

AN EVALUATION OF PRODUCERS' ISSUES IN PRODUCT DEVELOPMENT OF THE GARMENT ENGINEERING INDUSTRY IN LAGOS STATE, NIGERIA

Ajila, K.O.

Department of Family, Nutrition and Consumers Sciences, Faculty of Agriculture, Obafemi Awolowo

University, Ile-Ife, Nigeria

olaoluajila@gmail.com; olaajila-k@oau.edu.ng

+2349030122099 +2348035665798

ABSTRACT

This paper examines the garment engineering industry in Lagos, Nigeria, highlighting its role as a source of employment, income, and foreign exchange. However, the industry faces challenges due to the increasing demand for short-lived, trendy clothing driven by technological advancements and changing social norms. The study focuses on how garment producers' socio-cultural values and economic motivations influence product development within the industry. Conducted in ten urban areas of Lagos, the research involved 847 producers and employed a mix of data collection methods, including interviews, questionnaires, and focus groups. The study found that while producers are mostly well-educated women (66.7%) entering the field due to financial reasons, their skills and access to resources limit product development. Despite moderate knowledge and some informal training, expensive equipment and materials hinder innovation. Interestingly, social and economic factors like communication and business models significantly influence success. The findings suggest an average level of product development performance within the Lagos garment engineering industry. The study recommends making resources more affordable and establishing a government-supported training center to improve the industry's overall performance.

Keywords: Product development, garment engineering, textiles, urbanized, socio-cultural

1.0. INTRODUCTION

Garment engineering (GE) is an act of technical designing to satisfactorily meet stipulated requisitions of end-users. The engineering work becomes imperative as civilization proceeds with population and fashion competition that in turn places pressure on the textile and clothing industry in terms of consumer demands and expectations (Rohit, 2010; Sarkar & Bhattacharjee, 2022). The central process in garment engineering is to refine the idea of shape, colour, and surface decoration (Kurz, 2010). AFDBG (2018) described the garment industry as one of the oldest and largest industries that illustrate challenges associated with manufacturing requisitions. It is where modern technology and changes were adopted very quickly for sustainable performance even in poor nations (DrDanijela, 2016). Customarily, GEI has its key raw material origin in fibre either natural or synthetic Fig. (1), and the supply chain is vertically interdependent of the following production stages;

- i. pre-production process,
- ii. production process,
- iii. post-production process.

Each stage encompasses several other sub-units of peculiar needs and specialties hanging on creativities and innovativeness' (Mazharal, 2022; Raichurkar, 2018; & Saran, 2009).

For good performance, products from the industry must be able to compete in the international standard market. For example, it is expected that a garment should perform to the satisfaction of the consumers in terms of handle, appearance, fit, and comfort among others. Traditionally, garment purposes are grouped into two broader classes of protection and modesty. While the protective class comprises safety value, comfortability, and sanitation aptitude, modesty focuses on fitness that expatiate identification capacity, status building and, decorative reasons (Peter, 2021). Currently, people are significantly more satisfied and concerned with modesty than protective purposes in garments, where less attention is driven at cathexis/nude bodies (Woodman, 2012; Satinder. Bhawna, and Nonis, 2017; Adewale, and Jaiya, 2022).

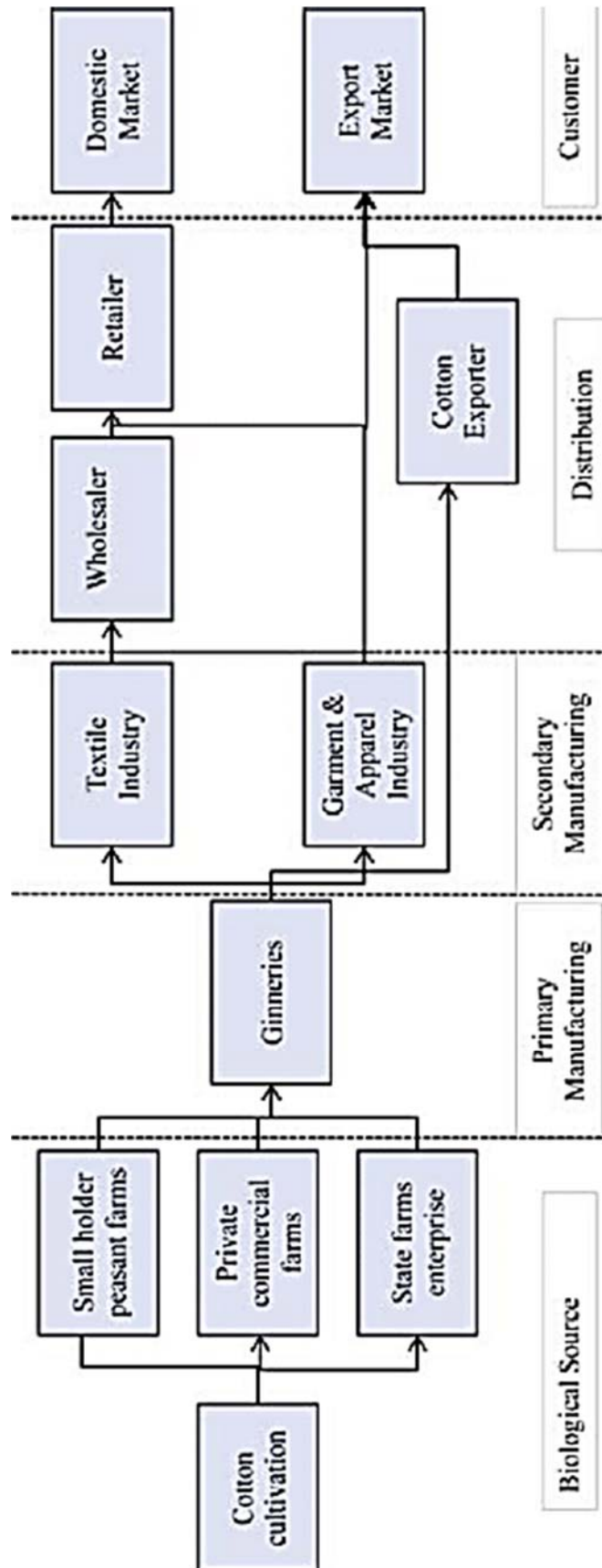


Figure 1: Cotton supply chain Source: Adapted from Abayneh Feyso (2018)

However, well-fitted garments are those that satisfy consumers' psychological and physiological comfort. Physiologically, a garment must be comfortable to wear; consistent with current fashion; free of undesirable wrinkles, sags, or bulges, and; allow sufficient ease for freedom of movement (Nasir and Nurhaiza, 2019; Vanessa and Emanuela, 2018). Research studies of BrainKart, 2016; Fitch and Cassidy, 2013; and Allwood, et al, 2006 acknowledged six essential elements of psychological scaling of garment fit as follows:

- i. accords with economic, social, and functional status,
- ii. making a statement/identity creation,
- iii. allegiance to a specific culture, cause, or group,
- iv. optimum balance of aesthetics, performance, and cost,
- v. flattering the wearer,
- vi. support individual psychological comfort needs.

According to studies no organization performs

better than the quality of its staff, hence product development performance of GEI will also depend on producers proficient in parameters needed at each processing stage (Ridfan, Idayanti, and Andi, 2020; Rwanda, Thomas and Benjami, 2018). Examples of such parameters are yarns/threads, fabrics, sewing gadgets, decorative details, colour and figure analysis, smoothening, and stabilizing among others. Danmel (2018) opined that fabric handle and tailorability are interrelated and signify key quality parameters for clothing manufacturers and consumers. For example, to maintain a good overall appearance and fit in a garment, seam strength must be adequate. Besides, the composition of sewing thread and sewing machine accessories such as the type and size of the needle, type of feed dog, and sewing machine setting could influence seam appearance.

The study was carried out in Lagos state (Fig.2) that lies in the Southwestern region of Nigeria. Lagos state represents the commercial hub of Nigeria with a high population density of over 24 million. It comprises twenty Local Government Areas and houses most textile and fashion businesses amidst other clusters of industries in Nigeria. The state is highly urbanized with a fast-growing civilization rate. Administratively, each of the LGA is divided into "wards" based on the land mass and population density.

2.2. Sample Selection and Research Instruments

Fifty percent of LGAs in the state viz as Ikeja, Lagos Island, Alimosho, Ojo, Badagry, Surulere, Shomolu, Oshodi, Isolo, Mushin, and Ibeju-Lekki were purposively selected for the study. A multistage sampling technique was applied in selecting 50% of the administrative wards from each selected LGAs. Data was collected from March to May 2022. Stratified and multistage sampling techniques were employed in selecting 10% of established producers from available professional bodies' records within each ward. Making a total of 847 producers across the state and, 840 respondents whose responses were coherent were analyzed for the study. Again, immediate customers/clients of each of the selected producers were contacted to complete the data section on garment efficiency for performance. Twenty-four Focus Group Discussions (FGDs) sessions were held to elicit primary information from the respondents. Structured and pre-tested interview schedules and questionnaires were applied in collecting data from individual respondents. The study also involved the Observer Participatory and Interactive (OPI) system.

2.3. Measurement of variables

Operationalized variables for this study were dependent (product development performance) and independent variables (producers' issues). The dependent variable (Y) was measured through consumer satisfaction (garment fit) values such as correct ease allowance; appropriate dart length, width, and direction; proper seam line placement; and right positioning of fabric grainline among others. The total score for each respondent was calculated as PDP index. Using the average score and standard deviation value, the scores were then categorized into 'high performance' 'average performance' and 'low performance'. The independent variables (X) were measured by produces socio-cultural values and, and econo-force traits. For example, socio-cultural values include community values, attitude, education, risk aversion, and infrastructure accessibility among others. Again, the respondents were requested to respond to 15 items as relates with skill practices under econo-force traits on scale of Yes (2- points) or No (1-point). The skill practices index was the summation of all the scores on the fifteen statements. The individual maximum score was 30, and the minimum was 15.

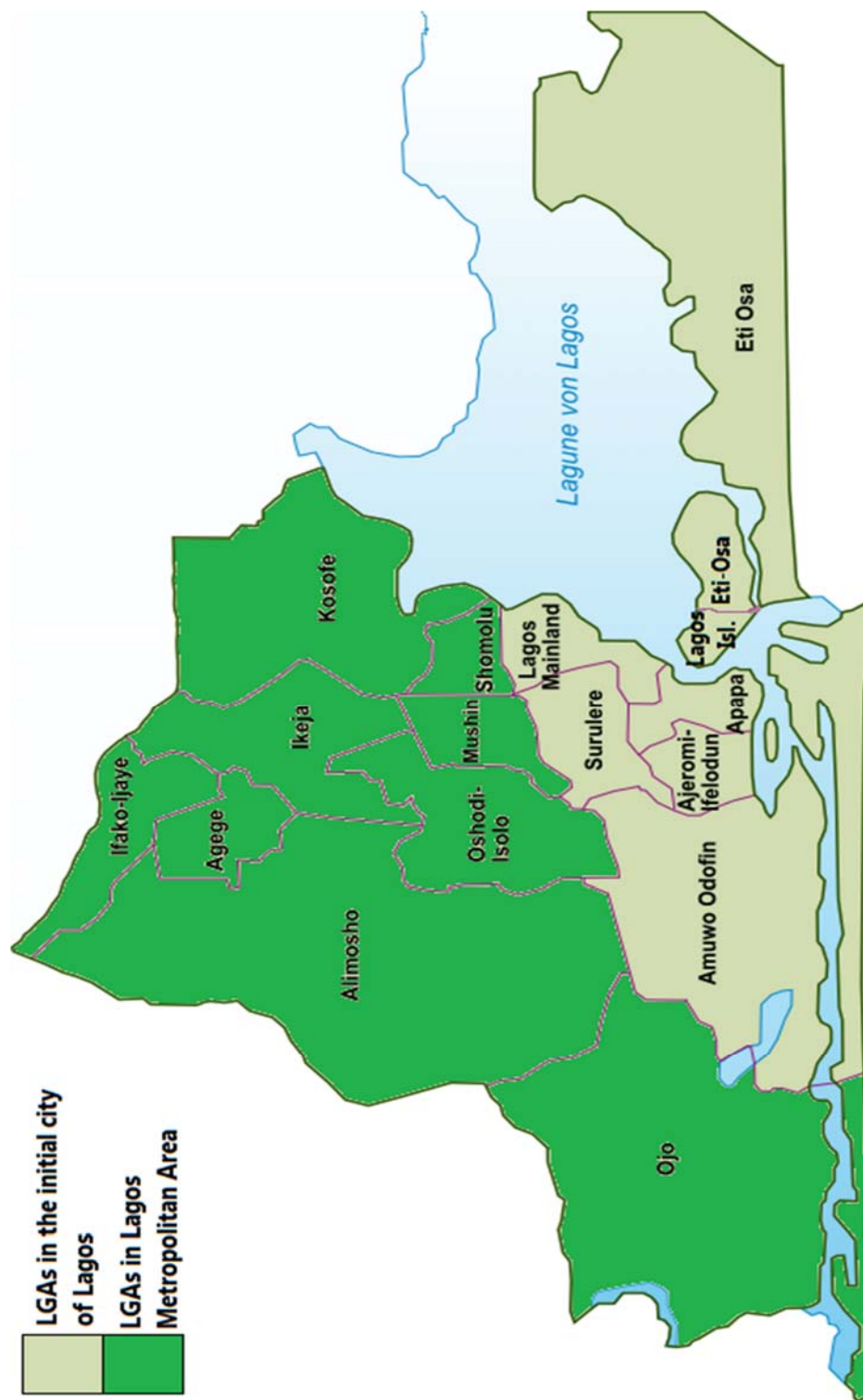


Fig. 2. Map showing Local Government Areas in Lagos state.

2.4. Data analysis

Descriptive statistical techniques were used to describe and summarize the collected data. Correlation analysis was applied to establish the direction of the relationship between GEI and PDP.

3.0. RESULTS AND DISCUSSIONS

3.1. Produces socio-cultural values: Selected socio-cultural values were reviewed as follows:

3.1.1. Sex, age, family size, and indigenous status

The female-to-male ratio of garment producers in the studied area was 2:1 with a mean age of 33.8 years ($SD = \pm 7.5$). The average family size was 4 members ($SD = \pm 1.1$) where 61.5% lived in a conjugal system. Seventy-three percent of the respondents were not indigenes of the study community and 57.3% were heads of a family. In Nigerian cultures, the head of the family frequently wields the greatest power in decision-making (Idachaba, 2005). The above findings could bestow on the respondents a certain degree of authority or influence on their immediate environment to augment labour.

3.1.2. Social participation, level of education, and external exposure

Social organization participation represents an effective means of networking in the garment industry. The producers were affiliated with social groups such as religion and cultural groups (100%) respectively, cooperative society (69.2%), thrift (41.5%), clubs (61.3%), and political organizations (87.5%). As 24.8% registered with garment producer trade unionism, 56.3% enrolled with the government trade policy, and 18.9% enrolled with both. Finding shows that all (100%) producers do participate in social functions within and outside the community on a regular basis. In support of Dundon and Buren (2022) trade unionism was described as enfolded with unnecessary rheostat on membership's economic performance. The producers highlight that there was no existing gap in personal interaction with the opposite sex, but the degree of interaction is guarded by the profundity of cultural mores in the area.

Producers were scholars of Western education of which 62.8% had tertiary education, 31.4% just completed secondary school education, and 6.8% dropped out of secondary school. All (100%) had plausibly average external orientation as Souto-Otero (2021) opined external exposure as informal education.

3.1.3. Language and communication channels

The general language in the area was Yoruba which 57.4% could speak fluently. The English language is the most popular bilingual in the area which 89.2% of the textiles could speak confidently, just as all (100%) spoke Pidgin English (Nigerian sub-derivation of the English language) smoothly. While about 29.0% understood and spoke the French language, the garment industry was highlighted as a social interactive act with language fluency as a requisite and, Ibrahim (2019) identified the language barrier as endangering to individual performance in the industry.

Respondents identified radio, internet, television, films, posters, and, friends as the most available communication channels in the area. The most accessible mediums of information on GEI were the internet, posters, television, colleagues, and professional bodies. This indicates that apart from informal channels of communication, producers also derived information through social media. Modern sources of information such as the radio, internet, and television could serve as an effective mass medium for trade promotion and updating.

3.1.4. Attitude toward the garment engineering industry, risk aversion, and fatalism

Attitudes towards garment engineering were assessed based on producers' receptiveness, awareness, interest, and knowledge of the practicality and potential of GEI. All (100%) exhibit a favourable attitude towards garment engineering in which 26.2% get engaged with the industry on instinct or passion, and 12.1% are due to lack of financial support to further education. The majority (47.5%) came into the profession as a result of unemployment, 8.0% were by inheritance and 6.2% were enthralled by the industry lucrative value.

Producers' risk aversion tendency mean value was 10.7 ($SD = \pm 2.6$) out of 22.0. About 37.0% demonstrated low fatalistic tendencies, 41.1% were moderate, and 21.8% were highly defeatist. Most (89.4%) producers exhibited an average self-confidence instinct on the job, 87.2% were highly optimistic, including 87.6% who were highly confident. According to the findings, 88.1% exhibit high courage-ability aptitude on the job. Eric, *et.al.* (2022) and Singh (2022) submitted that low-risk aversion and fatalism tendencies are likely to induce individual drives for proactiveness in converting creative ideas into innovation.

3.1.5. Infrastructure facilities

Analysis showed that all communities visited had ICT with accessible networks including electricity, good water, hospitality centers, relatively good transportation and security outfits, and a standard market for textile and fashion. Others include higher and lower schools among others. Major identified essential infrastructures for garment engineering were electricity, ICT, and transportation. Producers described the functionality of most available facilities as unpredictable. For example, functional government electricity was not stable, in which a fuel-powered generator was the most assured source of electricity and whilst 79.6% possessed a generator, all the producers had access to solar energy which 19.5% applied as source of power at production. Good roads and electricity would enhance a good communication network and ensure efficient accessibility of an area.

3.1.6. Community attitude toward GEI and, values

Detailed analysis of community attitude towards GEI revealed that 78.3% of the respondents perceived youths (age 14-36) in the study area as having positive attitudes, and 69.2% perceived that adult in the same community displayed highly favorable attitudes towards GEI. The perceived favorable attitude was attached to the prevailing social class and exposure level of people in the studied area. There are cultural norms and beliefs guiding the industry in which, about 41.7% conceded the needs to perform certain traditional sacraments towards achieving success but 58.3% did not recognize these traditional norms. These finding are in dissonance with what operates in the south-west rural area of Nigeria, where the community exhibits negative attitude towards GEI and individuals were sore afraid of violating these established cultural norms.

Further studies on the communities revealed the following traces of faddisms viz as uncontrollable youth inflow, high level of fashion consciousness/sense, festivities, homelessness, high economic hustling, late marriage, and single parenting respectively. Prevailing social group in the community were mostly independents working class of young and adults youths. The community was highly industrialized with a high population density of socialites and regular contact with the outside world.

3.2. Producers econo-force traits:

3.2.1. Occupation and job experience

Data analysis on respondents' main occupation shows that 72.2% majored in garment making. Analysis of supplementary occupations shows that respondents engaged in textile merchandise (39.7%), hair artist and makeup (21.0%), fashion merchandise (47.2%), and other businesses such as Ecclesiastics (33.7%), and general suppliers (48.7%) among others. This implies that the respondents had more than one source of income. Producer job experience mean score value was 6.8 years ($SD = \pm 2.5$).

3.2.2. Training and skill practices

Garment engineering training received by the respondents was analyzed to ascertain sources of skill acquisition and duration. The mean value on training duration was 2.3 ($SD=1.5$) in which majority (87.1%) of the respondents had between 1-2 years of training. Main induction training received by 9.4% was through family and 65.1% acquired the skill as an apprentice with established producers. While 13.6% attend formal fashion school, 25.9% attend government vocational training centers and, 4.2% acquire the induction skill through friends. These findings are also in tandem with Alamet *al.*, (2013). About 67.0% of the respondents had the opportunity to participate in developmental agencies training programs on garment making and 33.0% had no access. The mean value of apprentice had by the producers was 3.0 ($SD=1$). Apprentices routinely serve as labourers for about 6 months after completion of training. The respondents were aware of formal and functional vocational training centers for garment making in the studied area. While 68.7% had visited these centers for job updates and were satisfied with the training, 31.3% could not attend due to financial implication that was high. Producers in the study area find updates mainly through posters, catalogues, the internet, friends, and other producers in the community respectively, and about 24.1% are updated through professional bodies. Producers' skill practices in garment engineering were examined through construction procedural practices and according to a study, garment technical approaches practices by 76.3% in the area was "whole garment" system (individuals perform all activities in garment processing) just as 23.7% adopted "section and, unit production" systems. The producers exhibit relatively average skill practices on fabric and thread selection as well as stabilizers (supporting fabrics) detailing. For example, 58.0% habitually construct provisional

stitches or pinning facing into the garment before final attachment. Besides, the sameness of grainlines between facing and shell fabrics was highly recognized by 61.4%.

The skill demonstrated on body measurement was averagely good. General adopted cutting technique by the textilis was free hand cut and in addition 59.2% often used sketch pattern. Among those who used patterns, only 37.0% exhibited an average knowledge of technical geometric pattern drafting. Skill practices on seam selection and finishing including decorative details and notions construction were averagely good. For example, whilst the upper collar and the underneath were created on the same grainline, 67.0% engineered upper collar wider than the underneath. In tandem with Ope (2019), the producers displayed good skill in colour combination with an average knowledge on figure and colour style analysis.

3.2.3. Patronage, satisfaction, and competitive advantage strategies practices

An in-depth analysis described the level of patronage had by the producers as average and high during the festive period. Producers are averagely satisfied with incomes from GEI. All (100%) have a brand name and 66.0% have signposts with market segmentation that was structured by gender. More than average, 58.8% highlighted customers in the study area as willing to pay for quality services and 41.2% were not willing but at the same time wanted the latest fashion trends hence, the producers often cut costs to offer services at lower prices where less quality consumable inputs were seldom used. About 75.4% displayed high knowledge of handling customer's complaints professionally. All (100%) respondents had reasonable contacts with developmental agencies mostly fashion incubators agents who are set-up by government to supports mall-scale enterprises. The producers engaged in mentorship that habitually helps in solving problems and, the major identified mentorship embraced were the internet, induction trainers, advanced garment producers within and outside the community.

3.2.4. Business mode, hired labour, and income

Detailed analysis shows that 64.0% of the respondents had personal GEI centers and 36.0% either worked from home or as an attaché (where an individual will be charged per day for use of equipment/assets). Eighty-four percent worked in niche markets, and while 51.0% were directly involved in garment production processing, 49.0% were only engaged in coordinating/managing the

industry. Labours were averagely available in the studied area. The average size of labour had by respondents was 3 employees ($SD = \pm 1.3$). While 61.5% constantly engaged in hired labour for the businesses, 27.0% seldom hired, 11.5% did not hire any labor, but all (100%) producers seldom engaged family members as labours. The average monthly income from GEI was ₦62,754 ($SD + 15,910$). The respondents' financial records attested to the authenticity of their financial claims.

3.2.4. Space tenancy and marketing system

Analysis revealed that 75.0% of the respondents operate in a rented tenancy and 25.0% used personal/family assets. The producers strongly agreed that the marketing of GEI is highly competitive and requires recurrent innovativeness to attract patronage. Major advertisement and promotion kits in the portfolio of GEI marketing highlighted by the respondents were product quality and networking to induce referral. The producers identified established standard markets for GEI in the area. Although, the professional bodies often influenced market price, nevertheless price were determined by individual producers. The respondents pay tax to the three tiers of government level viz as local, state and federal level which was too high.

3.2.5. Inputs and credit accessible

The producers rated inputs (consumable and equipment) availability as high in the studied area. Consumable inputs are highly affordable and the fixed inputs (equipment) were averagely affordability. Major accessible credit supply lines were informal (cooperative and family), and 50.5% could access credit from banks. Producers operate in a fairly equipped system with up-to-date equipment. All (100%) were aware of modern technologies in garment processing such as computer-aided design (CAD) gadgets, electrical cutting machines; buttonhole making engines among others, and 29.7% could access the above-mentioned.

Access to credit is another factor that might influence business continuity. For the past two decades, the government of Nigeria established the Bank of Agriculture (BOA) and Bank of Industries (BOI) targeting small-scale enterprises (Dike, 2019). Detailed analysis shows that all (100%) of the respondents had accessed the informal credit system. Specifically, 57.6% of the respondents also accessed credit from community-based social groups (CBSG)/cooperative societies, and 32.0% from family members and friends. The respondents

explained further that processing credits from CBSG and cooperative groups are much easier with less interest rate than the banking system.

3.3. Product development performance

Product development of GEI was evaluated through garment fit values/consumer satisfaction. Data analysis on product development is shown in Table 1. While most (53.5%) engineered garments averagely hanged well on the body with a suitable amount of ease (63.7%), garments' waistline falls at the natural waist smoothly (66.1%). Results revealed the mean values for product development performance of the garment engineering industry in the study area as 40.6, with a standard deviation of 7.3. About 41.0% of the respondents have performance scores above 47.9 (High level), 43.5% scored between 33.3-47.9 (Average level), and 16.1% scored below 33.3 (Low level). This implies that the level of performance of the garment engineering industry in Lagos state of Nigeria was average.

3.4. Results of correlation analysis

Data collected were subjected to correlation analysis to examine the relationship between the product performance of the garment engineering industry and producers' socio-cultural values. Results in Table 2 showed a significant relationship at $p < 0.01$ and $p < 0.05$ level between producers socio-cultural values [social participation ($r = 0.596$), cosmopolitan ($r = 0.601$), community value ($r = 0.572$), producers attitudes ($r = 0.721$), infrastructure ($r = 0.595$), community values ($r = 0.713$), and communication channels ($r = 0.601$)]; Econo-force traits [business mode ($r = 0.645$), input accessibility ($r = 0.711$), accessible credit ($r = 0.603$), competitive advantage skill ($r = 0.658$)] and performance. The positive correlation simply means that, the more the magnitude of variation in these variables, the higher the predisposition to product performance. The coefficient of

determination (r^2) explained the degree of variation in the performance of the garment engineering industry as relates with each of the producers' attributes analyzed.

4.0. CONCLUSION

AND

RECOMMENDATIONS

It was established that the level of product development performance of the garment engineering industry in Lagos state of Nigeria was average. There were accessible and standard training schools in the region and, major identified mentorships were cosmopolitan. The respondents displayed average skill practices in the operation of construction technical structures with fabrics and threads, stabilizers, and decorative details including smoothening and storage. Correlation analysis highlighted factors of producers' socio-cultural values and econo-force traits that influence garment engineering industry products development performance in the state. The identified factors are highly significant in the effective performance of garment engineering industry, but there is need to prioritize equipment affordability. It is very essential to establish affordable standard and formal training centers as well as fashion incubator centers for ease of updating and assistance on the job. The developmental agencies (both governmental and Non-governmental organizations) should encourage or motivate producers to participate in professional trade unions for ease of accessing information on incentives and training through mass group action. At the same time, the garment producers' professional bodies need to review the organization's acts and activities towards control of excessive authority. Textile and clothing association research organizations should engage in the monitoring of the various establish governmental agencies on textile and clothing industry toward effectiveness. The same organization could also mediate between producers and the government on tax reduction.

Table1: Table showing consumer's reaction to GEI product development performance in Lagos state
1= To no extent, 2=Little extent, 3= Great extent.

Variables	3(%)	2(%)	1(%)
Produced garments in the area;			
have suitable amount of ease	63.7	27.2	9.1
free from wrinkles .	41.2	32.5	26.3
dart lengths are equal in length	51.0	38.5	10.5
darts are suitably positioned	57.9	23.0	19.1
dart width are proportionate to the figure size	47.4	16.3	36.3
dart seams are rightly spaced	53.0	22.5	24.5
Fabric grainline are correctly placed	67.3	31.4	1.3
seam lines are straight	58.0	22.0	20.0
garment hanged well on the body	53.5	41.7	4.8
seam allowance are neither too wide or small	21.3	15.2.	63.5
sleeves hang accurately with no wrinkles	47.5	21.0	32.5
seams are neatly finished	41.0	14.5	45.5
pockets are neatly constructs	60.0	35.0	5.0
necklines do not gaped nor bleaks	42.6	26.2	31.2
necklines are neither too big or small	59.2	34.8	6.0
armhole seams follows the natural arm joint curve perfectly	44.7	31.1	24.2
no discomfort and phony tightness at armhole seams	52.0	22.0	26.0
front waist dart point toward bust directly	47.2	10.1	42.7
front waist dart do not cross bust points	58.3	16.1	25.6
waistline falls at the natural waist	66.1	25.0	8.9
side seams do not swung to front or back	52.9	19.1	27.0
vertical seams hanged same way on both sides of the garment	53.0	27.5	19.5
hemlines are straight and evenly parallel to the floor	64.0	22.0	14.0
zipper does not puck nor form ridges	40.3	30.4	29.3
collar- fall hanged over collar-stand without fly-out	76.0	19.1	3.9
collar size is proportionate to garment in size	68.0	23.5	8.5
buttonholes' are evenly and neatly finished	62.3	28.7	9.0
space between buttonholes are equal	54.0	36.0	10.0

Mean value = 40.6

Standard Deviation = 7.3

Source: Field survey, 2022.

Table 2: Table showing the relationship between producers' issues and product development performance in the garment engineering industry

Variables	Coefficient [®]	Coefficient of determination (r ²)
sex	0.101	0.010
age	-0.224*	0.050
indigenous status	-0.017	0.000
religious	-0.131**	0.017
social participation	0.596*	0.355
marital status	0.175*	0.031
Household size	0.189**	0.036
language	0.504**	0.254
education	0.397*	0.158
cosmopolitan	0.601*	0.361
skill practices	0.628*	0.394
risk aversion	-0.495**	0.245
Producer attitude	0.721*	0.520
functioning infrastructure	0.595*	0.354
hire labor	0.374*	0.140
Community attitude	0.407**	0.166
community values	0.572**	0.327
Faddism	0.386**	0.149
training had	0.516**	0.266
inputs availability	0.711**	0.506
major occupation	0.420**	0.176
job experience	0.262*	0.069
Business mode	0.645**	0.416
space tenancy	0.271**	0.073
marketing system	0.497**	0.247
credit accessibility	0.603*	0.364
patronage	0.371**	0.138
job satisfaction,	0.504*	0.254
competitive advantage strategies skill	0.658**	0.433
Income	0.491**	0.241
Accessible communication channels	0.601*	0.361
Fatalism	-0.443**	0.196
tax payment	-0.201*	0.040
contact with developmental agent	0.327*	0.107
mentorship	0.488**	0.238

Critical value of r at $p < 0.01 = 0.171$,

Critical value of r at $p < 0.05 = 0.124$

* r is significant at $p < 0.01$ level,

** r is significant at $p < 0.05$ level

Source: Field survey, 2022.

5.0. REFERENCES

- Abayneh Feyso (2018). Cotton value chain analysis: The case study of smallholder farmers Arbaminch Zuria District, Gamo Gofa Zone, Ethiopia. *Asia journal of plant science and research*, 8(20); 19-30.
- Adewale, A. A., & I Jaiya, D. A. (2022). An assessment of consumer preference for locally made textiles in Nigeria. *International Journal of Clothing Science and Technology*, 34(6); 821-833.
- African Development Bank Group (2018). Feasibility study for the development of the fashionomics platform. *External Report*, 1-32.
- Alam, M.K., Aboki, E., Gidado, E.H, Buba, D.D. (2013). Economic analysis of cotton production in selected Local Government Area of Taraba state, Nigeria, *Journal of Agricultural Sciences*, 4(1); 27-32.
- Alao, O.A. (2022). Textile cottage industries: A tool of economic conflict management in South-south, Nigeria. *Unpublished Ph.D Thesis*. Federal University of Technology Oweri, Nigeria.
- Allwood Julian, M., Soren Eiback Laursen, Cecilia Malvido de Rodriguez, and Nancy Bocken (2006). Well Dressed? The present and future sustainability of clothing and textiles in the United Kingdom. *Fashion Industry and Sustainability Circularity*, University of Cambridge, Institute for Manufacturing, Cambridge, 1-68. U.S.A.
- BrainKart (2016). Classification, functions, theory of clothing. www.brainkart.com/article/Classification,-Functions,-Theories-Of-Clothing_1858
- Cassidy, L. and Fitch, K. (2013). Beyond the catwalk: Fashion public relations and social media in Australia. *Asia Pacific Public Relations Journal*, 14(1& 2): Murdoch University.
- Danmei Sun (2018). Fabric handle as a concept for high-performance apparel. In: High-performance apparel, Woodhead Publishing Series in Textiles, 307-323. <https://doi.org/10.1016/B978-0-08-100904-8.00015-8>
- Dike Onwuamaeze (2019). Efforts by the federal government and Central Bank of Nigeria to revive the textile and garment sector. thisdaylive.com/index.php/2017/05/19/em-powering-the-nigerian-textile-industry/
- Dorcas, K.C. (2019). Sustainability of garment making entrepreneurship towards rural livelihood in Osun state of Nigeria. *M.Sc. Thesis*. Obafemi Awolowo University, Osun State, Nigeria.
- DrDanijela Paunovic (2016). Strategic anagement in the garment industry. *Journal of Textile*, Vol. 2013. www.sciencedirect.com/topics/engineering/garment-industry
- Dundon, T., & Van Buren, M. (2022). Union responses to new forms of work organization: A review and research agenda. *Human Resource Management Journal*, 32(2); 438-462.
- Eric, D.1., Abdul-Nasiru, 1., Anthony, S. K., and Linus, K. K. (2022). Intention to pursue a career in entrepreneurship: The role of risk aversion and proactive personality. *Ghana Social Science Journal*, 19 (2): 34-51. <https://journals.ug.edu.gh/index.php/gssj/article/download/2169/1247> www.sciencedirect.com/science/article/pii/S0927537123000611
- Idachaba, M. (2005): The testing of innovations under peasant farming conditions. *Review of American Extension System*.p.35-51.
- Kurz, E. (2010). Analysis of fashion design entrepreneurship: Challenges and supporting models. *Unpublished Master Thesis*, University of Boras, Sweden.
- Mazharal Islam Kiron (2022). Garment construction in fashion design. Textilelearner.net/garment-construction-in-fashion-designing
- Nasir and Nurhaiza Nardin (2019). Investigating the product quality attributes that influence customer's satisfaction of online apparels. *International Journal of Advanced Research*, 2(7); 819-82.
- National Union of Textile Garment and Tailoring Workers of Nigeria (2017). <https://www.gov.ng>
- Nathan Oviriohor (2022). Restoring hope in the textile industry in Nigeria. Vanguardngr.com/2022/03/restoring-hope-in-the-textile-industry-in-Nigeria
- Niwa, M., (2001). Clothing science, its importance and prospects, *Text Asia*, 32(35).
- Okolocha, C.B, John-Akamelu, C.R., and Muogbo, U.S. (2020). Effect of skill acquisition on youth employment in Nigeria. *International Journal of Research in Finance and Management*, 3(1): 33-37. https://www.researchgate.net/publication/339352867_Effect_of_skill_acquisition_on_youth_employability_in_Nigeria#full-text

- Otero (2021). Validation of non-formal and informal learning in formal education: Covert and overt. *European Journal of Education, Research, Development and Policy*, Vol.58. onlinelibrary.wiley.com/doi/full/10.1111/ejed.12464.
- Peter Thomas (2021). Clothing as the practice that distinguishes humans. www.researchgate.net/post/Clothing_as_the_Practice_that_Distinguishes_Humans.
- Peter Uzoho (2017). Empowering the Nigeria textile industry. thisdaylive.com/index.php/2017/05/19/empowering-the-nigerian-textile-industry/
- Ridfan, R.A., Idayanti, N, Andi, R. S. (2020). Effect of quality of work-life and employee engagement towards job satisfaction and employee performances at PT. Indofood CBP Sukses Makmur, Tbk. Makassar Branch. *Global Scientific Journal*, 8(8); 2527- 2539. www.globalscientificjournal.com.
- Rohit, Shah (2010). Examine the role of different actors across the textile-fashion supply Chain to understand the issues regarding growth of eco- labeled sustainable textile products. *Unpublished M.Sc. Thesis*, University of Manchester. Souto
- Rwanda, T. H., Thomas, N., & Benjamin, M. (2018). Influence of employee relations on organizational performance: The Case of Nyamasheke District. *Journal of Human Resource & Leadership*, 2(3); 61-86. Stratford Peer Reviewed Journals and Book Publishing. <https://stratfordjournals.org/journals/index.php/journal-of-human-resource/article/download/173/206/485>.
- Sarkar, A., & Bhattacharjee, D. (2022). Impact of technological advancements on the garment and textile industry: A review. *International Journal of Clothing Science and Technology*, 34(2); 123-138. doi: 10.1108/IJCST-02-2021-0039
- Satinder, P. S. Bhawna, A., Nonis, J (2017). Factors affecting customer satisfaction in textile industry: A Study of Vardhman Group. *Biz and Bytes*, 8(1); 158-189. <https://www.bizandbyte.com/documents/Dr.%20Satinder%20Pal%20Singh>.
- Vanessa Mounkar, and Emanuela, Gregoria (2018). Textile and clothing industries can drive African industrialisation and benefits women. African Development Bank Group. *Fashionomics External Reports*. 8-12.
- Woodman Anne (2012). Fashion for a cause. Clayton news star. <http://www.wwd.com/fashionnewshttp://nymag.com/news/intelligencer/cheap-clothes>.