

## SUCCESS AND COMPETENCE IN AGRICULTURAL BUSINESS BY RETIRED MILITARY OFFICERS IN SWAZILAND

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### **Abstract**

*A descriptive-correlational research was conducted determining relationship between competence and success in agricultural business of the Umbutfo Swaziland Defence Force (USDF) retired military officers. A questionnaire was developed for both competence and success measures and characteristics of respondents. Validation and pilot tests were conducted. Data collection used the USDF protocol. Descriptive, correlational and inferential statistics were generated. Findings revealed: most retired military officers were engaged in field crop production, business management, indigenous chicken production, beef production, sheep/goat production, and vegetable production. Areas in which respondents reported to have had high to very high competence in: layer production, agro-forestry, sugar cane production, field crop production, business management, vegetable production and broiler production. Comparisons by levels of competence according to characteristics groupings did not yield any significant difference. Correlations between levels of competence and education groupings showed mostly negative coefficients. Indicators of success in agricultural business were: living in a better house; having bought cattle; assisted extended family members; having clean water; and, providing better education for children. Comparisons by levels of success according to characteristics groupings yielded no significant difference. Correlation between levels of success and education groupings showed negative but low correlation coefficients. Positive substantial correlations existed between competence levels and success in broiler production, honey bee keeping, layer production, rabbit production, and pig production. Positive moderate correlations existed between competence and success in sheep/goats production and fish production.*

### **Introduction**

Agriculture contributes about 25% of the Swaziland Gross Domestic Product (Swazi Review of Commerce and Industry, 2003), and is a viable means to improving income and employment for the rural population (Dlamini, 2001). Libenberg and Roefs (2001) assured that retired military officers engaging in agriculture continue their roles in security and defence, and in the process boost their morale and self-esteem.

Many retired military officers in Swaziland invested their pension in agricultural business venture as a way of sustaining themselves and their families, and sell surplus. However, some have not been successful. The main reason given is the low levels of competence in the business areas they engaged in, which USDF could have equipped them even before retirement. Most encounter challenges as they re-integrate with their community (Times of Swaziland, Nov. 3, 2003; Liebenberg and Roefs, 2001), and this became a reason for choosing agriculture as a befitting business. Makocha (2003) stated that, few studies have focused on the competencies that influence farmer success.

### **Purpose and Objectives**

The purpose of the paper is to determine the relationship between levels of competence in agricultural business areas and levels of success by retired military officers of the USDF. The objectives were to: (i) identify and describe the agricultural business areas retired military officers were engaged in, and their levels of competence; (ii) determine: if there are significant differences in levels of competence in agricultural business areas by characteristics of retired military officers; and, correlations between levels of competence in agricultural business areas and levels of education of retired military officers; (iii) identify and describe the indicators and levels of success of retired military officers in agricultural business; (iv) determine: if there are significant differences in levels of success in agricultural business by characteristics of retired military officers; and, correlations between levels of success in agricultural business and levels of education of retired military officers and, (v) describe the correlations between levels of success and competence in agricultural business areas of retired military officers.

### **Theoretical Base**

The approach used in this study is hypothesis testing based on both conceptualising and deductive reasoning. Tuckman (1978) described the conceptual approach as defining of events in terms of causality with other events, to how reality operates and variables interrelate. The deductive process begins with known facts (theory), and goes through deductive hypotheses testing to arrive at empirical facts (Ary, 1985).

#### *Characteristics indicative of competence and success of retired military officers in agricultural business*

USDF has no clear instrument of recruitment. Desirable age, health condition, nationality and absence of criminal record, are the criteria used. Education and other relevant training were not part of the recruitment criteria used. Retirement on the other hand, stipulates the age, health, and/or violation of a military order (USDF, 1993).

Competencies are skills that operators need to know (CriteriaOne, 2006), such as in agricultural business. According to the same website, competencies have to be accompanied by right character, proficiency and willingness to apply knowledge and skills. The foregoing if possessed may bring success in the job performance (Macocho, 2003, Findlay, 1992; and, Mdluli, 1999).

#### *Hypotheses tested*

Statistically significant differences in competence levels in agricultural business areas as dependent variable, by characteristics groupings as plausible independent variables, will not be found.

Positive moderate and higher correlations between competence levels in agricultural business areas as dependent variable, and education levels of the respondent groups as plausible independent variable, will not be found.

Statistically significant differences in levels of success in agricultural business as dependent variable, by characteristics groupings as plausible independent variables, will not be found.

Positive moderate and higher correlations between levels of success in agricultural business as dependent variable, and education levels of respondents as plausible independent variable, will not be found.

*Relationship between levels of competence and levels of success in agricultural business areas of retired military officers*

Agricultural business that takes the initiative to promote strategic competencies and get closer to customers will continue to successfully compete in the global market (<http://web.extensions.uiuc.edu/iidea/projects/competencies.htm>). An advice from Mitchell (2003) on competency-based success was that, any business needs to identify key behaviours and competencies, and business owners should spend sufficient time on, rather than in the business, ensuring success factors can be replicated as circumstances change.

Indicators of success in agricultural business may manifest in the personal and social achievements. The personal achievements may be measured in terms of satisfaction of oneself, of the family economic status, and material possessions. Social achievements may be revealed by feedback on company respect of clients; ethics, practices, operations and, quality of work (<http://cawuk.com>). Success at work requires competence, natural ability, discipline, training and moral character (<http://www.nhffmc.org>).

*Hypothesis tested*

Positive moderate and higher correlations between the independent variable levels of competence, and the dependent variable levels of success in agricultural business areas, will be found.

### **Methods and Data Sources**

The study was descriptive-correlational. The target population was the 750 retired military officers in 1995 to 2003. The population frame was provided by the Pension Department of the USDF. A representative purposive sample of 254 was drawn of those engaged in agricultural business areas. A questionnaire was developed from literature review of competence items in different agricultural business areas (Section A) and from a Focus Group Discussion (FGD) conducted with 12 about-to- retire military officers who were engaged in agricultural business to come up with indicators of success (Section B). Section C for characteristics of respondents was also provided in the questionnaire. Three subject matter specialists in areas of Crop Production, Animal production and Health, and Agricultural Economics and Management in the Faculty of Agriculture attested to the content validity of instrument. Pilot test was conducted with another group of 30 about-to- retire military officers. Reliability coefficient was .56 for competence, and .53 for success rating measure.

Data collection was conducted using the USDF military procedure: (i) Army Commander's permission was sought; (ii) Chief of Personnel informed the selected sample; the

questionnaires were distributed in four regional military stations with the help of two research assistants and collected after a week in the Personnel Office of stations. Data input and analysis were done using the Statistical Package for Social Sciences version 10. Descriptive, inferential and correlational statistics were generated to describe, compare and correlate data. An *a priori* alpha level of .05 was used in comparing groups.

### Findings and Conclusions

*Agricultural business areas retired military officers were engaged in and the reported levels of competence*

Many of the respondents were engaged in field crop production (n=254), business management (n=254), indigenous chicken production (n=232), beef production (n=133), sheep/goat production (n=58) and vegetable production (n=27) as shown in Table 1. However, the business areas in which respondents reported themselves to have had high to very high competence (Means of 4.56 to 5.65) were in: layer production (n=6), agro-forestry (n=8), sugar cane production (n=11), field crop production (n=254), business management (n=254), vegetable production (n=27), and broiler production (n=254).

Regarding the characteristics of the sample, 78% are married while the rest are separated; 88% owned a homestead and 12% lived in their father's homestead; and, 54% had pension as only source of income, with 46% as having other sources aside from pension. At the time of survey, the state of employment was distributed as follows: 40% were unemployed but want a job; 28% were self-employed; 19% were employed, and 13% were unemployed and not looking for a job. The majority (83%) expressed interest in receiving training in agriculture while the rest were not interested. Two-thirds of the sample (n=169; 67%) did not receive any sort of training aside from within the recruitment programme during military service, while a third (n=85; 33%) had. Sixty-one percent reported that their previous army rank helped at retirement, that is, the monthly pension they receive is adequate for their needs, but 39% reported the contrary.

**Table 1. Agricultural business areas retired military officers were engaged in and the reported levels of competence.**

Agricultural business areas	<i>n</i>	<i>M</i>	<i>SD</i>
1. Layer production	6	5.65	.31
2. Agro forestry	8	5.46	.45
3. Sugar cane production	11	4.89	.39
4. Field crop production	254	4.80	.49
5. Business management	254	4.61	.42
6. Vegetable production	27	4.61	.42
7. Broiler production	17	4.56	.56
8. Farm structures and machinery	10	4.46	.44
9. Pig production	16	4.40	.61
10. Dairy production	18	4.39	.11
11. Indigenous chicken production	232	4.26	.66
12. Rabbit production	7	4.14	.32
13. Fruit crop production	14	4.08	.39
14. Honey bee keeping	4	3.97	.14
15. Fish production	5	3.58	.33
16. Sheep/goat production	58	3.45	.55

17. Beef production	133	3.09	.47
Total		3.09	.47

Scale: 1=Very low competence; 2 = Low competence; 3 = Slightly low competence; 4 = Slightly high competence; High competence; 6 = Very high competence.

Thirty-seven percent had primary education, 25% had junior secondary education, 16% had senior secondary education, 15% had no education at all, and 7% had university education. More than half (54%) reported that the extension officer in their area played no role in their agricultural businesses, while 46% received some assistance from the extension officer. Seventy-two percent indicated that they did not receive assistance from any agricultural association in their area while 28% did.

*Comparisons of levels of competence in agricultural business areas by characteristic groupings of respondents*

Comparisons using t-test or F-test were conducted in all characteristics as plausible independent variables which were treated as nominal data, and levels of competence as dependent variable which was in interval measure. Levels of competence did not differ significantly by groups of characteristics of respondents.

*Conclusion on hypothesis tested*

Statistically significant differences in competence levels in agricultural business areas as dependent variable, by characteristic groupings as plausible independent variables, were not found.

*Correlations between levels of competence in agricultural business areas and levels of education of respondents*

Correlations were generated between levels of competence in business areas as dependent variable which was in interval measure and one characteristic, levels of education, which was in ordinal measure. Correlation coefficient values generated were interpreted using Davis (1971) ranges of coefficients and corresponding descriptors. Some negative and high magnitudes of correlations were found in levels of competence in agriculture business areas with levels of education, as revealed in Table 2. However, readers are cautioned on the rather small number of retirees practising some business areas.

**Table 2. Correlations between levels of competence in agricultural business areas and levels of education of respondents.**

Agricultural business area	n	r <sub>s</sub>
1. Fish Production	5	-.913
2. Rabbit Production	6	-.822
3. Broiler Production	4	-.577
4. Layer Production	6	-.470
5. Agro forestry	8	-.361
6. Sheep/Goat Production	58	-.118
7. Pig Production	17	-.094
8. Vegetable Production	27	-.056
9. Field Crop Production	254	-.056
10. Indigenous Chicken Production	232	-.038

11. Bee Keeping	4	.333
12. Sugarcane Production	11	.323
12. Farm Structures and Machinery	8	.317
13. Beef Production	135	.165
14. Business Management	254	.051
15. Fruit Production	14	.055
16. Dairy Production	18	*

*Note:* Davis (1971) descriptors of relationship: .70 and above – very strong; .50 - .69 – substantial; .30 - .49 – moderate; .10 - .29 – low; and, .01 - .09 – negligible.

\*competence levels were constant for all the groups.

Negative correlations between levels of education and levels of competency in 10 areas were found: very strong, in 2 areas, fish production and rabbit production; substantial, in 1 area, broiler production; moderate in 2 areas, layer production and agro forestry; low in 1 area, sheep/goat production; and, negligible in 4 areas. Positive correlations were found in 6 areas: moderate in 3 areas, sugarcane production, farm structures and machinery and bee keeping; and, negligible in 3 areas, business management, fruit production and beef production. In one competency area, dairy production, no correlation was established since reported levels of competence were constant for all the groups.

#### *Conclusion on hypothesis tested*

Positive moderate and higher correlations between competence levels in agricultural business areas as dependent variable, and education levels of the respondents as plausible independent variable, were not found.

#### *Indicators of success in agricultural business identified by retired military officers*

Indicators of success (Means of 3.50 to 4.53) in agricultural business are shown in Table 3. Indicators are: living in a better house; having bought cattle; assisted extended family members; having clean water; and, providing better education for children.

**Table 3. Indicators identified by, and levels of success of, retired military officers in agricultural business (n=254).**

Indicator of success	<i>M</i>	<i>SD</i>
1. Living in a better house	4.53	.94
2. Bought cattle	3.73	1.45
3. Assisted extended family members	3.72	1.12
4. Had clean water	3.56	1.15
5. Provided better education for children	3.50	1.02
6. Enough food for the family	3.37	1.05
7. Gained strong work ethics	3.28	1.18
8. Served as a role model to community members	3.26	1.15
9. Gained community respect	3.15	1.00
10. Had financial stability	3.10	1.01
11. Installed electricity	3.03	1.47
12. Being known to other business people	3.00	1.04
13. Installed telephone	2.99	1.45
14. Bought a car	2.35	1.00

15. Bought a tractor	2.34	.95
16. Bought a farm	1.86	.94
Total	3.17	1.12

Scale: 1=Very low success; 2 = Low success; 3 = Slightly low success; 4 = Slightly high success; High success; 6 = Very high success

#### *Comparisons in levels of success by characteristic groupings of respondents*

Comparisons in levels of success according to characteristics of respondents using t-test or F-test were conducted. Groups in each characteristic showed no significant differences in levels of success.

#### **Conclusion on hypothesis tested**

Statistically significant differences in levels of success in agricultural business as dependent variable, by characteristic groupings of respondents as plausible independent variables, were not found.

#### *Correlations between levels of success in agricultural business by levels of education of retired military officers*

Correlation between levels of success and education yielded a negative but low correlation index as can be observed in Table 4. Spearman rank correlation coefficient indicates that overall, retired military officers who had higher level of education than other groups did not necessarily have higher levels of success in agricultural business.

**Table 4. Correlation between levels of success in agricultural business by levels of education of retired military officers.**

Level of education	<i>n</i>	<i>M</i>	<i>SD</i>	<i>r<sub>s</sub></i>
1. No education	37	3.56	.89	
2. Primary education	94	3.16	.79	
3. Junior secondary education	64	2.94	.73	-.106
4. Senior secondary education	41	3.00	.98	
5. University education	18	3.66	.54	
Total	254	3.17	.84	

Note: Davis (1971) descriptors of relationship: .70 and above – very strong; .50 - .69 – substantial; .30 - .49 – moderate; .10 - .29 – low; and, .01 - .09 – negligible.

#### *Conclusion on hypothesis tested*

Positive moderate and higher correlations between success in agricultural business as dependent variable, and education levels of respondents as plausible independent variable, were not found.

#### *Correlation between levels of competence and success in agricultural business areas*

Analysis of correlations between levels of competence in business areas and success in business are shown in Table 5. Results revealed positive substantial correlations (.51-.66) existed between levels of competence in 5 agricultural business areas and success in agricultural business: broiler production, honey bee keeping, layer production, rabbit production, and pig production. Moderate positive correlations (.43-.48) existed between levels of competence and success in 2 agricultural business areas: sheep/goats production, and fish production. Positive but

low correlations (.11-.24) were found between levels of competence and success in 4 agricultural business areas: agro forestry, beef production, vegetable production, and in sugar cane production. Positive but negligible correlations were found between levels of competence and success in 2 agricultural business areas: indigenous chicken production and fruit crop production.

However, negative negligible correlations existed between levels of competence and success in 3 agricultural business areas: dairy production, field crop production and business management, and negative moderate correlation existed between levels of competence and success in farm structures and machinery. Overall, in 13 out of 17 agricultural business areas, positive correlations were found, seven of which are moderate to substantial.

**Table 5. Correlation between levels of competence and success in agricultural business areas.**

Independent variable	n	Dependent variable (Agricultural business success)
1. Competence in broiler production	4	.66
2. Competence in honey bee keeping	4	.66
3. Competence in layer production	6	.65
4. Competence in rabbit production	6	.61
5. Competence in pig production	17	.51
6. Competence in sheep/goats production	58	.48
7. Competence in fish production	5	.43
8. Competence in agro forestry	8	.24
9. Competence in beef production	135	.18
10. Competence in vegetable production	27	.13
11. Competence in sugar cane production	11	.11
12. Competence in indigenous chicken production	232	.05
13. Competence in fruit crop production	14	.04
14. Competence in dairy production	18	-.02
15. Competence in field crop production	254	-.03
16. Competence in business management	254	-.11
17. Farm structures and machinery	8	-.39

*Note:* .70 and above – very strong; .50 - .69 – substantial; .30 - .49 – moderate; .10 - .29 – low; and, .01 - .09 – negligible.

#### *Conclusion on hypothesis tested*

Overall, positive moderate to substantial relationships between the independent variable levels of competence in agricultural business areas, and the dependent variable success in agricultural business, were found.

#### **Educational Importance, Implications and Applications**

The USDF is informed of agricultural business areas that the retirees engaged in and the levels of competence the retirees possess. Indicators of success show that retired military officers value family factors: having better house, having cattle (a symbol of family wealth), assisting extended family, having clean water, and providing better education for children.

The USDF may use the availed information on agricultural business areas where competence levels are low to offer continuing education in these identified agricultural business areas, especially if business areas are those that have been identified as national or programmatic priorities for economic development.

Agricultural business competencies of about-to-retain and retirees may be enhanced through identifying potential partners, like the competent and successful retirees, and staff at the College of Agriculture in the University of Swaziland. Higher level of education came out to be not a positive factor of success in agricultural business. The latter finding poses a question then on what are the characteristics of individuals who have low levels of education but succeed in agricultural business.

### References

- Ary, D., Jacobs, L.C. & Razavieh, A. (1996). *Introduction to research in education*. (5<sup>th</sup> ed.) Forth Worth, TX: Harcourt Brace Publishers.
- CriteriaOne (2006). *The whole person approach*. Retrieved 02.02.2006 at <http://www.criteriaone.biz>
- Competence at Work Ltd. (2005). *Developing people, strategies and organisations*. Retrieved 01.02.2006 at <http://cawuk.com>.
- Davis, J.A. (1971). *Elementary survey analysis*. NJ: Prentice Hall.
- Dlamini, S.G. (2001). *Production and marketing of broilers in Swaziland. The Case Study of small-scale farmers in Malkerns and Luyengo area*. Unpublished B.Sc. research project report. University of Swaziland, Luyengo, Swaziland.
- Findlay, H.J. (1992). Where do secondary vocational agriculture teachers acquire professional agricultural education competencies? *Journal of Agricultural Education*, 33 (3), 28-33.
- Libenberg, J. and Roefs, M. (2001). *Demobilisation and its aftermath II*. Institute for Security Studies, Pretoria, South Africa.
- Makocha, C.G. (2003). *Assessment of competencies possessed by senior secondary school home economics teachers in implementing the localised food and nutrition syllabus in Botswana*. Unpublished B.Sc. research project report. University of Swaziland, Luyengo, Swaziland.
- Mdluli, R.C. (1999). *Evaluation of the British in-service course*. Unpublished B.Sc. research project report. University of Swaziland, Luyengo, Swaziland.
- Mitchell, R.K. (2003). *Competency-based success*. Retrieved 01.02.2006 at <http://www.nhffmc.org>
- Swazi Review of Commerce and Industry (Pty) Ltd (2003). Manzini, Manzini: Swaziland Review of Industry, Commerce and Tourism, 41.
- Anonymous (Nov. 3, 2003). *The USDF has forgotten all about us*. Mbabane, Swaziland: Times of Swaziland.
- Tuckman, B.W. (1978). *Conducting educational research*. (2<sup>nd</sup> ed.) San Diego, CA: Harcourt Brace Jovanovich, 30-31.
- Umbutfo Swaziland Defence Force (1993). *Force conditions of service and public service pension order*. Nokwane, Manzini. USDF Personnel Department, Swaziland.