Developing entrepreneurial competencies for successful business model canvas

IOP Conf. Series: Journal of Physics: Conf. Series **953** (2017) 012040 doi:10.1088/1742-6596/953/1/012040

Developing entrepreneurial competencies for successful business model canvas

D I E Sundah[1], C Langi[2], D R S Maramis[3], dan L Tawalujan[4]

[1,2,3]Business Administration Department, [4]Mechanical Engineering Department, Manado State of Polytechnic, Jl Raya Politeknik, Kelurahan Buha, Kec. Mapanget, Manado, 95252, North Sulawesi Province, Indonesia.

Corresponding author's e-mail address: dvogessundah@yahoo.com, cyscaikelangi@gmail.com, leonardtawalujan@gmail.com, dianamaramis@ymail.com,

Abstract

We explore the competencies of entrepreneurship that contribute to business model canvas. This research conducted at smoked fish industries in Province of North Sulawesi, Indonesia. This research used a mixed method which integrating both quantitative and qualitative approaches in a sequential design. The technique of snowball sampling and questionnaire has been used in collecting data from 44 entrepreneurs. Structural equation modeling with SmartPLS application program has been used in analyzing this data to determine the effect of entrepreneurial competencies on business model canvas. We also investigate 3 entrepreneurs who conducted smoked fish business and analyzed their business by using business model canvas. Focus Group Discussion is used in collecting data from 2 groups of entrepreneurs from 2 different locations. The empirical results show that entrepreneurial competencies which consists of managerial competencies, technical competencies, marketing competencies, financial competencies, human relations competencies, and the specific working attitude of entrepreneur has a positive and significantly effect on business model canvas. Additionally, the empirical cases and discussion with 2 groups of entrepreneurs support the quantitative result and it found that human relations competencies have greater influence in achieving successful business model canvas.

Keywords: business model canvas, competencies, entrepreneurship, effect, structural equation modeling

1. Introduction

Essentially, human resources, equipment, building, infrastructure, and capital are all very important factors in developing a business model, but it is the entrepreneur of how to use them efficiently and effectively that are the key of successful business. The success of business models cannot be separated from the mastery of certain entrepreneurial competencies required by a particular business. Business modelling is often on a very strategic level [1]. However, business model and entrepreneurship are closely link [2]. This means that entrepreneurs who have entrepreneurial

competence will conduct certain business model become successful. Furthermore, several studies have shown significantly influence of individual competence on firm performance [3][4]. Thus, entrepreneurship and business development are widely accepted as keys in building a more vibrant economy leading to national re-building [5]. Thus, successful entrepreneurs are those who have competence [6].

Recently, business competition is mostly influenced by the rapid development of science and technology as well as an open market system. In addition, the business competition faced by the company is not balanced with the competence of human resources owned by the company. Human resources in each company have different competencies with their unique characteristics in facing the business competition. Every human resource is formed from various educational backgrounds, experiences, skills, family and community so as to create different culture and behaviour of organizations. Therefore, the organization should be able to integrate a number of skills possessed by employees and technology to generate strong competitiveness so as to contribute and to increase a certain value or increase the strength or ability to enter new markets [7].

Competence is the integration of individual knowledge, skills, values and attitudes that can lead to improve performance in which it can be reflected in the habit of thinking and acting according to the task to be performed [8]. It also will describe of what to know or do in order to do the job well [9] and establish by as individual knowledge, skills and abilities that directly affect performance [6]. Effective and/or superior performance will be generated by competence [10]. The performance of an organization will be determined by the mastery of certain competencies which are: very valuable, rare and difficult to imitate. Knowledge, skills, and work with various experiences will strengthen his or her competence in carrying out a specific job.

The business model explains how each innovation can create a new market or disrupt the competitive advantage of its major competitors [11]. Indeed, competency has a direct influence more dominantly on the performance of employees compared to the function of leadership and organizational culture [12], whereas valuable competence, rare, difficult to imitate, and are difficult to be replaced are all factors that become a source of company excellence in compete with other companies [13]. It is also makes the competency as a force that cannot be easily imitated by competitors [14].

Thus it can be concluded that the performance of business model will be determined by the mastery of specified competencies - especially valuable, rare and difficult to be imitated-, commitment to the job description and commitment of business entrepreneurs who possess high motivation to achieve targets that generate benefits for the organization. Moreover, competence is the ability of each individual in knowledge, skills, and working attitudes to carry out a specific job with a variety of experiences in strengthening his or her competence.

Business of smoked fish has been conducting for long time by the entrepreneurs in North Sulawesi, Indonesia. Entrepreneurs typically smoke the fish in the large quantities and at high costs which are not suitable with capability of traditional fishermen in conducting these business activities. The long process of making the smoked fish and requires substantial capital caused entrepreneurs offer high price to the consumers in last few years in North Sulawesi, Indonesia. This research aims to develop entrepreneurial competence in the framework of the development of smoked fish business for traditional fishermen in the coastal area of Manado Bay. Therefore, it aims to test the entrepreneurial competencies on business model in North Sulawesi, Indonesia. Sustainable business model is a business model that creates competitive advantage through superior customer value and contributes to a sustainable development of the company and society [15]. Moreover, in order to recognize the need for business model changes and turn the business model change into success, companies need to develop specific capabilities [16]. However, they only focus on value proposition, value creation, value capture, and customer element in enabling business model change but do not identify the additional properties and capabilities in business model elements and the overall business model.

Therefore, this research is expected to be able to answer the following questions: (1) Are the factors of managerial competence, marketing competence, financial competence, technical competence, human relations competence, entrepreneurial working attitude affect business model canvas?; (2) Which entrepreneurial competence is the most dominant in affecting business model canvas?

2. Conceptual Framework and Hypothesis

Indonesia's development strategy aims to improve the welfare of its people. The results of research conducted in the coastal area of Manado Bay found that coastal development, environmental changes, and adaptation of traditional fisherman behavior have a positive and significant impact on the welfare of traditional fishermen [17]. The synergy of these four variables has not really occurred in the coastal area of Manado Bay. Based on statistic data, the number of poor families in the coastal area of Manado Bay has increased and only in the subdistrict of Wenang has decreased. It also shows that the total number of poor families in Manado City in 2011 was 22,513. This means there is an increase of 30.09% (6774 poor families) which in 2006 only 15,739 poor families [18]. It also found that the welfare of traditional fishermen at coastal area in Manado Bay is still low [19].

The Paradoxes result in the implementation of coastal development in Manado Bay shows on the one hand, creating a positive impact on the life of coastal communities through increasing incomes of coastal communities while on the other hand, has had a negative impact on traditional fishermen [19]. The competence of traditional fishermen on the Manado Bay coast is not in line with the programs and skills offered by the Manado City government (both in number and type of program) [19]. Finally, traditional fishermen are still struggling to improve their welfare, despite being given employment opportunities for them. Therefore, this research also attempt to find and explore on entrepreneurial competencies and business model for improving traditional fishers' welfare at coastal area in Manado Bay, North Sulawesi, Indonesia.

Science and technology in fact have affected the competition in the business world. Therefore, organizations should be able to integrate a number of skills and technology in making a strong competitive force and unique and it can contribute to enhance certain values or add strength/ability to enter a new markets [7]. Integration of knowledge, skills, values and attitudes of individuals who directs to increase the performance reflected in the habit of thinking and acting in accordance with the profession needs to be done [8]. Thus, each individual has a certain competence would have the idea of what needs to know or do in order to do a good job [9], so that the more competent person then the resulting performance will be superior and effective [10]. Furthermore, a person's competence will be exploited better when people have a belief and values; skills; experience; personality characteristics; motivation; emotional; intellectual and organizational culture [20].

2.1. Factor of entrepreneurial Competencies

Entrepreneurship is defined as the backbone of economy or tailbone of economy [21]. An entrepreneur is someone who create and has innovative ability, the ability to create something different; ability to start a business; ability to seek opportunities; ability to create something new; and the ability to take risk; ability to develop ideas; and managing available resources [22]. Entrepreneur is also a person who has the knowledge, skills, and individual qualities that include: attitudes, values, and behaviors necessary to perform tasks / jobs / activities [6]. The core of entrepreneurship is to create new and different through creative thinking and innovative action to create opportunities [21]. Entrepreneurship competence is an individual knowledge, skill and capability that directly affect business performance, including technical competency, marketing competence, financial competence, and human relations competence [23].

Moreover, the competencies that an entrepreneur must possess are: managerial skills; human skills, decision making skills and time managerial skills [21]. It is also argued that entrepreneurial competence includes: competency planning, competency influence, competency communication, interpersonal competency, thinking competency, organizational competency, human resource

competency, leadership competency, client service competency, business competency, self management competency, and technical competency [21].

Creativity is the process of coming up with an idea, where innovation pertains to execution to the idea. Innovation means that organization can innovate not only by recombining the resources and the control, but also by harnessing those of the partners, suppliers, and customers who participate in their business model [22]. Creativity and innovation are important to entrepreneur as they develop new product, market, and idea [23]. Furthermore, innovating business model is increasingly recognized as a key to delivering greater social and environmental sustainability in the industrial system [12]. Thus, the important of idea and creativity in value creation is dramatically increasing and they are at the heart of business [24].

2.2. Business Model

Business model is becoming one of the trending topics by academics and practitioners today. It deals extensively on how to design new business models and especially how to make the transition from an existing business model to a newly designed business model [1] or try to find new breakthroughs to find new values that can provide new competitive advantage for the business undertaken. Periodically, organizations try to reinvent their business model in order to be in a competitive business [25]. Business models deals with description of how an organization creates and capture value from offering a service to its customer [26]. The main purpose of the business model is how the organization operates its business by creating new value in a particular business field.

The nine elements of business model become popular tool that makes it simple for practitioners in designing business model in a creative session [27]. Nine elements of business activity, namely: value proposition, customer segment, channel, customer relationships, key resources, key activities, key partners, costs structure, and revenue streams. Business models illustrate how value is created within the organization by focusing on the various components of corporate activity and its interrelationships [28]. While business model innovation is business model replacements or the process of developing novel replacement that provide product or service offering to customer that were not previously available [29].

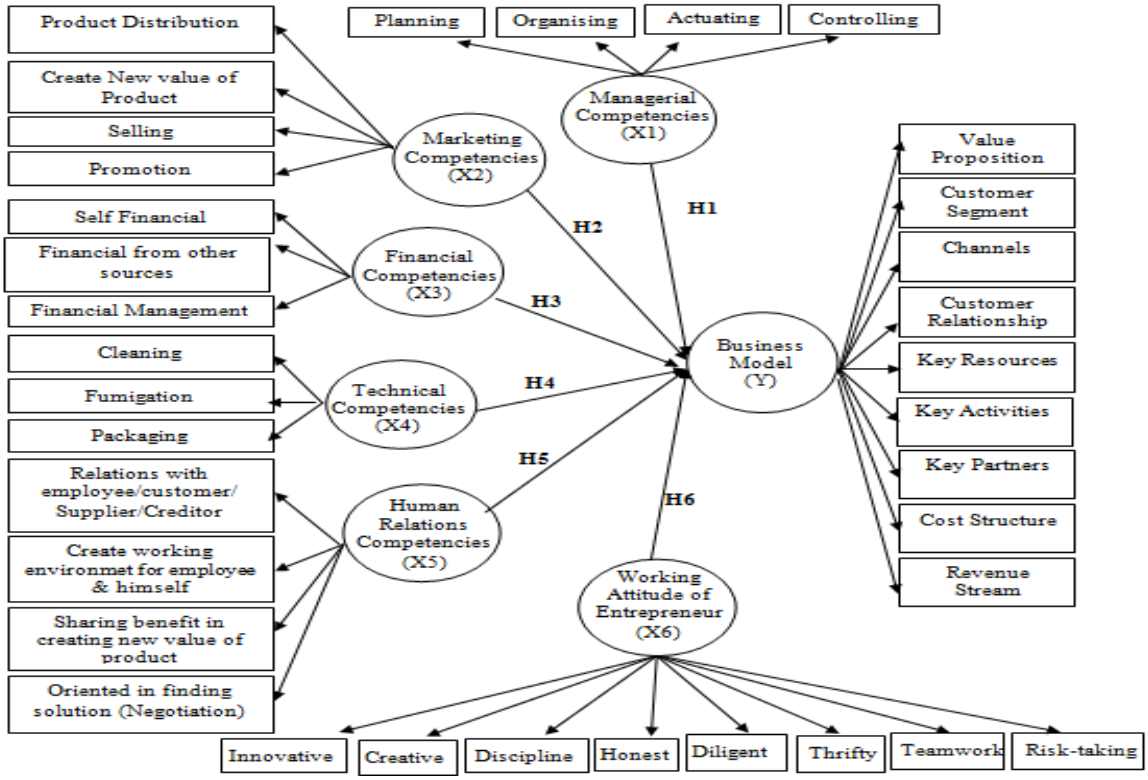
2.3. Entrepreneurial competencies influence toward business model

Today's business model cannot be separated by the entrepreneurial competencies owned by managers or business owners. Indeed, it was found that there are 3 drivers of success identified in the economic and managerial literature, namely: entrepreneurial factors (the characteristics, attitudes, and behaviours of funders), strategic factors (the effectiveness of firms' strategic decisions and the strategic capabilities of firms) and contextual factors (market dynamics, location-specific advantages) [30].

Based on the theoritical framework, the following hypotheses were derived:

H1: Better managerial competencies will improve successful business model canvas.
H2: Better marketing competencies will improve successful business model canvas.
H3: Better financial competencies will improve successful business model canvas.
H4: Better technical competencies will improve successful business model canvas
H5: Better human relations competencies will improve successful business model canvas.
H6: Better specific working attitude of entrepreneurs will improve successful business model canvas.

Based on the framework of this study, it can be drawn as follows:



Source: Authors

Figure 1. A conceptual framework of research

3. Research Method

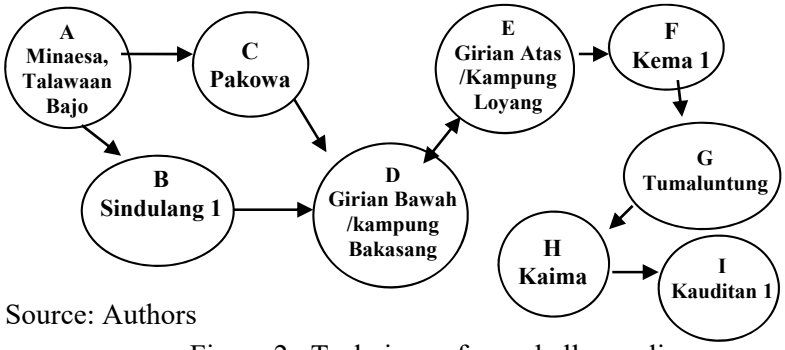
The method used in this research is mixed method which combines quantitative and qualitative methods with sequential explanatory design (data collection and analysis of quantitative data in the first stage and followed by data collection and analysis of qualitative data in the second stage) [34]. The endogenous variables is business model canvas which consist of values proposition, customer segments, channels, customer relationships, key resources, key activities, key partners, cost structures and revenue streams [30]. While the exogenous variables is entrepreneurial competencies which include 6 indicators namely: human relations competence, financial competence, marketing competence, technical competence, and managerial competence, and working attitude of entrepreneur [6][21] [22][[23][24][26][27].

3.1. Data Collection

This research intended to analyse the influence of entrepreneurship competencies on business model canvas. A self-designed questionnaire was used to gather the research data of entrepreneurship competencies and business model canvas. The questionnaire consisted of three parts. The first part comprises of demographic, characteristic of respondents, and business profile of respondents. The second part, respondents were asked to rank statements by using 1-5 point likert scale by strongly agree/important to strongly disagree/not important on contextual condition related to business model of smoked fish business faced by respondents.

The questionnaire consisted of 31 items which were intended to measure factors of business model canvas, while 38 items were used to measure entrepreneurship competencies. The Overall, 44 sets of questionnaires were collected and filled up completely. The method of analysis used in this research was both descriptive analysis and structural equation model (SEM). Furthermore, research

data was processing by using software SmartPLS. Data collection technique was done by snowball sampling technique since there was no secondary data about the total number of smoked fish entrepreneurs in North Sulawesi.



Source: Authors

Figure 2. Technique of snowball sampling

Figure 2 describes the techniques of data collection by using the snowball sampling. The first data which was chosen is an entrepreneur of smoked fish who has long been recognized by community as an entrepreneur in business of smoked fish, while the second sample until the last sample was based on the information obtained from the prior respondents. The sample size has shown a size larger than 30 and less than 500 which was sufficient for most of researches [35]. The operational definition of entrepreneurial competencies of this research is the ability of informal entrepreneur that owned his/her knowledge and skills in the managerial, technical, marketing, financial, human relations, and specific working trait and behaviour. While business model canvas is business activities consist of 9 elements of activity, namely: values proposition, customer segments, channels, customer relationships, key resources, key activities, key partners, cost structures, and revenue streams [30].

Data of this research were collected through 3 main sources, namely: semi-structured interviews with 3 informants, collection of questionnaires from 44 entrepreneurs, and focus group discussion (FGD) with 2 different groups of entrepreneurs located in Minaesa District, Talawaan Bajo, North Minahasa Regency and Girian Atas District or Kampung Loyang, Bitung City. The interviews were based on 9 element's activities of business model canvas [30].

The number of respondents who participated in this research is distributed in several location of research as follows:

Table 1. Total number of Entrepreneurs in Smoked Fish Business.

No	Location of research		Number of Entrepreneurs
	City/Regency	District	
1	Manado City	1. Sindulang 1	2
		2. Pakowa	1
2	North Minahasa Regency	3. Minaesa,	9
		4. Kema	1
		5. Tumaluntung	3
		6. Kaima	4
		7. Kauditan 1	4
3	Bitung City	8. Girian Bawah	4
		9. Girian Atas	16

4. Result and Discussion

The influence of entrepreneurial competencies on business model canvas is analysed by using SEM (Structural Equation Modeling) through SmartPLS program application. There are some stages in processing this research data.

4.1. Test of Validity and Reliability

Data analysis in this research is using SEM (Structural Equation Modeling) include: validity and reliability test by using CFA through "SmartPLS" application program. The validity test is intended to find out whether the questions in the questionnaire are representative enough. Validity test is conducted by using confirmatory factor analysis (CFA) on each latent variable. The second measurement test is a Reliability test which is an index indicating the extent to which the measuring instrument is reliable. Reliability is a measure of the internal consistency of indicators of a form variable that indicates the degree to which each indicator indicates a common form factor.

4.1.1. *Variable Measurement Model of Managerial Competencies (X1.* The latent variable of Managerial Competencies (X1) has 4 indicators, which include planning (X1.1), Organizing (X1.2), Actuating (X1.3) and Controlling (X1.4). A confirmatory factor analysis is used in order to know whether Managerial Competencies (X1) is a valid latent variable by using SmartPLS. While the loading factor testing (lamda) in detail on each indicator with bootstrap sample is presented in Table 2 as follows:

Table 2. Validity Test on indicators of managerial competence (X1) with a bootstrap sample

Managerial Competencies (X1)	Coeffisient Orginal	Bootstrap	
		Coeffisient	T-Statistic
Planning (X1.1)	0.759	0.756	26.619
Organising (X1.2)	0.647	0.647	20.021
Actuating (X1.3)	0.633	0.624	11.881
Controlling (X1.4)	0.745	0.739	18.039

Table 2 shows that all indicators in the latent variable Managerial Competency (X1) give the value of T-Statistic is greater than 1.96 and the value of the original coefficient is close to the mean coefficient value of subsample. Thus, the loading factor on the 4 indicators is greater than 0.5, and these factors are statistically significant for measuring Managerial Competency (X1). While, the result of reliability test for Managerial Competence (X1) using composite reliability (constructs) with a cut off value of at least 0.6. Calculation of reliability test as follows:

$$CR = \frac{(\sum \text{standardized loading})^2}{(\sum \text{standardized loading})^2 + \sum e_j}$$

Detailed reliability test of latent variables Managerial Competence (X1) is as follows:

Table 3. Realibility Test of Managerial Competencies *(X1)*

Managerial Competencies (X1)	Loading (λ)	λ^2	$1 - \lambda^2$	CR
Planning (X1.1)	0.759	0.576081	0.423919	
Organising (X1.2)	0.647	0.418609	0.581391	
Actuating (X1.3)	0.633	0.400689	0.599311	0.791
controlling (X1.4)	0.745	0.555025	0.444975	
Total	2.784		2.04960	

Table 3 shows that the latent variable of Managerial competencies (X1) gives CR (Composite Reliability) value of 0.791 which means above its cut-off value of 0.6. Thus, it can be said that Managerial Competencies (X1) is reliable.

4.1.2. *Variable Measurement Model of Marketing Competence (X2).* The latent variable of Marketing Competence (X2) has 3 indicators, which include product distribution (X2.1), creation of new product value (X2.2), sales (X2.3) and promotion (X2.4). A confirmatory factor analysis (CFA) is used in order to know whether Marketing Competencies (X2) is a valid latent variable by using SmartPLS. While the loading factor testing (lamda) in detail on each indicator with bootstrap sample is presented in Table 4 as follows:

Table 4. Validity Test on the Indicators of Marketing Competence (X2) with boostrap samples

Marketing Competencies (X2)	Coeffisient Orginal	Bootstrap Coeffisient	Bootstrap T-Statistic
product distribution (X2.1)	0.752	0.742	14.048
create new value of product (X2.2)	0.701	0.703	52.750
Selling (X2.3)	0.682	0.683	21.741
promotion (X2.4)	0.764	0.759	19.846

Table 4 shows that all indicators in the latent variable of Marketing Competencies (X2) provide a T Statistic value is greater than 1.96 and the value of the original coefficient is close to the mean coefficient value of subsample. Thus, the loading factors on 4 indicators are greater than 0.5 and these factors are statistically significant for measuring Marketing Competencies (X2). While, the result of reliability test for Marketing Competencies (X2) using composite reliability (constructs) with a cut off value of at least 0.6. The detailed reliability test of the latent variable Marketing Competencies (X2) is presented in Table 5.

Table 5. Reliability Test of Marketing Competencies (X2)

Marketing Competencies (X2)	Loading (λ)	λ^2	$1 - \lambda^2$	CR
Product distribution (X2.1)	0.752	0.565504	0.434496	
Create new value of product (X2.2)	0.701	0.491401	0.508599	
Selling (X2.3)	0.682	0.465124	0.534876	0.816
Promotion (X2.4)	0.764	0.583696	0.416304	
Total	2.899		1.89427	

Table 5 shows that the latent variable of Marketing Competence (X2) gives CR value of 0.816 which means above its cut-off value of 0.6. Thus, it can be said that the Marketing Competence (X2) is reliable.

4.1.3. Variable Measurement Model Financial Competencies (X3). The latent variable of Financial Competencies (X3) has 3 indicators, which include Personal finance (X3.1), Financial other source (X3.2) and financial management (X3.3). A confirmatory factor analysis (CFA) is used in order to know whether Financial Competencies (X3) is a valid latent variable by using SmartPLS. While the loading factor testing (lamda) in detail on each indicator with bootstrap sample is presented in Table 6.

Table 6. Validity Test on Indicators of Financial Competence (X3) with boostrap samples

Financial Competencies (X3)	Coeffisient Original	Bootstrap Coeffisient	Bootstrap T-Statistic
Personal Finance (X3.1)	0.714	0.712	26.370
financial other source (X3.2)	0.703	0.699	16.682
Financial management (X3.3)	0.723	0.722	22.043

Table 6 shows that all indicators in the latent variable of Financial Competence (X3) provide a T Statistic value is greater than 1.96 and the value of the original coefficient is close to the mean coefficient value of subsample. Thus, the loading factors on 3 indicators are greater than 0.5, and these factors are statistically significant for measuring Financial Competence (X3). While, the result of reliability test for Financial Competence (X3) using composite reliability (constructs) with a cut off value of at least 0.6. The detailed reliability test of the latent variable Financial Competence (X3) is presented in Table 7.

Table 7. Reliability Test on Financial Competence (X3)

Financial Competencies (X3)	Loading (λ)	λ^2	$1 - \lambda^2$	CR
Personal Finance (X3.1)	0.714	0.509796	0.490204	0.757
Financial other source (X3.2)	0.703	0.494209	0.505791	
Financial management (X3.3)	0.723	0.522729	0.477271	
Total	2.14		1.47327	

Table 7 shows that the latent variable of Financial Competence (X3) gives CR value of 0.757 which means above its cut-off value of 0.6. Thus, it can be said that the Financial Competence (X3) is reliable.

4.1.4. Variable Measurement Model of Technical Competence (X4).

The latent variable of Technical Competency (X4) has 3 indicators, which include Cleaning (X4.1), Fumigation (X4.2) and Packaging (X4.3). A confirmatory factor analysis (CFA) is used in order to know whether Technical Competency (X4) is a valid latent variable by using SmartPLS. While the loading factor testing (lamda) in detail on each indicator with bootstrap sample is presented in Table 8.

Table 8. Validity Test on Indicator of Technical Competence (X4) with boostrap samples

Technical Competencies (X4)	Coeffisient	Bootstrap	
	Original	Coeffisient	T-Statistic
cleaning (X4.1)	0.863	0.863	47.605
fumigation (X4.2)	0.946	0.945	101.621
Packaging (X4.3)	0.763	0.761	22.153

Table 8 shows that all indicators in the latent variable of Technical Competency (X4) provide a T Statistic value is greater than 1.96 and the value of the original coefficient is close to the mean coefficient value of subsample. Thus, the loading factors on 3 indicators are greater than 0.5, and these factors are statistically significant for measuring Technical Competency (X4). While, the result of reliability test for Technical Competency (X4) using composite reliability (constructs) with a cut off value of at least 0.6. The detailed reliability test of the latent variable Technical Competency (X4) is presented in Table 9.

Table 9. Reliability Test of Technical Competence (X4)

Technical Competencies (X4)	Loading (λ)	λ^2	$1 - \lambda^2$	CR
cleaning (X4.1)	0.863	0.744769	0.255231	0.895
Fumigation (X4.2)	0.946	0.894916	0.105084	
Packaging (X4.3)	0.763	0.582169	0.417831	
Total	2.572		0.778146	

Table 9 shows that the latent variable Technical Competency (X4) gives CR value of 0.895 which means above its cut-off value of 0.6. Thus, it can be said that the Financial Competence (X3) is reliable.

4.1.5. Variable Measurement Models of Human Relations Competencies (X5). The latent variable of Human Relations Competency (X5) has 4 indicators, which include relation with employee / customer / supplier / creditor (X5.1), Create working environment for employee & herself (X5.2), Sharing benefit in creating new value of product (X5.3) and oriented in finding solution (X5.4). A confirmatory factor analysis (CFA) is used in order to know whether Human Relations Competency (X5) is a valid latent variable by using SmartPLS. While the loading factor testing (lamda) in detail on each indicator with bootstrap sample is presented in Table 10. It shows that all indicators in the latent variable of Human Relations Competency (X5) provide a T Statistic value greater than 1.96 and the value of the original coefficient is close to the mean coefficient value of subsample. Thus, the loading factors on 4 indicators are greater than 0.5, and these factors are statistically significant for measuring Human Relations Competency (X5). While, the result of reliability test for Human Relations Competence (X5) using composite reliability (constructs) with a cut off value of at least 0.6.

Table 10. Validity Test on Indicators of Human Ralations Competence (X5) with boostrap samples

Human Relations Competencies (X5)	Coeffisient Original	Bootstrap Coeffisient	Bootstrap T-Statistic
Relation with employee/customer/supplier/creditor (X5.1)	0.701	0.691	13.473
Create working environment for employee & himself (X5.2)	0.728	0.721	16.403
Sharing benefit in creating new value of product (X5.3)	0.524	0.528	8.724
Oriented in finding solution (X5.4)	0.763	0.768	25.125

The detailed reliability test of the latent variable Human Relations Competence (X5) is presented in Table 11.

Table 11. Reliability Test of Human Relations Competence (X5)

Human Relations Competencies (X5)	Loading (λ)	λ^2	$1 - \lambda^2$	CR
Relation with employee/customer/supplier/creditor (X5.1)	0.701	0.491401	0.508599	0.776
Create working environment for employee & himself (X5.2)	0.728	0.529984	0.470016	
Sharing benefit in creating new value of product (X5.3)	0.524	0.274576	0.725424	
Oriented in finding solution (X5.4)	0.763	0.582169	0.417831	
Total	2.716		2.12187	

Table 11 shows that the latent variable Human Relations Competencies (X5) gives CR value of 0,776 which means above its cut-off value of 0.6. Thus, it can be said that the Human Relations Competencies (X5) is reliable.

4.1.6. Variable Measurement Models of entrepreneur's working attitude (X6). The latent variable of Working Attitude of Entrepreneur (X6) has 8 indicators, which include innovative (X6.1), creative (X6.2), discipline (X6.3), honest (X6.4), diligent (X6.5), thrifty (X6.6), team work (X6.7), and risk taking (X6.8). A confirmatory factor analysis (CFA) is used in order to know whether

Working Attitude of Entrepreneur (X6) is a valid latent variable by using SmartPLS. While the loading factor testing (lamda) in detail on each indicator with bootstrap sample is presented in Table 12.

Table 12. Validity Test on indicators of Entrepreneur's Working Attitude (X6) with boostrap samples

Working Attitude of Entrepreneur (X6)	Coeffisient Original	Bootstrap Coeffisient	Bootstrap T-Statistic
Innovative (X6.1)	0.669	0.663	17.103
Creative (X6.2)	0.760	0.758	19.773
Discipline (X6.3)	0.854	0.851	26.534
Honest (X6.4)	0.914	0.912	58.095
Diligent (X6.5)	0.744	0.742	13.869
Thrifty (X6.6)	0.727	0.723	23.019
Teamwork (X6.7)	0.743	0.744	20.052
Risk taking (X6.8)	0.709	0.706	14.078

Table 12 shows that all indicators in the latent variable of Working Attitude of Entrepreneurs (X6) provide a T Statistic value greater than 1.96 and the value of the original coefficient is close to the mean coefficient value of subsample. Thus, the loading factors on 8 indicators are greater than 0.5, and these factors are statistically significant for measuring Working Attitude of Entrepreneurs (X6). While, the result of reliability test for Working Attitude of Entrepreneurs (X6) using composite reliability (constructs) with a cut off value of at least 0.6. The detailed reliability test of latent variables of Working Attitude of Entrepreneur (X6) is presented in Table 13.

Table 13. Reliability Test Of Entrepreneur's Working Attitude (X6)

Working Attitude of Entrepreneur (X6)	Loading (λ)	λ^2	$1 - \lambda^2$	CR
Innovative (X6.1)	0.669	0.447561	0.552439	
Creative (X6.2)	0.760	0.577600	0.422400	
Discipline (X6.3)	0.854	0.729316	0.270684	
Honest (X6.4)	0.914	0.835396	0.164604	
Diligent (X6.5)	0.744	0.553536	0.446464	0.920
Thrifty (X6.6)	0.727	0.528529	0.471471	
Teamwork (X6.7)	0.743	0.552049	0.447951	
Risk taking (X6.8)	0.709	0.502681	0.497319	
Total	6.12		3.27333	

Table 13 shows that the latent variable Working Attitudes of Employers (X6) gives CR value of 0.920 which means above its cut-off value of 0.6. Thus, it can be said that the Working Attitudes of Employers (X6) is reliable.

4.1.7. Variable measurement Business model (Y). The latent variable of Business model (Y) has 8 indicators, which include value proposition (Y1.1), Customer segment (Y1.2), Channels (Y1.3), customer relationship (Y1.4), key resources (Y1.5), Key activities (Y1.6), key partners (Y1.7), cost structure (Y1.8) and revenue stream (Y1.9). A confirmatory factor analysis (CFA) is used in order to know whether Business model (Y) is a valid latent variable by using SmartPLS. While the loading factor testing (lamda) in detail on each indicator with bootstrap sample is presented in Table 14.

Table 14. Validity Test on Indicator of Business Model Canvas (Y) with boostrap samples

Business Model Canvas (Y)	Coeffisient Original	Bootstrap	
		Coeffisient	T-Statistic
Value proposition (Y1.1)	0.727	0.726	31.582
Customer segment (Y1.2)	0.644	0.645	23.835
Channels (Y1.3)	0.775	0.774	47.902
Customer relationship (Y1.4)	0.761	0.760	47.043
Key resources (Y1.5)	0.833	0.831	68.216
Key activities (Y1.6)	0.709	0.707	26.708
Key partners (Y1.7)	0.593	0.589	14.748
Cost structure (Y1.8)	0.589	0.585	15.816
Revenue stream (Y1.9)	0.669	0.667	25.750

Source: Report of SmartPLS Data Processing, 2017

Table 14 shows that all indicators in the latent variable of Business Model (Y) provide a T Statistic value greater than 1.96 and the value of the original coefficient is close to the mean coefficient value of subsample. Thus, the loading factors on 9 indicators are greater than 0.5, and these factors are statistically significant for measuring Business Model (Y). While, the result of reliability test for Business Model (Y) using composite reliability (constructs) with a cut off value of at least 0.6. The detailed reliability test of latent variables of Business Model (Y) is presented in Table 15.

Table 15. Reliability Test of Business Model Canvas (Y)

Business Model Canvas (Y)	Loading (λ)	λ^2	$1 - \lambda^2$	CR
Value proposition (Y1.1)	0.727	0.528529	0.471471	0.898
Customer segment (Y1.2)	0.644	0.414736	0.585264	
Channels (Y1.3)	0.775	0.600625	0.399375	
Customer relationship (Y1.4)	0.761	0.579121	0.420879	
Key resources (Y1.5)	0.833	0.693889	0.306111	
Key activities (Y1.6)	0.709	0.502681	0.497319	
Key partners (Y1.7)	0.593	0.351649	0.648351	
Cost structure (Y1.8)	0.589	0.346921	0.653079	
Revenue stream (Y1.9)	0.669	0.447561	0.552439	
Total	6.300		4.53429	

Table 15 shows that the latent variable Business Model (Y) gives CR value of 0.898 which means above its cut-off value of 0.6. Thus, it can be said that the Business Model (Y) is reliable.

4.2. Discriminant Validity

Discriminant validity test aims to test the validity of the indicator block. Discriminant validity test of indicator can be seen on cross loadings between indicator and its construct as shown in Appendix. The indicator block is valid if the value of each indicator in measuring the construct variable (= indicator block) is predominantly higher than the value of each indicator in measuring another construct variable.

The cross loadings value in the Appendix shows the discriminant validity results for each indicator block predominantly can be considered good. It also shows that the indicator of each construct variable gives a high convergent validity value that is more than 0.5. In addition, it can be seen from the value of AVE aims to establish that the construct variable has a good discriminant validity value. The AVE value is satisfactory if> 0.5. AVE test results appear in Table 16.

Table 16. Value of AVE (Average Variance Extracted)

Variables	Value of Average Variance Extracted
Business model (Y)	0.696
Managerial Competencies (X1)	0.687
Marketing Competencies (X2)	0.526
Financial Competencies (X3)	0.609
Technical Competencies (X4)	0.741
Human Relations Competencies (X5)	0.669
Working Attitude of Entrepreneur (X6)	0.591

Source: Report of SmartPLS Data Processing, 2017

The result of the AVE value for the indicator block measuring the construct can be expressed as having a good discriminant validity value. This means that all indicators used in this study are valid as a measure of each construct variable because all of these indicators have a discriminant validity value that is dominantly higher when compared with the value of each indicator in measuring other construct variables.

4.3. Structural Equation Model Test

Test of Structural Model (Inner Weight) is shown through the result of structural path coefficient. Where the results of path coefficients provide strong evidence on the formulation of hypotheses in this study as follows:

H1: Managerial Competencies (X1) have a significant effect on business model canvas (Y)
H2: Marketing Competencies (X2) have a significant effect on Business model canvas (Y)
H3: Financial Competencies (X3) have a significant effect on business model canvas (Y)
H4: Technical Competencies (X4) has significant effect on business model canvas (Y)
H5: Human Relations Competencies (X5) have a significant effect on Business model canvas (Y)
H6: Working Attitude of Entrepreneur (X6) has significant effect to Business model canvas (Y).

After validity and reliability test on all latent variables which valid and reliable result, and at bootstrap sample test B = 500 give significant result, then continued in analysis with diagram form. The result of hypothesis test to produce a fit model was using Structural Equation Modeling (SEM) analysis. Then, the data was processed by using SmatPLS software. The complete results will be described as a synergistic relationship between the variables as presented in figure 3.

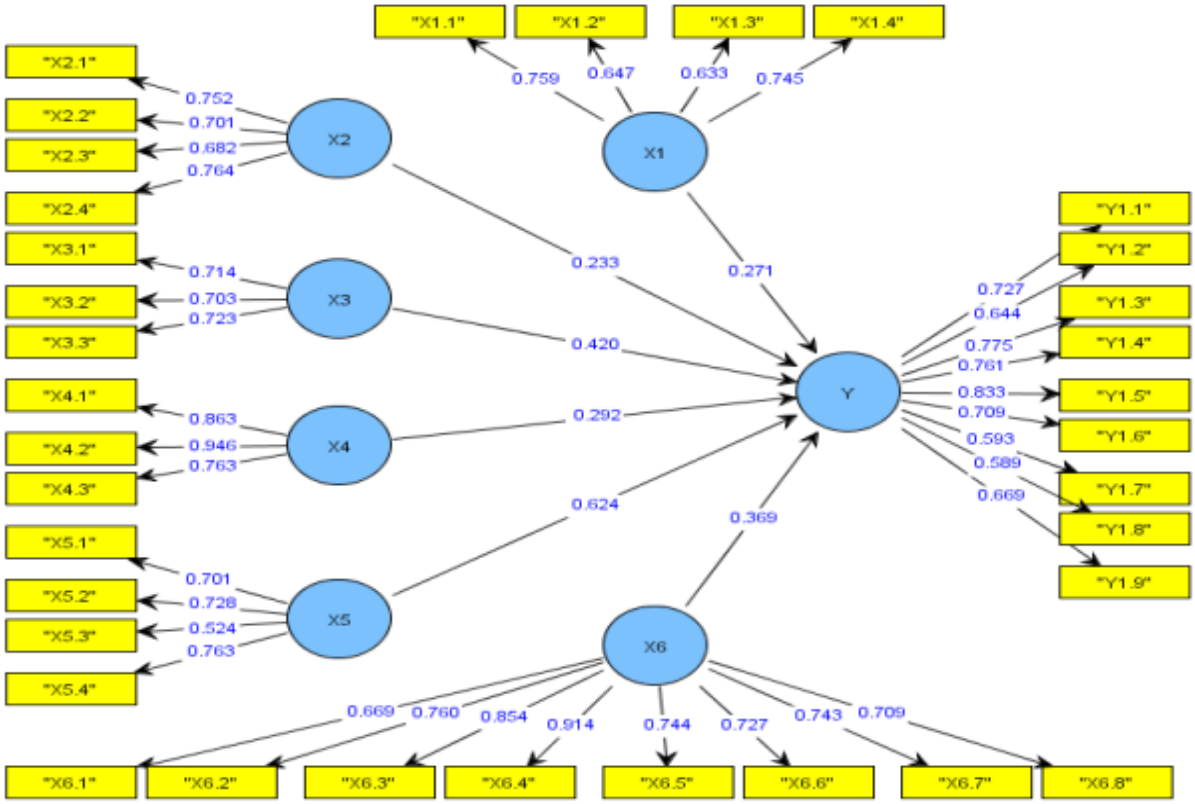


Figure 3. The effect of Exogenous Variables (Entrepreneurial Competencies/X) on Endogenous Variable (Business Model Canvas/Y)

The results of the complete model testing above with the SmarPLS program can be seen from the R-Square Value that describes the goodness-of-fit of a model. The recommended R-Square value is greater than zero. The results of this research data processing by using SmartPLS give R-square value as shown in Table 17.

Table 17. *Goodness of Fit from R-Square*

Variable	*R-Square*
Managerial Competencies (X1), Marketing Competencies (X2), Financial Competencies (X3), Technical Competencies (X4), Human Relations Competencies (X5), Working Attitude of Entrepreneur (X6) → Business model (Y)	0.712

Source: Report of SmartPLS Data Processing, 2017

Table 17 describes the contribution or proportion of entrepreneurial competencies namely: Managerial Competencies (X1), Marketing Competencies (X2), Financial Competencies (X3), Technical Competencies (X4), Human Relations Competencies (X5), Working Attitude of Entrepreneur (X6) on Business model (Y) is 0.712.

The result of all R-square values shows that all R-square values are greater than zero. This means that this research model meets the required Goodness of Fit. The calculation result of Q square value from Table 17 obtained the following results:

$$Q2 = 1- (1-0.712) = 0.712$$

The model is able to explain that entrepreneurial competencies contributed to Business Model Canvas (Y) of 71.2%. From the appropriate model, it can be interpreted every path coefficient. The path coefficients are the hypothesis of this study, which can be presented in the following structural equations:

$$Y = 0.271\ X1 + 0.233\ X2 + 0.420\ X3 + 0.292\ X4 + 0.624\ X5 + 0.369\ X6,$$

(X1: Managerial Competencies, X2: Competencies Marketing, X3: Financial Competencies, X4: Competencies, X6: Working Attitude of Entrepreneurs, and Y: Business Model Canvas (Y).

4.4. Research Hypothesis Test Results

The path coefficient test and the above equations are explained in Table 18.

Table 18. Results of path coefficient test on Business Model Canvas (Y)

Variable	Coefficient		T-Statistic	Description
	Original	Bootstrap		
Managerial Competencies (X1) → Business Model Canvas(Y)	0.271	0.267	5.305	H1, accepted
Marketing Competencies (X2) → Business Model Canvas (Y)	0.233	0.235	4.000	H2, accepted
Financial Competencies (X3) → Business Model Canvas (Y)	0.420	0.415	12.520	H3, accepted
Technical Competencies (X4) → Business Model Canvas (Y)	0.292	0.294	4.928	H4, accepted
Human Relations Competencies (X5) → Business Model Canvas (Y)	0.624	0.625	13.365	H5, accepted
Working Attitude of Entrepreneur (X6) → Business Model Canvas (Y)	0.369	0.361	4.416	H6, accepted

Source: Report of SmartPLS Data Processing, 2017

Table 18 shows the interpretation of each path of coefficient. It shows that entrepreneurial competencies have a positive and significant effect on Business Model Canvas (Y). This can be seen from the coefficient of path that has positive with the T-Statistic is bigger than t-table = 1.96. Thus, entrepreneurial competencies which consist of managerial competencies (X1), marketing competencies (X2), financial competencies (X3), technical competencies (X4), human relations competencies (X5), and specific working attitude of enrepreneur (X6) directly affects the Business Model Canvas (Y), which means that any increase in managerial competencies (X1), marketing competencies (X2), financial competencies (X3), technical competencies (X4), human relations competencies (X5), and specific working attitude of enrepreneur (X6) will increase the successful of Business Model Canvas (Y).

5. Business Model Canvas

This research used a business model canvas analysis which includes 9 elements of business activities, namely: value proposition; customer segment; channel; customer relationship; key resources; key activities; key partner; cost structure; and revenue streams. Each informant provided information on each element of business model canvas in conducting the smoked fish business in North Sulawesi. This can be explained in more detail as follows:

5.1. Value Proposition

Value Proposition is the advantage / uniqueness in the form of products and services provided to attract consumers and buy products produced, so that can be distinguished by the products and services offered by other companies.

5.1.1. SMEs (Small Medium Entreprises) of Maesang, District of Molas, Manado City. Small Medium Entreprises (SMEs) of Maesang produce 2 or 3 fishes for 1 Kg. Smoked fish

produced by SMEs Maesang has the uniqueness that is: "*small and fresh smoked fish*". This was described by 1 informant as follows:

> "I immediately brought the smoked fish in the traditional market called “Bersehati” and the retailers who have become my customers have been waiting there. Every day 500 Kg smoked fish sold out. I could not distinguish my product with similar products produced by others. I only know that my product of smoked fish is fresh”.

5.1.2. SMEs of Lastari, District of Kaima, North Minahasa Regency. Small Medium Entreprises (SMEs) of Lastari produce ± 10 or 12 Kg of fish. Smoked fish produced by SMEs Lastari has the uniqueness that is: "*large and fresh smoked fish*". This was described by SMEs Lastari as follows:

> "Ya ... our smoked fish just like that ... but it is big and fresh ... because we produce skipjack in the early morning and evening. Thus, the smoked fish is still fresh / and warm ... after finished processing, we sold directly. We only sell smoked fish that has weight 10 - 12 Kg / per fish. However, we sell it in small pieces according to customer demand).

5.1.3. *SMEs of Laiya, Desa Kauditan 1, North Minahasa Regency.* Small Medium Entreprises (SMEs) of Laiya produce produce ± 5 or 6 Kg of fish. Smoked fish produced by SMEs Laiya has the uniqueness that is: "*medium and fresh smoked fish*". This was described by 3 informan as follows:

> "The tuna fufu we produce is still warm, we have brought it in the market ... we already have a fixed customer ... and they already know that our smoked fish is fresh because we directly brought to the market for sale. We usually bring the products of smoked fish to the traditional market before sunrise)

Result on Focus Group Discussion (FGD supports the result of interviews that customers can not distinguish the production of smoked fish. The customer will only be informed about the location of the product, whether the products of smoked fish from Bitung, Minaesa, Talawaan Bajo, Kaima, Kauditan, Kema, and Manado. It found that branding and packaging will increase production costs.

5.2. Customer Segmentation

Customer segment is the determination of the customer that the product of smoked fish can last a long time. Customer segmentation can be described with determination of certain customer in producing smoked fish.

5.2.1. SMEs (Small Medium Entreprises) of Maesang, District of Molas, Manado City. Customer segment of SMEs Maesang is retailer of smoked fish in Manado City. SMEs Maesang distributes the smoked fish to retailer everyday in the traditional market “Bersehati”.

5.2.2. SMEs of Lastari, District of Kaima, North Minahasa Regency. Customer segment of SMEs Lastari is community in Kaasar District, Karegesan District, Kaima District, Treman Districts in North Minahasa Regency. The smoked fish has already known by customer from other city in Indonesia, namely: Timika, Jakarta, Balikpapan, Bandung, as well as customer from other country, such as: Japan and United States of America.

5.2.3. *SMEs of Laiya, Kauditan 1 District,North Minahasa Regency.* Customer segment of SMEs Laiya is customers in the traditional market “Kauditan”. Selling activity in Kauditan traditional market has been conducting since 1967 and it is profitable than selling to third parties. Smoked fish produced by SMEs Laiya has been known by customers from other city and country, such as: Jakarta; Japan; and the State of America.

The results of the Focus Group Discussion (FGD) show that most of them sell their product directly to customers in order to get more profit than sell to the third parties. Entrepreneurs who produce smoked fish in large quantities will sell their products throug retailers.

5.3. Channels

Communication network is a network built by smoked fish entrepreneurs in promoting the value proposition of smoked fish products to customers. Based on the research findings, the three informants use communication networks through mobile phones.

5.4. Customer Relationship

Customer relationship is the ways in which entrepreneurs develop good relationships with customers. The three informants describe the establishment of customer relationship as follows:

5.4.1. SMEs (Small Medium Entreprises) of Maesang, District of Molas, Manado City. SMEs develop relationship with retailers directly through selling process by quantity, price and payment system. This was described by 1st informant as follows:

> "One of important factor in conducting business is trusting with each other. If the smoked fish taken by the retailer was not sold out, then they will give information in another day. Thus, they will not take products and if the smoked fish has already sold out, then the payment will be made in total or on credit".

5.4.2. *SMEs of Lastari, Kaima District, North Minahasa Regency.* Building relationships with consumers is developed directly and in various ways. In the sales process related to the quantity and the price of smoked fish to be purchased by customer, while the payment system is made in cash. In order to keep customers in buying smoked fish, SMEs of Lastari provide simple show room that can sell smoked fish and cooking ingredient.

5.4.3. *SMEs of Laiya, Kauditan 1 District, North Minahasa Regency.* In keeping the customer, SMEs of Laiya provide the appropriate price to the customer. Thus, customers will not be interested in purchasing another product.

The results of focus group discussions indicate that almost all smoked fish entrepreneurs try to retain their customers by lowering prices cheaper than the prices of other entrepreneurs. They will try to sell smoked fish slightly cheaper than the prevailing prices in the market. One of the principles of selling a product is not selling a product below the cost of the product.

5.5. Key resources

Primary resources is an important asset owned by entrepreneur in conducting smoked fish business, include: physical resources, intellectual resources, human resources, and financial resources.

5.5.1. MSEs of Maesang, Molas District, Manado City. MSEs of Maesang has 6 places of fumigation with the production space ± 33 m2.

5.5.2. SMEs of Lastari, Kaima District, North Minahasa Regency. MSEs of lastari has one place of fumigation with the production space ± 45 m2.

5.5.3. SMEs of Laiya, Kauditan 1 District, North Minahasa Regency. MSEs of Laiya has one place of fumigation with the production space ± 10 m2.

5.6. Key Activities

Key Activities (activities) are activities undertaken in the management of smoked fish business so that the business activities can run smoothly and well.

5.6.1. SMEs of Maesang, Molas District, Manado City. The type of fish produced by SMEs of Maesang is smoked fish with a total production of 500 Kg per day.

5.6.2. SMEs of Lastari, Kaima District, North Minahasa Regency. The type of fish produced by SMEs of Lastari is smoked fish with a total production of 560 Kg per week or ±55 tuna fishes.

5.6.3. SME's Laiya, Desa Kauditan 1, Kecamatan Kauditan, Kabupaten Minahasa Utara. The type of fish produced by SMEs of Laiya is smoked fish with a total production of 100 Kg/day or ±20 tuna fishes/day.

5.7. Key Partner

Key partners is an activity undertaken by the company to establish relationships and cooperation with business partners so as to optimize the business, reduce risk and improve business competitiveness. The three informants have never experienced difficulties in repaying the purchase of raw materials and they have never taken loans from other parties such as: Bank.

The result of Focus Group Discussion (FGD) conducted at Kampung Loyang, Girian Atas District, Bitung City found that if they obtained cash for raw material purchases, the production cost would be lower.

5.8. Cost Structure

All costs required to run a business model. The results of this study in 2016 found that cost structure in the business of smoked are: (1) Fish; (2) Wood Fuel / coconut husk / coconut bark; (3) Bamboo; (4) Transport; (5) wages; (6) employee salary; (7) hand phone; (8) Water; (9) Electricity; (10) Ice.

5.9. Revenue Stream

The flow of income gained from each consumer segment. The three informants earned primary income on the sale of smoked fish and only 2nd informant which earned another income.

The result of Focus Group Discussion (FGD) finds that they earn other income as motorcycle taxi drivers, fishermen, and sell mobile phone pulses, and have stalls.

6. Developing Entrepreneurial Competence for successful Business Model Canvas

Business model is not about imitating or comparing existing businesses, but relating to finding a new mechanism for creating value and profitability [30]. Result of this research shows that there is a positive and significant influence of entrepreneurial competencies on the business model canvas.

Based on the results of this research, we propose a model of developing of entrepreneurship competencies for successful business model canvas, as illustrated in figure 4:

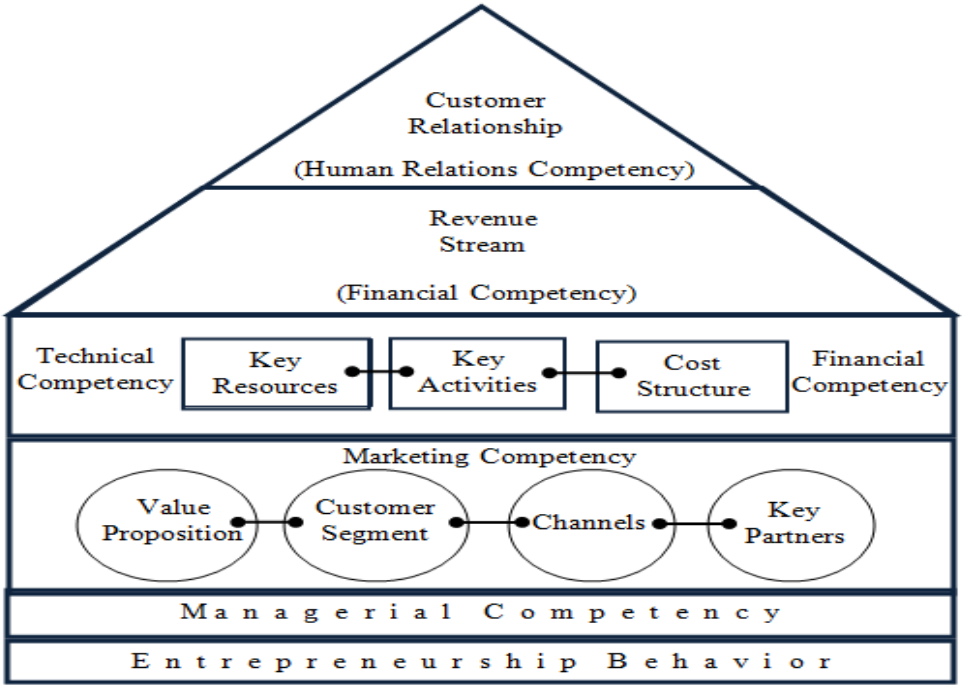


Figure 4. Developing Entrepreneurial Competencies for Successful Business Model Canvas

Figure 4 shows 5 stages in developing entrepreneurial competencies for successful business model canvas, namely: (1) the specific working attitude of entrepreneur is the real action shown in carrying out business. It is related to discipline and honest, diligent, cooperation, creative, risk-taking and thrifty, and innovative. This finding is relevant to finding which state that successful innovation inside the organization will develop appropriate business model and sustain that model in an environment can be resistant to change [11]. (2) Managerial competencies relate to activities in planning the activities to be carried out - whether starting from the planning of raw materials/inventory up to the process of curing and distributing the products, and planning the use of working capital, and controlling in order to conduct business activities in accordance with the expected goal. (3) Marketing competencies deal with defining the unique value proposition of the smoked fish business, determining which consumers will be targeted for marketing the smoked fish products with clean technology, establishing certain communications media to promote the products produced, and establishing cooperative relationships with suppliers. Thus, business activities can be implemented effectively. (4) Technical competence is a competence related to various preparations including: equipment, human resources, raw materials, curing area, and fumigation; engaging in the process of packinging fish; along with the financial competencies associated with regulating the costs required in the production process. (5). Human relations competence related to the supply of smoked fish products that are easy to reach by customers with human relations approach. (6). Revenue Stream deals with determining the revenue stream to be built in certain business.

Result of this research will able to give better understanding for start-up business and entrepreneurs/business owners in developing the entrepreneurial competence which will significantly affect the successful business model canvas. Moreover, human relations competence is the greater influence for successful business model canvas. The result of this research also supports the findings of some experts who state that communication competence, interpersonal competence, and competence of customer service is an important competence in building business relationships [24] [36]. Competence of human skills or competence of human relations is the competence that must be owned by an entrepreneur such as: outgoing, sociable, sympathy, and empathy for others; in addition

to decision-making skills such as: the ability to analyze situations and formulate various problems to find an alternative solution to the problem; and time management skills [21] [23].

The results also show that the entrepreneurial working attitude is very important in conducting a business. Working attitude of entrepreneur in the business of smoked fish, namely: discipline and honesty, diligence, teamwork, creative, risk-taking and thrifty, innovative. This finding is in line with the finding which states that an entrepreneur cannot manage a business only has the knowledge and skills without have an entrepreneurial attitude such as: creative and innovative, independent, risk-taking, discipline [37]. Moreover, our research is particularly relevant to the study which found the characteristics of the entrepreneurial attitude that should be owned by business managers, namely: innovative; proactive; and dare to take risks [38]. It is states that without a culture of discipline, there will be no future, there will be no respect and there will be no progress [39]. It implies that if there is a culture of discipline in the management of a business, then there will be a future, there will be respect, and there will be progress. one of the strengths that are important to build a strong business culture in order to achieve success is to build discipline and efficiency [40]. The mastery of entrepreneurial competence should be equipped with an honest person, innovative, daring and agile in the face of risk [21]. It was also found that one of the main components in the measurement of entrepreneurial competencies are: financial competence (Financial Competence), technical competence (technical competence); and also the competence of marketing (marketing competency) [23].

This finding also indicates that managerial competence is an essential competence. Managerial competence undertaken by entrepreneurs such as: planning of activities to be carried out, either from the planning until the fish raw material in the process of curing and distribution of products, as well as planning the use of working capital. Managerial skills are competencies that must be owned by entrepreneurs [21]. In fact, planning competency should be an important to the success of an entrepreneur [24]. Subsequently, another opinion suggests that the competence of an entrepreneur, namely: (1) the ability to analyse systematically; (2) the ability to take advantage of opportunities and manage their resources; (3) the ability to find external and internal needs of consumers; and (4) the ability to learn and improve their competence; (5) the ability to communicate [36].

Entrepreneurship is defined as controlling a nation's economy and basically creating something new and different through creative thinking and innovative action to create opportunities [21]. An entrepreneur is someone who has the ability to be creative and innovative, the ability to create something different; the ability to start a business; the ability to seek opportunities; the ability to create something new; and the ability to bear the risk; the ability to develop ideas, as well as managing the available resources [22]. Creative and innovative process that can only be done by people who have a passion and an entrepreneurial attitude, namely: those who believe themselves (confident, optimistic, and full commitment), initiative (energetic and confident), has the achievement motive (oriented results and future), leadership (dare to be different), and willing to take risks with the full calculation (because it was like to be a challenge) [21]. Entrepreneurship is also the attitude and behaviour of people in addition to innovative, initiative, and able to take risks, also behave anticipatory, and profit-oriented [41]. It was also found that innovation is a specific instrument of entrepreneurship [25].

7. Conclusions

In this paper we have introduced a model of developing entrepreneurship competencies for successful business model canvas. We operationalize and measure the entrepreneurial competencies, namely: managerial competence, marketing competence, technical competence, financial competence, human relations competence, and specific working attitude of entrepreneur, and show empirically that it has an impact on business model canvas. This research also found that the competence of human relations has the greater influence on business model canvas compared to other entrepreneurship competencies. It also played an important role in ensuring the successful of smoked fish business model in North Sulawesi Province, Indonesia. To the best of our knowledge, this

research is the first empirical study in developing model of entrepreneurial competencies for business model canvas. Our strongest and most robust finding relates to the influence of entrepreneurship competencies on business model canvas.

This paper has a few limitations. *Firstly*, the case studies of small medium enterprise (SMEs) identified in this research is almost similar in conducting their business. It seems that they almost have the same problem and challenge. Therefore, more case studies with different types of industries should be conducted by further research for providing a comprehensive understanding of entrepreneurial competencies, business model canvas and how it deals with the competition in global market. *Secondly*, there is no level of management in small medium entreprises (SMEs). Therefore, we could not consider of how managers in different level of management may develop their competencies of entrepreneurship. We do believe that different focuses of entrepreneurial competencies will be found in conducting further research in different types of business, industries and level of management within the organisation.

Despite of these limitations, this study makes some contributions: *Firstly*, the entrepreneurial competencies give profound insights to entrepreneurs of small medium entreprises in order to improve entrepreneurial competencies in an effort to make the business model developed becomes more successful. Human relations competence has a very significant influence for the success of the business model. Therefore, every entrepreneur has to develop consistently his or her human relations competencies in becoming successful entrepreneur. *Secondly*, our explanation on the effect of entrepreneurial competence toward business model canvas contributes to the literature on the business model canvas, especially by introducing a model of developing entrepreneurial competencies for business model canvas. The literature of the business model canvas tends to focus on the implementation of business model canvas as a tool in implementing business activities without considering the entrepreneurial competencies that should be owned by entrepreneur. Our research contributes with new insights by providing an integrated view about entrepreneurial competencies that can be developed in implementing the successful business model canvas. *Thirdly*, we suggest that every entrepreneur will obtain best result in driving of improvement on their business model relied on characteristic of his/her business model and by developing the entrepreneurship competencies, primarily on the smoked fish business in Indonesia. Consequently, knowledge, skills, and specific working attitude of entrepreneur are very important in implementing the business model canvas as a tool in winning the competition in the global market.

8. Acknowledgements

The authors would like to thank to the following institutions: The Directorate of Research and Community Service, Directorate General of Research Enhancement and Development, Ministry of Research, Technology, and Higher Education, Indonesia, and Manado State of Polytechnic for funding and supporting the research.

9. References

[1] Reuver, M.D., Bouwman, H., and Haaker, T. 2013. Business Model Roadmapping: A Practical Approach to Come from an Existing To A Desired Business Model. *International Journal of Innovation Management*. 17, (1), 1-18

[2] Freiling, Jorg. "Business model innovation--a concept between organizational renewal and industry transformation." Journal of Entrepreneurship, Management and Innovation, vol. 11, no. 1, 2015, p. 3+. PowerSearch, go.galegroup.com/ps/i.do?p=GPS&sw=w&u=ptn019&v=2.1&id=GALE%7CA433121565&it=r&asid=9ed0b51182f88e6329b5f8d255e70380. Accessed 23 June 2017.

[3] Absah, Y. 2008. Kompetensi: Sumberdaya Pendorong Keunggulan Bersaing Perusahaan. *Jurnal Manajemen Bisnis*. 1. (3). 109-116

[4] Purwanto, E., Idrus, M.S., Ratnawati, K., dan sudarma, M. 2011. Kinerja Perusahaan Terkait dengan Teknologi Informasi, Lingkungan, dan Kompetensi. *Jurnal Aplikasi Manajemen*. 91. 31 Mei 2011: 901-909
[5] Anderson, R.B. and Giberson, R. 2004. Aboriginal entrepreneurship and economic development in Canada: thoughts on current theory and practice', in Stiles, C. and Galbraith, C. (Eds.): *Ethnic Entrepreneurship: Structure and Process*, Elsevier Science, Amsterdam, pp.141–170.
[6] Fithri, P dan Sari, A. F. 2012. Analisis Kompetensi Kewirausahaan Industri Kecil Suku Cadang di Kota Padang. *Jurnal Optimasi Sistem Industri*. 11. (2): 279-292.
[7] Prahalad, C.K., dan Hamel. 1990. Strategic Intent. *Harvard Business Review*. May-June:63-76
[8] Robert, A R. 2001. Competence of Human Resource. Yogyakarta. Gajah Mada University Press.
[9] Hutapea, T., dan Thoha, N. 2008. Kompetensi Plus. Gramedia Pustaka Utama. Jakarta
[10] Prihadi. 2004. Manajemen Sumberdaya Manusia. Bandung. PT Remaja Rosdakarya, PT Refika Aditama.
[11] Euchner, J., Ganguly, A. 2014. Business Model Innovation in Practice: A systematic approach to business model innovation can help capture value and reduce risks. *Research Technology Management*. November—December 2014. 33-39.
[12] Manik, E dan Coenraad, D. P. 2015. Pengaruh fungsi kepemimpinan, kompetensi, dan budaya organisasi terhadap kinerja pegawai pada Direktorat Jenderal Energi Baru, Terbarukan dan Konservasi Energi. *Jurnal Ekonomi, Bisnis, dan Entrepreneurship*. 9. 1: 56-67.
[13] Barney, J.B. 1991. Firm Resources and Sustained Competitive Advantage. *Journal of Management*. 17. (1): 99-120
[14] David, F. R. 2002. *Manajemen Strategis: Konsep*. Edisi Bahasa Indonesia. Terjemahan: Alexander Sindoro. Prenhallindo. Jakarta.
[15] Hvass, K.,K. 2015. Business Model Innovation through second hand retailing: a Fashion Industry Case. *The Journal of corporate citizenship Issue*. 57.
[16 Muller, Christiana, and Stefan Vorbach. Enabling business model change: evidence from high-technology firms. *Journal of Entrepreneurship, Management and Innovation*, vol. 11, no. 1, 2015, p. 53+. PowerSearch, go.galegroup.com/ps/i.do?p=GPS&sw=w&u=ptn019&v=2.1&id=GALE%7CA433121568&it=r&asid=435271c952750e004c7081ee0d9e052f. Accessed 23 June 2017.
[17] Sundah, D.I.E., A. Suman, Soemarno, P. Kindangen, 2013. How coastal development, environmental change, and adaptive behaviour affects fishermen's welfare? (A study of traditional fishermen from the coastal area of Manado Bay, Indenesia). IOSR-*Journal of humanities and social science*. 17,(4), 24-34.
[18] Biro Pusat Statistik Kota Manado tahun 2006 and 2011
[19] Sundah, D.I.E. 2014. Coastal Development Model for Traditional Fishermen' Welfare at Manado Bay, Indonesia. Unpublished doctoral disertation. University of Brawijaya. Malang. Indonesia
[20] Abdullah, M. M. 2013. Manajemen Bisnis Syariah. Aswaja. Yogyakarta
[21] Suryana. 2003. Kewirausahaan: Pedoman Praktis, Kiat, dan Proses Menuju Sukses. Salemba Empat: Jakarta.
[22] Soegoto, E. S. 2009. Enterpreneurship: Menjadi Pebisnis Ulung. PT Elex Media Komputindo Kompas Gramedia. Jakarta.
[23] Suryana. 2006. Kewirausahaan. Edisi 3. Salemba Empat. Jakarta
[24] Wibowo. 2007. Manajemen Kinerja. Raja Grafindo Persada. Jakarta.
[25] Zott, C and Amit, R. 2007. Business model design and the performance of entrepreneurial firms. *Organization science*. 18. (2). 181-199.
[26] Govindarajan, V. 2010. Innovation is Not Creativity. August 3. 2010. http//blogs.hbr.org/goindarajan/2010/08/innovation-is-not-creativity.html

[27] Anderson, U., Dasi, A., Mudambi, R., and Pedersen, T. 2016. Technology, Innovation, and Knowledge: The importance of ideas and international connectivity. *Journal of World Business*. 51: 153-162.
[28] Andries, P., Debackere, K., and Looy, V. B. 2006. Effective Business Model Adaptation Strategies for New Technology-Based Ventures. Paper presented at the 9th PREBEM Conference on Business Economics, Management and Organization Science, Amersfoort, The Netherlands.
[29] Bouwman, H., Haaker, T, and De Vos, H. 2008. Mobile Service Innovation and Business Models. New York: Springer.
[30] Osterwalder, A and Pigneur, Y. 2012. Business Model Generation. Jakarta: Elex Media Komputindo.
[31] Harima, A., and Vemuri, S. 2015. Diaspora business model innovation. Journal of Entrepreneurship, Management and Innovation, 11. (1) p.29. PowerSearch, go.galegroup.com/ps/i.do?p=GPS&sw=w&u=ptn019&v=2.1&id=GALE%7CA433121567&it=r&asid=b5c8924ead106b1b231335cd433a32ac. Accessed 23 June 2017.
[32] Mitchel, D. w., and Coles, C. B. Business model innovation breakthrough. *Journal of Business Strategy.* 25. (1): 16-26.
[33] Balboni, Bernardo, and Guido Bortoluzzi. 2015. Business model adaptation and the success of new ventures. *Journal of Entrepreneurship, Management and Innovation*, 11. (1): vol. 11, no. 1, 2015, p. 119+. PowerSearch, go.galegroup.com/ps/i.do?p=GPS&sw=w&u=ptn019&v=2.1&id=GALE%7CA433121571&it=r&asid=213e6ad1474101f35be25e32739ca6dc. Accessed 23 June 2017.
[34] Sugiyono. 2012. Metode Penelitian Kombinasi (Mixed Methods), Alfabeta, Bandung.
[35] Ferdinand, A. 2013. Metode Penelitian Manajemen: Pedoman Penelitian Untuk Penulisan Skripsi, Tesis, dan Disertasi Ilmu Manajemen. Edisi Keempat. Badan Penerbit Universitas Diponegoro. Semarang.
[36] Wu, W.W. 2009. A Competency-based Model for Success of an Enterpreneur Startup. *Jurnal of WSEAS Transaction on Business and Economics*. 6. (6): 279-29
[37] Mahfud, T dan Pardjono. (2012). Praksis Pembelajaran Kewirausahaan Pada Unit Produksi Jasa Boga. *Jurnal Pendidikan Vokasi*. 2. (1): 27-40
[38] Vitale, R., Gigliearno, J., dan Miles, M. 2003. Enterpreneural Orientation, Market Orientation in Established and Startup Firms. http://www.uic.edu/cba/ies/2003/papers.
[39] Kasali, R. 2010. Myelin: Mobilisasi Intangibles Menjadi Kekuatan Perubahan. Gramedia. Jakarta.
[40] Hasan, I. 2011. Penguatan Kompetensi Kewirausahaan dan Daya Saing UKM Komoditi Unggulan Ekspor di Propinsi Aceh. *Jurnal Infokop*. 19: 38-52.
[41] Isa, M. 2011. Analisis Kompetensi Kewirausahaan, Orientasi Kewirausahaan, dan Kinerja Industri Mebel. *Benefit Jurnal Manajemen dan Bisnis*. 15. (2): 159-168.