



INNOVATIVE BEHAVIOUR: MALE VS FEMALE ENTREPRENEURS IN AKWA IBOM STATE

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ABSTRACT: *It is observed that there are more male entrepreneurs engaged in entrepreneurial activities than female entrepreneurs given a number of factors that hinder the female entrepreneurs. However, does this translate to the male entrepreneurs being more innovative than the female entrepreneurs? This study aims to examine the innovative behaviour of male and female entrepreneurs in Akwa Ibom State. Using a survey design and a purposive sampling method, 250 respondents were examined for the study and the data analysed using descriptive statistics revealed the findings that both male and female entrepreneurs have similar levels of innovative behaviour, although the female entrepreneurs exhibited a slightly higher level of innovative behaviour in the areas of product innovation, process innovation, market innovation and raw materials innovation. The result indicated that the male entrepreneurs' process innovation led to a slightly speedier delivery of their goods compared to the female entrepreneurs and that their goods stand out against competitors compared to the female entrepreneurs. In organisational restructuring, both male and female entrepreneurs have a similar level of innovative behaviour, however, the female entrepreneurs tend to reorder each division of their businesses to ensure employee's effectiveness more than the male entrepreneurs and profit tend to increase more for the female entrepreneurs who reorder their businesses compared to the male entrepreneurs. Hence, more female citizens in the state need to be encouraged to startup and to stay creative and innovative.*

KEYWORDS: Innovative behaviour, Gender, Entrepreneurs, Male, Female, Akwa Ibom State.



INTRODUCTION

The contribution of entrepreneurship to economic development cannot be overemphasized. Entrepreneurship brings about wealth creation, innovation, competitiveness and job generation which is seen as a global panacea for the problems of unemployment and poverty (Brownson, 2014^a). Being an entrepreneur is largely seen as a male-gendered enterprise (Baker & Liou, 1997; Achtenhagen & Welter, 2011) which is strongly strengthened given the large number of male entrepreneurs that are successful and the ratio of male to female managers in most corporate institutions (Brownson, 2021). Cantzler and Leijon (2007) pointed out that a wide gap exists between male participation in business as entrepreneurs and women entrepreneurs. Bank of Montreal (BMO) (2020) posits that a few studies have looked at the motivations and characteristics of men and women entrepreneurs to see how they differ and what they have in common. Cohoon et al. (2010) study found that men and women entrepreneurs were quite similar in their motivations to start a business with a slight difference in the encouragement of a mentor for women which was also confirmed in the study by Klynveld Peat Marwick Goerdeler (KPMG) (2015). BMO (2020) concluded that the key difference between men and women entrepreneurs have less to do with special traits or skills, and more to do with access to opportunities and the different ways men and women are perceived in business. Wu et al. (2022) in their study of Chief Technology Officers (CTO) found that firms with Female CTOs are more innovative than firms with male CTOs. Despite various research on innovation, gaps still exist in the area of gender as a determinant of innovative behaviour. Zastempowski and Cyfert (2021) posited that many areas of research on innovation constitute a kind of a white spot of which is the innovativeness of small enterprises as there exist a gap especially in the area of internal factors that can stimulate innovativeness of small enterprises of which one of such factors that receives scarce attention is the gender of enterprise owner and manager. It is against this background that this study seeks to investigate and compare the innovative behaviour of male and female entrepreneurs in Akwa Ibom state.

Innovative Behaviour

Innovative behaviour is an important factor in entrepreneurship recognition and has great importance in the development of companies (Kamran & Gaanjinia, 2017). Innovative behaviour is defined in many ways by scholars. For instance, Travalee (2013) defines it as a deliberate and executive behaviour involving implementation of new ideas among group or organisational tasks to take advantage of the organisational, group or working benefits. Harborn and John (2013) see it as the result of creativity which involves converting the creative process to profit by an individual through the use of new ideas. Yuan and Marquardt (2023) posit that innovative behaviour refers to the introduction and application of new ideas, products, processes and procedures to a person's work role, work unit or organisation. Strobl et al. (2018) assert that individual innovation behaviour encompasses the refinement of existing knowledge associated with exploitation as well as the development of new knowledge associated with exploration. Shin et al. (2017) suggest that it is the generation of new ideas while Janssen (2000) adds that it is the intentional creation, introduction and application of new ideas within a work role, group or organisation, in order to benefit role performance, the group, or the organisations.

The above definition shows that innovative behaviour has to do with the generation of new ideas which involves creativity and the application of such new ideas. However, most of the



above definition has been done within the context of an existing organisation in which the innovator here is the employee. In this study, innovative behaviour will be viewed from the dimension of the business owner using Schumpeter's dimension of innovation in which he posited that innovation encompasses; generation of new or improved product or services, introduction of new process of production, development of new sales markets, development of new supply market and reorganisation or restructuring of the company (Reguia, 2014).

Product Innovation

Product innovation is the process of creating a new product or improving an existing one -to meet customers' needs in a novel way (Cote, 2022). Reguia (2014) opined that product innovation is the development of new products, making changes in the current product design or using new techniques and means in the current production methods of which active training methods can stimulate the ability of Individuals to be creative and innovative in developing new products (Brownson, 2014^b). Callminer Team (2022) asserted that product innovation is the process of creating a product that addresses key needs among consumers in intuitive, understandable ways by using advanced technology or design improvements. They pointed out that it can create new opportunities for the businesses that succeed and can often result in the formation of entirely new industries as well. Paddle (2023) adds that product innovation is the creation and introduction of a product or service that is new to the market or a substantial and novel iteration of an existing product which includes improvements in components and materials, incorporated software, technical specifications and other functional characteristics like user-friendliness. They pointed out that innovation in new products can only occur in three dimensions namely; new product innovation (radical or disruptive), incremental changes of existing products (improving existing products) and development of new product features (developing new features to improve products and increase their frequency and adoption). Product innovation helps businesses stay ahead of the competition, it helps the company gain new customers, retain existing ones and create brand loyalty. It can play a critical role in promoting sustainability (Matthieu, 2023)

Process Innovation

Process innovation has to do with the improvement or enhancement of methods and procedures. It is the introduction and application of a new technology or method of production that helps the organisation remain competitive while meeting customer's needs. It is also the application of new technologies, strategies, techniques, people or skills to improve a process and generate tangible benefits for an organisation (Awati & Pratt, 2023). This involves the active participants of the employees for appropriate skill training and development for the process innovation to be effective (Brownson, 2013). Jain (2023) asserts that process innovation is implemented to enhance efficiency, effectiveness and value creation in an organisation. He pointed out that the goal of process innovation is to drive improvements, optimise operations, reduce costs, increase productivity and deliver better outcomes for the organisation. In accordance with that view, Awati and Pratt (2023) assert that process innovation can generate value to internal customers, including employees or the organisation itself, as well as external customers including business partners and consumers. They pointed out that process innovation goals include lowering cost of production, improvement in product or service quality, reduction in cost (per goods produced, and human resource cost), reduction in lead time, improvement in responsiveness to customers demand and strengthening the



companies' competitive advantage. Process innovation can occur in various areas within an organisation such as production, operations, supply chain management, customer service and administrative process among others (Jain, 2023).

Market Innovation

Marketing innovation is the implementation of a new marketing method (marketing idea or strategy) that differs significantly from the previous marketing methods used by the enterprise and that has not been previously used by the enterprise (The Organization for Economic Cooperation and Development (OECD), 2018). Market innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (Glossary, 2023; OECD, 2018). It is the incorporation of new market methods and techniques that differ from the previous ones and involve significant changes in product promotion, design, packaging and placement (SendPulse, 2023). It is the changing of market structure, introducing new market devices, altering market behaviour and reconstituting market agents (Kjellberg et al., 2015 cited in Spring et al., 2021). Sprong et al. (2021) define it as purposive actions by market stakeholders that result in a distinctively new or altered form of market. The purpose of marketing innovation is to satisfy consumers' needs better, to open new trade areas or new positioning of products on the market in order to boost sales (Erikson & Martens, 2023).

Raw Materials Innovation

Materials innovation is the process of meeting user needs through improvements in existing products or processes, or creating and developing something completely new in order to achieve greater differentiation or a reduction in costs (Infinitia, 2023). Raw materials innovation has to do with responsible sourcing (which implies securing sustainable access to raw materials) (Techtour, 2023), technological advancement in sourcing (using technology leverage to optimise sourcing methods to ensure supply chain transparency and facilitate swift and seamless transactions) and global partnership (to access diverse range of high quality raw materials and ingredients via global partnership which allows organisation to offer competitive prices and continuous supply even in the face of market fluctuations) (Aftrade Fze, 2023).

Organisational Restructuring

Organisational restructuring is a process in which an organisation makes changes to its structure, systems, and process to achieve its goals and objectives more effectively (Ahmed, 2023). It is an act that reorganises the ownership, legal, operational or any other structure of an organisation for making it organised and profitable (Bhasin, 2023). It is a corporate action that is conducted when the company is facing some severe issues hence a significant modification is made to save the company from jeopardy or severe financial harm (ibid.). The goal of organisational restructuring is to create a more agile and efficient organisation that is better equipped to respond to changing market conditions (Ahmed, 2023). Organisational restructuring occurs due to changes in the business environment, business model and when the organisation has to adapt to survive and grow in the market (Bhasin, 2023). It can be carried out through various forms such as downsizing, merging with or acquiring other companies, reorganising departments or divisions and changing reporting relationships (Ahmed, 2023).

Gender and Innovative Behaviour



Entrepreneurs' gender has been suggested as one of the factors that influence innovativeness (Foss et al., 2013). Gender can influence innovative behaviour due to a variety of social, cultural and economic factors. It is said to be related to innovative behaviour by the uneven distribution of power, resources, and status between women and men, as well as between services and manufacturing industries, in policies, processes, and networks of innovation (Linberg & Schiffbaenker, 2013). Although being an entrepreneur is largely seen as a male-gendered enterprise, entrepreneurs' female gender has been found to exert a positive impact on small business innovativeness. Given women's participation in innovative behaviour, are men more innovative than the women entrepreneurs in view of the domain being highly dominated by men? Foss et al. (2013) study suggested that although women are characterised by a similar level of innovation in generating new ideas, as men, their level of innovation activity is lower as women's ideas are less frequently implemented in the organisation. Nahlinder et al. (2015) study suggested no significant differences in innovation between male and female entrepreneurs. They pointed out that women-led companies invest less resources on innovation compared to men. Zastempowski and Cyfert's (2021) study in Poland revealed that the female gender of the entrepreneur has a positive impact on the product and process innovativeness of small enterprises and that the chances of introducing product innovation are higher in female managed enterprises by 83.7%, process innovation by 56% and product and process innovation by 82.1%. Exposito et al. (2021) found no differences in the propensity to innovate between 1405 Spanish men and women entrepreneurs, however, male entrepreneurs were more prone to process innovations than their female counterparts which was not the case for product and organisational innovations. Millward and Freeman's (2002) study found that men and women are equally innovative though their gender role within the context of an organisation can affect how they are perceived and how they behave when innovating and sharing ideas. They posited that men were perceived to be more innovative and willing to take more risk while innovating than women who were perceived to be more adaptive and risk-averse, innovative solutions were perceived to come more from men than women and that innovative solutions made by men are more likely to be implemented than that made by women.

Method

Using a survey design and a purposive sampling method with a structured questionnaire, 250 respondents were examined for the study in Uyo, Akwa Ibom State and the data was analysed using descriptive statistics.

Analysis

The aim of this study was to examine the innovative behaviour of male and female entrepreneurs in Akwa Ibom State to compare whether male entrepreneurs are more innovative than female entrepreneurs given their dominance in the field of entrepreneurship in the state. The analysis of the field survey is shown on the table below:

Table 1: Gender Distribution of the Respondents

Sex Distribution	Frequency	Percentage
MALE	124	49.6%
FEMALE	126	50.4%
TOTAL	250	100%



Table 1 above shows the gender distribution of the respondents examined in the study. The table shows that the male respondents were 124 representing 49.6% of the respondents while the female respondents were 126 representing 50.4% of the respondents. This shows that the representation for male and female respondents in the study was slightly even with a 0.4% difference in the representation.

Table 2: Product innovation of the Respondents

Product Innovation	Male						Female					
	SA	A	UD	D	SD	Total	SA	A	UD	D	SD	Total
I like to develop new products to meet the needs of my customers	29	56	4	18	17	124	33	58	6	13	16	126
	23	45	3%	15	14	100	26%	46%	5%	10%	13%	100%
	%	%		%	%	%						
I have made improvements in my current products to meet customers' needs compared to my competitors	25	59	6	21	13	124	27	57	10	15	17	126
	20	48	5%	17	10	100	21%	45%	8%	12%	14%	100%
	%	%		%	%	%						
My products always stand out from that of my competitors due to my innovative approach in redesigning them	27	53	10	18	16	124	29	56	14	11	16	126
	22	43	8%	14	13	100	23%	44%	11%	9%	13%	100%
	%	%		%	%	%						

Table 2 above shows the analysis on the product innovation of the respondents. The table shows that 29 male respondents (representing 23% of the responses) strongly agreed to the first statement "I like to develop new products to meet the needs of my customers", 56 male respondents (representing 45% of the responses) agreed to the statement, 4 male respondents (representing 3% of the responses) remained undecided, 18 male respondents (representing 15% of the responses) disagreed to the statement while 17 male respondents (representing 14% of the responses) strongly disagreed to the statement. On the other hand, 33 female respondents (representing 26% of the responses) strongly agreed to the same statement, 58 female respondents (representing 46% of the responses) agreed to the statement as well, 6 female respondents (representing 5% of the responses) were undecided, 13 female respondents (representing 10% of the responses) disagreed to the statement while 16 female respondents (representing 13% of the responses) strongly disagreed to the statement. This implies that about a total of 85 male respondents (total of those who strongly agreed/agreed) agreed to being fond of developing new products to meet the needs of their customers while about a total of 91 female respondents (total of those who strongly agreed/agreed) agreed to being fond of developing new products to meet their customers' need. This shows that both male and female respondents in the state are innovative although only a slight difference indicates a strong female innovative behaviour against that of the male.

On the second statement "I have made improvements in my current products to meet customers' needs compared to my competitors" on table 2, 25 male respondents (representing 20% of the responses) strongly agreed to the statement, 59 male respondents (representing 48%



of the responses) agreed to the statement, 6 male respondent (representing 5% of the responses) remained undecided, 21 male respondents (representing 17% of the responses) disagreed to the statement while 13 male respondents (representing 10% of the responses) strongly disagreed to the statement. On the other hand, 27 female respondents (representing 21% of the responses) strongly agreed to the same statement, 57 female respondents (representing 45% of the responses) agreed to the statement as well, 10 female respondents (representing 8% of the responses) were undecided, 15 female respondents (representing 12% of the responses) disagreed to the statement while 17 female respondents (representing 13% of the responses) strongly disagreed to the statement. This implies that about 84 male respondents (total of those who strongly agreed/agreed) agreed to making improvements in their current product offering to meet customers' needs compared to their competitors while 84 female respondents (total of those who strongly agreed/agreed) as well agreed to making improvements in their current product offering to meet customers' needs compared to their competitors.

On the third statement "My products always stand out from that of my competitors due to my innovative approach in redesigning them" on table 2, 27 male respondents (representing 22% of the responses) strongly agreed to the statement, 53 male respondents (representing 43% of the responses) agreed to the statement, 10 male respondents (representing 8% of the responses) remained undecided, 18 male respondents (representing 14% of the responses) disagreed to the statement while 16 male respondents (representing 13% of the responses) strongly disagreed to the statement. On the other hand, 29 female respondents (representing 23% of the responses) strongly agreed to the same statement, 56 female respondents (representing 44% of the responses) agreed to the statement as well, 14 female respondents (representing 11% of the responses) were undecided, 11 female respondents (representing 9% of the responses) disagreed to the statement while 16 female respondents (representing 13% of the responses) strongly disagreed to the statement. This implies that about 80 male respondents (total of those who strongly agreed/agreed) agreed to their products standing out from that of the competitors due to their innovative approach in redesigning them while 85 female respondents (total of those who strongly agreed/agreed) as well agreed to their products standing out from that of the competitors due to their innovative approach in redesigning them.

On the whole, the analysis in table 2 shows that only a slight difference exists in the innovative behaviour of male and female entrepreneurs in Akwa Ibom State which indicates that the female entrepreneurs are more likely to be slightly more innovative than the male entrepreneurs.

Table 3: Process Innovation of the Respondents

Process Innovation	Male						Female					
	SA	A	UD	D	SD	Total	SA	A	UD	D	SD	Total
I have introduced new processes in the production of my goods	27	52	15	12	18	124	31	54	14	12	15	126
	22	42	12	10	14	100	25	43%	11%	9%	12%	100
	%	%	%	%	%	%	%					%
The new process of production I have introduced increase the speed of my delivery	25	58	10	14	17	124	29	48	13	19	17	126
	20	47	8%	11	14	100	23	38%	10%	15%	14%	100
	%	%		%	%	%	%					%



The new processes of production I have introduced have made my products standout against that of my competitors	28	49	15	13	19	124	30	46	18	13	19	126
	23	40	12	10	15	100	24	37%	14%	10%	15%	100
	%	%	%	%	%	%	%					%

Table 3 above shows the analysis on the process innovation of the respondents. The table shows that 27 male respondents (representing 22% of the responses) strongly agreed to the first statement “I have introduced new processes in the production of my goods”, 52 male respondents (representing 43% of the responses) agreed to the statement, 15 male respondent (representing 12% of the responses) remained undecided, 12 male respondents (representing 10% of the responses) disagreed to the statement while 18 male respondents (representing 14% of the responses) strongly disagreed to the statement. On the other hand, 31 female respondents (representing 25% of the responses) strongly agreed to the same statement, 54 female respondents (representing 43% of the responses) agreed to the statement as well, 14 female respondents (representing 11% of the responses) were undecided, 12 female respondents (representing 9% of the responses) disagreed to the statement while 15 female respondents (representing 12% of the responses) strongly disagreed to the statement. This implies that about a total of 79 male respondents (total of those who strongly agreed/agreed) agreed to introducing new processes in the production of their goods while about a total of 85 female respondents (total of those who strongly agreed/agreed) agreed to introducing new processes in the production of their goods. This shows that both male and female respondents in the state carry out process innovation in their business although only a slight difference indicates more female participation in process innovation than their male counterparts.

On the second statement “The new process of production I have introduced increase the speed of my delivery” on table 3, 25 male respondents (representing 20% of the responses) strongly agreed to the statement, 58 male respondents (representing 47% of the responses) agreed to the statement, 10 male respondent (representing 8% of the responses) remained undecided, 14 male respondents (representing 11% of the responses) disagreed to the statement while 17 male respondents (representing 14% of the responses) strongly disagreed to the statement. On the other hand, 29 female respondents (representing 23% of the responses) strongly agreed to the same statement, 48 female respondents (representing 38% of the responses) agreed to the statement as well, 13 female respondents (representing 10% of the responses) were undecided, 19 female respondents (representing 15% of the responses) disagreed to the statement while 17 female respondents (representing 14% of the responses) strongly disagreed to the statement. This implies that about 83 male respondents (total of those who strongly agreed/agreed) agreed to the speed in delivery of their goods due to the new process introduction while 77 female respondents (total of those who strongly agreed/agreed) also agreed to the statement.

On the third statement “the new processes of production I have introduced have made my product standout against that of my competitors” on table 3, 28 male respondents (representing 23% of the responses) strongly agreed to the statement, 49 male respondents (representing 40% of the responses) agreed to the statement, 15 male respondent (representing 12% of the responses) remained undecided, 13 male respondents (representing 10% of the responses) disagreed to the statement while 19 male respondents (representing 15% of the responses) strongly disagreed to the statement. On the other hand, 30 female respondents (representing 24% of the responses) strongly agreed to the same statement, 46 female respondents (representing 37% of the responses) agreed to the statement as well, 18 female respondents



(representing 14% of the responses) were undecided, 13 female respondents (representing 10% of the responses) disagreed to the statement while 19 female respondents (representing 15% of the responses) strongly disagreed to the statement. This implies that about 77 male respondents (total of those who strongly agreed/agreed) agreed to their products standing out from that of the competitors due to their innovative approach in the process production of their goods while 76 female respondents (total of those who strongly agreed/agreed) also agreed to the statement.

On the whole, the analysis on table 3 shows that only a slight difference exists in the process innovation of male and female entrepreneurs in Akwa Ibom State which indicates that the female entrepreneurs are more likely to be slightly more innovative in the process of production of their goods than the male entrepreneurs, however, the male entrepreneurs' process innovation lead to a slightly more speedy delivery and their goods stand out against competitors compared to the female entrepreneurs.

Table 4: New Market of the Respondents

New Market	Male						Female					
	SA	A	UD	D	SD	Total	SA	A	UD	D	SD	Total
I have introduced new marketing methods to the marketing of my goods	30 24 %	47 38 %	12 10 %	14 11 %	21 17 %	124 100 %	34 27%	46 36%	10 8%	16 13%	20 16%	126 100%
I have introduced different designs to my products to improve its marketing	28 23 %	51 41 %	13 10 %	15 12 %	17 14 %	124 100 %	28 22%	57 45%	12 10%	13 10%	16 13%	126 100%
The new promotion I carried out to market my products makes it to stand out compared to my competitors	27 22 %	53 43 %	15 12 %	13 10 %	16 13 %	124 100 %	29 23%	59 47%	15 12%	10 8%	13 10%	126 100%

Table 4 above shows the analysis on the market innovation of the respondents. The table shows that 30 male respondents (representing 24% of the responses) strongly agreed to the first statement "I have introduced new marketing methods to the marketing of my goods", 47 male respondents (representing 38% of the responses) agreed to the statement, 12 male respondent (representing 10% of the responses) remained undecided, 14 male respondents (representing 11% of the responses) disagreed to the statement while 21 male respondents (representing 17% of the responses) strongly disagreed to the statement. On the other hand, 34 female respondents (representing 27% of the responses) strongly agreed to the same statement, 46 female respondents (representing 36% of the responses) agreed to the statement as well, 10 female respondents (representing 8% of the responses) were undecided, 16 female respondents (representing 13% of the responses) disagreed to the statement while 20 female respondents (representing 16% of the responses) strongly disagreed to the statement. This implies that about a total of 77 male respondents (total of those who strongly agreed/agreed) agreed to introduce new marketing methods to the marketing of their goods while about a total of 80 female



respondents (total of those who strongly agreed/agreed) agreed to introduce new marketing methods to the marketing of their goods. This shows that both male and female respondents in the state carry out new market innovation in their business although only a slight difference indicates more female participation in market innovation than their male counterparts.

On the second statement “I have introduced different designs to my product to improve its marketing” on table 4, 28 male respondents (representing 23% of the responses) strongly agreed to the statement, 51 male respondents (representing 41% of the responses) agreed to the statement, 13 male respondent (representing 10% of the responses) remained undecided, 15 male respondents (representing 12% of the responses) disagreed to the statement while 17 male respondents (representing 14% of the responses) strongly disagreed to the statement. On the other hand, 28 female respondents (representing 22% of the responses) strongly agreed to the same statement, 57 female respondents (representing 45% of the responses) agreed to the statement as well, 12 female respondents (representing 10% of the responses) were undecided, 13 female respondents (representing 10% of the responses) disagreed to the statement while 16 female respondents (representing 13% of the responses) strongly disagreed to the statement. This implies that about 79 male respondents (total of those who strongly agreed/agreed) agreed to the introduction of different designs to their products to improve its marketing while 85 female respondents (total of those who strongly agreed/agreed) also agreed to the statement.

On the third statement “The new promotion I carried out to market my products makes it to stand out compared to my competitor” on table 4, 27 male respondents (representing 22% of the responses) strongly agreed to the statement, 53 male respondents (representing 43% of the responses) agreed to the statement, 15 male respondent (representing 12% of the responses) remained undecided, 13 male respondents (representing 10% of the responses) disagreed to the statement while 16 male respondents (representing 13% of the responses) strongly disagreed to the statement. On the other hand, 29 female respondents (representing 23% of the responses) strongly agreed to the same statement, 59 female respondents (representing 47% of the responses) agreed to the statement as well, 15 female respondents (representing 12% of the responses) were undecided, 10 female respondents (representing 8% of the responses) disagreed to the statement while 13 female respondents (representing 10% of the responses) strongly disagreed to the statement. This implies that about 80 male respondents (total of those who strongly agreed/agreed) agreed to their new marketing promotion making their product stand out from that of the competitors while 88 female respondents (total of those who strongly agreed/agreed) also agreed to the statement.

On the whole, the analysis in table 4 shows that only a slight difference exists in the market innovation of male and female entrepreneurs in Akwa Ibom State which indicates that the female entrepreneurs are more likely to be slightly more innovative in the marketing of their goods than the male entrepreneurs.

Table 5: New Source of Raw Materials of the Respondents

New Source of Raw materials	Male						Female					
	SA	A	UD	D	SD	Total	SA	A	UD	D	SD	Total
I like to identify new source of raw materials for my products to meet	32 26%	53 43%	8 6%	15 12%	16 13%	124 100%	29 23%	57 45.2%	8 6.3%	23 18.3%	9 7.1%	126 100%



the changing taste of my customers												
The new source of raw materials that I identified aids to differentiate my product from that of my competitors	27 22%	48 39%	12 10%	18 14%	19 15%	124 100	27 21%	59 47%	10 8%	19 15%	11 9%	126 100%
My sales have improved because my customers prefer customise products as the differences in my products compared to my competitors provides that for them	28 23%	46 37%	14 11%	21 17%	15 12%	124 100%	23 18%	61 48%	9 7%	17 14%	16 13%	126 100%

Table 5 above shows the analysis on the raw material innovation of the respondents. The table shows that 32 male respondents (representing 26% of the responses) strongly agreed to the first statement “I like to identify new source of raw materials for my products to meet the changing taste of my customers”, 53 male respondents (representing 43% of the responses) agreed to the statement, 8 male respondent (representing 6% of the responses) remained undecided, 15 male respondents (representing 12% of the responses) disagreed to the statement while 16 male respondents (representing 13% of the responses) strongly disagreed to the statement. On the other hand, 29 female respondents (representing 23% of the responses) strongly agreed to the same statement, 57 female respondents (representing 45.2% of the responses) agreed to the statement as well, 8 female respondents (representing 6.3% of the responses) were undecided, 23 female respondents (representing 18.3% of the responses) disagreed to the statement while 9 female respondents (representing 7.1% of the responses) strongly disagreed to the statement. This implies that about a total of 85 male respondents (total of those who strongly agreed/agreed) agreed to introduce a new source of raw materials to meet the changing needs of their customers while about a total of 86 female respondents (total of those who strongly agreed/agreed) agreed to the statement. This shows that both male and female respondents in the state carry out raw material innovation in their businesses although only a slight difference indicates more female participation in the raw market innovation than their male counterparts.

On the second statement “The new source of raw materials that I identified aids to differentiate my product from that of my competitors” on table 5, 27 male respondents (representing 22% of the responses) strongly agreed to the statement, 48 male respondents (representing 39% of the responses) agreed to the statement, 12 male respondent (representing 10% of the responses) remained undecided, 18 male respondents (representing 14% of the responses) disagreed to the statement while 19 male respondents (representing 15% of the responses) strongly disagreed to the statement. On the other hand, 27 female respondents (representing 21% of the responses) strongly agreed to the same statement, 59 female respondents (representing 47% of the responses) agreed to the statement as well, 10 female respondents (representing 8% of the responses) were undecided, 19 female respondents (representing 15% of the responses) disagreed to the statement while 11 female respondents (representing 9% of the responses)



strongly disagreed to the statement. This implies that about 75 male respondents (total of those who strongly agreed/agreed) agreed to the new source of raw materials aiding to differentiate their products from that of their competitors while a total of 86 female respondents (total of those who strongly agreed/agreed) also agreed to the statement.

On the third statement “My sales have improved because my customers prefer customise products as the differences in my products compared to my competitors provides that for them” on table 5, 28 male respondents (representing 23% of the responses) strongly agreed to the statement, 46 male respondents (representing 37% of the responses) agreed to the statement, 14 male respondent (representing 11% of the responses) remained undecided, 21 male respondents (representing 17% of the responses) disagreed to the statement while 15 male respondents (representing 12% of the responses) strongly disagreed to the statement. On the other hand, 23 female respondents (representing 18% of the responses) strongly agreed to the same statement, 61 female respondents (representing 48% of the responses) agreed to the statement as well, 9 female respondents (representing 7% of the responses) were undecided, 17 female respondents (representing 14% of the responses) disagreed to the statement while 16 female respondents (representing 13% of the responses) strongly disagreed to the statement. This implies that about 74 male respondents (total of those who strongly agreed/agreed) agreed to the improvement in sales due to their raw material innovation carried out on their product to stand out from that of the competitors while 84 female respondents (total of those who strongly agreed/agreed) also agreed to the statement.

On the whole, the analysis in table 4 shows that only a slight difference exists in the raw material innovation of male and female entrepreneurs in Akwa Ibom State which indicates that the female entrepreneurs are more likely to be slightly more innovative in raw material innovation than the male entrepreneurs.

Table 6: Reorganisation of Organisational Structure

Reorganisation of Organisational Structure	Male						Female					
	SA	A	UD	D	SD	Total	SA	A	UD	D	SD	Total
I like to rearrange my organisation once in a while to achieve my goals	34 27.4 %	50 40.3 %	11 9%	15 12.2 %	14 11.2 %	124 100 %	36 28 %	48 38 %	12 9%	18 14 %	14 11 %	126 100%
I like to reorder each division of my business to be sure my employees are effective	26 21%	48 39%	15 12 %	18 14%	17 14%	124 100 %	29 23 %	51 41 %	9 7%	18 14 %	19 15 %	126 100%



I do notice positive increase in the profit of my organisation when I change staff positions in each unit	23 19%	35 28%	26 21 %	19 15%	21 17%	124 100 %	27 21 %	53 42 %	14 11 %	17 14 %	15 12 %	126 100%
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Table 6 above shows the analysis on the restructuring of the organisation of the respondents. The table shows 34 male respondents (representing 27.4% of the responses) strongly agreed to the first statement “I like to rearrange my organisation once in a while to achieve my goals”. 50 male respondents (representing 40.3% of the responses) agreed to the statement, 11 male respondents (representing 9% of the responses) remained undecided, 15 male respondents (representing 12.2% of the responses) disagreed to the statement while 14 male respondents (representing 11.2% of the responses) strongly disagreed to the statement. On the other hand, 36 female respondents (representing 28% of the responses) strongly agreed to the same statement, 48 female respondents (representing 38% of the responses) agreed to the statement as well, 12 female respondents (representing 9% of the responses) were undecided, 18 female respondents (representing 14% of the responses) disagreed to the statement while 14 female respondents (representing 11% of the responses) strongly disagreed to the statement. This implies that about a total of 84 male respondents (total of those who strongly agreed/agreed) agreed to rearrange their organisation once in a while to achieve their goals while about a total of 84 female respondents (total of those who strongly agreed/agreed) agreed to the statement as well. This shows that both male and female respondents in the state are on equal footing in the rearrangement of their organisation once a while to achieve their goals.

On the second statement “I like to reorder each division of my business to be sure my employees are effective” on table 6, 26 male respondents (representing 21% of the responses) strongly agreed to the statement, 48 male respondents (representing 39% of the responses) agreed to the statement, 15 male respondent (representing 12% of the responses) remained undecided, 18 male respondents (representing 14% of the responses) disagreed to the statement while 17 male respondents (representing 14% of the responses) strongly disagreed to the statement. On the other hand, 29 female respondents (representing 23% of the responses) strongly agreed to the same statement, 51 female respondents (representing 41% of the responses) agreed to the statement as well, 9 female respondents (representing 7% of the responses) were undecided, 18 female respondents (representing 14% of the responses) disagreed to the statement while 19 female respondents (representing 15% of the responses) strongly disagreed to the statement. This implies that about 74 male respondents (total of those who strongly agreed/agreed) agreed to the reordering of each division of their business to ensure employee effectiveness while 80 female respondents (total of those who strongly agreed/agreed) also agreed to the statement.

On the third statement “I do notice positive increase in the profit of my organisation when I change staff positions in each unit” on table 6, 23 male respondents (representing 19% of the responses) strongly agreed to the statement, 35 male respondents (representing 28% of the responses) agreed to the statement, 26 male respondent (representing 21% of the responses) remained undecided, 19 male respondents (representing 15% of the responses) disagreed to the



statement while 21 male respondents (representing 17% of the responses) strongly disagreed to the statement. On the other hand, 27 female respondents (representing 21% of the responses) strongly agreed to the same statement, 53 female respondents (representing 42% of the responses) agreed to the statement as well, 14 female respondents (representing 11% of the responses) were undecided, 17 female respondents (representing 14% of the responses) disagreed to the statement while 15 female respondents (representing 12% of the responses) strongly disagreed to the statement. This implies that about 58 male respondents (total of those who strongly agreed/agreed) agreed to notice a positive increase in their profit due to changes in staff positions in each unit of their organisation while 80 female respondents (total of those who strongly agreed/agreed) also agreed to the statement.

On the whole, the analysis in table 6 shows that only a slight difference exists in the organisational restructuring of male and female entrepreneurs in Akwa Ibom State which indicates that the female entrepreneurs are more slightly likely to restructure their organisations than their male entrepreneurs.

DISCUSSION OF FINDINGS

This study sought to examine the innovative behaviour of male and female entrepreneurs in Akwa Ibom State. The results from the analysis of each variable investigated are discussed below:

Product Innovation

The analysis showed the product innovative behaviour of male and female entrepreneurs in Akwa Ibom State. The result showed that though both gender are innovative, the female entrepreneurs are more slightly innovative than the male entrepreneurs in that, the female gender (91- total of those who strongly agreed/agreed) are slightly more fond of developing new products to meet customers' needs than the male gender (85- total of those who strongly agreed/agreed) as shown in the first statement of the investigation; the female gender (84 - total of those who strongly agreed/agreed) make improvements in their product offerings to meet customers' needs compared to their competitors in a similar way like the male gender (84 - total of those who strongly agreed/agreed) as shown in the second statement; the female entrepreneurs (85 - total of those who strongly agreed/agreed) through their innovative approach to their products make it more outstanding than their competitors compared to the male entrepreneurs (80 - total of those who strongly agreed/agreed) as shown in the third statement. The result aligns with the study of Foss et al. (2013) who found a similar level of innovative behaviour in both male and female entrepreneurs in generating ideas though women's ideas were less frequently implemented. The result also aligns with the findings of Zastempowski and Cyfert's (2021) study in Poland who found that the female gender has a positive impact on product innovativeness of small businesses and the chances of introducing product innovation were higher in female managed firms by 83%. Although Exposito et al. (2021) found no difference in the innovative behaviour of male and female entrepreneurs in Spain, they however found that the female entrepreneurs were more prone to product innovation than the male entrepreneurs.



Process Innovation

The analysis showed the process of innovative behaviour of male and female entrepreneurs in Akwa Ibom State. The result showed that though both gender have process innovative behaviour, the female entrepreneurs are more slightly innovative than the male entrepreneurs in that, the female entrepreneurs (85 - total of those who strongly agreed/agreed) are slightly more fond of introducing new processes in the production of their goods to meet customers' needs than the male entrepreneurs (79 - total of those who strongly agreed/agreed) as shown in the first statement of the investigation; however, the male entrepreneurs' (83 - total of those who strongly agreed/agreed) process innovation lead to a slightly more speedy delivery compared to the female entrepreneurs (77 - total of those who strongly agreed/agreed) and their (77 male respondents - total of those who strongly agreed/agreed) goods stand out against competitors compared to the female entrepreneurs (76 female respondents - total of those who strongly agreed/agreed). This result aligns with the findings of Zastempowski and Cyfert (2021) who found that female entrepreneurs have a positive impact on process innovation of small businesses with the chances of introducing process innovation by 56% compared to the male entrepreneurs. However, Exposito et al. (2021) found that male entrepreneurs are more prone to process innovation than female entrepreneurs while Nahlinder et al. (2015) and Millward and Freeman (2002) found no significant difference in the process of innovative behaviour of male and female entrepreneurs.

Market Innovation

The result of the market innovative behaviour of the entrepreneurs as highlighted on table 4 of the analysis shows that only a slight difference exists in the market innovation of male and female entrepreneurs in Akwa Ibom State which indicates that the female entrepreneurs are more likely to be slightly more innovative in the marketing of their goods than the male entrepreneurs as more female entrepreneurs (80 female respondents - total of those who strongly agreed/agreed) agreed to introducing new marketing methods to the marketing of their goods compare to the male entrepreneurs (77 male respondents - total of those who strongly agreed/agreed), they (85 female respondents - total of those who strongly agreed/agreed) introduce different designs to their products to improve its marketing compared to the male (79 male respondents - total of those who strongly agreed/agreed) and the new marketing promotion they (88 female respondents - total of those who strongly agreed/agreed) introduce to their product make it stand out from that of the competitors compared to the male entrepreneurs (80 male respondents - total of those who strongly agreed/agreed). This result is a new finding which contradicts the work of Millward and Freeman (2002) who found that male entrepreneurs were perceived to be more innovative than the female entrepreneurs. Other scholars found significant differences in the innovative behaviour of male and female entrepreneurs (Nahlinder et al., 2015; Exposito et al., 2021).

Raw Materials Innovation

The results on table 4 shows that only a slight difference exists in the raw material innovation of male and female entrepreneurs in Akwa Ibom State which indicates that the female entrepreneurs are more likely to be slightly more innovative in raw material innovation than the male entrepreneurs as slightly more female entrepreneurs (86 female respondents - total of those who strongly agreed/agreed) introduced new source of raw materials to meet the changing needs of their customers compared to the male entrepreneurs (85 male respondents -



total of those who strongly agreed/agreed), more female (86 female respondents - total of those who strongly agreed/agreed) entrepreneurs' products were differentiated from that of their competitors due to the new source of raw materials introduced by them compared to the male entrepreneurs (75 male respondents - total of those who strongly agreed/agreed) and improvement in sales occurred for the female entrepreneurs (84 female respondents - total of those who strongly agreed/agreed) due to their raw material innovation compared to the male entrepreneurs (74 male respondents - total of those who strongly agreed/agreed). The result of this finding is new to the literature as limited studies have investigated the raw material innovativeness of male and female entrepreneurs although some studies found that there was no significant difference in the male and female innovative behaviour in such studies (Foss et al., 2013; Nahlinger et al., 2015; Exposito et al., 2021; Milward & Freeman, 2002).

Organisational Restructuring

The result of the analysis on table 6 showed the organisational restructuring abilities of the male and female entrepreneurs in Akwa Ibom State. The result indicated that though both the male and female entrepreneurs similarly agreed to rearranging their organisation once in a while to achieve their goals, only a slight difference exists in the organisational restructuring behaviour of male and female entrepreneurs in Akwa Ibom State which indicates that the female entrepreneurs are more slightly likely to restructure their organisations than their male entrepreneurs as 80 female entrepreneurs (total of those who strongly agreed/agreed) agreed to reordering each division of their business to ensure employee effectiveness compared to the male entrepreneurs (74 - total of those who strongly agreed/agreed) and also 80 female entrepreneurs (total of those who strongly agreed/agreed) agreed to noticing a positive increase in their profits due to changes in staff positions in each unit of their organisation compared to the male entrepreneurs (58 - total of those who strongly agreed/agreed). This result aligns with the findings of Exposito et al. (2012) who found that female entrepreneurs are more prone to organisational innovation than the male entrepreneurs; the result also corroborates with Foss et al. (2013) who found a similar level of innovative behaviour between the male and female entrepreneurs.

CONCLUSION

This study sought to investigate the innovative behaviour of male and female entrepreneurs in Akwa Ibom State. The findings reveal that both male and female entrepreneurs have similar levels of innovative behaviour, although the female entrepreneurs exhibited a slightly higher level of innovative behaviour in the areas of product innovation, process innovation, market innovation and raw materials innovation. The result indicates that the male entrepreneurs' process innovation led to a slightly speedier delivery of their goods compared to the female entrepreneurs and that their goods stand out against competitors compared to the female entrepreneurs. In organisational restructuring, both male and female entrepreneurs have a similar level of innovative behaviour, however, the female entrepreneurs tend to reorder each division of their businesses to ensure employee's effectiveness more than the male entrepreneurs and profit tends to increase more for the female entrepreneurs who reorder their businesses compared to the male entrepreneurs. Given these findings, more female citizens need to be encouraged to startup and to stay creative and innovative. The government should not waiver in their efforts to encourage more women to venture into entrepreneurial ventures



as this will not only contribute to their lives positively, but it will aid in the development of their individual families and the state as whole as well as the nation.

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