

The Testing of the Reliability and Validity of Accounting and Financial Skills Measures: An Empirical Evidence of Thai Dairy Farm Entrepreneurs

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Abstract

Despite the dissimilarity and diversity of management functional skills, especially accounting and financial skills in modern entrepreneurs, there is a lack of acceptably valid and reliable accounting and financial skills assessment scales. This study measures the reliability and constructs validity of an accounting and financial measurement scale created based on existing measures of accounting skills and financial skills. The data was gathered from 240 entrepreneurs from dairy farm businesses in Thailand by using questionnaires. The results from an exploratory factor analysis (EFA) demonstrated significantly better reliability and factor stability for the revised scale in comparison to existing instruments. Based on these results, both scales appear to be a reasonably reliable and valid instrument for the measurement of accounting and financial skills, competencies, and capabilities. The implications of the findings are discussed in the development of accounting and financial skill factors and future research.

Keywords: accounting skill; financial skill; dairy farm businesses

1. Introduction

In the world of social science, the variety of unambiguous activities and functions in managing a firm's performance demanding management skills has shown in the literature (Huselid et al. 1997). Many skills in business are important devices dealing with seeking opportunities, operating and starting a firm or business such as marketing, financial, customer service, sales, leadership, communication and negotiation, delegation and time management, project and planning, networking, problem-solving, etc. (e.g. Carson & Gilmore, 2000; Philpot, Hearth & Rimbey, 2000).

The responsibilities required in dairy farms are finance and accounting skills that include listing all farm resources and all farm business transactions, which have financial effects on their income (Bart, 2006). The existing agricultural procedures encourage dairy farmers to undertake recordkeeping or keep accounting records because they are considered as being extremely crucial (Undutimi, 2013). Dairy farmers can be successful by implementing financial and accounting practices to manage their farms (Yaaghubi et al. 2009). In Thailand, and most developing countries, the management of accounting and finance that does not fulfill the execution requirements designated in agricultural SMEs (Ahmed & Zabri, 2012). Similarly, in the context of dairy farmers' running skills in these countries, the skills of an accountant, farmers, and decision-makers were often at variance from the essential accounting skills for handling a business (Poppe, 1991). Consequently, the misuse of the principles of accounting affects the farmers or owners who are not concerned about employing a sound method of accounting and finance actions for their business (Poppe, 1991). On the other hand, many researchers have shown that farmers who used accounting measures correctly, can run their businesses with higher efficiency (Allen & Sanders, 1994).

Garcia and colleagues (1983) recorded that owners who planned financial statements made cash flow projections better than owners who did not apply such methods. Streeter (1992) clarified the situation by insisting that using accounting arrangements improved the farmers' choice making and management systems traits. Besides, stockholders for agricultural activities and agricultural policymakers need to know more about accounting details, which can predict the business' future environments (Crane & Leatham, 1995; Argilés & Slof, 2001). In conclusion, it is necessary to use accounting information in agricultural firms' activities. This kind of detail is helpful for many investors in agricultural businesses and for the owners.

The profitability and productivity of the farms can be more efficient if the farmers carefully keep their accounts. Reliable strategies, which are updated and sound accounting procedures and record-keeping, are very important because they help the farmers to make wise decisions in managing their agri-businesses (Sharma et al. 2012). The accounting measures in a dairy firm are very crucial in giving the required detail for managers' decision-making. These measures offer the dairy farmers or owners the necessary information and knowledge to show what is needed to realize their business strengths and weakness and permit financial analysis. Moreover, dairy farm accounting can be used as a guide for assessing their business progress. Additionally, evidence from previous studies have shown that small dairy farmers operators often lack the necessary tool to use financial and skill accounting (Beal & Delpachitra, 2003). Many pieces of

research record the financial and accounting skill of businesses by referring to the respondents' level of skill by using both quantitative and qualitative methods (Salam & Hasan, 2020) and include basic statistics such as Mean, S.D. t-test, and F-test (Lussier, 1996; Marriott, 2004; Al-Sharafat, 2017).

This study created items to measure financial and accounting skills that could be applied in the dairy business, so their challenges could be examined. In this study, the groups tested were the farmers and owners of the dairy businesses, who used various skills and knowledge to raise their level of competency to meet the requirement for the growth of their business. These challenges guaranteed that all of the items included in the financial and accounting skills fit the firm's context. Reliability, validity, CFA, and EFA measures were used as statistical tools to test the study's model fit. Hence, the objective of this research was to create items to measure the financial and accounting skill level of dairy farmers and owners in Thailand. This study sought to improve the scope of literature coverage by developing financial and accounting skills in the context of dairy farmers and owners in Thailand.

2. Literature Review

2.1 Accounting Skills

Accounting skills refer to those aspects that are practical and useful in all businesses both small and large. Managers who possess accounting aptitude are typically detailed-oriented and are smart in analysis and logical thinking (Shanker, 2010). Accounting management skills are the skills that assist the entrepreneurs or business owners in managing record keeping and all the accounting and finance management related to the business. Adegite (2010) stated that accounting responsibilities are to help a business by storing all information about the business dealings that have financial insinuations. Hence, accounting is a systematic plan that involves the classification, recording, interpretation, systematic gathering, analysis of information, and transmission to help the owners make a financial decision.

According to Evbodaghe (2009), the accounting profession increases the assurance and the expansion of financial information about the business, which helps both firms and other organizations to become more successful. Internationally, countries have stronger and more stable economies because of the international accountancy profession. Investor confidence and public trust usually improve the profession. The employees in the accountancy profession will lack credibility when the businesses are not prepared to present reliable information. In Thailand, accounting practices follow the code of conduct or the principles of the Federation of Accounting Professions of

Thailand (FAP), which is a legally acknowledged organization by the Thai government. Ajibolade (2008) said the purpose of these ethical codes is to avoid problems with integrity, accountability, or transparency. Accounting skills include record-keeping, attention directing, financial management, and reporting skills that are expected to inspire effective decisions, business reporting, and the performance evaluation of any business innovativeness (Akande, 2011). Also, accounting skills act as guidance for the owner to make an effective decision about the production and pricing issues, while recording or reporting skills often support the method and techniques that enable all the businesses to gather specific information (Ajibolade, 2008).

Moreover, Agbiogwu (2010) stated that owners possess nine (9) common characteristics in accounting skills. The following are the nine common characteristics: Physical and mental strength, self-control, competitive, humble, having good judgment, decisive, motivational, demonstrating an optimistic behavior, and having great communication skills. In accounting skills, we use the system to record, classify, summarize and interpret the business's daily financial data, allowing owners can keep a record of the money flow process (Brown & Clow 1992). A good entrepreneur should be able to understand the common sources and fund uses in the business.

This study measures the accounting skill scales by focusing on previous definitions included abilities to record and calculate initial capital, amount of consumed inputs, amount of conducted production, forecast the profit and loss, always improve their accounting skills, and use accounting skills to managing financial and credit from various sources to create higher benefits for businesses. Moreover, other items that are useful to measure involve maintaining accounting records to financial operations, create an effective accounting system for the farm, and achieved performance above profitability benchmarks based on current accounting skills (Akande, 2011; Egbe, 2015). Therefore, this research considered ten items to measure accounting skills in the context of dairy farm businesses.

2.2 Financial Skill

Financial skills are considered essential skills for employees who work in many fields such as including accountants, finance, industry, chief financial officers, financial analysts, finance managers, underwriters, and more (Indeed Career Guide, 2021). Also, financial skill is referred to as a “capability to use relevant knowledge and understanding to manage an expected or an unpredictable situation to solve a financial problem and convert it to a benefit and opportunity to one’s advantage” (Taylor & Wagland, 2013). Many business owners, such as dairy owners, need to have the financial ability to enable

their businesses to perform satisfactorily. In the management field, the owners must have accuracy skills, both financial and accounting, if their businesses are to be successful. Gibson (2004) found that financial skill is “mandatory” for owners or managers. On the other hand, “commercial management” and common management skills have become progressively more significant in modern businesses (Littlejohn & Watson, 2004). The prior pieces of research have shown that financial skills can improve a firm’s performance (Subramaniam et al. 2002). Dyt and Halabi (2007) explained that in SMEs there is a tendency for financial skills to be absent. Despite being absent, some results show the skills at two aspects of management consist of the financial skills shown are cost control, accounting and budgeting, processes, and control mechanisms; financial management contains analysis, risk assessment, and resource utilization. Baliyan and Marumo (2016) described the importance of financial skills for a successful dairy business performance. Meanwhile, Kay and Moncarz (2004), Raybould and Wilkins (2005), and Harper, Brown and Irvine (2005) are a group of researchers who have studied different features in the area of financial skills and have emphasized their importance for business owners. Some have theorized (Kay & Moncarz, 2004; Harper et al. 2005) that good financial skills can help managers and entrepreneurs to become more successful (Graham & Harris, 1999).

According to a prior study, Gloy and LaDue (2003) made the most recent inclusive study about farm financial performance effects. Jackson-Smith and his associates (2004) inspected the link between dairy farm financial performance and financial management knowledge and training. Nevertheless, there are fewer studies that have examined the items of financial skill in businesses about the dairy farm, which will only be found in the literature of small business management (e.g. McMahan, 2001; Zaman & Gadenne, 2002). The indication is rather assorted, for instance, in the outcomes of a study series about U.S. farms studied by Mishra and colleagues (2001), the research looked at a wide range of factors that influence the farm financial performance and, in each variable, comprised a dichotomous amount of keeping records or books on farm expenditure and income. These speculations have been investigated and uncertainty has been voiced about the extent and effectiveness of these financial skills. Dairy farms have some specific problems, such as technical issues, and in addition, there are many crucial factors affecting profits including some aspects of financial management inside the unit. The most recent prospects for the dairy firms are good, but the importance of financial management has declined. This affects the possibility of losses, the confidence in systems, and the control functions. Meanwhile, there is growing pressure on profitability ensuring that it is essential to maintain tight

controls, so managers can handle the many financial responsibilities in their dairy businesses. More understandings of business skills help managers in making the best decisions and predicting their revenues and costs in their business. Thus, making suitable actions to exploit performance and profitability is vital.

From the details mentioned above, it is not surprising that accounting and financial skills have been featured in many entrepreneurial-related textbooks such as Deakins and Freel (2009). Their discussion shows that starting and running a business is not an easy task. By focusing on these matters, insights can be gained about the demanding nature and complexity of the business. Many pieces of evidence have shown that small businesses in some poverty-stricken countries, such as Nigeria, are affected by several factors affecting small business success (Akande, 2011). Moreover, Akande (2011) also found that accounting skill to be contributory to entrepreneurial performance and, as such, owners or entrepreneurs are advised to embark on capacity building in accounting skills in the area of financial management and record-keeping while the government makes preparations for submitting financial statements on performance monitoring mandatory for small business owners.

However, many questions will occur, such as: Does the significance of accounting and financial skills vary, or is it the same across businesses? How to handle and approach the affluence of accounting and financial skills? Should the list include more skills in the context of farming? Is it necessary for farmers to have these skills to be successful in their businesses? Are there differences between cases or contexts regarding the relevance of different skills or skill sets? Besides, this list is based on the assumption that the entrepreneurial process can be mapped and codified. However, Johannisson and Mønsted (1997) suggested that entrepreneurial knowledge can be personal and fall into the general skills category. Moreover, Chia (1996) stated that the cultivation of entrepreneurial imagination is the most crucial contribution to business studies in Universities and Business Schools. Business owners, entrepreneurs, leaders or managers, and researchers need to focus on financial and accounting abilities because there must be a concise measure of these skills.

Nevertheless, financial skill items were included in this study to encompass the ability to create a good and efficient financial system. The ability to sell and calculate profit from their business, ability to improve financial management skill through continuing education, ability to purchase needed inputs to receive discount prices, and the ability to manage income taxes effectively (Baliyan & Marumo, 2016; Al-Sharafat, 2017). These dimensions in both accounting and financial skills are not usually handled by more advanced statistical analysis but involve only Mean, S.D. t-test, F-test, and

Regression analysis. Therefore, the definition of financial skills in this research was developed or elaborated and summarized under five items. However, the current study extended the validity and reliability of the tool of accounting and financial skills of dairy farm owners or farmers by using an advanced methodology.

3. Research Method

3.1 Population and Sample

Respondents were farmers who were owners and entrepreneurs of the dairy farms, who conducted and managed dairy farms in Thailand. Dairy farms are crucial in the Thai Economy because Thailand's King began the Dairy Farming Promotion Organization of Thailand and Livestock Department to help Thai citizens gain a reliable income for their families. Today, Thailand has a production of raw milk with a capacity of 2,800 tons a day or more than one million tons per year (2015). Sixty percent of the production goes to the commercial dairy sector and the rest goes to a school milk program (Dairy Development Program, 2018). Additionally, in the ASEAN region, Thailand is the largest exporter and producer of dairy products.

The populations in this study were dairy farmers, entrepreneurs, and owners, who conducted and managed dairy farms in Thailand and represented 3,627 and 2,495 households, respectively. In total there were 6,122 dairy farmers (Department of Livestock Development, 2017). The collected data were calculated using Mund and colleagues (2005) in accord to the minimums of sample size from 3 to 20 times the number of items and absolute ranges from 100 to over 1,000. As a result, a total of 240 questionnaires were collected and used. Besides, the researcher told all of the informants that their responses were anonymous and confidential, assured them that the data would be collected and maintained in an off-site computer system to help guarantee confidentiality, and explained that management would receive a summary report without individual identification. Afterward, this study used statistical data processing and analysis software by defining the score for accounting and financial skill dimensions from owners in dairy farms. The various statistics included EFA and CFA were used for this research.

3.2 Research Instrumentation

The survey was written in Thai and checked for inter-translation validity. The surveys were developed based on prior accounting and finance study questionnaires. A five-point Likert scale was used in this research, ranging from one (strongly disagree)

to five (strongly agree), in order to avoid confusion and bias of longer scales. The study instrument has been modified and adapted from previous research and current financial accounting and skills required in the industry.

This research instrument was divided into three main sections. The first part consisted of six questions on respondent characteristics, including gender, age, level of education, work experience, monthly income, and job position. The second part consisted of ten accounting skills elements from previous studies such as Akande (2011) and Egbe (2015). Lastly, the final five items dealt with financial skills and were modified from Baliyan and Marumo (2016) and Al-Sharafat (2017).

The second and third parts were calculated from a five-point Likert scale, ranging from one denoted as strongly disagree with five denoted as strongly agree. This research utilized item-objective congruence (IOC) to test for the study's survey validity. The outcome of IOC displayed a valid value between .67 – 1.00, which indicates that it was applied, and was established by (Turner & Carlson, 2003). After the survey was developed, the non-response error was calculated between late and early respondents and the results show that there were no differences for each variable. Next step, the researcher pretested the questionnaires on 30 owners of dairy farms in Muak Lek. The Cronbach's Alpha coefficient value obtained was .79 financial skill items and .92 in accounting skill items. Cronbach's Alpha coefficients of the 240 respondents were .75 on the financial skill items and .90 of the accounting skill items. These values showed high reliability for the items, as confirmed by Cho and Kim (2015).

3.3 Statistical Techniques

This study employed a statistical data process and analysis software by defining the score for accounting and financial skills dimensions from farmers in dairy farms in Thailand. The various statistics used in this study were Descriptive Statistics (e.g. Frequency, Percentage, Mean (\bar{x}) and Standard Deviation (S.D)). Two steps were used to confirm all of the items in this study. First, exploratory factor analysis (EFA) was the statistical method used to uncover the underlying structure of the relatively large set of variables. The purpose of this method is data reduction and component summarization. McDonald (2014) stated that factor analysis is a generic term for a somewhat vaguely delimited set of techniques for data processing, mainly applicable to the social and biological sciences, and explores empirical data to observe characteristic features and intriguing relationships without imposing a definite model on the data (Stonefield, 1999). Varimax rotation was used in this study because it simplifies the expression of data. In this study, the findings are the following: inter-item correlation (correlation matrix) are at

least several small-moderate sized correlations greater than .30. Anti-image correlation matrix diagonals greater than .50, measures of sampling adequacy (MSA) in Kaiser-Meyer-Olkin (KMO) should be greater than .50. Bartlett's test of sphericity should be significant (Tabachnick & Fidell, 2001) and Eigenvalues for the correlation matrix should be greater than 1.00 (Warne & Larsen, 2014). Second, confirmatory factor analysis (CFA) was used to consider reducing an item or construct consisted of insisting that the standardized factor loading should be higher than the .40 cut-off and was statistically significant (Nunnally & Bernstein, 1994). The t-value or critical ratio was more than 1.96 ($p < .05$) (Harrington, 2009), and R^2 was greater than .50 (Zikmund, 2003; Moore, Notz, & Fligner, 2013). Other criteria were used to examine the construct validity of the data in the questionnaire. Chi-square/df test range values were held to be valid when between 2.00 – 5.00, RMSEA when less than .05 and GFI when greater than .95 (Diamantopoulos et al. 2000). Moreover, another method that employed the Composite Reliability (CR) and Average Variance Extracted (AVE) was related to the quality of item measurement. The value of the Composite Reliability (CR) was more than .70 (Hair et al. 2014), and the Average Variance Extracted (AVE) was greater than .50 (Diamantopoulos et al. 2000).

4. Results

The respondent profile of the 240 farmers indicated 143 males (59.6 percent) and with an educational level distribution showing that 129 farmers graduated from secondary school (52.5 percent). In terms of the average age of respondents, they were around 40.89 years old, with the average number of family members being 4.04 and average experience in the dairy farm business about 12.23 years. The average number of cows was 38 per family and the average number of cows inbreeding was 23. To summarize the respondent profile based on the information collected, this study can identify several key characteristics of the respondents. The majority of them were males of older age and with a reasonably good educational background. Most of them possessed working experience in dairy farm businesses for more than 12 years, had more than 35 cows per family, and 23 cows inbreeding per family. Therefore, the respondent's profile showed that the respondent had the appropriate characteristics to answer the information in the questionnaire about accounting and financial skills. Moreover, accounting and financial skills in the dairy farmers' business returned reliability (Cronbach's alpha) values of .931 and .906, respectively. The overall items showed a reliability value of .949. The results indicated high reliabilities for all variables and can be used for analysis, validity estimation in the next step.

Table 1. Items within the Questionnaire

Construct		Questions
Accounting Skills (AS)	AS1	Record and calculate of initial capital for dairy farm.
	AS2	Record and calculate amount consumed dairy farm inputs.
	AS3	Record and calculate amount conducted production in dairy farm.
	AS4	Record and calculate profit and loss.
	AS5	Follow-up continuing education to improve your accounting skill.
	AS6	Effectively managing your financial and credit from various sources based on your accounting skills.
	AS7	Effectively managing your financial operations based on your accounting records.
	AS8	Create an effective accounting system for your farm.
	AS9	Achieved performance above profitability benchmarks based on your accounting skills.
	AS10	Train your employees on accounting record keeping.
Financial Skills (FS)	FS1	Create good and efficient financial system.
	FS2	Sell and calculate profit form dairy farm business.
	FS3	Improve financial management skill through continuing education.
	FS4	Purchase needed inputs to receive discount prices.
	FS5	Manage income taxes effectively.

4.1 Exploratory Factor Analysis (EFA) for Accounting and Financial Skill

Table 1 exhibited each item within two constructs under the heading of accounting and financial skills. Moreover, Table 2 indicates the rotated factor scores. The accounting and financial skill items will be discussed separately. The overall results showed two factors that appeared with high loading greater than .40 and commonality values greater than .30. In this variable, fifteen items were considered, after analyzed by EFA, in the accounting and financial skills of dairy farmers. Bartlett's test of sphericity chi-square was 3336.971, df = 153 and the significance was .000. The Kaiser-Meyer-Olkin test was used to measure sampling adequacy (MSA). The value obtained was .939, which gave an Anti-image Correlation value between .874 (AS10) to .963

(AS3). The communality value ranged between .566 (AS9) to .795 (AS2) and was acceptable for this study.

Table 2 Exploratory Factor Analysis of Accounting and Financial Skill Constructs

Items	Dimensions	
	Factor 1	Factor 2
AS2	.843	
AS1	.826	
AS3	.791	
AS4	.770	
AS10	.680	
AS6	.664	
AS5	.646	
AS7	.637	
AS8	.636	
AS9	.621	
FS2		.813
FS4		.789
FS3		.789
FS1		.787
FS5		.765
Eigenvalue	9.217	1.205
Variance Explained	61.447	8.037
Cumulative Variance Explained	61.447	69.483
<i>N = 240 Kaiser-Meyer-Olkin (KMO) statistic = .945</i>		
<i>Bartlett's Test of Sphericity; $\chi^2 = 2917.327$, $df = 105$, $Sig. = .000$</i>		

The detail of the findings relating to EFA and other value is addressed as follows: The first factor was accounting skill (AS). It showed a high loading weight acceptability greater than .40 (range from .621 to .843) and included AS2 (.843), AS1 (.826), AS3 (.791), AS4 (.770), AS10 (.680), AS6 (.664), AS5 (.646), AS7 (.637), AS8 (.636) and AS9 (.621). Therefore, all of the items in accounting skills were acceptable to the representative variable in this study. The second dimension was financial skills (FS).

As shown in Table 2, five items had a loading weight greater than .40. High loadings were shown in items such as FS2 (.813), FS4 (.789), FS3 (.789), FS1 (.787), and FS2 (.765). Therefore, all items in the financial skills were relevant for this study.

4.2 Confirmatory Factor Analysis (CFA) for Accounting and Financial Skill

The factor loading results obtained from the EFA showed ten items in accounting skills and five items in financial skills that had values higher than .40 and other values also were acceptable. Next, all items were measured using confirmatory factor analysis (CFA). This measurement model was applied to all variables (Wong & Law, 2002) in order to evaluate how good the observed variables are linked to a set of latent variables. The measurement of all items was established based on theoretical and empirical backgrounds suggested by previous studies (Choi & Seltzer, 2010). Therefore, the ten items of accounting skills were used in CFA where the parameter (AS2) was allocated a value of 1.00 as the model’s reference indicator. The selection of a reference indicator should be the one that has a reliability that is the highest of items in the model (Kline, 2005).

Table 3. Standardized loading, S.E., t-value, R², CR and AVE of Accounting Skills Variable

Item	Factor Loading			R ²	CR	AVE
	Standardized Loading	S.E.	t-value			
AS2	.819	-	-	.671	.936	.557
AS1	.747	.056	17.440***	.557		
AS3	.745	.067	14.116***	.555		
AS4	.826	.085	13.671***	.682		
AS10	.715	.115	11.618***	.511		
AS6	.804	.108	12.954***	.647		
AS5	.801	.099	12.969***	.641		
AS7	.800	.097	13.797***	.639		
AS8	.813	.115	12.909***	.661		
AS9	.721	.110	11.322***	.519		

$\chi^2 = 14.467$, $df = 11$, $\chi^2/df = 1.315$, $p\text{-value} = .208$, $GFI = .988$, $AGFI = .942$, $SRMR = .011$, $RMSEA = .036$

Table 3 show the results from accounting skills indicated ten items. Moreover, all items showed R^2 higher than .50 and, after considered other value such as $\chi^2/df = 1.315$, p -value = .208, GFI = .988, AGFI = .942, SRMR = .011 and RMSEA = .036. In addition, the Average Variance Extracted (AVE) value might be higher than 0.5 and the Composite Reliability (CR) value should be more than .50 were acceptable. Therefore, the findings indicated that the AVE value for accounting skill was .557 and CR was .936, both of which are higher than the suggested cut-off criterion. These results indicated that the convergent validity of the construct was adequate and showed that the accounting skills have the goodness of fit value consistency between conceptual framework and empirical evidence.

Table 4. Standardized Loading, S.E., t-value, R^2 , CR and AVE of Financial Skill Dimensions

Item	Factor Loading			R^2	CR	AVE
	Standardized Loading	S.E.	t-value			
FS2	.924	-	-	.854	.922	.703
FS4	.757	.061	13.627***	.574		
FS3	.876	.083	14.405***	.767		
FS1	.840	.069	13.133***	.705		
FS5	.783	.096	12.339***	.614		

$\chi^2 = .004$, $df = 1$, $\chi^2/df = .004$, p -value = .950, GFI = 1.000, AGFI = 1.000, SRMR = .000, RMSEA = .000

In the financial skill area, five items from EFA and the CFA results are exhibited and the results returned R^2 for all item higher than .50, $\chi^2/df = .004$, p -value = .950, GFI = 1.000, AGFI = 1.000, SRMR = .000 and RMSEA = .000. These results showed that the goodness of fit from five items in financial skill indicating validity and reliability sufficient that all of the items can be representative of the financial skill variable. In the case of that Average Variance Extracted (AVE), it showed a value of .703 and CR was .922, both of which were higher than the cut-off criteria. Table 4 shows the results of CFA and other values from the data analysis. These results indicate that all of the items in the financial skill variable possess adequate validity and reliability values.

5. Discussion

In this research, accounting and financial skills were developed and validated because they were used by farmers and dairy farm owners in Thailand. The dimensions and items used were based on prior research findings, combined with the important skills shown by owners or managers in conducting their business effectively and who exhibited performances that led to success in business. Dairy farm businesses are important because they were considered as a part of the strategic industries in Thailand. The Government of Thailand aims to help all dairy farm owners attain higher skills by promoting and educating more dairy farm activities for owners and managers. The literature review indicated that for a business to be successful in its operations the owners or the managers must possess managerial skills including financial and accounting skills. In this research, two dimensions of managerial skills (both accounting and financial skills) were confirmed as being more valid and reliable devices to measure the accounting and financial ability of owners and farmers.

The results, regarding the reliability and validity of four dimensions of managerial skills, especially financial and accounting skills in dairy farm businesses were consistent with findings reported in the literature (e.g., Kay & Moncarz, 2004; Raybould & Wilkins, 2005; Ajibolade, 2008; Agbiogwu, 2010; Akande, 2011; Baliyan & Marumo, 2016). “Consistent with the findings” means that accounting and financial skills are an important dimension related to abilities, such as applying relevant understanding and knowledge to manage unpredictable or unexpected financial and accounting problems, so businesses will be successful, which includes SMEs such as dairy farm businesses.

Consequently, there is a lack of clarity of accounting and financial skills’ dimensions and items that might help the management function within all organizations to be successful. This study gives two significant contributions to financial and accounting skill dimensions for the dairy farm managers in Thailand. First, it established that to measure the accounting and financial skills, there must be ten items for the accounting skill dimension and five items for financial skill dimensions. The perception shows that entrepreneurs or owners might have both skills (Baliyan & Marumo, 2016; Al-Sharafat, 2017) uniform to the results from Mäkinen (2013) and Egbe (2015). Second, the empirical findings from ten items of accounting skill dimension and five items of financial skill dimension showed strong reliability and validity in accordance to the condition of CFA and EFA that was applied in this research. Therefore, the scholars who want to use accounting and financial skill dimensions can show these items to their future research and accomplish the modern accounting and financial dimension.

6. Conclusion and Suggestion

The study entitled “The Testing of the Reliability and Validity of Accounting and Financial Skills Measures: An Empirical Evidence of Thai Dairy Farm” resulted from entrepreneurs, owners, and farmers from dairy farm businesses in Thailand. This study was conducted to confirm the managerial, accounting, and financial skill items of the owners and entrepreneurs in the local society and community. These items include making predictive and develop the skills, formulating functional management strategies, and developing sustainable and long-term business activities. The results of the findings from the research will help identify the significant managerial skill items in financial and accounting variables.

This study can truly be applied to 240 entrepreneurs from dairy farm businesses in Thailand. The results can be applied, with the help of the Thai government, by promoting and increasing awareness among owners and managers of activities related to the dairy farm. Under the cooperation and participation of the entrepreneurs and farmers in the dairy business, the responsibility is quite simple which is attending and participating in the activities provided. In conclusion, it is crucial focusing on these entrepreneurs because dairy farm businesses are considered a part of the strategic industries in Thailand.

Thus, this research makes two significant contributions to the comprehension of financial and accounting skills in the context of dairy farm businesses. The first sign is the dimensions and items of financial and accounting skills in this research can be used to identify the financial and accounting skill variables. The idea that entrepreneurs or owners have many functional management skills important to have a successful business is not new (Poppe, 1991; Streeter, 1992; Allen & Sander, 1994), and is supported by the results from Bart (2006), Yaaghubi, and colleagues (2009), Ahmed and Zabri (2012) and Undutimi (2013). Second, the observed findings from five items in the financial skills area and ten items in the accounting skills domain showed that they had strong reliability and validity. Additionally, the findings also confirm the possession of supplementary understandings of managerial skills in financial and accounting matters in dairy farm entrepreneurs or owners. Dairy farm entrepreneurs or owners are concerned in all areas such as making predictive and decision-making plans, formulating functional management strategies and developing sustainable and long-term business performance. Consequently, future scholars who want to examine financial and accounting skills can use these items and acknowledge the significance of these skills to all businesses.

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