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Does My Skin Tone Really Matter? A Socioeconomic Analysis in Nigeria.

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Abstract: Does my skin tone really matter? If it does, to what extent and direction does skin tone predict socioeconomic outcomes, especially amongst people of color who have experienced colonial rule with its white supremacy agenda? In this research, we examined if skin tone measured in individual typology angle (ITA) does not affect employability, income, partner selection, and political representativeness. With a focus on Nigeria, the most populous black nation, a former British colony, we addressed this broad question through a survey. Using the iterative capability of Qualtrics which randomly picks a set of three pictures with known ITA and randomly assigns each with age, work experience, education level, and expected salary, we obtained 386 data points delineated across different gender, sexual orientation, age, and skin tones. Our results showed that male respondents are biased towards lighter skin and younger employees; darker skinned respondents prefer lighter skin, younger, and less educated partners; and respondents 45+ years prefer darker skinned political representatives. Quantitatively, we found that generally, 1σ Skin tone approximates +2.5pp of employability, 0.11 education years, 0.2 years of relevant work experience, 0.4 Age in years and −0.27 in expected salary ($4,500pa). For male employers: 1σ Skin tone approximated +11.3pp employability, 0.50 formal years of education, 0.8 years in relevant work experience, −2.0 Age in years, and −1.3 in expected salary ($21,600pa). In partner selection, 1σ Skin tone approximated +1.3pp in the general population, +5.4pp for dark skinned respondents, −9.86pp in Southeastern Nigeria, −37.1pp in South-South region of Nigeria. In political representativeness, 1σ Skin tone approximates −3.79pp amongst the general respondents, and −24.2pp for respondents 45+ years.

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If you're White, you're right,
If you're yellow, you're mellow,
If you're brown, stick around,
If you're Black, get back.

—Parrish (1944, p. 90)

1. INTRODUCTION

White and black, the lines are clear. But the skin color of man is not as distinct; rather it is a shade of colors. From veiled white to mulatto, from chocolate to very light skin, from light skin to dark, or from darker skin to charcoal black; it is not as discrete. Although for the sake of measurement, social scientists have put these shades into 11-item scale pallets or guides (Telles & PERLA 2014), it is incontestable that skin tone is a continuous measure of human bodily features.

The concept of whiteness resonates in the Anglosphere: e.g., in the United States (white Americans), Canada (white Canadians), Australia (white Australians), New Zealand (white New Zealanders), the United Kingdom (white British), and South Africa (white South Africans). A white person is an offspring of white parents. The usage of "white people" or a "white race" for a large group of mainly or exclusively European populations, is defined by their light skin, among other physical characteristics (Keevak, Michael 2011). The term "Black" on the other hand is used to describe persons who are perceived as dark-skinned compared to other populations and is mostly used for people of Sub-Saharan African descent and the indigenous peoples of Oceania (Frigi et al. 2010, Henry, Tanyu). Any other categorization from these two races is considered people of color. However, offspring of a black and white parent or, an individual with both white and black ancestors are termed “mulattoes” and are light skinned, but dark enough to be excluded from the white race. (Oxford Dictionary Definition Lexico.com).

As the outermost part of the human body, the human skin or phenotypic look commands a lot of psychological, physiological, and physical importance and benefits; all of which have been tied to evolution, geographical location, colonialism, and culture (Aisha P- 2014). It can define the identity and perception of an individual. Identity has been found to affect socioeconomic behavior which is reinforced by expected pay-off from an individual's action and how they are perceived by others. This means that society can cause persistent changes

in these payoffs. Just as dressing, skin color is a symbol of identity. (George A. A. and Rachel E. K.- 2000)

The consideration and importance of this white identity (either real or apparent) and its benefits either genuine or counterfeit) may have been influenced the urge of different gender, race, and tribe to alter the natural tone of their skin. Hence some naturally black or brown-skinned individuals and colonies, especially Africans and Africa, tend to "adopt" the "white skin". This gave birth to the idea of skin toning or bleaching. Skin bleaching or toning refers to the cosmetic misuse of toxic agents or abuse of skin lightening agents primarily to change one's normal and natural skin color to attain importance or obtain benefits. These skin lightening agents have been found to contain dangerous chemicals (e.g., mercury) that may increase rates of infertility, skin cancer, and serious skin/brain/kidney disease. If these dangers are real, why then do Africans continue to use damaging skin-bleaching cosmetics? Are there any benefits (real or apparent) associated with skin tone difference? Amongst many socioeconomic factors, can one's skin tone affect their employability and income, and to what extent does one's skin tone affect one's chances of political selection or choices and control in the marriage/relationship market?

NIGERIA

Nigeria is in West Africa, along the eastern coast of the Gulf of Guinea, and just north of the equator. It is bordered on the west by Benin, on the north by Niger and Chad, and on the east by Cameroon. Nigeria covers an area of 356,669 square miles (923,768 square kilometers), about twice the size of California. Split by the confluence of the Niger and Benue Rivers in the center of the country, creating a "Y" that divides it into three major ethnic groups: the Hausa in the north, who are a mix of extremely light to extremely dark skin color persons; the Yoruba in the southwest, who are largely dark-skinned; and the Igbo in the southeast who are largely light skinned. For political and tribal representation reasons, these regions were further divided into six geopolitical zones namely North Central, North-East, North-West, South East, South-South, and South West.

Nigeria, colonized by the British and granted independence on the 1st of October 1960, has an estimated population of 200 million+. Like other African countries, the penchant for light skin found its way into the country through colonialism. While there are no clear records of the existence of colorism in Nigeria before colonization, it is safe to say colonialism widely propelled it through the white supremacist ideology, which preached the superiority of all things white (Ramya M. V. 2019) and the inferiority of all things Black. Hence being close to whiteness in thoughts, actions, and appearance earned you certain privileges.

In the educational sector, it is not uncommon to see darker-skinned children being mocked and called horrible names like ‘blackie’, ‘charcoal’ and ‘burnt offering’ while the light-skinned ones are adorned with names like, ‘Oyinbo pepper', 'Yellow pawpaw' and 'Fanta’. As a dark-skinned person, I experienced this name-calling growing up in the city of Lagos Nigeria. In the labor market, it is also rumored that dark-skinned people get rejected from jobs on the ground that they will not be able to attract customers with their dark skin. Some companies have been accused of only hiring light-skinned people. In entertainment and advertisement, billboards, magazines, and TV commercials are flooded with lighter-skinned individuals because they are believed to look prettier, cleaner, and irresistible. The message seems to be clear, "Hey! Look here, we are white". A tour of any major city in the country is telling of the obsession with whiteness. From roadside kiosks, supermarkets, and grocery stores to online stores, the number of skin-bleaching products feeding off the insatiable desire to become white and accrue associated benefits, will shock you.

This research work is focused on evaluating empirically the existence of the supposed benefits of lighter skin. Hypothetically, to what extent does your skin tone affect your chances of being employed, selected as spousal equivalent, or political representative. How much work experience, years of education, or salary expectation differential exist between individuals of

comparable characteristics but with different skin tones (measured in individual typology angle -ITA)? This research study is to find out this probability contribution, and quantitative tradeoffs and justify the rationale for/not bleaching by a supposedly darker-skinned person to becoming light.

2. LITERATURE REVIEW

Skin Color and Colonialism

Different pieces of literature across different regions have put forward various findings on skin tone, skin bleaching, and its significance for blacks and people of color. Scholars from the West have traced light-skin color preferences, sometimes called colorism, to the origins of race and racism and that they are associated with European colonization, Western slavery, and White supremacy (Angela R. Dixon et al, 2017). During the 17th and 18th centuries, the Europeans justified the growing slave trade from Africa to Europe and the Americas using biblical interpretations of the very dark color of Africans, until dark skin became a generalized symbol of human worth and of the potential to be enslaved (Jablonski 2012). In a similar vein, Ramya M. Vijaya (page 227, Chapter 1 – Race in the Marketplace) concluded that the British colonial rule sparked and ingrained the association of whiteness with power, privilege, and overall social superiority.

In the US, research suggests that black female slaves raped by their white owners gave birth to lighter-skinned slaves (also called "Mulattos") who by their birth enjoy preferential treatment (Keith & Herring 1991, Monk 2014, Norwood 2013, Russell et al. 1992) including being more likely to be assigned desirable jobs (for instance, as house slaves), learn a skilled trade, receive some schooling, be manumitted (Drake & Cayton 1993, Reuter 1917, Russell et al. 1992) and are perceived as more intelligent, attractive, and generally superior to blacks (Myrdal 1944, Reuter 1917). It was reported that dark-skinned people lacked the social and economic capital that light skin provides, and are therefore disadvantaged in education, employment, and housing. Additionally, dark skin is generally not regarded as beautiful, so dark-skinned women often lose out in the dating and marriage markets (Danielle Casarez-2019). On the other side, light-skinned men and women are typically not regarded as

legitimate members of the African American or Mexican American communities. (Hunter, Margaret L – 2008).

In the African continent which houses the majority of the blacks and has a rich history of colonial influence, the impact of colonialism on the physiological, psychological, and socioeconomic outcomes of the continent is evident. Although not well developed, the available body of literature has shown the interpretation of and rationale for wanting "whiter" skin on the continent. Jablonski (2012) and Lewis et al. (2013) suggested that Arab domination spawned the notions of light-skinned superiority and is associated with status, privilege, and cultural superiority (Van den Berghe & Frost 1986). In addition, Kelly M. Lewis (2011), Petra Robinson (2011), and Samuel Adu-gyamfi (2018) found that skin bleaching is linked to colonialism, self-objectification, and Westernization and that some of the motivations for bleaching amongst Africans particularly women are; -to remove skin imperfections, make or maintain softer skin, meet the westernized standard of beauty, look more attractive to current or potential partners and impress and meet friends' approval. With the desire for lighter skin seeming to push people to skin-lightening, skin bleaching has reached epidemic levels in many nations around the globe with prevalence in Africa unmatched by any other continent. Ghana, Kenya, Tanzania, Senegal, Mali, South Africa, and Nigeria are cases in point (Adebajo, 2002). Nahomie (2014) reported that bleaching rates in Bamako are 25% and 70% in Lagos. Although bleaching practice seems to transcend gender in Africa, findings suggest women undeniably have a higher propensity than men, and sometimes apply skin-whitening products to their children (Counter & Buchanan, 2004; Fokuo, 2009). WHO 2011 and Ramya M. Vijaya (2019) reported that 77% of Nigerian women regularly use skin whitening products? It then becomes necessary to understand why Africans and most especially women bleach.

In analyzing the unmatched desire for lighter skin, the practice and consequences of skin bleaching with a focus on colonialism and apartheid in South Africa, Nahomie J. (2014) concluded that the "white is right" mantra pushed 35% of black South African to bleach, and that skin bleaching is more prevalent amongst women. To reinforce the perception and the

> *…if I behave very well in this life, I will reincarnate as a white man in my next life.*
> *A Long Walk to Freedom,*
> *Nelson Mandela (1995)*

reality of skin color, the late African freedom fighter, Nelson Mandela had thought virtuous behaviors are synonymous only with white skin.

Skin Color, Employment, and Income

Studies have shown that with varying skin color comes varying socioeconomic outcomes. From Jordan to Jamaica, from Canada to Cairo, and from Great Britain to Ghana, the importance of skin color cannot be overemphasized. In the US, studies on African Americans suggest that lighter skin is often associated with better life chances for other nonwhite groups in the United States (Hall 2010, Keith & Monroe 2016). After the Civil War, newly freed mulattos, who often had acquired greater skills, achieved greater upward mobility in terms of wealth, occupation, income, educational attainment, and social connections through white parentage (Frazier 1957, Herring et al. 2004). This outcome is corroborated by the studies of Marianne B. & Sendhil M. (2004) where, after randomly assigning African American or White-sounding names to resumes of fictitious candidates, they found that White names receive 50 percent more callbacks for interviews. callbacks are also more responsive to resume quality for White names than for African American ones, the racial gap is uniform across occupation, industry, and employer size, and employers are inferring social class from the names. Hence, concluded that differential treatment by race still appears to be prominent in the U. S. labor market. In addition, Arthur (2006) reported that mean hourly wages rise as skin tone lightens, moving from $11.72 to $13.23 to $14.72 and $15.94 for dark-skinned, medium skin, light-skinned and white respectively.

In Africa, darker skin color has been found to impact the economic status of its people. Darker skin individuals have experienced persistent education, income, health, marriageability, and discrimination disadvantages (Dixon 2017). Nahomie J. (2014) suggested that some black South African women believe that the reason they were struggling financially and otherwise was because of the color of their skin. This is corroborated by the work of Joni (2006) who found that there is an earning penalty for all men with darker skin tone relative to men with

light or very light skin tone and the latter is associated with higher women's employment rates.

Undocumented pieces of evidence have also shown that the white syndrome is so pervasive in the African continent and has been fueling economic discrimination - the presence of different pay for workers of the same ability. Employers of labor in the continent prefer employing graduates from abroad. There is also a grapevine that graduates from offshore institutions of learning earn better than those from local universities with the same discipline, qualification, and experience. This pushes an average African to want to study abroad with the objectives of increasing their chances of employability and income.

The narratives concerning the privileges of the light-skinned have not and cannot be left out of the skin bleaching discourse. Hall (2013, p. 3) argues that "bleaching syndrome," which is the "conscious and systematic process of self-denigration and aspiring to assimilation based on alien ideals, results from colonial domination". While for Hall (1995), the desires and actions to acquire lightness/whiteness are pathological, Hunter (2007) posits that such desires are not driven by an internalized pathology but instead are a rational response to the perceived (and often real) association between whiteness and better life outcomes. He adds that these outcomes are promoted by multinational corporations and the mass media. These images of a "new global beauty" (Hunter 2005, p. 57) are explicitly white or rooted in whiteness and underpin the formulation of skin-lightening practices and products; an industry projected to reach about $ 31.2 billion by 2024 (Global Industry Analysts 2018).

Dominic Sagoe et al (2018) using meta-analysis and meta-regression analysis of the global lifetime prevalence of skin bleaching found significant prevalence in some socioeconomic outcomes; Africa (27.1%) and Asia (23.1%) continents have the most involvement in skin bleaching, bleaching is predominant amongst persons ≤30 years (55.9%), prevalent with primary school leavers, common in urban or semi-urban residents (74.9%) and topical corticosteroid (51.8%) is the most used active bleaching ingredient.

Skin Color, Attractiveness, and Mate Selection

Over the years, humans have exhibited preferences for marriage partners. From tall to average height, from fair-skinned to dark-skinned, from slim to chubby, from machismo to athletic, men and women have made varieties of choices depending on observable or obscured reasons. Several studies have confirmed the association between skin color and attractiveness in the West is stronger for women than for men (Van den Berghe & Frost 1986, Hersch 2011b, Hill 2002a, Hunter 2011, Wade 2008). Among African Americans, the darkest men have been found to benefit from stereotypes about their masculinity and sexuality. Contrastingly, however, the relationship between lighter skin and attractiveness is positive and linear for women (Hill 2002). While darker-skinned men seem to be cashing in on other desirable characteristics to marry supposedly lighter or whiter high-status women, darker-skinned women are often not able to do so (Hunter 2005, Hill 2002, Udry et al. 1971). Using data from the 1850–1870 censuses, Bodenhorn (2006) showed that mulattos were more likely to marry other mulattos and were substantially wealthier than mulatto-black or black-black households, leading to the intergenerational transmission of light-skinned privileges.

Skin color is now being viewed as a form of capital to attract choice partners in the marriage market (Margaret L.H. 2011). It is being argued that white skin is an aspect of racial capital and that "light skin tone can be transformed into social capital (social networks), symbolic capital (esteem or status), or even economic capital (high-paying job or promotion)" (Glenn 2009, Vaid 2009). And more recently, this was corroborated by Monk (2015, p. 415) and Jha (2015) who conceptualized that skin color as a form of "bodily capital" that is traded for access to goods such as jobs, education, social networks, and romantic partners. In west Africa, skin color has also been found to play a significant role in the marriage market. For instance, many Ghanaian women's feelings about beauty, attractiveness, and the marriage market are associated with skin complexion. Using the Skin Color Assessment Procedure on sixty Ghanaian students and thirty market trading women, J.K Fokuo (2009) investigated skin color as a function of social capital in the marriage market and found that although participants were satisfied with their skin color, they believed that Ghanaian men found lighter-skinned women more attractive.

In Nigeria, colorism affects many social interactions. It is reported to have become standards braided into everyday language, expressions, actions, and beliefs. The desire to look white has led to the proliferation of both qualified and quack skincare consultants, beauty parlors, skin beauticians, and cosmetics outlets in almost every corner of the country. This has not come without its ills as there had been reported cases of skin deformations owing to ignorance of users, information asymmetry, and quacks parading themselves as professionals. The pervasiveness and veracity of this trend prompted the highest law-making organ of government in Nigeria in 2021, to regulate the formulation and distribution of cosmetics in the country.

Skin Color and Political Involvement

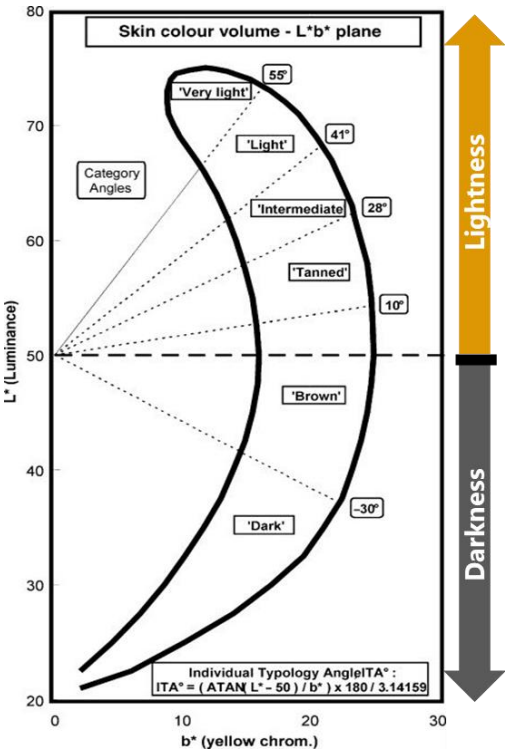
A few research works have been done on the dressing, gender, and educational qualification of political candidates, their perception by electorates, and their success at the polls. Unfortunately, there are not many studies on the role (if any) that skin tone plays on political outcomes. In one study on candidate's evaluation, it was found that the interaction of dark skin and non-straight hair has mostly negative effects on Black men and women's trait evaluations, but a positive effect on Black women's willingness to vote for the candidate (Danielle Casarez-2019). The study also showed that candidate appearance affects voter behavior, hence the need to consider the intersection of racial and gender phenotypes.

While several studies have examined the impact of skin tone on employability, income, mate selection, political involvement, escort services, and income, no study to the best of my knowledge has quantitatively examined these impacts or even examined it in Nigeria. This paper will investigate if skin tones affect partner selection, employers' acceptance, remuneration differentials, and political electability and to what direction and magnitude. It is hoped that the output from this work will be suitable for submission to economic journals and publications.

3. METHODOLOGY

Data Collection, and Usage

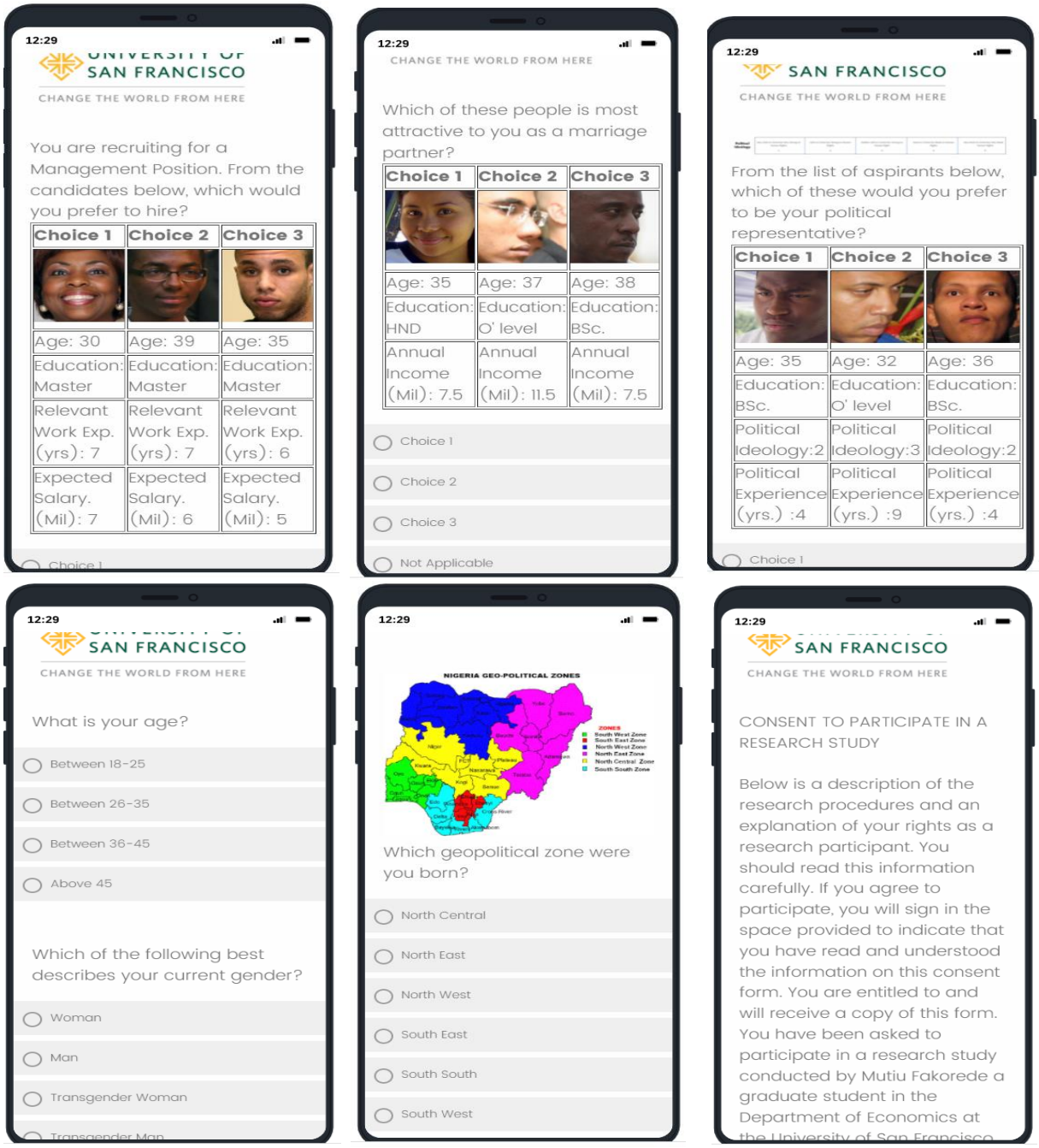
In determining the skin tone shades, we leveraged the data set of Kärkkäinen, & Joo (2019) in their work titled "FairFace: Face Attribute Dataset for Balanced Race, Gender, and Age for Bias Measurement and Mitigation" where 108,501 images were classified according to individual typology angle (ITA) for 7 race groups: White, Black, Indian, East Asian, Southeast Asian, Middle Eastern, and Latino. Their work classifies skin types into 7 physiologically different categories: very light, light, intermediate, tan, brown, dark, and very dark. We focused on the Black race to select our sample of individuals. Potential respondents were required to choose randomly selected and presented options. The ITA is a score ranging from -80 to +80 which represents the measure of lightness/darkness of skin tone based on the volume of light penetration. Higher ITA scores are equivalent to lighter skin tone.



250 pictures comprising a mixture of light, medium, and dark-skinned individuals across male and female gender with known ITA were selected. These pictures were set up as part of a survey on Qualtrics in the form of a postcard where respondents will choose from three randomly selected pictures. These pictures were also assigned random attributes including age, expected salary, relevant work experience, and educational qualification to establish (if any) the relationship between skin tone and these variables (attractiveness, employability, income, political representation). Respondents were asked to choose from among the randomly selected images paired with randomly generated socioeconomic attributes presented for each picture; his/her responses have been coded in a binary number of "1" for

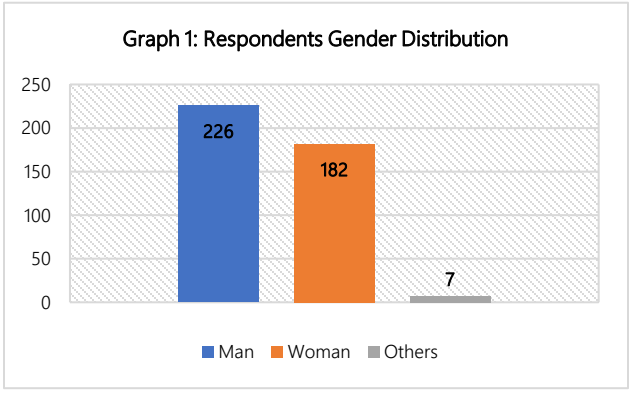
chosen and '0" otherwise. This allowed us to isolate skin tone from other features that might affect perceived employability, attractiveness, or electability.

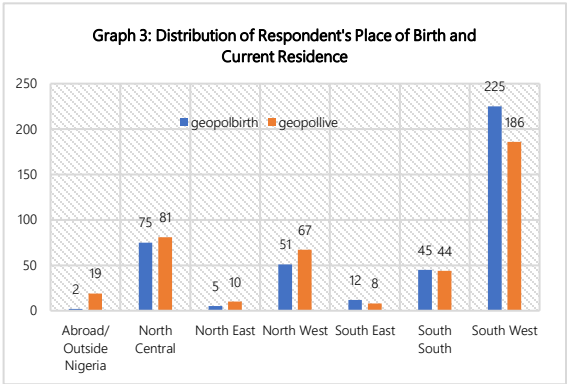
Each respondent was also asked to provide their demographic information including age, gender, sexual orientation, place of birth, and residence.

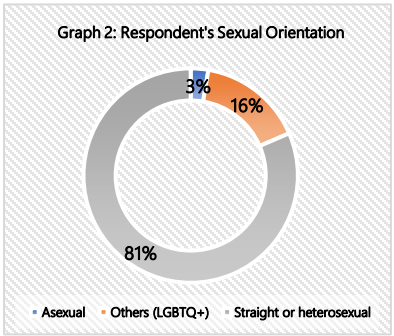


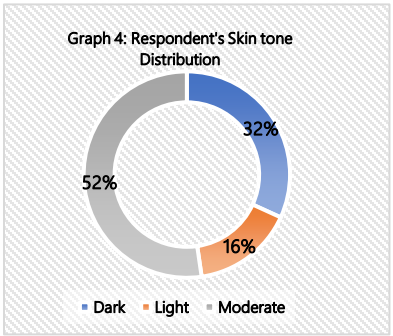
Descriptive Statistics

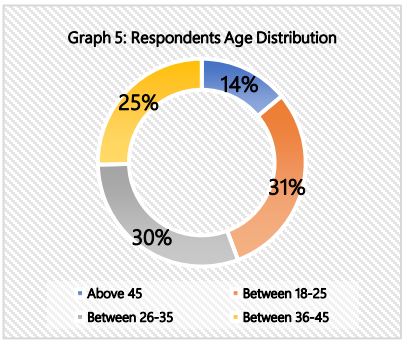
Survey Respondents: 563 respondents participated in the survey. However, only 415 completed it. In terms of gender distribution, of the 415 respondents, 54.46% (226) were male, 43.86% (187) were female and 1.68% (7) were Others (Transgender male/ female, etc. (See Graph 1). In terms of sexual orientation, 81% (338) were straight or heterosexual, 16% (66) were LGBTQ+ and 3% (11) were Asexual (see Graph 2). In terms of the geographical location of birth and residence, the majority of the respondents were born and currently residing in the Southwestern region (See Graph 3). In terms of Skin tone, 16% (66) consider themselves light-skinned, 32% (132) consider themselves dark-skinned while the majority 52% (217) believe they have moderate skin color (See Graph 4). The majority of the respondents are considered youth (below 45years). In Nigeria, this age bracket is the unofficial divide that separates the old and younger and serves as the critical orientation, ideology, and political divide. 86% of the respondents are between 18-45 years (See Graph 5).











Case Candidates: Considering that each respondent made 12 choices, after reshaping from wide data to long, a total of 4, 980 (415 x 12) observations were obtained. However, due to some missing data arising from empty / null responses, only 4,131 observations were analyzed.

The mean age distribution of employee, potential partner, and the political aspirant is ~35years; the mean years of formal education for employee, potential partner, and the political aspirant is 16 years; the mean salary expectation of employee is NGN7 million per annum (US$ 16,800) while mean income of potential partner is NGN9.5 million per annum (US$21,600); the employee work experience is 7.7 years. The mean skin tone ITA distribution across variables on interests is 21 and the standard deviation is 29. This means for a 1σ change; the skin tone changes numerically on the scale by 29 points. Our sample skin tone ranged from -75 to +55; this is equivalent to 130 points. This means a possible movement of 2σ in both directions. See tables below.

```
. sum empl_age partner_age aspt_age
```

Variable	Obs	Mean	Std. dev.	Min	Max
empl_age	4,131	34.52457	2.847464	30	39
partner_age	4,131	34.50012	2.8474	30	39
aspt_age	4,131	34.54829	2.899074	30	39

```
. sum empl_sal partner_inc
```

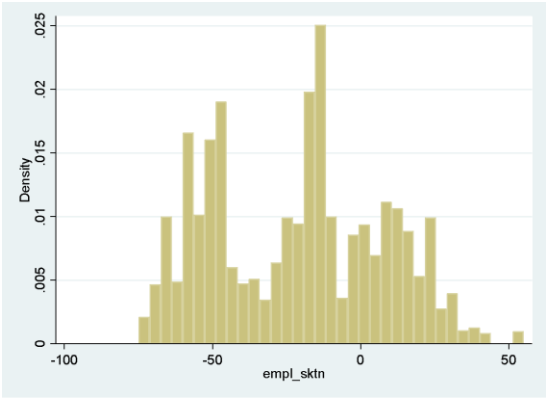
Variable	Obs	Mean	Std. dev.	Min	Max
empl_sal	4,131	7.046236	1.426672	5	9
partner_inc	4,131	9.536553	1.417418	7.5	11.5

```
. sum empl_ed partner_ed aspt_ed
```

Variable	Obs	Mean	Std. dev.	Min	Max
empl_ed	4,131	16.02663	2.830869	12	20
partner_ed	4,131	16.08957	2.866643	12	20
aspt_ed	4,131	16.04696	2.846981	12	20

```
. sum empl_wexp
```

Variable	Obs	Mean	Std. dev.	Min	Max
empl_wexp	4,131	7.74534	3.985631	2	18



Variable	Obs	Mean	Std. dev.	Min	Max
empl_sktn	3,789	-21.5421	28.98945	-75	55
partner_sktn	3,789	-21.17815	28.79825	-75	55
aspt_sktn	3,789	-21.10979	29.16183	-75	55

The currency of exchange in Nigeria is the Naira (NGN) and the official exchange rate at the time of this report is US$ to NGN 415.26.

Appendix 1 shows the kdensity graphs of all variables. A point to note is that for the age, education, and skin tone ITA, the graphs are the similar. This lays credence to the fact that they are all from the same database and with comparable randomly assigned socioeconomic characteristics.

4. ANALYSIS

Identification Strategy

The main idea of this research is to establish causal inference (if any) between the probability of being employed, chosen as a marriage partner or political representative, and skin tones, age, educational level, income, work experience, and salary expectation. In addition, the research seeks to establish the influence of respondent's skin tone, age, geographical location of residence, sexual orientation and gender affects the choices made. To avoid counterfactuals, all images of Black were extracted from the database of balanced race, gender, and age images (Kärkkäinen, K., & Joo, J. 2019). 250 images were randomly selected from across male and female gender and all shades of color. These images were set up on Qualtrics which randomly picks and assigns socioeconomic characteristics to each "case" (a set of 3 pictures) and each survey respondent was presented with four cases each across employability, partner selection, and political representativeness. In other words, each survey respondent was required to make 12 choices in all.

This research could have been done by obtaining data from individuals of different skin tones within the Black race focusing on their educational qualification, income bracket, marital status, political involvements, etc.; this approach will generate counterfactual problems. It will be difficult to disentangle how these characteristics are influenced by the skin tone, educational level, network, connection, or influence of respondents' parents/guidance.

Econometric Models & Analysis

In addition to ordinary least squares and logit, we used alternative-specific conditional logit (McFadden 1974) which allows two types of independent variables: alternative-specific

variables and case-specific variables. The main model is the alternative-specific conditional logit while the least square and logit were used as robustness checks.

$$Y_{ij} = \alpha + \tau s_i + X_i\beta + \varepsilon_{ji}$$

where;

$Yij = Dummy\ for\ subject\ j\ choosing\ candidate\ i$ (0/1)

s_i = Skin tone score

X_i = Age, Educ., Work Experience, and Income

The alternative-specific conditional logit requires multiple observations for each case (individual or decision), where each observation represents an alternative that may be chosen. The outcome or chosen alternative is identified by a value of 1 in depvar, whereas zeros indicate the alternatives that were not chosen. The choice of using asclogit is because each case consisting of several records (the alternatives) is treated as an observation. In addition, asclogit drops observations, by default, in a casewise fashion. That is, if there is at least one missing value in any of the variables for each record of a case, the entire case is dropped from estimation. We used *alternativewise* deletion, by specifying the *altwise* option in our model.

5. RESULTS AND DISCUSSIONS

Regressions: Our result showed that in a general term, skin tone does not seem to affect employability, partner selection, and political representativeness as their betas were not significant. However, across all models, years of education, relevant work experience, age, and salary expectations were all significant in their impact on employability. From the result, a standard deviation (σ) change in skin tone +1.55 percentage points (pp) employability.

VARIABLES	(1) OLS	(2) LOGIT	(3) ASC	(4) ASC
σemployee_skin tone	-0.000118	1.74e-05	0.0155	
	(0.0102)	(0.0504)	(0.0392)	
employee_gender	-0.00512	-0.0265	-0.0457	
	(0.0113)	(0.0560)	(0.0785)	
employee_educ.	0.0430***	0.213***	0.233***	
	(0.00307)	(0.0175)	(0.0149)	
employee_wexp	0.0246***	0.124***	0.135***	
	(0.00301)	(0.0162)	(0.0109)	
employee_age	-0.0126***	-0.0688***	-0.0736***	
	(0.000579)	(0.00453)	(0.0149)	
employee_salary	-0.0198**	-0.102***	-0.119***	
	(0.00353)	(0.0190)	(0.0273)	
Constant	0.0323	-2.054***	0.0573	-0.142*
	(0.0301)	(0.150)	(0.0751)	(0.0786)
Observations	3,789	3,789	3,789	3,789
R-squared	0.113			

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Across the gender lines, male respondents are biased towards lighter skin, more education, more relevant work experience, and younger employees with lower expected salaries. A standard deviation (σ) change in skin tone approximately +11.1 pp employability for a male employer.

VARIABLES	(1) OLS	(2) LOGIT	(3) ASC	(4) ASC
σemployee_skin tone	0.0128	0.0685**	0.111**	
	(0.00598)	(0.0296)	(0.0547)	
employee_gender	0.0282**	0.155***	0.137	
	(0.00723)	(0.0381)	(0.109)	
employee_educ.	0.0465***	0.234***	0.256***	
	(0.00443)	(0.0264)	(0.0208)	
employee_wexp	0.0251**	0.128***	0.140***	
	(0.00451)	(0.0252)	(0.0151)	
employee_age	-0.00967***	-0.0546***	-0.0585***	
	(0.00120)	(0.00907)	(0.0203)	
employee_salary	-0.0163*	-0.0882**	-0.116***	
	(0.00654)	(0.0347)	(0.0375)	
Constant	-0.174*	-3.114***	0.0676	-0.110
	(0.0711)	(0.382)	(0.104)	(0.109)
Observations	2,046	2,046	2,046	2,046
R-squared	0.127			

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In terms of partner selection, skin tone does not impact the choice of partner across the entire respondent population. Considering that Nigeria is divided into different socio political and

tribal zones and each with different skin tones, we regressed the probability of being selected as a partner on skin tone ITA, age, attraction, and income; skin tone was statistically significant in partner selection in both the Southeast and South-South regions. The Southeast region is predominantly light-skinned while the South-South is largely darker-skinned. The result suggests that SE prefers darker skin while SS. A standard deviation (σ) change in skin tone affects the probability of being selected as a partner by approximately-4.3pp generally, 147.6pp in SE, and 29.8pp in SS.

VARIABLES	(1) OLS-All	(2) LOGIT-All	(3) ASC-All	(4) ASC-All
σpartner_skin tone	-0.00791	-0.0388	-0.0430	
	(0.0101)	(0.0486)	(0.0371)	
partner_educ.	-0.000732	-0.00335	0.00489	
	(0.00156)	(0.00759)	(0.0127)	
partner_age	-0.00248	-0.0119*	-0.0142	
	(0.00134)	(0.00638)	(0.0128)	
partner_attracted	0.183***	0.864***	1.011***	
	(0.0219)	(0.106)	(0.0813)	
partner_income	0.0474***	0.226***	0.233***	
	(0.00339)	(0.0165)	(0.0264)	
Constant	-0.116**	-2.879***	0.0708	-0.0297
	(0.0251)	(0.146)	(0.0726)	(0.0741)
Observations	3,789	3,789	3,789	3,789
R-squared	0.058			

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) OLS-SE	(2) LOGIT-SE	(3) ASC-SE	(4) ASC-SE
σpartner_skin tone	-0.160***	-0.864***	-1.476**	
	(0.0162)	(0.0669)	(0.631)	
partner_educ.	0.0209	0.120*	0.0997	
	(0.0142)	(0.0698)	(0.132)	
partner_age	-0.00187	-0.0240	0.0226	
	(0.0115)	(0.0573)	(0.137)	
partner_attracted	0.160	0.841**	1.399*	
	(0.0762)	(0.368)	(0.804)	
partner_income	0.0557	0.280	0.335	
	(0.0405)	(0.200)	(0.220)	
Constant	-0.541	-4.992***	-0.822	-0.0355
	(0.356)	(1.729)	(0.702)	(0.646)
Observations	72	72	72	72
R-squared	0.147			

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) OLS-SS	(2) LOGIT-SS	(3) ASC-SS	(4) ASC-SS
σpartner_skin tone	-0.0563*	-0.269***	-0.298***	
	(0.0185)	(0.0856)	(0.114)	
partner_educ.	0.0182**	0.0867***	0.104***	
	(0.00392)	(0.0194)	(0.0390)	
partner_age	0.00442	0.0211	0.0244	
	(0.00698)	(0.0335)	(0.0399)	
partner_attracted	0.175**	0.820***	0.986***	
	(0.0304)	(0.142)	(0.240)	
partner_income	0.0182	0.0865**	0.0783	
	(0.00809)	(0.0396)	(0.0764)	
Constant	-0.367	-4.072***	0.306	0.283
	(0.242)	(1.145)	(0.224)	(0.227)
Observations	423	423	423	423
R-squared	0.060			

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In terms of political representativeness, skin tone also does not seem to impact the probability of being selected as a representative. The data suggested that education, gender, age, or skin tone does not matter. However, for respondents 45+ years, skin tone impacts their choices as they prefer darker-skinned representatives. This finding is quite important considering that respondents in this age bracket were either adults or youth when Nigeria got her independence in 1960. This choice may reflect their experiences during the colonial rule or information that was passed down from their parents; unlike the younger generation (<45years), who did not experience colonial rule or whose parents/guardians neither experienced nor pass down any colonial experiences' to. In this case, 1σ change in skin tone approximately -1.36pp of being selected by the general population of respondents and -23.5pp

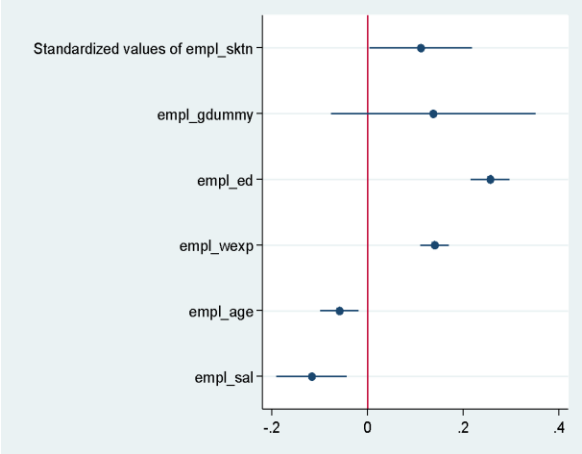
VARIABLES	(1) OLS	(2) LOGIT	(3) ASC	(4) ASC
σaspirant_skin tone	-0.00334	-0.0150	-0.0136	
	(0.00641)	(0.0288)	(0.0349)	
aspirant_gender	-0.0234	-0.105	-0.101	
	(0.0173)	(0.0774)	(0.0714)	
aspirant_educ.	-0.000617	-0.00279	-0.00396	
	(0.000466)	(0.00210)	(0.0121)	
aspirant_age	0.00397	0.0179	0.0185	
	(0.00353)	(0.0159)	(0.0120)	
Constant	0.221	-1.200**	0.0988	-0.0669
	(0.119)	(0.536)	(0.0680)	(0.0711)
Observations	3,789	3,789	3,789	3,789
R-squared	0.001			

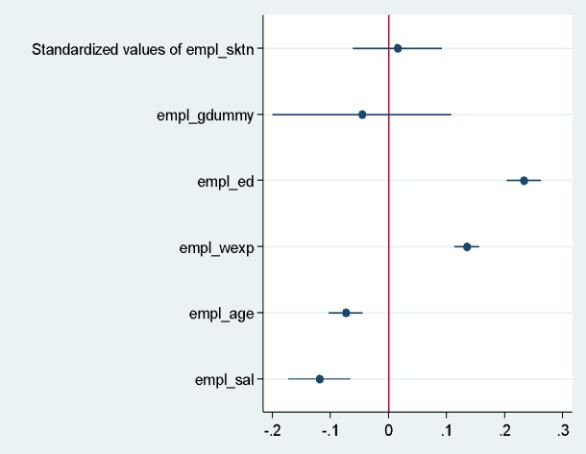
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) OLS	(2) LOGIT	(3) ASC	(4) ASC
σaspirant_skin tone	-0.0484	-0.220*	-0.235**	
	(0.0251)	(0.118)	(0.0993)	
aspirant_gender	-0.0275	-0.121	-0.121	
	(0.0599)	(0.269)	(0.201)	
aspirant_educ.	0.00241	0.0106	0.0120	
	(0.00381)	(0.0175)	(0.0358)	
aspirant_age	0.00402	0.0179	0.0213	
	(0.0124)	(0.0563)	(0.0326)	
Constant	0.167	-1.443	0.143	0.118
	(0.372)	(1.675)	(0.196)	(0.196)
Observations	495	495	495	495
R-squared	0.012			

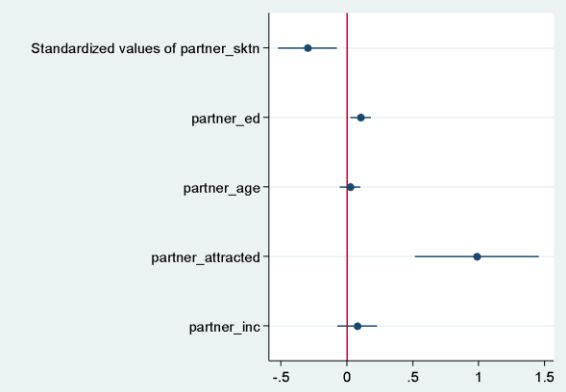
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

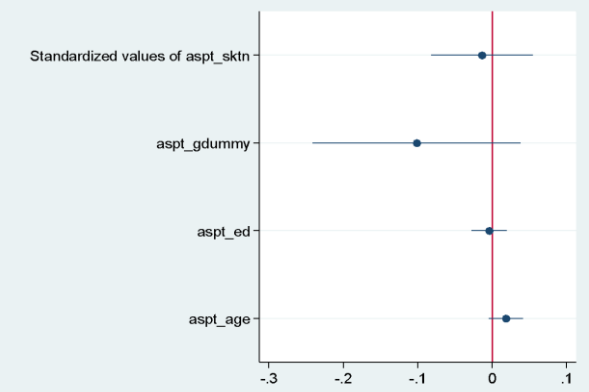
amongst >45 years old respondents, as a political representative. See below for all coef plots

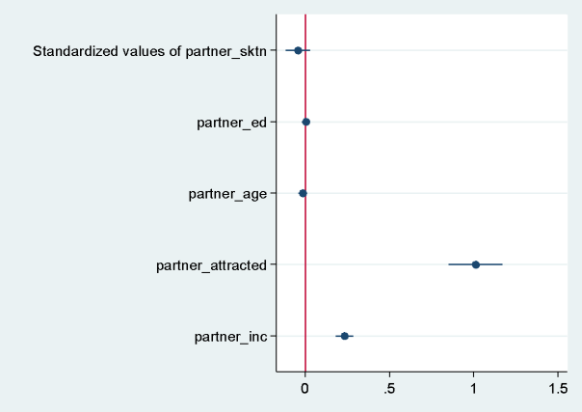


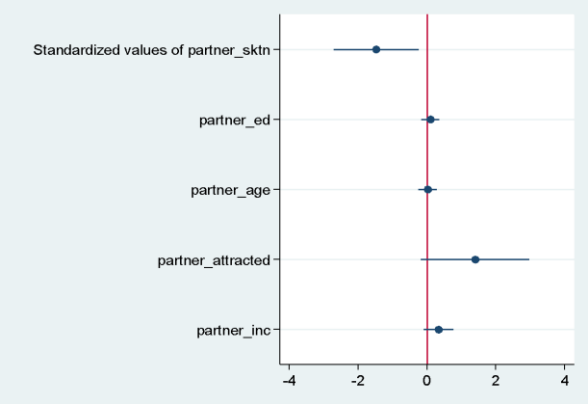


of regressions coefficients.









Trade Off Analyses: The table shows the tradeoff analysis of 1σ skin tone on employability, partner selection, and political representativeness indices. 1σ skin tone is equivalent to 0.07 years of formal education, 0.12 years of work experience, -0.2 years of age, and -0.13 million (USD313) of expected salary in the general population of respondents. Amongst male employers, these tradeoffs are even bigger with 1σ skin tone equivalent to 0.43 years of formal education, 0.79 years of work experience, -1.9 years of age, - 0.96 million (USD2,313) of expected salary.

Table 1: Trade-Off Analysis of Skin tone on Employability Indices

VARIABLES	All	Male Employer
employee_gender	-0.339168	0.792857
employee_educ.	0.0665236	0.433594
employee_wexp	0.1148148	0.792857
employee_age	-0.210598	-1.89744
employee_salary	-0.130252	-0.9569

At the partner selection level, 1σ skin tone is equivalent to -8.79 years of formal education, 3.02 years of age, and -0.18 million (USD433pa) of income in the general population of respondents. In the SS, 1σ skin tone trades off -2.6 years of formal education, -12.2 years of age, -3.8 million (USD9,150pa) of income

Table 2: Trade-Off Analysis of Skin tone on Partner Selection Indices

VARIABLES	All	SE	SS
partner_educ.	-8.793456	-14.8044	-2.61404
partner_age	3.028169	-65.3097	-12.2131
partner_attracted	-0.042532	-1.05504	-0.30223
partner_income	-0.184549	-4.40597	-3.80587

At the political representative selection theme, 1σ skin tone is equivalent to 3.4 years of formal education and -0.73 years of age in the general population of respondents. Amongst respondents that are >45years, 1σ skin tone trades off -19.58 years of formal education, and -11.03 years of age.

Table 3: Trade-Off Analysis of Skin tone on Political Representativeness Indices

VARIABLES	All	45+ years
aspirant_gender	0.1346535	1.942149
aspirant_educ.	3.4343434	-19.5833
aspirant_age	-0.735135	-11.0329

6. CONCLUSION

While skin tone benefits appear to go in both directions depending on the context, it is generally skewed in favor of the lighter skinned. The result of this research work has shown that skin tone affects employability and predicts socioeconomic outcomes. In Nigeria, women constitute more than 50% of the population, and about 30% of enterprises registered are owned by women (Adetoyinbo, 2021). In the Nigeria Gender Lens Entrepreneurship and Investing Report of 2021, it was reported that the Mastercard Index of Women Entrepreneurs (MIWE) estimated that 25.3% of the businesses surveyed are owned by Women based on 2019. This means that most businesses are owned or managed by males. With this premise, it can be concluded that darker skin individuals are at disadvantage in employment and income expectations. This finding is consistent with existing literature which suggests that lighter-skinned individuals have an employability advantage over darker-skinned ones. Arthur G (2006) found that there is a preference for light-skinned black employees and that the mean hourly wages rise as skin tone lightens, moving from $11.72 to $14.72 for dark-skinned to light-skinned.

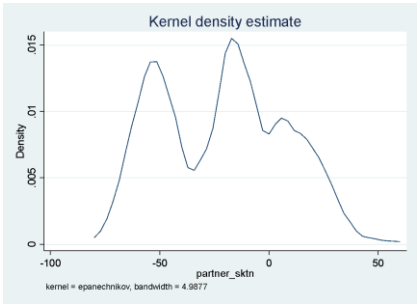
In the marriage market, lighter skin tone holds sway. Kelly M (2011) investigated motivations driving the preservation of skin-bleaching practices in Tanzania and found that one of the six key motivations for people, particularly women, to bleach their skin is to look more attractive to current or potential partners. This is further corroborated by Richard H. (2021) who finds that annually women of color spend more than US$8 billion on bleaching

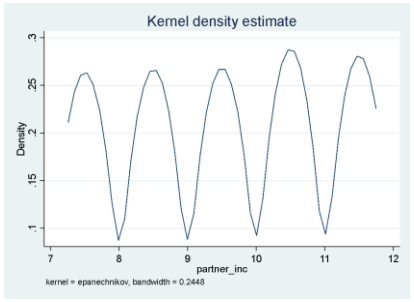
cream because lighter skin is a social acceptance benchmark, more attractive, marriageable, higher career opportunities, and better socioeconomic status. Our findings that some regions in the country exhibited preferences for lighter skin corroborates this fact. Under such a situation, spousal equivalents in these regions who are ordinarily dark may take to skin bleaching to boost their chances in the marriage market. This further creates an incentive for "adopting" white skin and a potential market for beauticians and skin technicians.

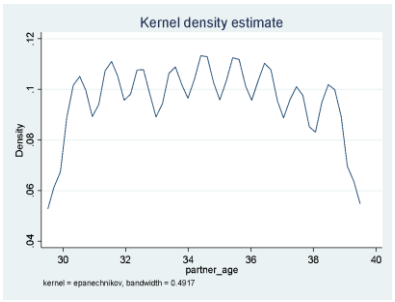
In terms of political representation, there has not been any study that examines skin tone to success at the polls. Our result is novel in that it shows that older generations favor darker skin. This can be tied to experiences under colonial rule. This finding creates an opportunity for further research work in political economics. In an economy of a former colony and with a higher percentage of the older generation, the skin tone of potential political aspirants may make or mar their chances at the poll.

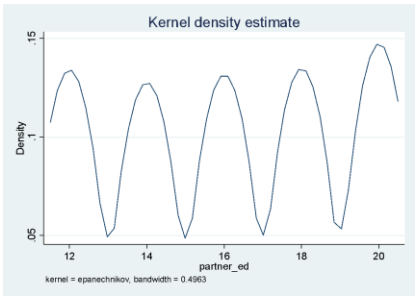
It can be concluded that we can reject the null hypothesis that skin tone does not affect employability, income, partner selection, and political representation; skin tone does matter and at a cost.

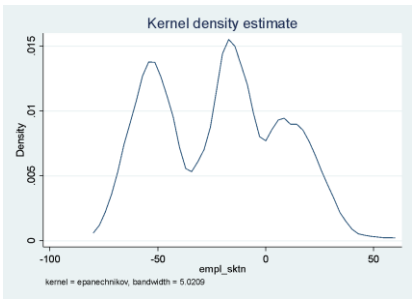
Appendix 1: Kdensity Plots of Choice Options

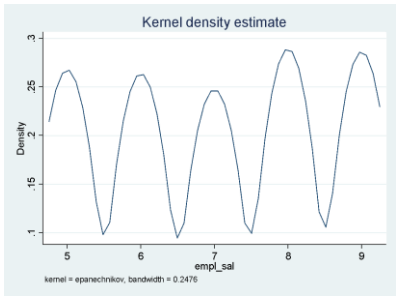


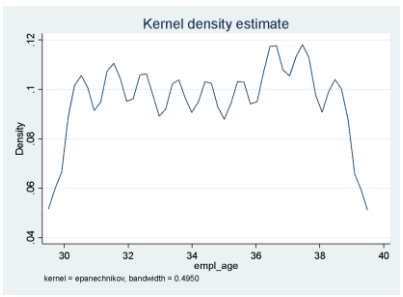


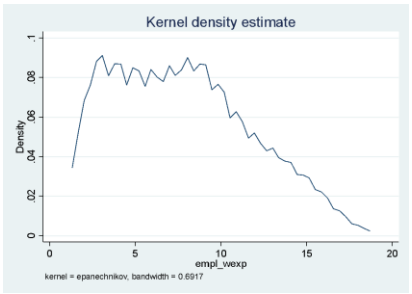


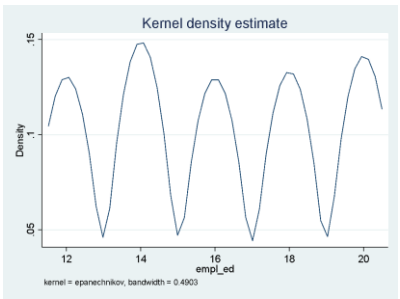


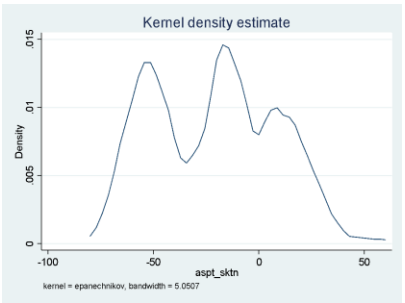


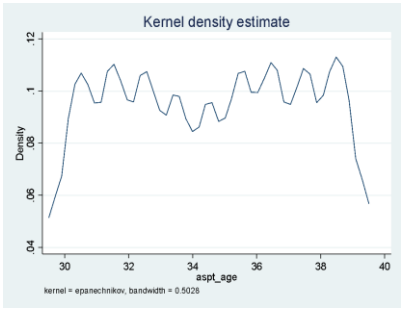


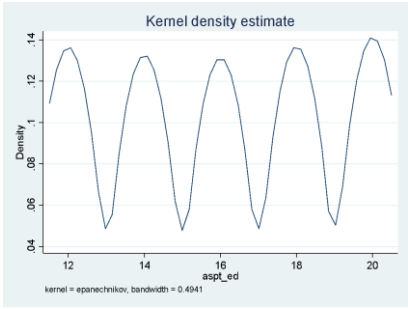












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