted from the researcher's curiosity in knowing the extent of the desire and intention of the students, especially the students of the Faculty of Computer Science (FILKOM) who at least have more qualified abilities regarding the mastery and development of information technology in Brawijaya University. Through the use of desirability and feasibility, it will look for influence on Creativity and Technopreneurship Intentions.

In the future will be known whether or not the influence of desirability and feasibility of motivation, creativity and implementation of students to participate or form a business in the field of technopreneurship so it can be a contribution of thinking or correction for institutions that apply the base of entrepreneurship, entrepreneurship and technopreneurship in accordance with the results of this study. In addition, as an input for Brawijaya University in increasing the willingness of students in participating and developing their own ability in technopreneurship.
METHOD

Administration Survey

This study uses a survey method because it does not involve setting or manipulating independent variables and a way to gather information about the characteristics, actions, perceptions, attitudes or opinions of a large group of observed units (such as individuals, Group or Organization) or population. In an exploratory-based survey, it will ask about the relationship between variables that are generally based on theoretical expectations based on how and why variables should be related (Recker, 2013). Explanatory research is also used to perform tests on hypotheses and sometimes measures the relationship between variables using statistical methods (Given, 2008).

The location of the research was conducted in Brawijaya University on the students with Strata 1 level at Faculty of Computer Science (formerly Information Technology Program and Computer Science) consisting of study program of Computer Science / Informatics, Information System Study Program, Computer System Study Program, and Education Study Program of Information Technology. This study will use a one-shot study or cross-sectional study in which data will be collected in a single step once in a period of several days or weeks or months to answer the research objectives. The population in this research is FILKOM (Faculty of Computer Science) students in 6th semester and above that is the class of 2013, 2012, 2011, 2010, and 2009 because it is assumed that at this level students have enough maturity of thinking and technical ability in computation field. Total population taken is as many as 2271 students from the class of 2009 to 2013. With a confidence level of 95% then the error margin or tolerance error to be used is 0.05.

Proportional Stratified Random Sampling will be used in this study where the strata categories of the population will vary greatly by year of generation and are too important for research purposes. The targeted sample is 340 students, divided into the student force strata where the number of samples obtained from the calculation of the population proportion of the population strata with the calculation of the previous Slovin formula. However, the calculations in this study will use the response rate of respondents according to the incoming data from the spread address link. The test data will use 30 and field data is 187 (Johanson and Brooks, 2010).

Research Instruments

Internal consistency is the first step that needs to be examined using Cronbach’s alpha value (Henseler, et al., 2009). Where Cronbach’s alpha testing is commonly used to evaluate the consistency of the respondent questionnaire and provide estimates for reliability on indicator correlations (Henseler, et al., 2009). According to Mitchell and Jolie (Ajanoviæ and Ivanoviæ, 2014), the value of alpha coefficients greater than 0.70 is acceptable, and Gliem (Ajanoviæ and Ivanoviæ, 2014), also states that if the Cronbach’s alpha coefficient reaches 1.0 the greater the internal consistency of an item in scale measurement.

Cronbach’s alpha can underestimate the internal consistency reliability of latent variables in the Partial Least Square (PLS) path model, so measurements such as Composite reliability are more suitable for this research. And values above 0.8 or 0.9 can be considered satisfactory, and values below 0.6 indicate less reliable (Henseler, et al., 2009).

RESULTS

For ease of reading result then Variable Perceived Desirability (X1 or PD); Variable Perceived Feasibility (X2 or PF); Creativity Variable (Y1 or CV); And Technopreneurship Intention (Y2 or TI) variables.

First Order Constructs

Using the WarpPLS model measurement, the latent variable coefficient is obtained where the R-squared value of 2 endogenous variables Y1 value of 0.548 indicates that the variance Y1 can be explained by 54.8% by the variance of X1 and Y2, and Y2 of value 0.449 indicates that the variance Y2 can be explained by 44.9% by the variance of X2 and Y2. Then, although the Technopreneurship
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Figure 1  first order Structural Model

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<th>Tabel 1  Latent variable coefficients first order</th>
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<td>R-squared coefficients</td>
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<td>Composite reliability coefficients</td>
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<td>Cronbach’s alpha coefficients</td>
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<td>Average variances extracted</td>
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<td>Full collinearity VIFs</td>
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<td>Q-squared coefficients</td>
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Intention (Y2) variable has a Cronbach’s Alpha value below 0.7 so it can be considered this variable does not have good internal reliability and should be considered, but in PLS it is better to note the CA value and use the Composite Reliability value (Henseler, et al., 2009) where all variables in this model have values above 0.8 so it can be considered that all variables are considered satisfactory. For Average Variances Extracted (AVE) value must have a value above 0.5 to satisfy the convergent validity while the Perceived Feasibility (X2) variable has a value of 0.432 to indicate the presence of non-convergent validity, but values above 0.4 are still considered sufficient if Composite Reliability exceeds the value 0.6 (Fornell and Larcker, 1981) and Composite Reliability variable Perceived Feasibility (X2) is worth 0.828.

The estimation result of this model shows good predictive validity because Y1 variable is 0.547 and Y2 are 0.450 where both variables are above zero. The advantages in WarpPLS are the measurement of full VIF values of co-linearity, even in this model
all variables have values below 3.3 so this model is free from vertical, lateral, and common method bias problems (Sholihin and Ratmono, 2013).

**Second Order Construct**

It is shown that the Perceived Desirability (X1) variable consists of Attitude towards acting (X1.1 or ATA) variable and Social Normal variable (X1.2 or SN).

The result of measurement in Table 2 shows that the variable attitude towards acting (X1.1) and social norm (X1.2) is already qualified by having the value of Composite reliability greater than 0.7 although CA of Social Normal variable (X1.2) is Below 0.7. Then the value of AVE has a value above 0.5 which means it has fulfilled the convergence validity requirements.

**DISCUSSION**

Hypothesis 1 states that Perceived Desirability has a significant effect on Creativity. The result of hypothesis testing between variables shows that Perceived Desirability has a significant positive effect on Creativity which does not support Edward, et al. (2015), where self-perception or individual has less significant influence on Creativity will But supports the arguments of Jaiswal and Dhar (2015), in which the climate of innovation or working environment has a positive relationship to employee Creativity.

In this study, Perceived Desirability can be shown through the interest of students to start a business. Students view business development is quite serious. One of the things that cause Perceived Desirability has a significant positive effect on Creativity is a positive view of business development. This positive outlook is formed by the support of families and universities in starting a business. This
is in line with the research of Veciana, et al. (2005), states that students are the most expected resource to become entrepreneurs (Veciana, et al., 2005). According to Pramono, the university is a great place to develop ideas and creativity so that it is expected to produce graduates into new entrepreneurs (Darmanto, 2013). Therefore, support in the business of the environment and the support of people who are considered important can improve the creativity of students in efforts to reduce business.

Hypothesis 2 states that Perceived Feasibility has a significant effect on Creativity. The result of hypothesis testing between the variables shows that Perceived Feasibility has a significant positive effect on Creativity that supports Mulyadi, et al. (2016), arguments in which self-efficacy significantly influences Creativity, also Byrge and Tang (2015) argument in which Creativity training can significantly improve self-efficacy, and the arguments of Jaiswal and Dhar (2015) where low creative self-efficacy will make the creative employees too low. High self-efficacy can be seen from students who feel ready to start a business and have confidence in developing the business. In addition, positive self-efficacy can be seen from the perception of students who are able to take advantage of business opportunities and have the confidence to succeed in running the business.

Hypothesis 3 states that Perceived Desirability has a significant effect on Technopreneurship Intentions. The result of hypothesis testing between variables shows that Perceived Desirability has positive significant effect to Technopreneurship Intentions which does not support Fitzsimmons and Douglas (2010), argument where Perceived Desirability is negative to Technopreneurship Intentions, this is possible because respondents in Fitzsimmons and Douglas (2010), already has a negative view which is exaggerated on Technopreneurship Intentions, so it is advisable to try on different types of respondents or countries. Then according to Lee and Wong (2004), also does not support this research where perceived personal finance has no significant effect on intention to found a business, it is possible respondent Used in the higher education, government, and public research sectors that focus more on established research and development, as well as research conducted in 2007 where the concept of Entrepreneurship and Technopreneurship may still be confused with the notion of a business or company. However, the results of this study support Usman, et al. (2015), there is a high significance between Perceived Desirability and Technopreneurship Intentions.

In this study, Technopreneurship Intentions seen from the interest of students to prefer a career as an entrepreneur and start the realization of his business since becoming a student. In addition, students are always looking for business and business information that is in demand. This is in line with Krueger’s research which states that the higher a person’s Perceived Desirability, the person views the creation of a new business as interesting and desirable (Krueger, at al. 2000). This view grows from the student’s personal experience of entrepreneurship (eg good or bad), and the level of support from the environment (family, friends, relatives, colleagues, colleges). Factors Technopreneurship Intentions, whether through lectures, seminars, entrepreneurial practices are factors that play a role to enhance the positive impression and interest of a person to entrepreneurship. Support from family and people who are considered close also plays a role in increasing interest in starting a business (Darmanto, 2013). Therefore, the higher Perceived Desirability a person, the higher the level of Technopreneurship Intentions.

Hypothesis 4 states that Perceived Feasibility has a significant effect on Technopreneurship Intentions. The results of hypothesis testing between variables show that Perceived Feasibility has a positive significant effect on Technopreneurship Intentions which does not support Fitzsimmons and Douglas (2010), argument in which Perceived Feasibility is negative against Technopreneurship Intentions, this is possible because respondents in Fitzsimmons and Douglas (2010), already has a negative view which is exaggerated on Technopreneurship Intentions, so it is advisable to try on different types of respondents or countries. Usman, et al. (2015), also does not support this re-
search where the skills and skills about entrepreneur are insignificant to entrepreneurship Intentions, this is possible because of Usman, et al. (2015), is still very minimal entrepreneurship-based education in Pakistan especially in Islamabad.

However, the results of this study support the argument of Lee and Wong (2004) which the management of anchors significantly influence the intention to found a business. Krueger and Brazeal (1994), proves that Perceived Desirability, perceived credibility, and the tendency to act represent more than half the beliefs for entrepreneurship, but Perceived Feasibility has more influence (Veciana, et al., 2005). The management capability is still part of the Perceived Feasibility indicator.

This research is in line with research Darmanto (2013), which explained that Perceived Feasibility has positive and significant effect to entrepreneurship intentions. This shows that a student decides entrepreneurship depends on his / her belief and ability to manage the resources owned. The higher self confidence and the ability of students have to entrepreneurship, the higher the interest to realize the business. The university’s support in providing basic scholarships, funds and facilities can add students’ confidence to entrepreneurship. Perceived Feasibility is rated as perceived behavior control in Theory of Planned Behavior, and has an important role in encouraging the improvement of entrepreneurship intentions (Veciana, et al., 2005). Based on the theory, the availability of opportunity will affect the achievement of someone, in this case, choose to entrepreneurship. The confidence of a student who will entrepreneurship can be influenced by his experience first, for example in the family or the environment there is an entrepreneur (Veciana, et al., 2005). The new experience will increase or decrease the students’ confidence to entrepreneurship by looking at challenges, opportunities, and constraints during Entrepreneurship (Ajzen, 1991).

Hypothesis 5 states that Creativity has a significant effect on Technopreneurship Intentions. The result of hypothesis testing between the variables shows that Creativity has a significant positive effect on Technopreneurship Intentions which does not support the argument of Antonio, et al. (2014), where there is no significant correlation between creativity toward entrepreneurship achievement in University graduates studied. This is possible because respondents do not prioritize Creativity to achieve success, there may be factors or variables that could affect the Technopreneurship Intentions and entrepreneurship achievement. Then, according to Lee and Wong (2004), also does not support this research where Creativity anchor has no significant effect on intention to found a business in a new field.

However, the results of this study support the arguments of Edward, et al. (2015), where there is a very significant correlation between Creativity and entrepreneurship. And this study also supports the argument of Gundry, et al. (2014), where Perception of team support for innovation and entrepreneurial firm innovation intensity has a significant positive relationship. Respondents in this research, University of Brawijaya students are equipped with Entrepreneurship course. Through the course, students are required to try business from a simple level. The role of the university in familiarizing and shaping the character of the students is in line with William and Askland (Onsman, 2016) stating that Creativity has generally been considered to be the base of architecture, and a large part of the goal of the university program as an expected graduate attribute or desired to learn outcome through forming habits. Like the discussion of Creativity, that behind all existing innovations will be found a Creativity, and Innovation can arise because of a habit so that Creativity is a habit.

In the Perceived Desirability variable, it can be seen that the indicator with the biggest total score is personal interest to be a technopreneur while the lowest is the indicator of the possibility of earning a big and high sense of togetherness. This can be interpreted that a desire to become a technopreneur UB FILKOM students prioritize their personal interests and desires and assume the possibility of large income and high togetherness will follow after becoming a technopreneur. That personal interest, personal profit to be gained, and the influence of negative views of others, then the influence of the surrounding environment, the possibility of
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earning a large, and a sense of togetherness is important to always be improved and supported by the campus, especially FILKOM UB so as to increase Creativity and intentions of students to become a technopreneurship which of course also can help graduates become the mobiliser of society and not always think and hope to become white-collars.

In Perceived Feasibility variable it can be seen that the indicator with the biggest total score is the need for training, while the lowest is the indicator of personal knowledge. This could mean that for FILKOM students the existence of an additional training or educational activity about a new business whether it is in the form of start-up or entrepreneurship is very important so that it can help the business run better or smoothly and surely will increase personal knowledge in understanding an entrepreneurship or Technopreneurship. That the ability to solve the problem, personal knowledge, mastery of specific or special suitability, the need for training, the ease of mixing with others, the basic idea to be developed, and the support of the relevant institutions is important to be owned and best empowered by FILKOM UB to help Students especially the ability of good softskill and increase the selling value of graduates with high competence.

In the Creativity, the variable can be seen that the indicator with the largest total score is a belief in personal creativity while the lowest is an indicator of the appreciation of others. This shows that students feel confident that their personal creativity will influence how their efforts will be made in the future, so it is clear that the skills and imagination to produce something new is very important to always be nurtured and will increase the desire to make new business or become a technopreneur of the creativity they have. How to build and shape this level of creativity is also an important step for each individual or student when it comes to establishing a business. That the courage to take risks, believe in personal creativity, appreciation from others, risk taking in groups, and openness with inputs become an indicator which highly approved to be developed to increase students’ desire to become a technopreneur.

In variables, Technopreneurship Intentions can be seen that the indicator with the largest total score is the interest with flexible working time while the lowest is an indicator of the plan to start a business after college. This shows that UB FILKOM students are very interested in flexible working time compared to work with certain time. From the conditions in the field that students of information technology are accustomed to completing the last minute meeting work, where the idea or the completion of a task that arises at a time that sometimes cannot be explained easily. Then many have a habit to play games at leisure and connected to the virtual world almost 20 hours a day in a year. The ease of time management is a freedom that many students are looking forward to today. The existence of intention to become a technopreneur for students is still considered high, but this should also be supported by the confidence of the students concerned, and the existence of the plan they have compiled well and here is an important role of the FILKOM to facilitate the needs of students, and how to give understanding of good time management to avoid misdirected.

Through the process of habituation, students will be more sensitive in looking at attractive business opportunities and even a solution for a problem. This is in line with Amabile (Moussa, 2014), which defines Creativity as the work of any new idea, in the form of a product, service, process, and procedure that can lead to interesting changes within an organization. Based on the theory, Creativity is closely related to innovation and its interrelationship with cross-discipline discipline. Technopreneurship is an interdisciplinary discipline that discusses the three interests of technology, entrepreneurship, and innovation, not just between technology and innovation (Scarlat, 2014). So that technopreneurship becomes an appropriate field to accommodate students’ creativity. Therefore, the higher the height of Creativity, the higher the Technopreneurship Intentions students have.

CONCLUSIONS and RECOMMENDATIONS

In analyzing all research objectives, the influence of Perceived Desirability, Perceived Feasibil-
ity to Creativity and Technopreneurship Intentions is forming the appropriate theoretical model. The study used one-shot study by involving students of Faculty of Computer Science UB who have enough maturity of thinking and technical ability in the field of computing. Collecting research data using questionnaire, then is analyzed by SEM-PLS method using SPSS and WarpPLS software.

The effect of Perceived Desirability on Creativity after analyzed shows that it has a significant positive relationship. This is indicated by the value of the path coefficient (β) of 0.64 which is positive, and the value of P <0.01. The test results prove that the climate of innovation or work environment has a positive relationship to student Creativity.

The effect of Perceived Feasibility on Creativity after analyzed shows that it has a significant positive relationship. This is indicated by the value of path coefficient (α) of 0.66 which is positive, and the value of P <0.01. The test results prove that self-efficacy has a significant effect on Creativity, where Creativity training can significantly enhance self-efficacy, and low creative self-efficacy will also create low student creative.

The Influence of Perceived Desirability on Technopreneurship Intentions after analysis shows that it has a significant positive relationship. This is indicated by the value of path coefficient (α) of 0.61 which is positive, and the value of P <0.01. In this study showed a high significance between Perceived Desirability and Technopreneurship Intentions. This is possible because respondents have a positive view of Technopreneurship Intentions.

The Influence of Perceived Feasibility on Technopreneurship Intentions after analysis shows that it has a significant positive relationships. This is indicated by a positive path coefficient value (α) of 0.55, and P <0.01. The results showed that management anchor significantly influences intention to found a business. The management capability is still part of the Perceived Feasibility indicator.

The influence of Creativity on Technopreneurship Intentions after analysis shows that it has a significant positive relationship. This is indicated by a positive path coefficient value (α) of 0.56, and P <0.01. The results found a very significant correlation between Creativity and entrepreneurship. The results also support that perception of team support for innovation and entrepreneurial firm innovation intensity has a significant positive relationship. Then Creativity becomes a fully-mediated variable for Perceived Desirability and Perceived Feasibility variables against Technopreneurship Intentions variables.

Suggestions

Use of data with larger samples that are likely to find new significant and/or confirmed relationships that have been found and achieve better results and can be generalized. Exploration of other factors that are likely to affect or vary against Technopreneurship intentions. Implementation of application of entrepreneurship-based curriculum adapted for UB FILKOM students, especially Technopreneurship Intentions, especially if it can be given facilities and support that prioritizes the best interest of students to become UB FILKOM graduates who can compete in the digital era. For the main courses of study, in addition to entrepreneurship can also be integrated with the direction of technopreneurship, for example where there are some compulsory subjects that implement the coordination between the contest (An if a finalist or win a race), or activities that support student interest to become a technopreneurship.

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