

Entrepreneurial Competencies Required by Women Homemakers for African Oil Bean Seed Processing in South-East Nigeria

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Abstract: In South-East Nigeria, African Oil Bean (AOB) homemaking has for decades remained a trending business among rural women. By business model deviations, those women have continued to experience heavy business odds and challenges. Therefore, this study examined the required composite planning, processing, and marketing entrepreneurial competencies and success factors for AOB homemaking within the South-Eastern Nigeria. We used a survey research design on sample of 451 respondents out of a universe of 706 AOB experienced dealers and teachers. We tested three postulations around planning, processing, and marketing creativity, self-concept, and innovation in AOB business using Contingent Chi-Square statistics while drawing inferences from average competency expectations and standard errors. Using Cronbach reliability test, the instrument had alpha value of 0.98, which indicates significant par excellent reliability. We found that planning competencies are highly required for AOB entrepreneurial sustainability ($X^2_{\text{Calculated}} = 4.496, > X^2_{\text{critical value}} = 0.05$). Business planning power, planning autonomy, higher achievement motivation and creative business plans all scored high with average mean of over 3.3 point, which suggests high requirement. Processing competencies were also found to be highly essential and needed for AOB homemaking by South-Eastern women ($X^2_{\text{Calculated}} = 5.1409, > X^2_{\text{critical value}} = 0.05$). We found high AOB processing achievement spirit, social orientation initiative, higher processing endurance, POD boiling creativity, creative processing, boiling autonomy, Pod drying creativity, high processing risk taking and processing power to be processing competencies that scored higher among the respondents. Marketing competencies are highly required for AOB homemaking ($X^2_{\text{Calculated}} = 8.330, > X^2_{\text{critical value}} = 0.05$). We recommend that AOB homemakers should develop strong self-concept, innovation and creativity in planning, processing, and marketing AOB.

Keywords: Entrepreneurs; Competencies; AOB; Creativity; Innovation; Homemaking; Planning; Processing; Marketing.

Introduction

Spates in global household poverty have driven several women to engage in small scale businesses as a hunger mitigation strategy and as a household source of livelihood. However, following business environmental dynamism and the complexity of the processing of the local produces such as African Oil Bean (AOB) seeds, most of these local small-scale businesses

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have not been viable. They emerge in the next few months or years; they are out of business. Thus, it does appear that such businesses demand some measure of competencies to be mastered and acquired prior to engaging in the businesses. Studies have as well shown that entrepreneurial women display certain entrepreneurial traits that are markedly different from those of the men (Ismail, 2014). Studies have shown that AOB processing is women business, there is thus a need to study their peculiar success factors, which drive women AOB entrepreneurs to properly position them for the small-scale business for maximum performance. In this regard, this study examines the entrepreneurial competencies such as planning, processing, and marketing skills and characteristics required by AOB women processors within the South-Eastern Nigeria to enhance AOB business viability. AOB seed has constituted a delicacy within the South-Eastern Nigeria that could transform women economically. *Pentaclethra macrophylla* as AOB is botanically called, has thus constituted significant part of women entrepreneurial business in Nigeria. Yet, following poor planning, processing, and marketing awareness among the homemakers, the once- a- popular business is dwindling. As such, such business failure has continued to render several women jobless within the South-Eastern Nigeria, which has strong implications for overall standard of living identified in this present study the specific entrepreneurial skills, behaviour, and traits essential for AOB processors that would be value adding and possess the potential to enhance women standard of living in a business changing and competitive environment.

Overall, in the changing business environment, developing complex business-marketing networks, social-political complexities, and technological advancement present challenges for entrepreneurs to develop competencies to match their dynamic environment (Ekpe 2011; Kozlowski, & Matejun 2011). Evidence has shown that one of the key factors that have continued to impact the function, the growth and the development of businesses is the ongoing new economic transformation (Kozlowski, & Matejun 2011). The transformation towards new economic order is mainly characterized by increased necessity of information network, knowledge and other non-tangible business resources including systematic innovation (Drucker, 1999). The ongoing transformation process also reflects the attributes of creation enablement and new competitive advantageous development. Moreover, there is also a dominance of the network logic of economic structures (Balcerzak, 2009). In the new economic order, which according to Fischer (2003) resulted from the progressive processes of globalization, deregulation, liberalization of markets and changing demand models and behaviour. Yet, as Kozlowski, & Matejun (2011) revealed, the increased importance of the internet (Jentzsch, 2001) and the information and communications technology (ICT) sector (Temple, 2002, p.242) remains one of the most important factors leading to the essential changes in the organization of work and the logistic systems and changes in increased levels of entrepreneurial business efficiency. These changes in the business environment show that the Jovanovic model (Jovanovic, 1982) where entrepreneurs start up their business without knowing their true, 'time-invariant, individual-specific level of business skill or productivity level' (Coad, 2014) does not apply in a complex- dynamic business environment, which characterize our present business order. Generally, specific competencies must be developed to match the ever-evolving new business order and processes. Thus, competencies will ever remain the key to entrepreneurial success, sustainability, and adaptability (Fletcher, 2005; Oosterbeek, van Praag, M & Ijsselstein, 2008) in a fast-tracking business environment. In businesses that demand careful processing and women attention (Ismail, 2014); believe entrepreneurial skills are going to be a sine qua non for the business sustainability. Consistently, International Institute for Tropical Agriculture (IITA) (2007) emphasized that good processing competencies improve the quality and palatability of farm-processed produce.

As such, to ignore required entrepreneurial skills for specific business activities amounts to entrepreneurship failure.

However, the risk and cultural orientation inherent in entrepreneurs, which could constitute competency development inhibitors (Gumusay & MarcBohne, 2018) most often pushes them to avoid such important planning, marketing, and processing skills while they make effort to achieve a higher return on their investments. Entrepreneurs including African oil bean (AOB) homemakers are known for unnecessary and unsystemic risk taking. According to Ismail (2014), women engage in entrepreneurship because they have no choice. Thus, women entrepreneurship is not a means of exploring human entrepreneurship instinct. Rather, most women engage in entrepreneurship because they have no alternative. If they do not carry on any business, their household may be in poverty danger (Firdaus and Dewayanti, 2008). Thus, they have the potential to exhibit abnormal risk-taking behaviour when they have no option left. Generally, abnormal risk-taking behaviour among entrepreneurs explain why most entrepreneurs are called 'creative destructive opportunists (Kerr & Nanda 2009) that relentlessly pursue businesses irrespective of the risks involved and the resources they currently control (Gompers, & Sahlman, 2001). This disposition makes entrepreneurs proactive in objective pursuit and risk taking. Although risk positively correlates with business profitability according to the theory of capital asset pricing model (CAPM), (Cochrane, 2005) and it pays sometimes to be moderately risk averse according to entrepreneurial competency theory (Fletcher, 2005: Oosterbeek, van Praag, M & Ijsselstein, 2008). Better risk should be approached with caution and systematic planning through effective risk assessment. Many businesses have failed due to managers' aggressive riskiness behaviour. Sometimes entrepreneurs take risk but do not take risk consequences into their business models. Evidence abounds for different local women homemakers who lack the knowledge of processing and risk competencies their small-scale businesses demand (Ismail, 2014). They jump into certain businesses to maximize quick return without adequate risk assessment and planning. Unfortunately, the consequences have always been disastrous: 90% of entrepreneurs do not make it after few years of successful business operation due to blind risk-taking, poor processing skill, weak marketing mix knowledge and generally inadequate planning. Consistently, research on woman entrepreneurs in some countries has shown that woman entrepreneurs need orientation to a set of entrepreneurial competencies that contribute to their businesses (Ismail, 2014; Izquierdo, Deschoolmeester & Salazar, 2005; Nassif et al, 2012).

The belief of most entrepreneurs is that failure is a success (Coad, 2014), which has given rise to several Jovanovic entrepreneurial models (Jovanovic, 1982). But is it true that entrepreneurial failure amounts to business success to warrant less attention to competency acquisition requirement for business success? While one can learn from entrepreneurship failure by avoiding the past mistakes (Coad, 2014), the assertion that entrepreneurship failure is a success is just a phrase coined to console oneself against the searing pains of business failure. It is all evidence of wrong business practices and strategies. What is true is that entrepreneurs require and need to be aware of certain proven competencies and skills to experience business breakthrough and sustainability (Ismail, 2014; Izquierdo, Deschoolmeester & Salazar, 2005). Interestingly, entrepreneurial competencies are heterogeneous and idiosyncratic. Competencies acquired and needed for venture 'A' might not be a standard for venture 'B'. This means that entrepreneurs require continual trainings to acquire skills to relentlessly pursue different business opportunities. From all ramifications, any attempt to avoid such required specific knowledge would lead to utter business failure-experience that has characterized entrepreneurship.

In the Western and Northern Nigeria for instance, women aggressively engage in ‘nunu’ business to make both ends meet. But have they seen progress? It is certain that they have not seen much as most of them gave up after few years of enterprising and trying. Although some enterprising ‘nunu’ women still exist, majority of them have remained stunted; just managing to break even while searching for alternative sources of livelihood. The reason is that those entrepreneurial women lacked required ‘nunu’ processing competencies. For example, *nunu* or *wara*- a local cheese- demands proper preservation with ginger. But the application requires professional insight, skills, and guidance. One needs to know the measure to apply and the weather effect prior to application. Yet, the aggressive women entrepreneurs have gone ahead to mix the cheese with ginger without proper knowledge of the working of ginger as a protective agent and the factors that determine the quantity of ginger to add to ‘nunu’. Consequently, most of them are out of the business and the means of livelihood are tightening. In the South-Eastern Nigeria, which is the geographical location of this study, the trending business particularly among the local women is AOB home processing. AOB homemakers are women entrepreneurs who process and sell the products. In some cases, they engage in the business to take care of their family members. Unfortunately, like *wara*, business, significant progress is yet to be recorded despite throwing themselves into the business. Most AOB homemakers dive into the business for example with little or no knowledge of the AOB planning, processing, and market survey competencies. Market survey competencies are systematic to business success from marketing principle. However, market survey of AOB may sound alien to those local entrepreneurial women. As such, they need to be convinced of the relevance of market survey competencies in AOB business sustainability. Apart from the survey competencies, most local AOB homemakers are ignorant of the impact of planning and packaging competencies on entrepreneurial growth and performance. Failing to plan as they said is planning to fail and good packaging competencies are *sine qua non* for business’ products demand growth. A well packaged product will always draw buyers’ attention and patronage. Naturally, customers are attracted to good looking products. This accounts for why contemporary business lays emphasis on packaging and the ability required for the process. Thus, the market experts believe that when products are wrongly packaged, they can scare away consumers, who may misconceive their effectiveness. The most important fact is that packing is not just a causal job. It demands insight and skills. An entrepreneur willing for a long run business return must need and understand the packaging competencies. In addition, apart from the packaging skills, the most likely important challenging issue is that local AOB homemakers might have been ignorant of the fact that they need skills on the preservations of the unsold stuff. That could explain why it appears most AOB homemakers might have been carrying on the business without developing such competencies. As such, there is high rate of AOB processing abandonment by the risk-taking women.

The question that begs an answer is why are South-Eastern women failing in their AOB homemaker business? It is clear the problem is not that the AOB business is not lucrative. Of course, AOB business is very profitable. Those who understand the secret have made good returns. The problem is not that there is no market for the locally processed product. In fact, there are AOB demands in all the local and developed markets within the sub-region, though there remains need for further market exploration for return maximization. The key problem is that AOB homemakers and processors lack the knowledge of the required competencies for processing the seed for sustainability. They need to be exposed to the working techniques, plans and strategies. It is not just about processing AOB locally as some evidence tends to suggest that it is simple. There is need for skill development to process it properly and as we have said before, we emphasize again that entrepreneurial competencies are the key to entrepreneurship. Being aware of those competencies and the extent to which their application can leverage

entrepreneurial performance would bring increase the standard of living among rural women. Therefore, in this study, we examined the sustainable competencies required of AOB homemaking women within South-Eastern Nigeria.

Entrepreneurial Competency Conceptual Framework

Entrepreneurship competency, when used in a generic sense connotes professional ability. However, there are many approaches to the definitions of competencies as applies to entrepreneurial businesses that transcend its generic application. The most widely used approaches are inherent-innate, and acquisition-development approaches. The former views competencies as inherent and innate qualities for achieving pursuits (Armstrong, 2006). The latter considers competencies as skills to be acquired for successful accomplishment of tasks (Aniodo, 2001; Erant 2003). Both approaches are however essential for business progress and often are used interchangeably in entrepreneurial studies. Based on these, competence on the words of Armstrong, (2006) defines “characteristics – knowledge, skill, mind-set, pattern of thinking – which, at the time of being used, either respectively or in various combinations, produce successful performance”. Spencer and Spencer (1993) see competence as basic character of someone that causes him/her to be capable of showing effective superior performance in doing a job or character that provides contribution to outstanding performance in some work. On the acquisition viewpoint, competencies are the ability to perform a task and master processes through knowledge acquisition to the required standard (Aniodo, 2001; Erant 2003). Thus, good entrepreneurial competencies embrace abilities to take the initiative, set real objectives through systematic coaching, and try to achieve them, act creatively, overcome failures, critically evaluate the threats, and take the risk to implement the idea (Bikse, Rivza & Riemere, 2015). It is in fact hard for a business to succeed without the owners possessing some innate natural quality and developing skill through effective programmes to set real and realistic objective, explore possible market opportunities and identify real threats that can endanger the business existence.

Competency Theory of Entrepreneurship

The underpinning term in competency construct involves ‘certain skills and characteristics’ in someone that promote excellence in productivity and performance (Gilley 2009; Armstrong, 2006). Based on this view, several entrepreneurial competence theories have emerged. These theories have been used and applied in the several empirical studies (Febriani, 2012; Ismail, 2014). Entrepreneurial competence thus covers all human behaviour and characteristics that consist of skill, motive, nature, self-image, social role, and knowledge (Spencer & Spencer, 1993). In this regard, competence experts maintained that entrepreneurs have disclosed five fundamental characteristics that enable them to perform well in terms of business planning, marketing, and product processing. These characteristics are discussed below and formed the framework upon which we test hypotheses on AOB homemakers. The first characteristic that has been considered very vital to entrepreneurship competence is *motive*. Motive is a consistent driver of one’s actions and behaviour.

Entrepreneurs have motivations and desires for engaging in any business. When there is no motivation, the chances of poor performance would be very high. Thus, an AOB homemaker that lacks motivations would likely perform poorly and vice versa. Traits have also been identified with entrepreneurship competency skills that affect entrepreneurs’ performance. These are entrepreneurial physical and inherent characteristic that pattern entrepreneurs’ lives to respond to certain situation regarding planning, processing, and marketing their identified products. Traits as competence involves being self-confidence, maintaining self-control, ability to resist stress and being hard most of the times (Spencer & Spencer, 1993). Invariably, this is attitude and values, which entrepreneurs as persons possess. It suggests what one values, and

the value he or she places on businesses for example. Self-concept measures what one pursues and what is interesting for him or her to do and achieve something (Ismail, 2014). Self-concept as well has significant implication for successful planning and marketing of AOB. Another important competence is knowledge. Knowledge can be acquired or inherent. It is information that entrepreneurs possess in certain fields and businesses. Ismail, (2014) maintains that most often, 'knowledge constitutes a complex competence and difficult to be measured'. However, without information businesses would not advance in the attainment of their goals. There is also skills competence, which describes the ability to performance some physical and mental activities. Skill competence involves ability to analyze issues, determine the cause-effect of issues and strength to engage in conceptual thinking that recognizes the complex data pattern. According to Ismail, (2014), knowledge and skills are part of 'hard competency' such as the competence that would always be more visible in entrepreneurs. The hard competence is easily observable in someone. As such, is easier to be developed in entrepreneurs (Ismail, 2014; Spencer & Spencer, 1993). Hard competence is markedly different from self-concept, traits, and motives, which are part of soft competency. The soft competence is not always visible in someone and as such is more hidden natures and deeper. Unlike hard competence, it is the core personality of entrepreneurs and harder to be valued and developed relatively. In addition to the above, Fletcher (2005) outlined five clusters of personal characteristics that should be owned by entrepreneurs to permit excellence (Ismail, 2014). The Fletcher's (2005) competency theory includes: Objective and action Group: The objective and action group theory highlights initiative skills, image maintenance, problem solving skills and manager's goal orientation. The theory also consists of characters of efficiency and efficacy orientation, proactive behaviour, impactful tactics, and enlargement of concept diagnosis and leads subordinates. According to Fletcher, (2005), this competence involves the manager's freedom of expression as relates to direction and order provisions. It also covers providing feedback to help develop the subordinates, using power unilaterally, and developing other people.

Human resources group: This has to do with manager that possesses non pessimistic expectations to other people. Human resources group relates to business managers possessing realistic opinions about themselves, developing network and coalition with other persons to complete task and develop cooperation and pride in work and group (Fletcher, 2005). This theory also consists of accurate and self-evaluation, self-control, adaptability, objectivity in perception, positivism in the use of socialized power.

Leadership group: This involves the representation of the manager's ability and competency to deal with the basic issue, organizational pattern, objective, or targets. Leadership group covers carrying out changes relating to organizational targets and communicating the same powerfully or maximum impact. It consists of developing self-confidence, self-conceptualization, logical thinking, and verbal presentation usage in a business organization.

AOB Entrepreneurial Competency for Successful Entrepreneur

There are various entrepreneurial competencies. However, the entrepreneurial competence we employed in this research is Driessen's (2005) entrepreneurial competence for successful entrepreneurs. According to Ismail (2014), Driessen's (2005) entrepreneur competence comprises characteristic and skill for becoming a successful and productive entrepreneur. Driessen (2005) views successful entrepreneur from the need of autonomy, need of achievement, need of self-efficacy, social orientation, power, endurance, and desire to take risk. Driessen's (2005) also maintains that one of the skills to possess to be successful and productive entrepreneur is market awareness, creativity, and flexibility (Ismail, (2014). We follow Oosterbeek, van Praag, M & Ijsselstein, (2008) to highlight these ten entrepreneurial competency dimensions for business success. Firstly, there must be need for achievement.

There are evidence that productive and very successful entrepreneurs score high on need for higher achievement. Thus, they strive to the standard and compete out competitors. Competent entrepreneurs would normally build their company professionally and set high goals and targets, which they put in more efforts to achieve them. Secondly, there must be need for autonomy. This is embedded on the why one chooses to be an entrepreneur. A successful entrepreneur would always score high on the autonomy competency according to Ismail (2014) reflects ability to make decisions independently, the capacity to fix conflicting issues and problems without the intervention of others. Thirdly, the *need for power*: This is the desire to control and influence others' behaviour to achieve goals. Entrepreneurs who want to be successful would normally score higher on the need for power to influence others to realize their entrepreneurial goals. Fourthly, *Social orientation*: this entrepreneurial success theory highlights the fact that nexus with others is sine qua non in achieving goals. According to Ismail (2014) and Driessen (2005) successful entrepreneurs easily make business connections and are motivated by professional considerations in their social-cultural activity performances. Thus, they jettison their personal social needs and concentrate business affiliations and associations. Fifthly, *Self-efficacy*: This another entrepreneurial success factor that shows that one believes in one's ability. Self-efficacy suggests a kind of self-confidence. Most successful entrepreneurs usually believe that they successfully complete even the most complex task. Entrepreneurs on this mind set always exhibit idea that they can manage their on-business success, which is not a function of others' success and ideas. Sixthly, High Degree of Endurance. In business there is always a setback. However, a successful, entrepreneurs always hold their ground in difficult times. Thus, this entrepreneurial success factor has to do with the capacity to continue according to Ismail (2014) 'willfully' despite challenges that obstruct business speed. Seventhly, desire to Take Risk. Successful entrepreneurs score high on the risk-taking propensity. Thus, they always exhibit the ability to deal with uncertain situations and business opportunities. Eighthly, *Market awareness*: Entrepreneurs treat clients as kings and as such work to identify their needs and link the identified needs with the entrepreneurs' business goals. Thus, they invest in advertisement to create market awareness for clients on one hand. On the other hands, successful entrepreneurs invest in both soft and hard information to find customers market needs. In this case, they try identifying business target groups and could change based on the dynamism of the identified market. Successful entrepreneurs score high on market awareness, market competition and marketing mix planning. Ninthly, Successful Entrepreneurs are Creative. Creativity is ability to be innovative, which is a critical success factor for entrepreneurs. Creativity involves the ability to accept views and ideas from diverse perspectives other than the status quo. Creativity also involves ability to perceive and try new possibilities and latent opportunities based on open observations of the dynamic business environment. According to Ismail (2014), creativity is the ability to change challenges into new business opportunities. Tenthly, Flexibility: This success factor suggests adaptability, which is very vital for business sustainability. Thus, flexibility is the ability to adapt to changing business environment. Entrepreneurs, who are successful, react to environmental changes including new demands of customers and the new directions product market competitors. According to Ismail (2014), creativity is the ability to change challenges into new business opportunities. 10. Flexibility: This success factor suggests adaptability, which is very vital for business sustainability. Thus, flexibility is the ability to adapt to changing business environment. Entrepreneurs, who are successful, react to environmental changes including new demands of customers and the new directions product market competitors.

Research on Woman Entrepreneurs

Research by The Ministry of Micro-, Small- and Medium-Scale Businesses (2006) on the competence of women engaged in trading business, food and beverage industry, garments, beauty salon and at the same time producing the accessories, handicraft of “Iontar” palm and glass, and ceramic. Shows that women as business practitioners have several advantages such as endurance, being responsible, scrupulous, or careful. Successful entrepreneurial women are also found to be diligent, patient, honest, creative, and go-ahead people. On the other hand, evidence shows that entrepreneurial women are weak in running business and as well have been found to lack family support, lack local government support, are risk averse, play double role, are consumptive and are less profession. Thus, these factors have caused the failures of several women business. Ismail (2014) highlights that study on women engaged in small- and medium-scale businesses in Padang showed that women yielded high competence such as endurance and perseverance; scrupulous and careful; preserved; patient, honest, reliable, high responsibility, strong will, high spirited, and discipline in businesses. These success factors contributed to why most entrepreneurial women are successful in finance, handicraft, and processing industry (Ismail 2014; Febriani, 2012). Izquierdo, Deschoolmeester & Salazar (2005) identified that the most relevant entrepreneurial competencies from 180 entrepreneurs and scholars’ perspective include identifying business opportunities, evaluating business opportunities, decision making, networking, identifying, and solving problems, oral communication abilities, and innovation thinking. Wendy Ming-Yen and Siong-Choy (2007) identify that in Malaysian, women -entrepreneurs exhibit competence of confidence, courage, strong will power, risk taking, creativity and innovativeness. In Nigeria, Ekpe (2011) examined the traits that are considered essential for the success of entrepreneurial women. The study found that women entrepreneurs have the necessary characteristics to succeed as entrepreneurs. The study of barriers to entrepreneurship in men and women living in Golestan Province, Iran has done by Goji and Rahimian (2011) found that there is a significant difference between individual and environmental barriers in men and women entrepreneurs. They found that financial, marketing, scientific and legal constraints have had greater impact than socio-cultural, family, and physical factors in both groups (Ismail 2014). The study about the entrepreneurial competencies that characterize women in the Southeast region of Brazil has In Brazil, Nassif et al (2012) found that female entrepreneurs have a perception of their potentialities, limitations, desires, and concerns within a scope of cognitive and affective competencies (Ismail 2014). The study found that entrepreneurial women recognize the importance of developing opportunity perception, developing business and applying competency in leadership. Nassif et al (2012) found that the interpersonal skills, commitment, and social perception are sets of entrepreneurial competencies that contribute to their business success. Ismail (2014) found that major business success competency characteristics women possess includes need of achievement, endurance, and market awareness. The researcher further discovered that there are significant differences between men and women entrepreneurs in durability, need of achievement, social orientation, and risk-taking tendencies.

AOB Characteristics

AOB botanically known as *Pentaclethra macrophylla* is a well-known seed in South-Eastern Nigeria. When AOB pod is processed by fermentation, it is called ‘ugba’, ‘ukpaka’ or ‘akpaka’ depending on the local dialects. AOBs as pods are produced from AOB tree. Research has shown that AOB tree is a crop tree with long woody pods of about 35cm-36cm in length and 5cm-12cm in width (Keay & Ceungu 1986). According to Keay & Ceungu 1986, the long woody pod encloses dark-brown-grossly-hard seeds that are spherical or oblong in shape each weighing 15-20gramms. A pod contains about 8 seeds and when matured, splits open to release the enclosed seeds through explosive mechanism. Normally, the seeds are picked from the bush

by women and children. However, for commercial purposes, the owners pluck them before explosion and mechanically open the pods. When opened, the pods would be spread in the sun for drying. Once they are dried, the owner would head for sale in the local market or process them by themselves if they are AOB homemakers.

The AOB Entrepreneurial Competency Demand and Hypotheses Development

Competency theory highlights that certain skills will be combined to achieve a business goal. These skills include motivation, endurance, self-concept, courage, social ability, communication, risk taking and systematic planning (Gilley 2009; Armstrong, 2006; Driessen 2005). Driessen (2005) maintained that business success depends on the ability to exhibit those skills in business planning, processing, and product marketing. Fletcher, (2005) argue that there should be clusters of personal characteristics that should be owned by entrepreneurs to permit excellence (Ismail, 2014). For example, Fletcher (2005) observed that there is need for objective and action group, which highlights initiative skills, image maintenance, problem solving skill, and manager's goal orientation. AOB planning should involve objective and action group. Ismail (2014) highlights that study on women engaged in small- and medium-scale businesses in Padang showed that women yielded high competence such as endurance and perseverance; scrupulous and careful; preserved; patient, honest, reliable, high responsibility, strong will, high spirited, and discipline in businesses. These success factors contributed to why most entrepreneurial women are successful in finance, handicraft, and processing industry (Ismail 2014; Febriani, 2012). Moreover, Izquierdo, Deschoolmeester & Salazar (2005) identified that the most relevant entrepreneurial competencies include identifying business opportunities, evaluating business opportunities, decision making, networking, identifying, and solving problems, oral communication abilities, and innovation thinking. A combination of these competencies by AOB women entrepreneurs in the South-Eastern Nigeria would ensure high rate of success in the business. Thus, the issue of AOB homemaking is in the planning, processing, and marketing techniques to be exploited in competent manner. The delicate nature of the AOBs pods demands that the homemakers should develop adequate skills for their processing. It also demands that the homemakers should exhibit risk taking. The homemakers need realistic planning programmes to create market awareness and be relevant in a competitive environment. Business initiative, objective formulation, scale of business, task drawing, supplier identification, and budgeting risk should be approached with motivation, riskiness, endurance, communicative abilities, and self-concept. Periodic objective review is tasking, but entrepreneurs should develop high level endurance to tackle it. In addition, Objective review must be carried out to maintain control. Deviation from objective function is evidence of lack of control, which highlights poor business planning competence. Entrepreneurs need to evaluate their budget from time to time and then carry out variance analysis for systematic business management and expansion decision. AOB homemakers who engage these skills will invariably experience success. Therefore, we hypothesize that:

- *AOB Homemakers in the South-Eastern Nigerian Require Planning Competencies for AOB Business Success.*

As business environment continue to witness high level competition, AOB homemakers require a working marketing and processing skill to remain sustainable, carry on trading and business activities and make reasonable profit. Generally, processing AOB demand defined practical skills. Nwagu, Orji, Nwobodo and Nwobodo (2011) stated that processing of AOBs require boiling, the seeds for 5 to 8 hours. However, this as well depends on the nature of the seed. Exceptionally hard AOB seed may be boiled beyond the above stipulated hours. This is where entrepreneurial competencies are most required. Wrongly par-boiled AOB can yield

fermentation problem. Unfortunately, once they are not correctly fermented, the taste, smell and colour could be so disgusting. As such, it would not be good for eating, which would result in low market demand. AOB has high oil content. According to Okechukwu (1978) a fermented AOB seed contains about 78% and 25% of saturated and unsaturated fatty acids respectively. This high oil content demands competencies to manage the stuff for a substantial number of days if the product was not immediately disposed. That is, the entrepreneurs should have good packaging competencies of 'akpaka' to make it attractive to buyers. Thus, overall, boiling, de-hulling, washing, slicing, wrapping, and fermenting the AOB product need skills. Otherwise, AOB may not be palatable and safe for consumption. Successful marketers require communicative charm. They are persuasive and exhibit high level of tolerance, endurance, innovativeness, and social skills (Driessen 2005). Expectedly, AOB homemakers should exhibit the marketing self-concept and confidence for their success. They should understand the need of the consumers and market competition design in order not to be competed out of the market. Market and products change with technological and political changes. This cyclical nature of marketing environment should be trailed and mastered by the AOB Homemakers within South-Eastern Nigeria. Ability to align firms' objectives with customers' need and demonstrate self-efficacy would yield entrepreneurial success (Oosterbeek, et al. 2008). Based on the above need for skillful processing and marketing for entrepreneurial success, we hypothesize that:

- *AOB Homemakers in the South-Eastern Nigerian Require Processing Competencies for AOB Business Success.*
- *AOB Homemakers in the South-Eastern Nigerian Require Marketing Competencies for AOB Business Success*

Therefore, we examined the relevance of entrepreneurial competencies for running AOB business in Southeastern Nigeria using the above three hypotheses.

Methods

This study used a survey research design and studied a population of 706 respondents. The 706 respondents comprised 150 AOB processors within the South-East of Nigeria, 251 widely experienced agricultural lecturers from different Colleges of Education, and 305 lecturers from Food Science and Technology department in University of Agriculture, Umudike, Abia State, who are also versatile in food processing. Due to unavailability of some lecturers during the time of study, we used a judgmental sampling technique to select 451 respondents, which comprised 150 AOB processors, and 301 lecturers. In line with the entrepreneurial competency theory (Armstrong, 2006), we designed our questionnaires on the planning, processing, and marketing competencies expected of AOB homemakers. The study followed a likert-dummy pattern. Thus, the respondents were expected to answer each question by marking 4, 3, 2, and 1 according to whether the item is Highly Required (HR) Moderately Required (MR), Slightly Required (SR) and Not Required (NR) as AOB entrepreneurial competencies. Thus, the Likert values take a weight order such that an item with score of 4 carries a higher weight relative to other items of the questions. Generally, item with an average score of 2.5 ($\frac{(4*422)+(3*422)+(2*422)+(1*422)}{4*422}=2.5$) indicates that respondents are indifferent about the relevance of the items in competency building of AOB processors. In this case, the item may or may not be required. An item with an average score of above 2.5 shows that generally, the item is required as AOB entrepreneurial competence based on the weight technique. If a score of any item goes below 2.5, it means that the item is not required as a skill for planning, processing, or marketing AOB. Thus, the benchmark score for conclusion of the requirement or otherwise of specific item as a skill for AOB is 2.5 average score.

We also used tables and graphs to analyze the respondents' views. However, we test the overall hypotheses by using Chi-Square (X^2) statistical statistics. In this case, X^2 calculated of greater than the critical value of 0.05 suggests that the overall competency items are required for marketing, planning, and processing of AOB for business viability. Otherwise, the overall competency design would be rejected. To be able to determine the reliability of the primary data, the questionnaires were pre-tested. Three items one from each of three categories- planning, processing, and marketing competencies was pretested on 10 respondents randomly selected from the sample of 451 subset of 706 universes. The pretest-retest revealed no significant issue with the reliability of data collected. This is because the reliability test yielded a high-level coefficient Cronbach Alphas greater than 0.9 ((Planning; Alpha=0.973; Cochran's $Q = 156.878$; Sig. value=0.000); (Processing; Alpha=0.951; Cochran's $Q=217.813$; Sig. Value=0.000); (Marketing; Alpha=0.984; Cochran's $Q=43.806$; Sig. value=0.000)), which is a good fit for data reliability since a reliability coefficient of 0.7 or higher is considered a benchmark for acceptability. Therefore, Cronbach Alpha of 0.98 indicates greater internal consistency of the scale, which signals par excellence in terms of primary data reliability. This is well expected because we also carried out face to face questionnaire validation strategy, which were done by three expert lecturers in agriculture and Food Science and Technology. It was the validated copy of the instrument that was given to 10 AOB processors and literate farmers.

Chi-Square Calculation for Test of Hypotheses

The three hypotheses were tested using Chi-Square (X^2) statistics. This test is very important where each item is treated as a hypothesis. While the use of Likert-items presents some difficulties where there are many Likert questions and few hypotheses, we overcame the huddle by including and analyzing only the questions that directly address the main hypotheses. Thus, the variable items are treated as the same since they address specific but related competency issues. Therefore, the contingency table focused on the holistic effect and association of the planning competencies required for AOB processing. By using Chi-Square statistics, the researchers were able to find a statistically proven criterion to accept or reject the hypotheses. The Chi-square (X^2) test statistic was obtained using:

$$X^2 = \sum_{i=1}^R \sum_{j=1}^C \frac{(O_{ij} - e_{ij})^2}{e_{ij}}$$

O_{ij} is the observed cell count in the i^{th} row and j^{th} column of the table. e_{ij} is the expected cell count in the i^{th} row and j^{th} column of the contingency table. e_{ij} is calculated as: $e_{ij} = \frac{\text{row } i \text{ Total} \times \text{column } j \text{ total}}{\text{grand total}}$

The calculated X^2 values were therefore compared to the critical value from the X^2 distribution table with degree of freedom (df) = $(r-1)(c-1)$ and chosen confidence level, where r is the number of rows and c is the number of columns. The decision rule is thus, if the calculated X^2 value is greater than critical X^2 value, reject the null hypothesis, otherwise accept. On the other hand, if the p-value associated with the calculated X^2 is less than the hypothetical level of confidence usually 5%, then the null hypothesis will be rejected.

Results

Out of the 451 questionnaires distributed, 422 were returned and analyzed. This means that the researchers were able to assess the opinion of over 93% regarding competency requirement for AOB homemaking within the South-Eastern Nigeria. Based on the survey data from their opinions, researchers found evidence that AOB requires significant competencies for its viability. Firstly, the researchers presented the data in tables and figures. Overall, the responses show that most planning, processing, and marketing competencies are essential to AOB homemaker viability. In table 1, researchers found strong evidence that AOB homemakers need

strong planning competencies business initiative risk taking, business location diligence and business scope self-concept. They also found evidence that AOB homemakers require task drawing patience competence, human resource identification trait and objective group relation.

Table 1: Planning Competence Survey Responses

SN	Variables	Highly Required	Moderately Required	Slightly Required	Not Required
1	Business initiation competence	300(70.8%)	80 (18.9%)	30(7.1)	12(2.8)
2	Business location competence	302(71.2)	82(18.9)	26(6.1)	10 (3.1)
3	Objective formulation competence	300(70.8)	100(23.6)	17 (4.0)	5(1.2)
4	Scale of business competence	280(66.0%)	120(28.3)	16(3.8)	6(1.4)
5	Task drawing competence	310(73.1)	92(21.9)	12(2.8)	8(1.7)
6	Supplier identification competence	280(66.4)	130(31.0)	8(1.7)	4(0.9)
7	Human-material identification competence	250(59.0)	80 (19.1)	70 (16.0)	22 (4.7)
8	Market identification competence	310(73.1)	105 (24.8)	6 (1.2)	1 (0.5)
9	Relevant records competence	230(54.2)	60 (14.2)	100 (7.23)	20 (7.5)
10	Budgeting competence	250(59.4)	100 (23.1)	60 (14.2)	12 (2.8)
11	Fund sourcing competence	250(59.4)	120(28.1)	29 (6.8)	23 (5.2)
12	Periodical objective review competence	250(59.4)	120(27.8)	30(6.8)	22 (5.4)

Source: Author through survey

We found that 300 respondents suggest that initial risk of starting AOB is very vital and is highly required. Only 12 respondents suggest that this skill is not essential. Overall, most items of the question show that competence is vital for successful running of AOB business. It does appear that bookkeeping is not an essential competence in AOB planning. This is because; up to 120 respondents did not see any good use of it in running AOB business by women.

Graphical Analysis

Table 2 below presents the graph of the responses on the planning competencies required for AOB processing.

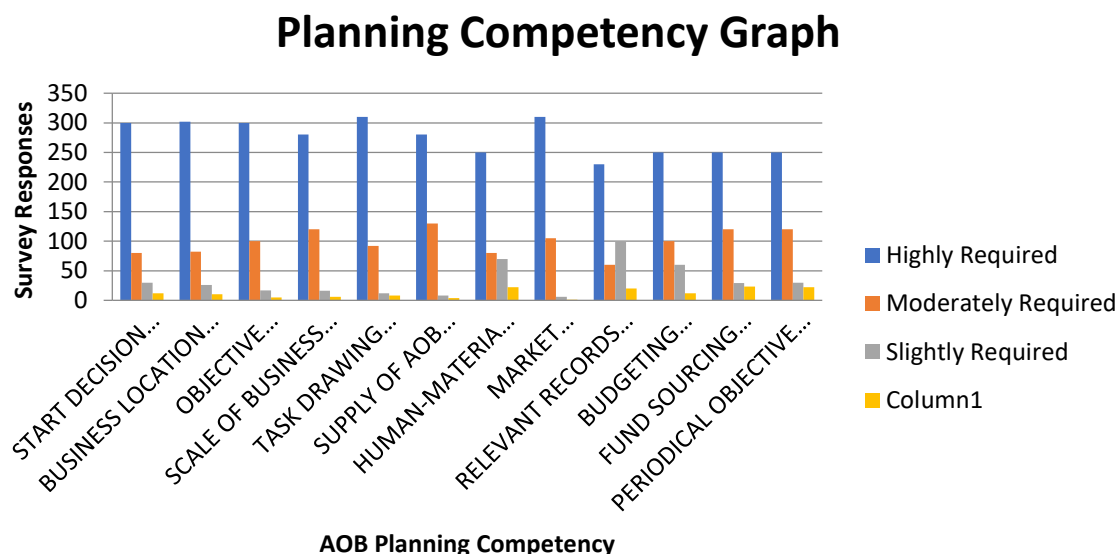


Figure 1: Graph of Planning Competencies Responses (Source: Author)

The above graph shows respondents are at home with all the AOB planning competencies. This is because highly required responses have the highest bar height followed by moderately required respondents.

Examining the Mean Variations

To further assess how the respondents’ view the planning competencies required AOB processing, we examined the mean differences and the standard deviations from the expectations. The statistics were displayed in table 3 below.

Table 3: Basic Statistics for Planning Competencies

Competency Variables	Mean Values	Std. Dev.	N
Business initiation competence	3.3697	0.74648	422
Business location competence	3.5379	0.75228	422
Objective formulation competence	3.4479	0.61723	422
Scale of business competence	3.6019	0.63455	422
Task drawing competence	3.4882	0.61430	422
Supplier identification competence	3.5735	0.56960	422
Human-material identification competence	3.6872	0.91855	422
Market identification competence	3.6114	0.50721	422
Relevant records competence	3.3981	1.0312	422
Budgeting competence	3.6161	0.83435	422
Fund sourcing competence	3.3460	0.83435	422
Periodical objective review competence	3.1090	0.8424	422

Source; Author

Using a mean statistic to assess the overall importance attached to the each AOB planning competence, it is very clear that the processors need strong planning skill. The mean statistic is between 3 and 4. This implies that all the items passed the acceptance criterion. The higher the mean of any question item is the need for the item this is because higher weight of 4 was attached to the highly required Likert value. This can also be seen from the standard deviations.

The standard deviation of value above 1 suggests odd. In the above table, only item question on bookkeeping skills exhibited such high deviation. It thus means that women AOB possessors do not necessarily need professional training in accounting to take their business to another level. However, we must put caution here because this idea is only relevant in as much as the business remains small scale. If the business expands there would be need for adequate record keeping for management purposes. Management accounting is very important for business growth and profitability. Otherwise, running business without proper accounting will lead to wrong decision and fraud.

Table 4: AOB Processing Competencies Responses

Variables	Highly Required	Moderately Required	Slightly Required	Not Required
Pod selection competence	250	100	50	22
Drying competence	300	90	20	14
Pod removal competence	200	150	55	17
Fire source competence	300	80	40	2
Drum placing competence	250	90	72	10
Water measure competence	300	100	16	6
Seed load competence	300	95	25	2
Boiling duration competence	300	100	14	8
Cooling competence	260	90	60	12
De-hull competence	250	100	60	12
Wash competence	300	80	29	13
Slice competence	200	100	50	72
Wash slice competence	300	80	30	12
Re-boiling competence	250	100	50	22
Soaking competence	300	60	30	32
Rewash competence	300	70	34	18
Leaving competence	300	105	12	5
Drain competence	260	120	25	17
Wrapping competence	300	100	12	10
Days fermentation competence	320	70	20	12

Source: Author

The above table shows the survey responses for all the processing competencies required for processing AOB by home makers. Most respondents agreed that the competencies are highly required. All the competency items with the exception slice competence achieved between 50% and 80% highly required response.

Table 5: Observations and Expectations for Test of AOB Planning Competency Hypothesis

Response	Obs	Exp	Obs	Exp	Obs	Exp
HR	300	276.109	310	276.109	230	276.109
MR	80	100.1229	92	100.1229	72	100.1229
SR	30	33.67997	12	33.67997	100	33.67997
NR	12	12.08811	8	12.08811	20	12.08811
HR	302	276.109	280	276.109	250	276.109
MR	82	100.1229	130	100.1229	100	100.1229
SR	26	33.67997	8	33.67997	60	33.67997
NR	10	12.08811	4	12.08811	12	12.08811
HR	300	276.109	250	276.109	250	276.109
MR	100	100.1229	80	100.1229	120	100.1229
SR	17	33.67997	70	33.67997	29	33.67997
NR	5	12.08811	22	12.08811	23	12.08811
HR	280	276.109	310	276.109	250	276.109
MR	120	100.1229	105	100.1229	120	100.1229
SR	16	33.67997	6	33.67997	30	33.67997
NR	6	12.08811	1	12.08811	22	12.08811

Source; Author; HR= Highly Required; MR=Moderately Required; SR=Slightly Required; NR=Not Required; Obs= Observation, Exp=Expectations.

Using the above, we calculate the test statistic using the contingency formula. Thus, calculated Chi-Square (X^2) = $\frac{\sum(O-E)^2}{\sum E} = \frac{22768.66}{5064} = 4.496$. Since the calculated Chi-Square is greater than the critical value of 0.05, we accept the hypothesis that all the planning competencies outlined in this study very vital to viability of AOB homemaking business.

AOB Processing Competencies

Part of the objective of this study is survey the AOB processing competencies for homemakers. We present the result of the survey in the following tables and figures. The hypothesis of the extent to which the competencies are required was tested using Chi-Square Statistic at 5% critical value. The analysis was also made using mean and standard deviation statistics.

AOB Homemaker Processing Competency

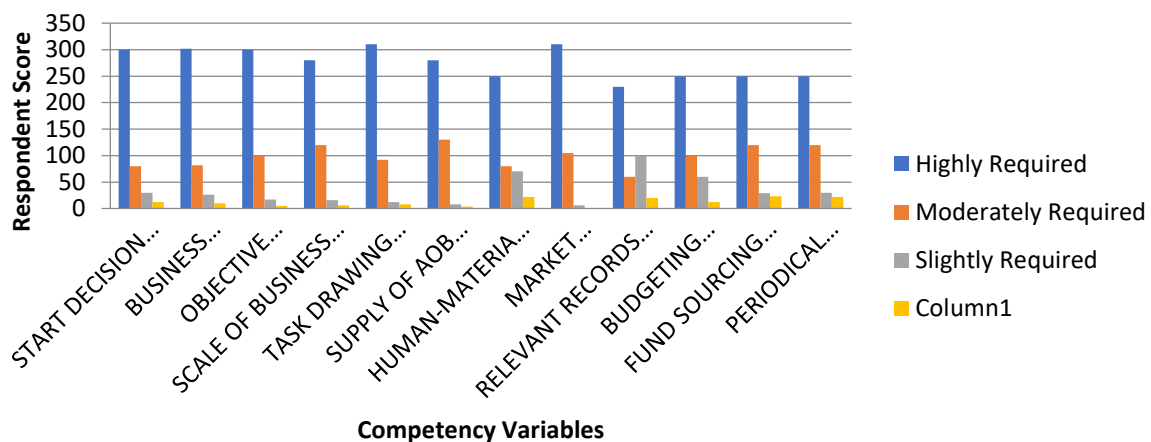


Figure 2: AOB Processing Competencies' Graph Responses (Source: Author)

The figure highlights the fact that virtually all the competencies are required for AOB processing. This is all the competency variables received highly and moderately required responses.

Table 6: AOB Processing Competencies Required

S N	Processing Variables	Competency	Mean Values	Std. Deviation	Min. Value (Highly Required)	Max Values (Not Required).	N
1	Pod selection competence		3.369668	0.8858	1	4	422
2	Drying competence		3.606635	0.7109	1	4	422
3	Pod removal competence		3.265403	0.8305	1	4	422
4	Fire source competence		3.606635	0.67655	1	4	422
5	Drum placing competence		3.374408	0.84814	1	4	422
6	Water measure competence		3.6398104	0.61504	1	4	422
7	Seed load competence		3.642180	0.61449	1	4	422
8	Boiling duration Competence		3.637441	0.64201	1	4	422
9	Cooling competence		3.417062	0.81365	1	4	422
10	De-Hull Competence		3.393365	0.83382	1	4	422
11	Wash competence		3.582938	0.74648	1	4	422
12	Slice competence		3.014218	1.13036	1	4	422
13	Wash slice competence		3.369668	0.88580	1	4	422
14	Re-boiling competence		3.488152	0.92143	1	4	422
15	Soaking competence		3.547393	0.81049	1	4	422
16	Rewash competence		3.658768	0.59464	1	4	422
17	Leaving competence		3.473934	0.78467	1	4	422
18	Drain competence		3.632701	0.65762	1	4	422
19	Wrapping competence		3.654028	0.70203	1	4	422
20	Days fermentation competence		3.590047	0.72302	1	4	422

Source: Author

The above table presents the basic AOB processing competencies. The main statistic is the mean values. None of the mean values falls below 2. This means that overall, the competencies are essential for processing AOB by home makers.

Test of Processing Competencies

Observations and Expectations for Chi-Square Test of Hypothesis

Table 3: Observations and Expectations for Contingency Test of AOB Process Competency Hypothesis

Response	Obs	Exp	Obs	Exp	Obs	Exp	Obs	Exp
HR	250	283	300	283	200	283	300	283
MR	100	88.5	100	88.5	100	88.5	95	88.5
SR	50	29.2	14	29.2	50	29.2	25	29.2
NR	22	21.3	8	21.3	72	21.3	2	21.3
HR	300	283	260	283	300	283	320	283
MR	90	88.5	90	88.5	80	88.5	70	88.5
SR	20	29.2	60	29.2	30	29.2	20	29.2
NR	14	21.3	12	21.3	12	21.3	12	21.3
HR	200	283	250	283	250	283	250	283
MR	150	88.5	100	88.5	100	88.5	90	88.5
SR	55	29.2	60	29.2	50	29.2	72	29.2
NR	17	21.3	12	21.3	22	21.3	10	21.3
HR	300	283	300	283	300	283	300	283
MR	80	88.5	80	88.5	60	88.5	100	88.5
SR	40	29.2	29	29.2	30	29.2	16	29.2
NR	2	21.3	13	21.3	32	21.3	6	21.3
HR	300	283	300	283	260	283	300	283
MR	70	88.5	105	88.5	120	88.5	100	88.5
SR	34	29.2	12	29.2	25	29.2	12	29.2
NR	18	21.3	5	21.3	17	21.3	10	21.3

Source: Author; Obs=Observations; Exp=Expectations; HR= Highly Required; MR=Moderately Required; SR=Slightly Required; NR=Not Required.

The above table presents the observations and expectations values of AOB processing competencies. The data will be analyzed using a contingency table to test degree of relevance of the associated competencies on AOB processing. We test the hypothesis that the competencies are required for dealing with AOB business in the Sought-Eastern Nigeria using Chi-Square statistic obtaining using the formula:

$$\text{Chi-Square } (X^2) = \frac{\sum(O-E)^2}{\sum E}$$

Variables have been previously explained.

Based on the above table, $\sum(O - E)^2=43389.2$; $\sum E=8440$; $\text{Chi-Square } (X^2) = \frac{\sum(O-E)^2}{\sum E} = \frac{43389.2}{8440} = 5.1409$.

From the above calculation, $X^2_{\text{calculated}}$ equals 5.1409, which is above the critical value of 0.05. Therefore, this suggests that the above outlined AOB processing competencies are vital for running a successful AOB Homemaking.

AOB Marketing Competencies for Homemakers

Marketing is very vital for success of any business. This study explored the marketing competencies required by AOB homemakers for successful business. Based on the survey, where 13 item questions relating to entrepreneurial marketing skills are explored, we arrived at the following responses as displayed in table 5.

Table 5: Marketing Process Competency

S/N	COMP.VARIABLE S	Highly Required	Moderately Required	Slightly Required	Not Required
1	Market survey competence	250	100	50	22
2	Package competence	290	90	22	20
3	Label competence	250	120	43	9
4	Pricing competence	290	98	32	2
5	Book recoding competence	272	89	56	5
6	Forecasting competence	285	108	14	15
7	Customer identification competence	320	78	18	6
8	Sale competence	290	110	12	10
9	Cash collection competence	260	95	42	25
10	Unsold competence	312	80	12	18
11	Stock taking competence	250	90	60	22
12	Income-exp account competence	200	100	90	32
13	Gross profit det. competence	150	70	100	102

Source: Author

Similar to prior responses on planning and processing, marketing competencies between 50% and 80% highly required favour with the exception of two research items namely GROSS PROFIT COMPETENCE AND INCOME-EXPENDITURE COMPETENCE. It does seem that AOB homemakers are not interested in proper booking in relation to marketing competencies.

8.6. Graphical Illustration

The graph below illustrates the marketing competencies required for AOB homemaking. Just as in the above table, highly required responses have the highest bar length, which shows that most of the marketing competencies are essential for AOB business success.

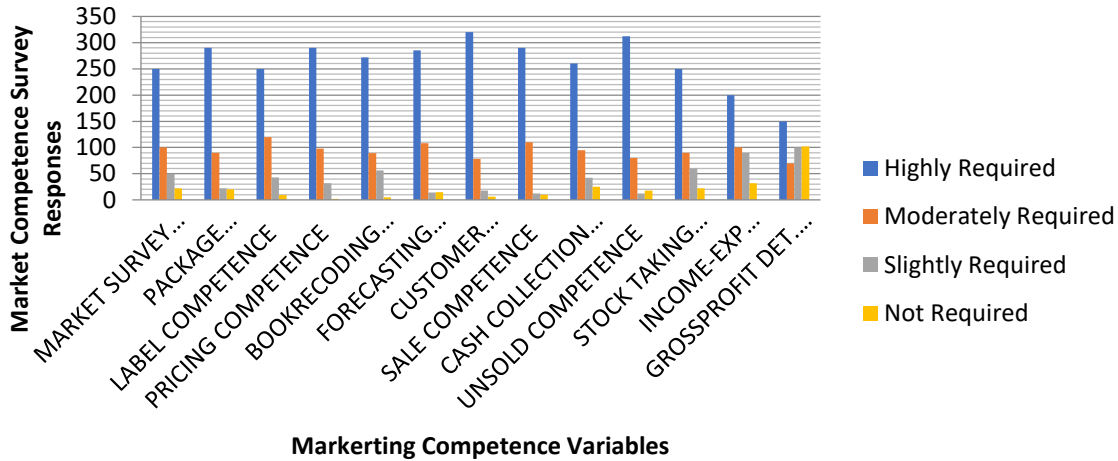


Figure 3: AOB Marketing Competency Graph (Source: Author)

AOB Marketing Competencies Means and Standard Deviation Analyses

In the table below, we examine the aggregate mean differences of the responses. Since, higher weight is given to items that are not relevant as a marketing skill and vice versa, we expect smaller mean values of between 1 and 2 to signal the need of the marketing item. On the other hand, if a mean of item tends towards 3 and 4, it means the item is not that essential in dealing AOB business by homemakers.

Table 6: Descriptive Statistics for AOB Marketing Competencies

Competency Variables	N Statistic	Min. Statistic	Max. Statistic	Mean Statistic	Std. Deviation Statistic
Market survey competence	422	1.00	4.00	3.369668	.88580
Package skill competence	422	1.00	4.00	3.537915	.80511
Label tactic competence	422	1.00	4.00	3.447867	.76185
Pricing skill competence	422	1.00	4.00	3.601896	.64862
Book recoding competence	422	1.00	4.00	3.488152	.76665
Forecasting competence	422	1.00	4.00	3.573460	.71831
Customer identification competence	422	1.00	4.00	3.687204	.62168
Sale motivation competence	422	1.00	4.00	3.611374	.66158
Cash collection competence	422	1.00	4.00	3.398104	.89219
Unsold risk competence	422	1.00	4.00	3.616114	.74049
Stock taking patience competence	422	1.00	4.00	3.345972	.90851
Income-exp account competence	422	1.00	4.00	3.109005	.99044
Gross profit det. Competence	422	1.00	4.00	2.635071	1.19560

Source: Author

In the above table 6, all the mean values indicate that the marketing competencies are very essential to AOB homemaking. The mean values yielded values between 3 and 4, which shows

that they are either highly or moderately required. However, the researchers found gross profit determination competency, which has mean value of 2.635071. This indicates that the item is not all that very essential as a marketing competence for AOB homemakers.

AOB Marketing Competence Hypothesis Test

To test the overall need of the marketing competencies for AOB homemaking, we use Chi-Square statistic. If the calculated Chi-Square is greater than the theoretical critical value 0.05, we accept the hypothesis that all marketing items are essential for AOB business within the South- Eastern Nigeria. As usual, we use a contingency table with observations and expectation values. How to get the figures has been previously described in the prior hypotheses.

Table 7: Observations and Expectations for Marketing Competence Test Using Chi-Square

<i>Response</i>	<i>Obs</i>	<i>Exp</i>	<i>Obs</i>	<i>Exp</i>	<i>Obs</i>	<i>Exp</i>	<i>Exp</i>	<i>Obs</i>
<i>HR</i>	250	263.0959	285	263.0959	250	263.0959	290	263.0959
<i>MR</i>	100	94.49599	108	94.49599	90	94.49599	98	94.49599
<i>SR</i>	50	42.40007	14	42.40007	60	42.40007	32	42.40007
<i>NR</i>	22	22.16193	15	22.16193	22	22.16193	2	22.16193
<i>HR</i>	290	263.0959	320	263.0959	200	263.0959	272	263.0959
<i>MR</i>	90	94.49599	78	94.49599	100	94.49599	89	94.49599
<i>SR</i>	22	42.40007	18	42.40007	90	42.40007	56	42.40007
<i>NR</i>	20	22.16193	6	22.16193	32	22.16193	5	22.16193
<i>HR</i>	250	263.0959	290	263.0959	150	263.0959	260	263.0959
<i>MR</i>	120	94.49599	110	94.49599	70	94.49599	95	94.49599
<i>SR</i>	43	42.40007	12	42.40007	100	42.40007	42	42.40007
<i>NR</i>	9	22.16193	10	22.16193	102	22.16193	25	22.16193
<i>HR</i>	312	263.0959	80*	94.49599	12**	42.40007	18***	22.16193

Source: Author; Obs=Observations; Exp=Expectations; HR= Highly Required; MR=Moderately Required; SR=Slightly Required; NR=Not Required; *=value for MR; **=value for SR; ***=value for NR

The above table presents the observations and expectations values of AOB marketing competencies. The data will be analyzed using a contingency table to test degree of relevance of the associated competencies on AOB marketing as noted above. We test the hypothesis that the competencies are required for dealing with AOB business in the Sought-Eastern Nigeria using Chi-Square statistic obtaining using the formula: $Chi\text{-Square } (X^2) = \frac{\sum(O-E)^2}{\sum E}$

Variables have been previously explained. Based on the above table, $\sum(O - E)^2 = 45702.14$; $\sum E = 5488.001$; $Chi\text{-Square } (X^2) = \frac{\sum(O-E)^2}{\sum E} = \frac{45702.14}{5488.001} = 8.330685$.

From the above calculation, X^2 calculated equals 8.330685. This figure is above the critical value of 0.05. Therefore, we conclude that the above outlined AOB marketing competencies are vital for running a successful AOB homemaking business.

Table 7: Summary of AOB Planning, Processing and Marketing Competency Hypotheses Test Statistics

Competencies Hypotheses	Average Mean values of competency items	$\sum E$	$\sum (O - E)^2$	Chi-Square (X^2) calculated	Critical Value	Decision Rule (Accept if $X^2_{cal} > X^2_{critical}$ value)
AOB Planning	3.482242	5064	22768.66	4.496	0.05	Accepted & Highly Required
AOB Processing	3.498223	8440	43389.2	5.1409	0.05	Accepted & Highly Required
AOB Marketing	3.157856	5488	45702.14	8.330685	0.05	Accepted & Highly Required

Source: Author

Discussions of Findings and Business Policy Implication

Planning Competencies and AOB Homemakers

This study focused on the three broad competencies required by AOB homemakers within the South-Eastern Nigeria. On average, we found AOB planning competencies to be highly required for AOB homemakers. The mean value of those who consented to the necessity of planning competencies equals 3.4822. This suggests that without planning skills, planning motivation, planning self-efficacy, and planning traits, it would be impossible to run AOB homemaking business. When tested using Chi-Square, we rejected the hypothesis that planning competencies are not required for AOB women homemakers (Chi-Square calculated=4.496> Chi-Square Theoretical Value=0.05). This means that women AOB processors should have working management objectives and strategies according to Ismail,(2014) and Fletcher (2005) . This is consistent with the theory that successful entrepreneurs have working objective functions (Oosterbeek, et al. 2008). Our finding confirms Ismail’s (2014) finding that study on women engaged in small- and medium-scale businesses in Padang showed that women yielded high competence such as endurance and perseverance; scrupulous and careful; preserved; patient, honest, reliable, high responsibility, strong will, high spirited, and discipline in businesses. We found that AOB planning demands self-concept, discipline, and perseverance. These success factors according to Ismail (2014) and Febriani, (2012) contributed to why most entrepreneurial women are successful in finance, handicraft, and processing industries. Consistent with our discovery, Izquierdo, et al. (2005) identified that the most relevant entrepreneurial competencies include identifying business opportunities, evaluating business opportunities, decision making, and networking, identifying, and solving problems, oral communication abilities, and innovation thinking. The implication for AOB homemaker planners is that they must know what they want and how to combine resources to achieve those risky objectives. Self-concept is a sine qua none for AOB success.

Entrepreneurs take risk of initiative actions as part of their strategies. Planning thus suggests that those women must be patient for their plans to mature and get realized. As such, AOB homemakers demands significant patience and motivation for risk taking in planning. Planning involves risk taking that can lead to financial loss, which the objectives run incongruent with the overall business goals. In as much as AOB homemakers score high on planning, it means

they must have big heart to take loss consistent with entrepreneurs' success factor. It therefore necessary that the homemakers need realistic planning programmes to create market awareness and be relevant in a competitive environment for their business sustainability as we postulated. Business initiative, objective formulation, scale of business, task drawing, supplier identification, and budgeting risk should be approached with motivation, riskiness, endurance, communicative abilities, and self-concept. The dealers in AOB business consent that these factors are essential in the small-scale business sustainability. The average mean score of the factors is approximately 4 points, which suggests highly required. The analysis also suggests that periodic objective review though tasking is vital for AOB sustainability. This means that AOB homemaking entrepreneurs should develop high level endurance to tackle objective review. This is because an objective review must be carried out to maintain control. Deviation from objective function is disastrous and highlights evidence of poor control, weak management, and poor business planning competence. Our analysis as well suggests that AOB entrepreneurs need to evaluate their budget from time to time and then carry out variance analysis patiently for systematic business management and expansion decision. Thus, AOB homemakers who engage these skills will invariably experience success and long run sustainability.

Processing Competencies and AOB Homemakers

We found a significant need for AOB processing competencies for homemakers. Overall, we found that the mean value of processing competencies is 3.498223. This suggests that processing competencies are highly required and without processing competencies AOB homemakers would not succeed consistent with competency theory (Oosterbeek, et al. 2008; Ismail (2014). Using a Chi-Square test statistic, which equals 5.1409 relative to theoretical critical value, which equals 0.05, we reject the null hypothesis that processing competencies are not highly required. Thus, our finding is consistent with the competence theory, which highlights the need for entrepreneurs to be diligence, patience, motivated and risk taking. Thus, AOB processing including drying, pod removal, fire sources, drum placing, seed loading, boiling, reboiling, cooling, de-hulling, washing, slicing soaking, draining, fermenting, and rewashing demand skills involving risk taking, self-concept, perseverance, motivation, endurance, courage, and discipline. Unmotivated AOB homemakers are not likely to process successfully the AOB. In addition, AOB is delicate. It demands discipline and carefulness, which are entrepreneurial keys to success (Oosterbeek, et al. 2008). Success in processing industries, finance, and handicraft industries depend on the above critical factors and have contributed to why most entrepreneurial women are successful in their business (Ismail 2014; Febriani, 2012). Like planning competencies, the most relevant entrepreneurial processing competencies include identifying business opportunities, evaluating business opportunities, decision making, and networking, identifying, and solving problems, oral communication abilities, and innovation thinking. AOB pod selection opportunities need to be identified. The implication for AOB homemaker processors is that they must know the processes they want and how to combine resources to achieve those risky strategic processes. AOB processing demands self-concept competence as such the factor should be a sine qua none for AOB processing sustainability.

Marketing Competencies and AOB Homemakers

Market awareness skills were found to be very vital competence required for the viability of AOB entrepreneurs consistent with Oosterbeek, et al. (2008) entrepreneurial competency theory. Our analysis shows that the mean score for marketing competence is 3.157856. This means that market competence is highly required. AOB homemakers must access the market opportunities to succeed. The test of hypothesis proves this stand as Chi-Square calculated is

8.33, which is greater than the 5% theoretical critical value. Thus, we accept the postulation that marketing competencies are highly required for AOB seed homemakers. Generally, success in processing industries, finance, and handicraft industries depend on the marketing skills. These skills have contributed to the success of most entrepreneurial women (Ismail 2014; Febriani, 2012). Thus, marketing like planning competencies including ability to; identify business opportunities, evaluate business opportunities, make decision, network, identify and solve problems, communicate orally, and think innovatively contribute to business success. AOB marketing opportunities need to be identified and communicated. Market presents opportunities. However, it takes patience, motivation, courage, and self-concept to explore and maximize the opportunity (Ismail 2014; Febriani, 2012). Our analysis shows that there is need for skills to identify the feasible market and how to enter the market and co-exist with the competitors. Market competence based on our finding shows that AOB homemakers should exhibit social economic live. This is consistent with the theory. AOB homemakers exhibit the desire to control and influence others' behaviour to achieve their marketing goals. AOB entrepreneurs who want to be successful would normally score higher on the need for market power to influence others to realize their entrepreneurial market goals. This also involves exhibiting competent marketing *social orientation*. In this case, AOB home makers should cultivate discipline to endure nexus with other competitors. This is important for achieving overall AOB business goals. According to Ismail (2014) and Driessen (2005) successful entrepreneurs easily make business-marketing connections and are motivated by professional considerations in their social-cultural activity performances. Thus, they jettison their personal social needs and concentrate business market affiliations and associations. Market awareness involve *self-efficacy*. The survey shows that this is very vital for AOB success. *Self-Efficacy* is an entrepreneurial success factor that shows that one believes in one's ability. Self-efficacy suggests a kind of self-confidence, which AOB homemakers should wear for their business sustainability. Evidence has shown that most successful entrepreneurs usually believe that they can successfully complete even the most complex task. Relative to marketing, Successful AOB homemakers should not be afraid to enter competitive environment. AOB entrepreneurs on this mind set always are expected to exhibit idea that they can manage their business success without the intervention of others' idea and success in marketing. Thus, even when there is a setback, they are expected to put on high degree of endurance character. In business there is always a setback, and the rate is high in innovative businesses. However, successful AOB entrepreneurs should always hold their ground in difficult times. Thus, in terms of marketing competency, this entrepreneurial success factor has to do with the capacity to continue developing new marketing ideas according to Ismail (2014) 'willfully' despite challenges that obstruct business speed. This means that AOB homemakers should wear risk as garment. Desire to take risk should read high in entrepreneurs scorecard. AOB homemakers should always exhibit the ability to deal with uncertain situations and business opportunities.

Another significant character that needs to be developed by AOB homemakers is market awareness competencies as previously pointed out: AOB entrepreneurs should treat clients as kings and as such work to identify their needs. These identified needs should be linked with the entrepreneurs' business and marketing goals. Thus, AOB should invest in advertisement to create market awareness for clients on one hand. On the other hands, to be successful AOB entrepreneurs should invest in both soft and hard information to find customers market needs. In this case, they should try to identify business target groups and can change based on the dynamism of the identified market. It has been noted that successful entrepreneurs score high on market awareness, market competition and marketing mix namely people, place, and product. This marketing competence also suggests that AOB homemakers should be creative. Creativity is ability to be innovative and is very critical to entrepreneurial success. Marketing

creativity involves the ability to accept views and ideas from diverse perspectives of consumers other than the status quo. This implies that AOB should be creative by exhibiting competencies to perceive and try new possibilities and latent opportunities based on open market observations of the dynamic business environment. Following Ismail (2014) AOB entrepreneurs should display creativity by developing ability to change challenges into new business and marketing opportunities. However, creativity without flexibility could lead to entrepreneurial success miscarriage. AOB entrepreneurs need to be flexible, which means they should be able to adapt to changing business and marketing environment. It has been found that entrepreneurs, who are successful, react to environmental changes and challenges including new customer demands and the new directions being charted by product market competitors in the market. Thus, marketing competencies are inevitable traits to display by AOB women entrepreneurs.

Conclusion and Recommendations for AOB Business Sustainability

AOB presents significant opportunity for women to improve their standard of living. Thus, it could constitute a significant source of income. However, analyses show that such entrepreneurship requires significant entrepreneurial competencies. Planning, marketing, and processing skills are required for the business viability. Ability to take strategic decision is at the root of the competencies needed by the AOB homemakers. Planning requires risk taking. AOB planning requires self-concept, flexibility, creativity, high degree of endurance. The research shows that AOB homemakers must take systematic risk in pursuing their business goals. Business initiation traits and motivation are very essential in this kind of business. The average mean score of the planning competence factors is approximately 4 points. This shows that the competencies are highly required for AOB homemakers. Researchers also show that the review of AOB objectives is essential though tasking. However, it was recommended that despite the herculean task of business objective review, AOB homemaking entrepreneurs should develop high level endurance, persistence, and discipline to tackle objective review. It was concluded that objective review must be carried out to maintain control. This is because deviation from objective function is disastrous and highlights evidence of business confusion, weak management, and poor business planning competence. The researchers found budgeting skill and discipline to be a vital competence for AOB business. Thus, AOB entrepreneurs need to evaluate their budget from time to time and then carry out variance analysis patiently for systematic business management, mitigation of deviation from plans and expansion decision. The researchers concluded that AOB homemakers who engage these skills will invariably experience success and long-term sustainability. Market awareness should be pursued with diligence, endurance, and courage to make AOB business visible and viable. These are significant marketing competencies required for AOB homemakers. Insight into market shift should be factored in the AOB homemakers' business model. Processing requires patience, diligence, and self-concept. AOB homemakers should approach their business with such a processing competency model. AOB entrepreneurs should handle customers as kings and as such, work to identify their marketing needs. We suggest that once these needs are identified, they should be linked with the AOB entrepreneurs' business and marketing goals. Since market competencies are vital for AOB sustainability, AOB should invest in advertisement and publicity to create market awareness for clients. It was also suggested based on the analysis that for AOB entrepreneurs to be successful, they should invest in both soft and hard information to find out what customers and market need (Oosterbeek, et al. 2008). AOB homemakers should try to discover business target groups. In addition, they should also possess the capacity to change their marketing models based on the dynamism of the identified markets. It was noted that successful entrepreneurs score high on market awareness, market competition and marketing mix such as nexus of people, place, and product. Thus, AOB engage in model of marketing that is all embracing, which means that AOB homemakers should be creative.

They should be innovative and exhibit the ability to accept views and ideas from diverse perspectives of consumers other than treading on the marketing status quo model.

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