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Personal Entrepreneurial Competencies of Dairy Buffalo Entrepreneurs in Nueva Ecija, Philippines

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ABSTRACT

This study aims to describe the profile of the dairy buffalo entrepreneurs and analyze their entrepreneurial traits, with the end view of improving these traits. The respondents were 170 dairy buffalo entrepreneurs from assisted cooperatives and associations of the Philippine Carabao Center (PCC) in Nueva Ecija, Philippines. Descriptive statistical tools (i.e., frequency counts, means and range and ranks) were used to analyze and interpret the data. Data were processed and analyzed using the Statistical Package for the Social Science version 20. Based on the results, the respondents were found to have a moderate score for persuasion and networking, but found to be strong in opportunity seeking, persistence, commitment to work contract, demand for quality and efficiency, risk-taking, goal setting and information seeking, systematic planning and monitoring and self-confidence. It is recommended that PCC should focus on enhancing the competency on persuasion and networking among dairy buffalo entrepreneurs through trainings and seminars.

INTRODUCTION

Competencies are demonstrated through the behaviour and actions of the individual, they are supposed to be observable and possibly more modifiable in the short and medium term than personality traits (Bird, 1995; Man, Lau and Chan, 2002). Due to these remarks, it can be expected that graduates who have received entrepreneurship education are better prepared to detect opportunities and implement their ideas than those who have circumscribed their studies to the elements contained in the classical professional approach.

This study used the Personal Entrepreneurial Competency (PEC) to determine the characteristics of the entrepreneurs. As McClelland and McBer (1987) in Palacpac *et al.* (2015) defined, personal entrepreneurial competency is an underlying characteristic of a person, which results in effective and /or superior performance in a business venture. It is an underlying characteristic of a person, in that it may be motive, traits, skills, aspect of one's self-image, a body of knowledge, set of skills and cluster of appropriate motives/ traits that an individual possesses to perform in his business.

The PECs are composed of the following traits: opportunity seeking, persistence, commitment to the work contract, demand for quality and efficiency, risk taking, goal setting, information seeking, systematic planning and monitoring, persuasion and networking, and self- confidence. These traits are described below as cited from (Diaz *et al.*, 1997 in Depositario, Aquino and Feliciano, 2011).

Opportunity seeking

An entrepreneur does not only spot opportunities for business but will also do something about the

opportunities cited like actually putting up a business; will also seize unusual opportunities to obtain financing, equipment, land, work space or business assistance.

Persistence

An entrepreneur does not give up easily when confronted with obstacles; takes repeated and different actions to overcome them. He/she stands his/her ground in the face of negative comments saying it is unwise or not good to invest in an unsure business.

Commitment to the work contract

Once a job is accepted, the entrepreneur accepts full responsibility for it; pitches in with workers in order to get the job done at a mutually-agreed time.

Risk-taking

The entrepreneur is willing to take risks; he/she is a cautious risk taker and not a gambler; prefers to take on challenging tasks knowing that with his/her knowledge, experience and hard work, he/she has a fair chance to succeed.

Demand for efficiency and quality

The entrepreneur sets high but realistic standards of excellence for himself/herself and he/she finds it hard to compromise on those standards. The entrepreneur strives to find ways to do things better, faster, or cheaper.

Goal setting

As an achiever, the entrepreneur is aware that planning can contribute to his/her high need to achieve. He/she therefore sets clear and well-defined long term and short-term goals.

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Systematic planning and monitoring.

A successful entrepreneur does not only plan but also follows through the plan systematically, checking if the activities and expected outputs are going on as planned. Planning enables him/her to avoid costly mistakes and anticipates possible problems. It enables him/her to program activities in advance. Monitoring, is verifying whether everything, including results, proceed according to plan. If there is any discrepancy, then either the activities or the plan itself need to be adjusted.

Information seeking

In order to achieve long- and short-term goals, the entrepreneur seeks for relevant Information regarding clients, suppliers and competitors; consults experts for business and technical advice; and uses contacts or information networks to obtain useful information.

Persuasion and networking

A persuasive person who readily establishes a network of personal and business contacts around him/her usually makes a good entrepreneur. The entrepreneur is a natural leader who can win people over to his way of thinking – financiers, suppliers, sources of information, buyers, etc. He/ she builds a network of contacts useful to starting and building up his/her business.

Self-confidence

The entrepreneur is one who believes in himself/ herself. He/she starts with the premise that “I can.” Self-confidence is related to the belief in one’s capacity to achieve despite the overwhelming odds.

Creativity

This is seeing something else, something different, and something beyond what others see. Creativity is the ability to use your thinking power to solve problems when you are faced with unusual situations or to make up new ways

of doing things in order to do something well.

METHODOLOGY

The study was conducted in Nueva Ecija, a landlocked province in Central Luzon, Philippines. The province is composed of five cities, 27 municipalities, and 849 barangays. It has a total land area of 5,638 sqm, which relies on agriculture as the main source of livelihood (Figure 1). Nueva Ecija is often tagged as the “Rice Bowl of the Philippines”

The Local Government Code, also known as Republic Act 7160, defines agricultural land as land devoted principally to the planting of trees, raising of crops, livestock and poultry, dairying, salt making, inland fishing and similar aquacultural activities and other agricultural activities, commercial or industrial. This definition explicitly categorizes dairy buffalo as an agricultural enterprise. The Philippine Standard for Industrial Classification (2009) classified Dairy Buffalo Farming under animal production and manufacturing of foods and food products.

The research was conducted in July 2019, covering 33 organizations implementing dairy buffalo enterprises in 16 cities and municipalities in Nueva Ecija. A survey among 170 randomly selected entrepreneurs from these organizations was the main data gathering technique to generate the respondents’ socio-economic characteristics and their personal entrepreneurial competencies.

The set of questions on the personal entrepreneurial competency was adopted from the Management Systems International (MSI) and McBer and Company Entrepreneurship Workshop (Diaz *et al.*, 1997 in Depositorio *et al.*, 2011).

The study was conducted to describe the respondents’ profile and analyze their personal entrepreneurial competencies. To arrive at this, the study employed a descriptive research design. Data were analyzed using descriptive statistical measures such as frequency counts, percentages, mean, and range.



Figure 1: Map of Nueva Ecija

RESULTS AND DISCUSSION

Socio-demographic Characteristics of the Respondents

Age
The mean age of the respondents is 51 years; the youngest age is 24 while the oldest is 76 years. Almost 30% of the respondents fall in the age bracket 41 – 50 years old (Table 1). The respondents’ mean age is lower than the mean age of farmers in 2017 which was 57 years old Considering the URT (United Republic of Tanzania,

2013) study which suggested the age group of 25-40 as a superior age to conduct a business and make big progress, the respondents are no longer in this age group. However, the mean age of 51 falls within the 25-54 years age bracket which is classified as prime working age

Educational attainment

About 45% of the respondents were high school graduates while 12% were college graduates (Table 1). These

Table 1: Profile of the respondent-entrepreneurs

Characteristics	Frequency (N=170)	Percent
Age (years)		
<31	5	3
31 - 40	26	15
41 – 50	51	30
51 - 60	49	29
>60	39	23
Total	170	100
Mean	51	
Range	24 - 76	
Educational Attainment		
Elementary Level	6	4
Elementary Graduate	41	24
High School Level	15	9
High School Graduate	76	45
College Level	11	6
College Graduate	21	12
Total	170	100
Sex		
Male	152	89
Female	18	11
Total	170	100
Marital Status		
Married	166	98
Widowed	4	2
Total	170	100
Household Size < 4		
4	31	18
> 4	48	28
Total	170	100
Mean	3.65	
Range	1 - 8	
Number of Children (n=170)		
< 2	41	24
2-3	95	56
> 3	34	20
Total	170	100
Mean	2.42	
Range	0 - 7	

statistics show that the respondents have relatively higher level of education compared to the common farmers who more often have reached elementary levels only. Olomi (2009) and Kumar and Kalyani (2011) have emphasized the importance of education in entrepreneurship because it provides the entrepreneurs the knowledge and skills to create a business.

Sex

Majority of the respondents were male (89%) and only 11% were female. This is unsurprising considering that the nature of some activities is still viewed in Philippine society as primarily men's domain. This indicates that dairy buffalo farming is an occupation highly dominated by men. Based on the 2015 Census of Population (POPCEN), males accounted for 50.5% of the total population of Nueva Ecija in 2015, while females comprised the remaining 49.5%. These figures resulted in a sex ratio of 102 males for every 100 females.

Marital Status

Majority (98%) of the respondents were married and the remaining two percent were widowed.

Household size and number of children

The respondents' households were composed of members ranging from one to eight, with more than half of the households composed of less than four members (54%). The average household size was 3.65, which is relatively smaller compared to the 4.3 average reported in Nueva Ecija in 2015 (POPCEN, 2015).

In terms of the number of children, more than half (56%) of the respondents have two- three children. About one-fourth (24%) have less than two children. Meanwhile, one-fifth (20%) of the respondents had more than three children. The average number of children was 2.42, which is almost comparable to 2.7 that was reported in the 2017 National Demographic and Health Survey

Economic Characteristics of the Respondents

Income from milk

The mean estimated annual income from the sale of milk (Table 2) was PhP224,374.03 for small hold, PhP292,822.65 for family module, PhP381,718.52 for semi- commercial, and PhP584,666.67 for commercial farms.

About 40% of the respondents under the small hold category earned PhP100,001 – 200,000. Only a small percentage (4%) earned more than PhP500,000. This was followed by 39% of the respondents under the family module who earned PhP100,001-200,000. Only a small percentage (2%) earned more than PhP500,000. In terms of semi commercial category, 30% of the respondents earned PhP200,000–300,000, and another 30% earned PhP300,001- 400,000, while 11% earned more than PhP500,000. Under the commercial category, 58% of the respondents earned more than PhP500,000, while a small percentage (8%) earned PhP300,001- 400,000 from milk annually.

Income from calves

The mean annual income from selling calves (Table 2) was PhP56,919.12 for small hold, PhP62,617.02 for family module, PhP80,347.83 for semi- commercial, and PhP101, 363.64 for commercial farms.

Under the small hold category, 41% of the respondents earned PhP25,001 – 50,000, while a small percentage (9%) earned PhP50,001-75,000 annually. In terms of family module, 32% of the respondents earned PhP25,001- 50,000, while 15% earned more than PhP100,000. Under the semi-commercial category, 26% of the respondents earned PhP50,001-75,000. The same percentage (26%) earned PhP75,001-100,000. Under the commercial category, 36% earned PhP50,001-75,000. The same percentage of 36% earned more than PhP100,000. A small percentage (9%) earned less than or equal to PhP25,000 from calves annually.

Income from vermicast

The mean annual income from selling vermicast (Table 2) was PhP12,100 for small hold, PhP13,333.33 for family module, and PhP60,000 for commercial. The semi-commercial farms did not sell vermicast.

Under the small hold category, 70% of the respondents earned less than or equal to PhP20,000, while the remaining 30% earned more than PhP 20,000 from vermicast annually. In terms of the family module, 67% of the respondents earned less than or equal to PhP20,000, while the remaining 33% earned more than PhP20,000. Under the commercial category, only one respondent earned more than PhP20,000.

The mean annual total benefits derived from the sale of milk, calves and vermicast was PhP276,211.69 for small-hold, PhP348,063.39 for family module, PhP450,162.96 for semi- commercial, and PhP682, 583.33 for the commercial farms.

Annual income from non-dairy farm sources

Non-dairy farm sources of income include crop production such as rice, onion, vegetable, corn, citrus; fisheries such fishpond operation, and livestock production such as goat, swine, sheep and poultry.

A total of 142 respondents (84%) earn income from non-dairy farm sources; meanwhile, there were 28 respondents (16%) who do not have such income. The mean annual income from non-dairy farm was computed at PhP49,750.00, which ranged from PhP5,000 to as high as PhP330,000. Specifically, about 31% of the respondents earn less than PhP20,000 per year from non-dairy farm sources, while 30% earn between PhP20,000 and PhP40,000. The province of Nueva Ecija, being predominantly agricultural, is inhabited by farmers who also engage in multiple crop and poultry production in addition to dairy farming.

Annual income from off-farm sources

Off-farm sources were composed of providing services for artificial insemination, and as laborer in rice planting

and harvesting production in other farms. Only 16 respondents (9%) earn additional income from off-farm sources which ranged from PhP3,000 to PhP100,000, with a mean of PhP20,237.50. Out of the 16 respondents, 12 (75%) earn PhP20,000 or less yearly.

Annual income from non-farm sources

Non-farm sources include variety (sari-sari) store, smoked fish vending, dress making, vulcanizing, tricycle driving, truck driving, catering, networking, government work, stove making, welding, overseas work as OFW,

Table 2: Annual income from sale of milk, calves and vermicast per farm category

Estimated Annual Income	Farm Classification							
	Small Hold (1-5 hds)		Family Module (6-10 hds)		Semi-Commercial (11-20 hds)		Commercial (> 20 hds)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Milk								
<100,000	12	16	1	2				
100,001-200,000	31	40	21	39	4	15		
200,001-300,000	21	27	13	24	8	30	2	17
300,001-400,000	10	13	10	19	8	30	1	8
400,001-500,000	3	4	8	15	4	15	2	17
>500,000			1	2	3	11	7	58
Total	77	100	54	100	27	100	12	100
Mean	224,374.03		292,822.65		381,718.52		584,666.67	
SD	112,909.68		124,036.38		160,117.60		246,730.37	
Range	60,000 – 500,000		100,000 – 540,000		150,000 – 900,000		216,000 –1,000,000	
Calves								
< 25,000	17	25	11	23	3	13	1	9
25,001-50,000	28	41	15	32	5	22		
50,001-75,000	6	9	6	13	6	26	4	36
75,001-100,000	10	15	8	17	6	26	2	18
> 100,000	7	10	7	15	3	13	4	36
Total	68	100	47	100	23	100	11	100
Mean	56,919.12		62,617.02		80,347.83		101,363.64	
SD	48,384.77		44,560.92		57,020.41		60,170.21	
Range	5,000 – 200,000		5,000 – 200,000		15,000 – 250,000		15,000 -200,000	
Vermicast								
< 20,000	7	70	2	67				
> 20,000	3	30	1	33			1	100
Total	10	100	3	100			1	100
Mean	12,100.00		13,333.33				60,000.00	
SD	8,478.07		7,637.62					
Range	5,000 – 30,000		5,000 – 20,000				60,000 - 60,000	
Total Benefits Derived								
Mean	276, 211.69		348,063.39		450,162.96		682,583.33	
SD	134,619.187		133,893.73		200,556.32		253,764.55	
Range	60,000 – 700,000		135,000 – 600,000		200,000 – 1,150,000		276,000 – 1,060,000	

honorarium, and pension.

Some 70 respondents (41%) earn additional income from non-farm sources, which ranged from PhP3,000 to PhP300,000, with a mean of PhP62,464.29. Some 43% of the respondents earn PhP20,000 or less annually.

Organizational Affiliation and Years of Experience in Dairy Buffalo Entrepreneurship

Majority (98%) of the respondents belong to the

cooperative organizations, and 2% are members of associations. Meanwhile, 34% of the respondents have 6-10 years membership in their organization, followed by 22% with 1 – 5 years, and 19% with 11-15 years. The mean year of membership was 12 years. In terms of the length of experience in dairy buffalo enterprise, 34% of the respondents have 6 -10 years of experience, 22% have 1 – 5 years, and 19% have 11-15 years. The mean year of experience in dairy buffalo enterprise was 10 years (Table 3).

Table 3: Organizational membership, length of membership and years of experience in dairy buffalo entrepreneurship.

Item	Frequency (N=170)	Percent
Organizational Membership		
Association	4	2
Cooperative	166	98
Total	170	100
Years of Membership in the Organization		
1-5	37	22
6-10	57	34
11-15	32	19
16-20	24	14
21-25	6	4
>25	14	8
Total	170	100
Mean	12.08	
SD	7.34	
Range	3 - 33	
Years of Experience in Dairy Buffalo Entrepreneurship		
1-5	50	29
6-10	60	35
11-15	25	15
16-20	31	18
21-25	2	1
>25	2	1
Total	170	100
Mean	10.42	
SD	5.81	
Range	3 - 30	

Dairy Farm Ownership

To become a farmer-beneficiary of a PCC dairy buffalo module, interested individuals are required to ensure access to a piece of land that will be dedicated for the dairy buffalo enterprise. In case they do not own the land, they must secure a written legal document, witnessed and attested by the officers of the cooperatives or the associations to which they are affiliated, stipulating that they are allowed to use a specific piece of land for this

particular purpose.

Majority of the respondents (92%) have full ownership of the farms they manage (Table 4). Other respondents have free use of land (4%), partial land ownership (3%) and leaseholders (1%). Results of this study somehow agree with the findings of Lantican *et al.* (2017) in their analysis of dairy buffalo value chain analysis in Luzon, Philippines, wherein majority of dairy farmer respondents (58%) in Region 3-NIZ own the land they use.

Table 4: Respondents’ ownership of dairy farm

Type of Ownership	Frequency (N=170)	Percent
Fully owned	157	92
Partly owned	5	3
Leascholder	2	1
Free use	6	4
Total	170	100

Number of Buffaloes Raised

Based on the number of buffaloes raised, the respondents can be categorized following Palacpac *et al.*'s (2017) classification of dairy buffalo farms. Most of the respondents (45%) who raise 1- 5 buffaloes were classified as small-hold farmers, while some who have 6-10 heads (32%) were considered as family module, those with 11 – 20 heads (16%) were semi-commercial, and those with more than 20 heads (7%) were considered commercial. The mean number of buffaloes raised by the respondents was 8, ranging from 1 to 40 (Table 5). This implies that they belong to the family module type.

Personal Entrepreneurial Competency of the Respondents

Table 6 summarizes the Personal Entrepreneurial Competency (PEC) scores of the dairy buffalo entrepreneurs. The mean scores were computed, interpreted and ranked based on the respondents’ attitudes and personal beliefs. Using the PEC scores as an instrument, the entrepreneurial competencies of the respondents was determined. In general, the respondents were found to have a moderate score for persuasion and networking, but found to be strong in opportunity seeking, persistence, commitment to work contract,

Table 5: Classification of dairy buffalo enterprise based on the number of buffaloes raised

Number of Buffaloes	Frequency (N=170)	Percent
1-5 (Small-hold)	77	45
6-10 (Family module)	54	32
11-20 (Semi-commercial)	27	16
>20 (Commercial)	12	7
Total	170	100
Mean	8.39	
Range	1 - 40	

demand for quality and efficiency, risk-taking, goal setting and information seeking, systematic planning and monitoring and self- confidence.

Understanding one’s PEC will be of great help in the detection and analysis of strong and weak points. These behavioral indicators are said to be useful in strengthening the entrepreneurial potential. The highest score for each PEC item is 25: the closer to 25 means the strongest in that particular PEC item

The dairy buffalo entrepreneurs regardless of their farm classifications were found to be strong in the PEC traits of opportunity seeking (19.83 for small hold, 19.35 for family module, 19.93 for semi-commercial and 20.17 for commercial); persistence (19.79 for small hold, 20.04 for family module, 21.11 for semi-commercial and 20.75 for commercial); commitment to the work contract (19.88 for small hold, 20.02 for family module, 20.11 for semi-commercial, 20.25 for commercial); contract demand for efficiency and quality (19.58 for small hold, 19.67 for family module, 19.81 for semi-commercial, 20.25 for commercial); risk taking (20.39 for small hold, 20.54 for family module, 20.19 for semi commercial, 19.92 for commercial); goal setting (23.97 for small hold, 23.93 for family module, 23.67 for semi-commercial, 24.00 for

commercial); information seeking (19.01 for small hold, 19.17 for family module, 19.63 for semi- commercial, 19.50 for commercial); systematic planning and monitoring (20.00 for small hold, 20.00 for family module, 20.44 for semi commercial, 20.08 for commercial); and self-confidence (20.77 for small hold, 20.72 for family module, 20.81 for semi-commercial, 18.92 for commercial).

Of the 10 PEC traits, only persuasion and networking was found to be moderate (17.88 for small hold, 17.54 for family module, 18.41 for semi-commercial, and 17.25 for commercial).

Table 6 shows the ranking of PEC traits of the respondents based on farm classification. Under the small hold category, goal setting was ranked highest (#1) with a score of 23.97. This was followed by self-confidence (PEC= 20.77, ranked #2), risk taking (PEC= 20.39, ranked #3), systematic planning and monitoring (PEC=20.00, ranked #4), commitment to work contract (PEC=19.88, ranked #5), opportunity seeking (PEC = 19.83, ranked #6), persistence (PEC=19.79, ranked #7), demand for quality and efficiency (PEC= 19.58, ranked #8), information seeking (PEC= 19.01, ranked #9), and persuasion and networking (PEC = 17.88 ranked #10).

In terms of family module category, goal setting was

ranked highest (#1) with a score of 23.93. This was followed by self-confidence (PEC= 20.72, ranked #2), risk taking (PEC= 20.54, ranked #3), persistence (PEC=20.4, ranked #4), commitment to work contract (PEC=19.88, ranked #5), systematic planning and monitoring (PEC=20.00, ranked #6), demand for quality and efficiency (PEC= 19.67, ranked #7), opportunity seeking (PEC = 19.35, ranked #8), information seeking (PEC= 19.17, ranked #9), and persuasion and networking (PEC = 17.54, ranked #10). For the semi commercial category, goal setting was ranked highest (#1) with a score of

23.67. This was followed by persistence (PEC=21.11, ranked #2), self-confidence (PEC= 20.81, ranked #3), systematic planning and monitoring (PEC=20.44, ranked #4), risk taking (PEC= 20.19, ranked #5), commitment to work contract (PEC=20.11, ranked #6), opportunity seeking (PEC = 19.93, ranked #7), demand for quality and efficiency (PEC= 19.81, ranked #8), information seeking (PEC= 19.63, ranked #9), and persuasion and networking (PEC = 18.41 ranked #10). In terms of the commercial category, goal setting was ranked highest (#1) with a score of 24. This was followed by persistence (PEC=20.75, ranked #2), commitment to work contract (PEC=20.25, ranked

Table 6: PEC scores of dairy buffalo entrepreneurs per farm classification

Personal Entrepreneurial Competency Traits	Farm Classification				
		Small Hold (n=77)	Family Module (n=54)	Semi- Commercial (n=27)	Commercial (n=12)
Opportunity seeking	Mean	19.83*	19.35	19.93	20.17
	Range	16 -22	16 - 22	17 - 21	18 - 22
	Rank	6	8	7	4
Persistence	Mean	19.79	20.04	21.11	20.75
	Range	15 - 25	16 -25	17 -25	18 - 25
	Rank	7	4	2	2
Commitment to the work contract	Mean	19.88	20.02	20.11	20.25
	Range	16 - 22	17 - 21	17 - 21	19 - 21
	Rank	5	5	6	3
Demand for efficiency & quality	Mean	19.58	19.67	19.81	20.25
	Range	16 - 22	13 - 22	15 - 22	19 - 22
	Rank	8	7	8	3
Risk taking	Mean	20.39	20.54	20.19	19.92
	Range	18 - 25	17 - 25	17 - 25	15 - 25
	Rank	3	3	5	6
Goal setting	Mean	23.97	23.93	23.67	24.00
	Range	18 - 25	20 -26	20 - 25	22 - 25
	Rank	1	1	1	1
Information seeking	Mean	19.01	19.17	19.643	19.50
	Range	16 - 22	15 - 22	18 - 21	16 - 22
	Rank	9	9	9	7
Systematic planning & monitoring	Mean	20.00	20.00	20.44	20.08
	Range	16 - 22	17 - 23	18 - 22	17 - 22
	Rank	4	6	4	5
Persuasion & networking	Mean	17.88	17.54	18.41	17.25
	Range	14 - 22	14 - 21	15 - 21	12 - 20
	Rank	10	10	10	9
Self-confidence	Mean	20.77	20.72	20.81	18.92
	Range	17 - 25	17 - 24	18 - 25	17 - 23
	Rank	2	2	3	8

* Adjectival rating - PEC scores can be generally be interpreted as follows: 19 and above – strong; 16-18 – moderate; and 15 and below – weak.

#3), demand for quality and efficiency (PEC= 20.25, ranked #3), opportunity seeking (PEC = 20.17, ranked #4), systematic planning and monitoring (PEC=20.08, ranked #5), risk taking (PEC= 19.92, ranked #6), information seeking (PEC= 19.50, ranked #7), self-confidence (PEC= 18.92, ranked #8), and persuasion and networking (PEC = 17.25, ranked #9).

With these rankings, it can be noticed that the entrepreneurs were strong on goal setting and consistently ranked #1 across farm classifications. The other competencies ranked variably across the farm categories. However, information seeking, and persuasion and networking consistently ranked ninth and tenth for small hold, family module and semi-commercial entrepreneurs.

It is noticeable from the table that in terms of risk-taking, the commercial entrepreneurs got the lowest score, which means that they were less risk-taker compared with the other entrepreneurs. This is quite understandable since they have big farms and have so much to lose in case of negative business outcomes.

All the competencies, except persuasion and networking, had adjectival ratings of strong since PEC scores can be generally be interpreted as: 19 and above – strong; 16-18 – moderate; and 15 and below – weak. The entrepreneurs from all farm categories had a moderate score on persuasion and networking. For commitment to work contract and demand for efficiency and quality, average scores tended to increase as the scale of operations increased.

The competencies described in Table 1, particularly persuasion and networking, can be further enhanced through the assistance of the Philippine Carabao Center or any government and non-government organizations, thereby increasing the entrepreneurs' PEC scores in the future toward a more successful management of their dairy buffalo enterprises.

McClelland and McBer (1987), explained that PEC is an underlying characteristic of a person, which results in effective and /or superior performance in a business venture. It is an underlying characteristic of a person, in that it may be motive, traits, skills, aspect of one's self-image, a body of knowledge, set of skills and cluster of appropriate motives/ traits that an individual possesses to perform in his business. In the context of dairy buffalo enterprise implementation, the respondents and their households were the ones making major decisions. Their respective entrepreneurial competencies will decide how much success they can achieve, hence these competencies must be strengthened or improved continuously.

The study of Li (2009) as cited by Alusen (2016) confirmed that entrepreneurs normally possess advanced level of entrepreneurial competencies than non-entrepreneurs, and both can be categorized based on their competency level. These findings imply that entrepreneurs can be more

capable than non-entrepreneurs in terms of competency. Alusen (2016) cited Resurreccion's (2012) findings that women entrepreneurs from the rural area were found to be great in terms of setting their goals, seeking relevant data, planning systematically and monitoring. They possessed all other competencies in moderation. However, most of these entrepreneurs tend to be weak in competencies involving risks, persuasion and networking.

CONCLUSION

The Personal Entrepreneurial Competency Scores of dairy buffalo farmers revealed that in general, the respondents were found to be moderate in persuasion and networking but found to be strong on opportunity seeking, persistence, commitment to work contract, demand for quality and efficiency, risk-taking, goal setting and information seeking, systematic planning and monitoring and self-confidence. The assessment of the Personal Entrepreneurial Competency (PEC) score of the respondent-participants places them at a moderate level on persuasion and networking. This implies room for improvement on this aspect which can be achieved through training.

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