Social Interactions and Women's Labor Market Outcomes in Kenya

By

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&

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ABSTRACT

We analyze labor market participation and income among 15-49-year-old women in Kenya. Our covariates are number of sexual partners, marital status, post-secondary school training, and the Program. The Program separates direct beneficiaries of Free Elementary School Education from non-beneficiaries. We utilize the 2022 Kenya Demographic and Health Survey in a fuzzy regression discontinuity design. We test for robustness using quantile regression at the 10th, 50th, and 90th labor income quantile. Program participation raises single years of schooling by 4-5months but does not affect labor incomes significantly. Women's labor incomes decline significantly among women in the 50th labor income quantile. Post-secondary training significantly raises labor incomes. The longer the period a woman spends furthering studies beyond grade 12, the fewer the sexual partners. Reductions in women's earning due to non-husband sexual partners are driven by unmarried women. We recommend that the Government of Kenya and its developmental partners invest in enhancing the enrolment and completion of further studies, notably; college, TVET, and university.

Key words: education, female labor force participation, sexual partnerships, social interactions, labor incomes

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1. BACKGROUND

Extant literature analyzes labor market outcomes along various dimensions. These include gendered occupational alignment/ career trajectory, and representation (Cortés & Pan, 2020). This dimension sheds light on the under-representation of females as well as the extent to which parenting/ childcare, and social norms and expectations affect their outcomes on the labor market (Mijs & Roe, 2021). The second dimension considers the pay gap/ wage differentials, job quality, and duration of work (Jones et al, 2023; Denier & Waite, 2019; Brown et al, 2019; Bursztyn et al, 2017). Developments along this dimension unearth how female labor market outcomes are affected by discrimination, and innovations, e.g., the inception of the contraceptive pill. The third dimension focuses on marital status, sexual identity, partnerships, partnership types, and friendships (Lleras-Muney et al, 2020; Martell, 2021; Delhommer, 2020; Brown et al, 2019; Waite et al, 2020; Brown et al, 2019). Scholarship along this line analyzes the partnership/ friendship/ marriage premium/ penalty that females face, e.g., forgone wages due to stay-at-home status, or housewife and househusband.

A largely ignored area of focus has been the sociology of work, especially, how social interactions/ networks affect gendered labor market outcomes[3]. In this paper, we focus on sexual partnerships and friendships as outcomes of social interactions. Although [not] having a partner affects labor market outcomes, the quality, and number of one's sexual partners are under-investigated. With 1 in every 2 hires being made possible via referrals and recommendations, it is fruitless to ignore network mobilization (Pedulla & Pager, 2019). Even then, individuals strategically choose with whom to socialize, and whom to have a sexual partnership[4] (Moeeni, 2021). This is decided upon alongside the longevity of such a relationship.

Interestingly, some individuals match with their sexual partners within the job environment (Bursztyn et al, 2017). In some circumstances, sexual partnerships depend upon an individual's position on the job market. Recent labor market turbulence occasioned increments in females' participation rate (Lim & Morgan, 2021). Simultaneously, there is an ever-increasing proportion of men getting disconnected from the labor market (Halpern-Meekin & Talkington, 2022). While this disconnect reflects a general decline in hours worked, e.g., during coronavirus (COVID)-19

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[3] These include being employed, occupational position/ career trajectories, unemployment spells, and labor earnings.
[4] Thus, individuals do not always look for partners for sexual gratification.

pandemic period, it alters the organization of family life (Halpern-Meekin & Talkington, 2022). Reductions in male labor market participation rates offsets undesirable outcomes within social networks. Halpern-Meekin & Talkington (2022) links a disconnect among males with inability to provide materially in romantic relationships. This in turn prolongs the time-to-marriage while rendering some men unmarriageable (Halpern-Meekin & Talkington, 2022). It is a matter of time for inability to find a romantic partner being declared a disability.

Labor market participants constantly attempt to balance between work and romantic commitments, and entanglements (e.g., marriage) (Nelson et al, 2021). A work-life imbalance paves way for conflict and discord among sexual partners (Lim & Morgan, 2021). This is further worsened by identification of sexual partners being a highly selective process[5] (Mijs & Roe, 2021). However, screening for partners is often imperfect[6] due to distorted signals (Bursztyn et al, 2017). The authors reveal single female MBA students underreporting labor market ambition[7] when observed by their male counterparts. This underreporting safeguarded their marriage prospects (Bursztyn et al, 2017).

Against this background, we analyze how gendered labor market outcomes are affected by sexual partnerships in Kenya. Unlike Lleras-Muney et al (2020) that identify friendship premium, we consider heterogenous friendship valuations that characterize heterogenous sexual partnerships. These partnerships are assumed to be not fully reciprocal[8] but reflect 'friendships with benefits[9]'. We make two-fold contributions. First, we bridge the data gap by leveraging on the Kenya National Bureau of Statistics' Kenya Demographic and Health Survey (KDHS). This survey contains granular data on the number of [hetero-]sexual partners (lifetime and short-term), and the frequency that a man/ woman had a sexual affair. Second, we consider the number of [wo]man's sexual partners, and marital status. On average, married women have fewer non-husband sexual partners compared to unmarried women.

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[5] This is dictated upon by one's position on the labor market.
[6] Especially among females
[7] i.e., lower salary expectations and lower willingness to work over extended periods
[8] Sometimes we identify with people who do not identify with us. Thus, perceived position in an individual's life (e.g., as a close friend) may not coincide with actual position.
[9] This suggestion was given by Davis Ombane.

2. RELATED LITERATURE

2.1 CONCEPTUAL LITERATURE

Understanding gendered labor market outcomes benefits from frameworks that model the economic empowerment of women. These frameworks fall into two broad categories. The first category emphasizes job market considerations and state of the job market. These outcomes in turn shape extra-household networking possibilities, sexual partnerships, and other outcomes[10] (Heintz, 2021; Halpern-Meekin & Talkington, 2022). The second category focuses on reverse engineering. In this scholarship, job market outcomes are explained by educational reforms and attainment, and and social interactions/ stratification (Enfield, 2019; Lleras-Muney et al, 2020). Improved educational access raises the number of educated females. This, in turn, exerts upward pressure on the labor market while raising equality of access to opportunities (Klasen, 2018). Similarly, reforms such as job targeting[11] raise the participation of targeted groups on the labor market. Where job-targeting is insufficient, individuals fall back on explicit job referrals[12]. Referrals are also common in forging sexual partnerships whereby potential partners are matched through third party referrers.

Existing structural rigidities necessitate an interrogation of women's shared perspectives. School systems that are entrenched in cultural norms and gender non-reversal propagate the subordination of women (Longwe, 1998). This undermines gains in bargaining power realized through women's access to better schooling opportunities. Thus, women and men may face similar challenges and struggles yet experience them differently. This is aggravated by physiological and psychological differences that place women at comparative disadvantage[13]. When agrarian societies shifted from hand-held hoes to ox-drawn ploughs, more men and boys tilled farms (Alesina et al, 2018)[14]. for instance, a shift from using hand-held hoe (which was better suited to women and girls) to ox-drawn plough (suitable for boys and men) led to more men and boys tilling the farm (Alesina et al, 2018).

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[10] E.g., income sources, educational attainment, and marriage

[11] E.g., job openings explicitly 'encouraging women to apply'

[12] This is affected by referral biases, e.g., qualified female candidates being less likely to be recommended by males (Pumkina & de la Flor, 2020).

[13] Valentine Dibondo argues that, "While boys were playing, girls were seated; they were seated observing." Thus, girls may have an upper hand to boys in observational tasks.

[14] Women/girls and men/boys had a comparative advantage in using hoes and ploughs, respectively (Alesina et al, 2018).

In many households, cultural norms undermine the autonomy of women in making key decisions. These include asset ownership, healthcare plans, labor market participation, and sexual partners (Jayachandran, 2021; Enfield, 2019; Olarewaju & Fernanado, 2020; Olarewaju et al, 2019). Heintz (2021) indicates the burden on unpaid work falling disproportionately on women. This, in turn, reduces women's autonomy substantively relative to paid employment (Jayachandran, 2021). Women accept less autonomy to prevent male sexual partners from feeling threatened by their affluence (Cortés & Pan, 2020). As a result, women forge sexual partnerships up the socio-economic status ladder to guarantee stability of the partnership (Karney, 2021). Some societies find it for women not to work but frown upon the idea of a woman working while the husband does not (Annan et al, 2021).

Career choice and job market aggressiveness is entrenched in societal dictates and expectations (Cifre et al, 2018). In some societies, stereotyping presents men as breadwinners while reneging women to caregiving. These stereotypes anchor women's actions, including furthering studies and career advancement, on approval by partnering men (Cifre et al, 2018; Cortés & Pan, 2020). This stifles equal footing on the job market (Banerjee, 2019). Besides, marital politics that gag women's freedom to participate on the labor market distorts the attractiveness of marriage (Galiè et al, 2022). At times, workplace discrimination and 'sexism' limit women's participation on the labor market through normalization of harassment (Banerjee, 2019). This is further aggravated by ringfencing certain jobs as a reserve for men, thereby locking out women.

Many labor markets and romantic relationships rely upon educational attainment as a screening tool. Higher levels of educational attainment raise an individual's exposure to economic opportunities (Gebreyes, 2019). Through the 'tagging effect' and the 'sorting effect', an individual's education level dictates the operational social circle (Le & Nguyen, 2021). Moeeni (2021) and Tanaka et al (2021) argue that girls/ young women are less likely to have sexual partners with comparably low levels of education[15]. Endogenous educational choices affect the time of entry into long-term sexual engagements, and the labor market (Sunder, 2019; Tanaka et al, 2020).

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[15] Sapiosexuality notwithstanding, educated women attract educated men, but educated men attract [un]educated women (Sunder, 2019; Tanaka et al, 2021).

Sometimes, labor market outcomes are affected by time allocation towards household production, e.g., child care. Cortés & Pan (2020) reveal that entry of the first child drastically alters the household-labor market dynamics. The authors argue that mothers devote disproportionately more time towards primary caregiving, and less time working outside the home. However, it is not automatic that mothers dominate primary caregiving[16]. Rising female labor earnings raise the opportunity cost of caregiving, thereby raising labor hours supplied by females outside the home (Moeeni, 2021).

Households face various shocks that [in]directly affect labor market outcomes. Job losses among breadwinners coerce secondary[17] breadwinners to raise labor hours supplied (Pumkina & de la Flor, 2020). This arises from the 'added worker effect' (Rose & Shem-Tov, 2023). When breadwinners lose jobs, secondary breadwinners are coerced

Exposure to shocks and household financial turmoil have disruptive effects on the labor market. Negative job market shocks such as mass layoffs or job displacement characterized by sole breadwinners (e.g., husbands) losing jobs coerce secondary breadwinners (e.g., wives) to increase hours of labor supplied through the 'added worker effect' (Pumkina & de la Flor, 2020; Rose & Shem-Tov, 2023). Broad-based shocks, however, disincentivize secondary breadwinners from working. As a result, labor hours supplied fall (Pumkina & de la Flor, 2020). Prolonged wage unemployment spells[18] render wage employment less attractive (Olarewaju et al, 2019).

Many individuals dedicate their adulthood pursuing romantic relationships, working, or looking for gainful employment. Characteristic of adulthood is task-sequencing[19], and exposure to perturbation[20]. Labor market disturbances disrupt household incomes. This, in turn, affects participation on the labor market, and the pursuit of sexual partnerships. Since individuals associate higher labor earnings with greater worker productivity, earnings serve as a screening tool

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[16] If a wife has comparative advantage working, then the husband ends up as primary caregiver (Cortés & Pan, 2020; Borrowman & Klasen, 2020).

[17] In the absence of unemployment benefits, secondary breadwinners serve as insurance for breadwinners.

[18] In some countries, e.g., China, and North Africa, job scarcity [e.g., during recessions] elicits opposition to female employment (Ibourk & Elouaourti, 2023; Xiao & Asadullah, 2020).

[19] i.e., individuals seek employment prior to forging sexual partnerships.

[20] E.g., individuals land jobs only to leave them (Rose & Shem-Tov, 2023); and, sexual partners free themselves from entanglements.

in sexual partnerships. The more productive at work a man is, the likelier he is to select into marriage/sexual partnership (McDonald, 2020).

2.2 RELATED EMPIRICAL EVIDENCE

Mulwa & Gichana (2020) reveal that employment within the formal private sector declines significantly in educational attainment among females in Kenya. However, females' employment within the informal or the formal public sector rise significantly in educational attainment. The authors argue that education equips females with skills needed on the labor market, thereby incentivizing them towards labor market participation[21]. The findings further suggest general employment and formal private sector employment rising in social capital[22]. This arises from social gatherings facilitating the sharing of information on available job opportunities[23][24]. Geographically, rural residents were significantly more likely to be employed, and worked within the informal sector, compared to their urban counterparts[25].

Borrowman & Klasen (2020) analyze occupational and sectoral segregation in 69 countries through the Duncan (dis)similarity index. The authors find significant reductions in sectoral segregation as female labor force participation rises. However, occupational segregation rises significantly. Increasing female-male education ratio and average male education widens sectoral and occupational segregation, respectively. The authors argue that rigid labor market hierarchies erode gains realized via greater female labor force participation. Segregation is further widened by risk aversion and gendered preference heterogeneities.

Ibourk & Elouaourti (2023) associate reductions in labor force participation with educational attainment[26] within North Africa. Among the married, participation rises in female education but

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[21] The authors ignore initial [dis]advantages yet they matter. Enfield (2019) indicates gendered differences across Nigeria's career landscape. This is attributed to greater schooling possibilities among the affluent and low rates of primary school completion among girls relative to boys.

[22] Proxied by social gatherings participation
[23] It is questionable that information-sharing benefited only formal private sector employment. Social gatherings, e.g., funerals and weddings, aren't anchored on the dissemination of job market-relevant information.

[24] Sometimes, workers rely on social networks. In Uganda and the Democratic Republic of Congo, well-connected women worked on high-renumeration tasks whereas the less-connected women served in less-rewarding posts in the gold mines (Rutherford & Buss, 2019).

[25] This could be driven by prevalence of unregistered rural farm enterprises. Tanaka et al (2020; 2021) show that non-farm job opportunities are limited in rural areas.
[26] Educational attainment is categorized as at least secondary or otherwise.

declines in male education. The findings are attributed to 'purity' considerations that undermine labor force participation among educated females. Among males, the authors reveal rising reservation wages among the educated, contraction of the public sector, and sluggish rate of private sector expansion. These jointly reduce the number of available jobs for educated males.

Xiao & Asadullah (2020) establish China's labor force participation significantly rising in both good English skills and years of education. Nevertheless, female Chinese have low participation rates relative to their male counterparts. Relatedly, Tanaka et al (2020) report ambiguous effect of years of education on labor force participation among Bangladeshi females. Over some bandwidths, an additional year of education significantly reduces female participation. Participation is insignificantly affected over other bandwidths.

A tradeoff exists between childcare and labor market outcomes that is anchored on career adjustment/ workplace flexibility. Cortés & Pan (2020) analyze income dynamics between men and women in the United States (US). Entry of the first child widens income gap in the early years. Although male parents' earnings remain fairly stable relative to childless males, childbirth erodes earnings among female parents. Thus, female partners experience a child penalty[27]. Relatedly, Klasen et al (2021) analyze cross-country heterogeneities arising from child presence. The observable differences arise from heterogeneities in returns to children upbringing and upbringing[28]. In Brazil where the average number of children per woman was much lower, the authors reveal higher female labor force participation rate relative to Tanzania, Bolivia, Indonesia, India, and Jordan.

Clark et al (2019) analyze subsidized daycare in Korogocho informal settlement within Kenya's Nairobi. Receiving daycare vouchers[29] significantly raises the likelihood of a mother being employed. Voucher recipients are also less likely to be unemployed. The authors argue that subsidized daycare incentivized mothers to work[30].

In the literature, other factors shaping labor market outcomes include: migration status (Gebreyes, 2019), religion, household size, [non] farm income source, age and age at marriage, wife's fertility,

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[27] This nudges females into occupations allowing intermittent labor market participation or ones with part-time option (Borrowman & Klasen, 2020).
[28] Characteristics of the household head also matters (Klasen et al, 2021).
[29] Or vouchers plus improved daycare quality.
[30] This excludes uncompensated childcare offered by female kin.

household income, retirement age (Klasen, 2018), ethnicity (Hassan et al, 2023), community social norms, and marital status. Previous studies largely ignore the importance of the number of sexual partnerships. This paper leverages on the number of sexual partnerships from a large representative dataset on women in Kenya.

3. METHODOLOGY

We define labor force participation based on time allocation [for a comprehensive methodology, see

https://drive.google.com/file/d/1b434iuJY3N6O_KAZYWfuu3i07cRfpfLF/view?usp=sharing].

An individual is in the labor force if, in a four-day period, he/ she spends a minimum of 1 hour on any activity that generates income (Tanaka et al, 2020). For the descriptive, we categorize married women and their partners/ husbands who are employed into occupations based on ISCO-08. This categorization enables us to identify segregation across occupations based on the Duncan dissimilarity index, D:

$$D = 0.5 \sum_r \left| \frac{B_r}{B} - \frac{G_r}{G} \right|, D \in [0, 1] \qquad (1)$$

Where the total numbers of women and men working in sector r are G_r and B_r, respectively, and G and B are the total number of women and men in the labor force. D=0 suggests absence of segregation whereas D=1 indicates perfect inequality in the sectoral distribution of women and men (Borrowman & Klasen, 2020). This index is sensitive to the sectoral size (Borrowman & Klasen, 2020). Utilizing the 2022 Kenya Demographic and Health Survey (KDHS), we report a dissimilarity index equal to 0.15 for the sub-sample of married women and their partners/ husbands[31].

For the baseline, we estimate the model:

$$V_k = \beta_0 + \beta_1 Z_k^b + \beta_2 A_k + \beta_3 Z_k^b A_k + \beta_4 Z_k^E + \beta_5 P_k + \beta_6 Z_k^E P_k + \beta_7 Z_k^b Z_k^E + \beta_8 Z_k^b Z_k^E A_k P_k + \theta_k M_k + \epsilon_k \qquad (2)$$

Where the labor market outcome V for woman k is explained by a woman's age (A), number of sexual partners (P), alongside interactions, and other factors (M); β and θ are regression

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[31] Potential self-selection is discarded because of low occupational segregation. Therefore, occupational choice does not explain gendered differences in labor market outcomes.

coefficients, and the nuisance term ε is a white noise. P and A are assignment variables, respectively, for single education years (that hint at social interactions) and age (indicative of [not] being in the free primary education). Treatment dummies are defined by:

$$Z_k^b = \begin{cases} 1(A_k \leq 37) \\ 0(A_k > 37) \end{cases} \text{and } Z_k^E = \begin{cases} 1(P_k^E > 12) \\ 0(P_k^E \leq 12) \end{cases} \tag{3}$$

Where single years of education are captured by P^E, and dummies Z^b and Z^E denote the 1985 (and post-1985) birth cohort, and the post-secondary school education cohort, respectively. With this in mind, we center at cutoff point (37 years and 13 years, respectively, for age and single years of schooling[32]).

Z^b is assigned 1 for individuals that benefited from free public primary school education (hereafter, the Program), and 0 otherwise. The Program was introduced in 2003. It enabled pupils that would otherwise have dropped out due to fee-related challenges to stay in school. However, inter-pupil differences in exposure to the Program at its infancy are inevitable[33]. Z^E is assigned 1 for holders of at least college diploma, and 0 otherwise. Z^E captures education premium that is assumed to affect both sexual partnerships and labor market outcomes. That is, educated females attract well-connected male partners. These, in turn, raise females bargaining power on the job market[34]. Imperfect compliance[35] is addressed in a fuzzy regression discontinuity design (fuzzy-RDD).

Lastly, we employ two robust checks. In the first check, we estimate two auxiliary equations for single years of education and number of sexual partners given by:

$$P_k^E = a_0 + a_1 Z_k^b + a_2(A_k - 37) + u_k \tag{4}$$

And

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[32] The average and median age of an elementary school in Kenya have declined over the years. The average grade 1 in the 2010s was much younger compared to a counterpart in the early 1980s. An average grade 8 pupil is a 12-14-year-old. We add a 4-year markup to obtain an outlier whereby the oldest grade 8 pupil is 18years. Backdating this gives 1985 as a conservative year of birth for one in elementary school in 2003. The individual was 18 and 37years old, respectively, in 2003 and 2022. Similarly, an individual with post-secondary training has at least 13 single years of education.

[33] Not all pupils benefited equally from the Program; e.g., a pupil in grade 2 at the time enjoyed 7 years of free elementary school education whereas a grade 8 counterpart only had a few months.

[34] Alternatively, the longer the schooling duration, the likelier an individual is to forge friendships and partnerships that directly affect labor market outcomes.

[35] Some pupils switch school type in response to the Program, e.g., from public to private schools, and vice versa.

$$P_k = b_0 + b_1 Z_k^E + b_2(P_k^E - 12) + v_k \qquad\qquad (5)$$

With the treatment effect being given by a_1 and b_1 whereas u and v are respective disturbances. Secondly, we estimate the labor income equation using quantile regression by considering the 10th, 50th, and 90th quantiles.

4. EMPIRICAL FINDINGS

4.1 OCCUPATIONAL DISSIMILARITIES

We utilized the 2022 KDHS dataset on 15-49-year-old married women, and women living with partners. This constituted 18294 married Kenyan women. Occupational distribution by gender is captured in Table 1. Occupational segregation is low. However, occupational gaps exist among craft and related trade workers, and plant/machine operators and assemblers. These occupations are least pursued by married women but attract a significant proportion of husbands/ partners. Disturbingly, women are thrice as likely to be unemployed as their partners.

Table 1: Occupational Disaggregation

Occupation	Married women/ living with partners	Husbands/ partners
Observations	18294	18225
Not working in the past 12 months	39.42	13.53
Managers	7.51	6.62
Professionals	3.33	4.95
Technicians & Associate Professionals	5.52	7.19
Clerical support workers	0.93	0.88
Services and sales workers	11.98	11.81
Skilled agricultural, forestry & fisher	16.41	15.84
Craft & related trades workers	0.78	9.62
Plant & machine operators, & assemblers	0.39	11.31
Elementary occupations	13.73	17.95
Armed forces	0.02	0.29
Dissimilarity index	0.1461	

Note: those not working are excluded from the dissimilarity index.

We reconcile unemployment disparity by matching women's employment status with husbands. Table 2 reveals approximately one-third of married women being unemployed but whose husbands/ partners worked weekly. This exceeds the 1 in 10 married women that didn't work and whose husbands also didn't work[36].

Table 2: Wife-Husband Employment Dynamics		
Married woman/ living with partner	Husband/ partner	

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[36] Neither substitutability nor complementarity between women's and husbands' employment is inferred.

Working	Didn't work	worked last 7 days	worked last 12 months	Don't know	Total
No	10.50%	32.97%	2.29%	0.12%	45.87%
Yes	2.97%	48.91%	2.09%	0.16%	54.13%
Total	13.46%	81.88%	4.38%	0.28%	100.00%

We suspect the type of earnings contributed to unemployment. Unpaid work or in-kind payments could disincentivize unemployed women from seeking employment. Table 3 indicates 19% of employed women receiving no payment. However, this does not infer causality.

Table 3: Earning Type and Place of Work for Women				
Type of earnings	Place of work			
	Family	Someone else's	self-employment	Total
not paid	3.842%	0.877%	14.210%	18.930%
cash only	1.543%	43.159%	31.351%	76.052%
cash and in-kind	0.143%	1.955%	2.340%	4.439%
in-kind only	0.097%	0.195%	0.287%	0.579%
Total	5.626%	46.186%	48.188%	100.000%

Table 4 regresses wife's unemployment against husband's, and vice versa. Unemployment of a married woman and that of a husband significantly cause each other. There could be potential confounders that raise the likelihood of husbands being unemployed simultaneously with their wives.

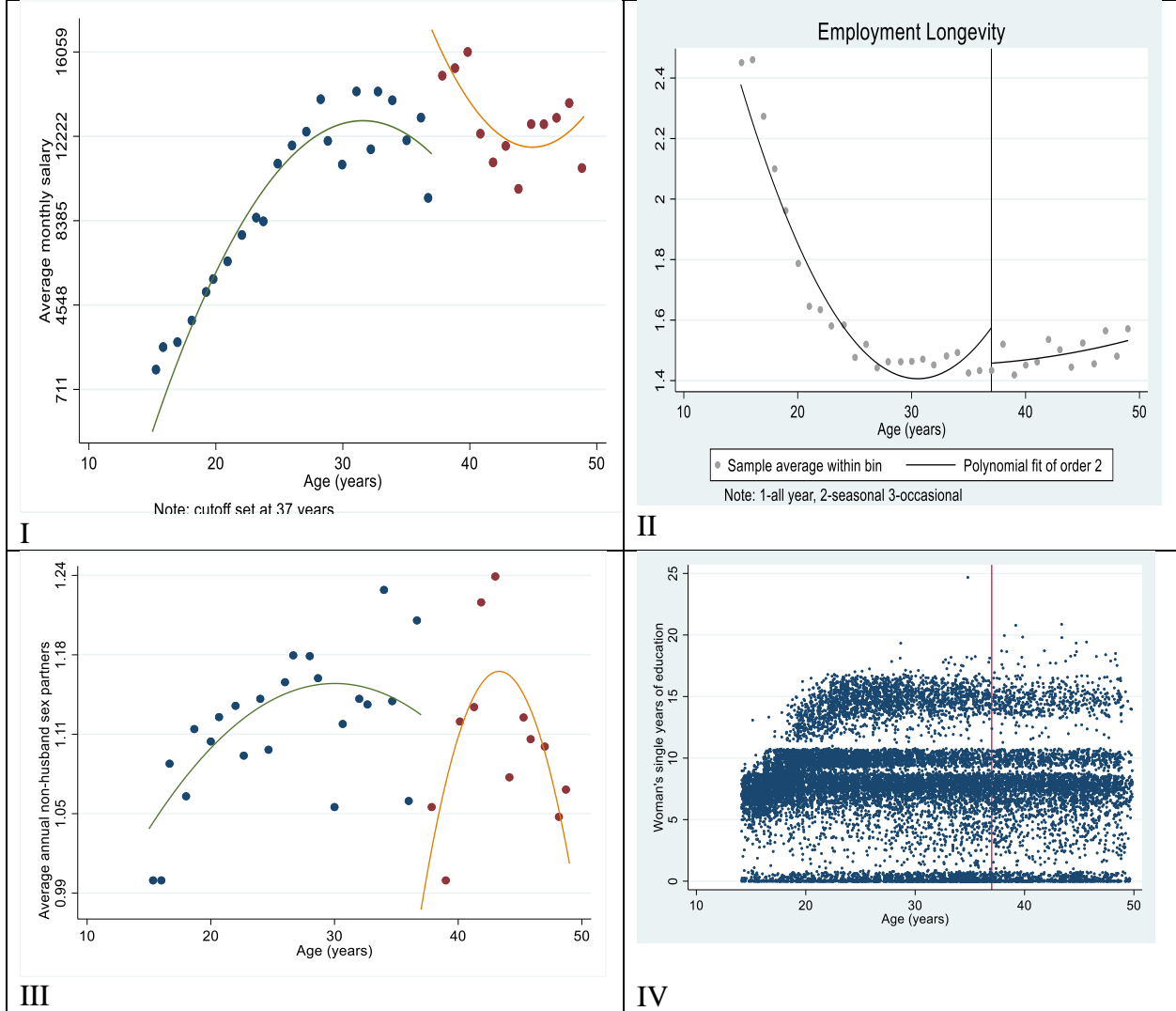| Table 4: Wife-Husband Unemployment Regressions				
	(1)	(2)	(3)	(4)
	Linear probability model		Probit marginal effect	
VARIABLES	Married woman	Husband	Married woman	Husband
Husband	0.403***		0.384***	
	(0.0102)		(0.00929)	
Married woman		0.197***		0.179***
		(0.00495)		(0.00472)
Constant	0.340***	0.0572***		
	(0.00372)	(0.00311)		
Observations	18,312	18,312	18,312	18,312
R-squared	0.079	0.079		

Standard errors in parentheses

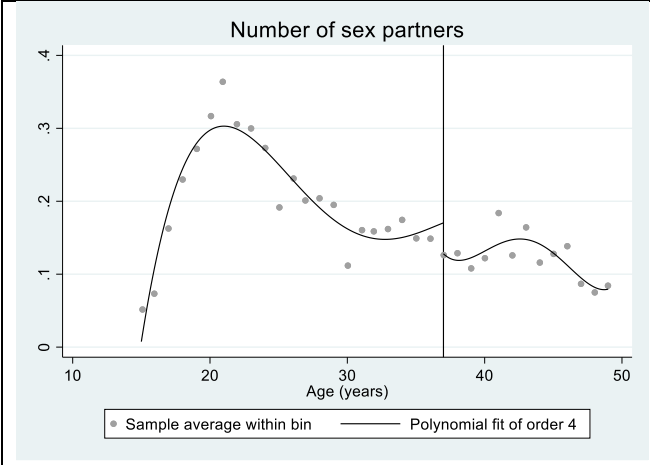*** $p<0.01$, ** $p<0.05$, * $p<0.1$

4.2 MAIN RESULTS

Table 5 utilizes a subsample of 2766 married women/ living with partners. Panel I reveals higher average monthly incomes in the pre-1985 birth cohort relative to post-1985. In Panel II, the average teenage women in the 1985 birth cohort is seasonally/ occasionally employed. However, adult
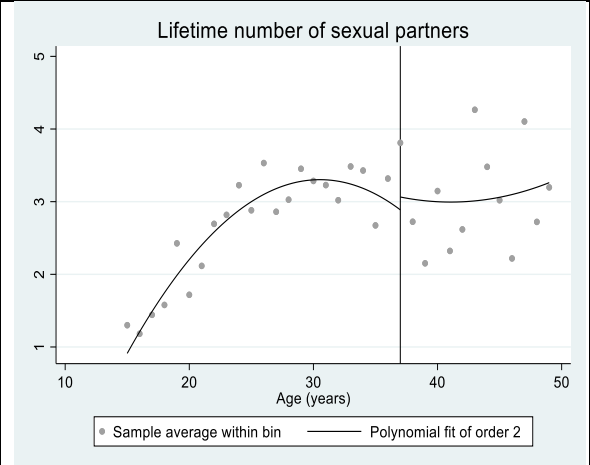
women worked either all-year or seasonally. Panel IV indicates concentration of education at 9-10 single years of schooling. In the 1985 cohort, average sexual partners rise from 1-2 among 15-19-year-olds to 3-4 among 25-35-year-olds.

Table 5: Fuzzy regression discontinuity plots

Number of sex partners — Sample average within bin; Polynomial fit of order 4

Lifetime number of sexual partners — Sample average within bin; Polynomial fit of order 2

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4.2.1 CAUSAL RELATIONSHIPS

In the full women sample in Table 6, the Program significantly raises labor incomes (column 1). The effect withers away when post-secondary training is considered (column 3). Among married women (column 4), the Program insignificantly affects incomes. The statistically significant results arose from failure to account for post-secondary training and the unmarried.

Age ambiguously affects labor income. Generally, labor incomes rose significantly in age. However, age insignificantly affects incomes among married women that benefitted from the Program. This is also true when post-secondary training is considered (columns 3 and 6).

The average woman with any post-secondary training earns at least Kenya Shilling (KSH) 23597 more compared to a counterpart with none. Married women gain KSH 2710 above the average trained woman. Post-secondary training both equips women with additional job market-relevant competences, and catalyzes social interactions. The number of non-husband sexual partners insignificantly raises labor incomes. Accounting for post-secondary training, an additional non-husband sexual partner reduces incomes by KSH 3989 to KSH 4225 in the full women sample. This effect is statistically not different from zero in the married women's sample. Unmarried women offset the detrimental effect of non-husband sexual partners on women's labor incomes.

	Table 6: Labor Income among Women					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Full women sample			Married women/ living with partner		
1985 birth cohort	2,886***		8.043	1,960		-76.21
	(827.6)		(1,443)	(1,225)		(2,024)

14

	(1)	(2)	(3)	(4)	(5)	(6)
Age	176.1***		154.7	240.6***		362.9
	(35.79)		(179.3)	(57.64)		(248.3)
Pre-1985 birth cohort's age (rf)	-		-	-		-
Age for the 1985 birth cohort	246.0***		178.9	186.6		-53.12
	(81.96)		(193.9)	(139.2)		(277.8)
At least 13 single years of education		23,597***	23,736***		26,307***	26,553***
		(888.4)	(889.2)		(1,161)	(1,162)
Number of non-husband sexual partners		431.7	1,248*		89.17	945.8
		(748.6)	(755.6)		(2,797)	(2,793)
Number of sexual partners for those with fewer than 13 years of education (rf)		-	-		-	-
Number of sexual partners for those with at least 13 years of education		-4,225***	-3,989***		-7,421	-7,449
		(1,494)	(1,490)		(6,514)	(6,496)
Constant	11,972***	6,343***	7,810***	13,155***	6,554***	7,327***
	(312.8)	(432.0)	(1,248)	(453.3)	(576.0)	(1,713)
Observations	12,361	6,578	6,578	7,610	4,028	4,028
R-squared	0.005	0.110	0.117	0.004	0.115	0.121

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Note: the explanatory variables age and single years of education are centered. 1985 birth cohort captures those born not earlier than 1985.
rf: reference group

4.2.2 THE MECHANISM

Table 7 presents quantile regression estimates for the 10th, 50th, and 90th quantile in the distribution of labor incomes. In the full women sample, the average woman with at least 13 single years of education earns KSH 3154 more compared to a counterpart with fewer years in the 10th quantile. This effect intensifies with the average woman's labor income in the 50th and 90th quantile, respectively, being 4.1 times and 14 times more than in the 10th quantile. Married women with post-secondary training earn 1.14-1.28 times the average woman's earnings.

Number of sexual partners significantly erodes women's average labor incomes in the 50th quantile. Earnings lost by married women from an additional non-husband partner are 2.04 times the average woman's loss. Earnings are unaffected by a woman's age, and birth cohort.

	(1)	(2)	(3)	(4)	(5)	(6)
Table 7: Quantile Labor Income Regressions						
		Full women sample			Married women/ living with partner	
VARIABLES	10th	50th	90th	10th	50th	90th
At least 13 single years of education	3,154***	12,900***	44,167***	4,000***	16,400***	50,333***
	(156.4)	(348.1)	(1,537)	(166.6)	(356.6)	(2,055)
Number of non-husband sexual	253.8*	1,200***	1,250	0	1,000	333.3

partners						
	(132.9)	(295.8)	(1,306)	(400.5)	(857.5)	(4,942)
Number of sexual partners for those with fewer than 13 years of education (rf)	-	-	-	-	-	-
Number of sexual partners for those with at least 13 years of education	-773.1***	-2,650***	-4,792*	250	-5,400***	-15,333
	(262.0)	(583.2)	(2,576)	(931.5)	(1,994)	(11,494)
1985 birth cohort	67.95	66.67	2,083	-62.50	-600	2,333
	(253.7)	(564.9)	(2,495)	(290.2)	(621.3)	(3,581)
Age	11.11	-33.33	416.7	18.75	0	666.7
	(31.53)	(70.19)	(310.0)	(35.61)	(76.22)	(439.4)
Pre-1985 birth cohort's age (rf)	-	-	-	-	-	-
Age for the 1985 birth cohort	8.120	83.33	-0	-18.75	0	-435.9
	(34.10)	(75.92)	(335.3)	(39.84)	(85.28)	(491.6)
Constant	566.7***	4,033***	13,750***	562.5**	3,600***	12,667***
	(219.5)	(488.7)	(2,158)	(245.7)	(525.9)	(3,031)
Observations	6,578	6,578	6,578	4,028	4,028	4,028

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: the explanatory variables age and single years of education are centered. 1985 birth cohort captures those born not earlier than 1985.

rf: reference group

Last, we investigate suspected drivers of women's single years of education and the number of non-husband sexual partners in Table 8. The Program raises a woman's single years of education by 4.8months with the impact being domiciled among unmarried women. Older women in the 1985 birth cohort have significantly fewer single years of education compared to their pre-1985 birth cohort counterparts. Post-secondary training insignificantly affects the number of non-husband sexual partners among married women but significantly raises in the full women sample.

As years of education rise among women with post-secondary training, the number of sexual partners significantly declines. Being unmarried provides post-secondary trained-women with the impetus to have as many sexual partners as they desire[37]. The more time a woman spends accumulating post-secondary training, the likelier she appreciates that it isn't all about having many sexual partners.

	(1)	(2)	(3)	(4)
	Table 8: Education and the Number of Sexual Partners			
VARIABLES	Single years of education		Number of sex partners in a year	
		Married/ living with partner		Married/ living with partner
1985 birth cohort	0.401***	0.114		
	(0.0801)	(0.111)		

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[37] Marriage constrains married women/ women living with partners.

	(1)	(2)	(3)	(4)
Age	-0.0353***	-0.0311***		
	(0.00287)	(0.00493)		
Pre-1985 birth cohort's age (rf)	-	-		
Age for the 1985 birth cohort	0.0299***	0.0237**		
	(0.00611)	(0.0113)		
At least 13 single years of education			0.0824***	-0.0137
			(0.0258)	(0.0136)
Years of education			0.0174***	0.00143***
			(0.00112)	(0.000521)
Years of education fewer than 13 (rf)			-	-
Years of education for those with at least 13			-0.0354***	-0.000178
			(0.00843)	(0.00433)
Constant	7.679***	7.491***	0.256***	0.0340***
	(0.0329)	(0.0428)	(0.00683)	(0.00352)
Observations	32,156	18,312	16,901	9,650
R-squared	0.006	0.002	0.024	0.001

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$
Note: the explanatory variables age and single years of education are centered. 1985 birth cohort combines those born in 1985 and after 1985.
Rf: reference group

4.3 DISCUSSION

This paper analyzed how labor market outcomes among 15-49-year-old women in Kenya are affected by social interactions. Social interactions were proxied by the number of sexual partners. Post-secondary training and benefiting from free public elementary education (the Program) were used as treatment variables. Fuzzy regression discontinuity design was estimated. The model was tested for robustness in quantile regressions.

The Program mattered insignificantly when post-secondary training is considered; among married women, the Program was insufficient in driving a wedge in labor incomes. Post-secondary training significantly affected labor incomes among women. Labor incomes declined in the full women sample for an additional non-husband partner among women with at least 13 single years of schooling. Married women's labor incomes were insignificantly affected by non-husband sexual partners. Incomes declined significantly and massively among women within the 50th quantile. Lastly, the number of non-husband sexual partners declined significantly in single years of schooling among post-secondary trained women whereas husband's and wife's unemployment caused each other.

Unlike Mulwa & Gichana (2020) that reveal education generally raising labor market participation rate, we argue that post-secondary training matters a lot. We find no reason to believe that a woman's socioeconomic status during childhood was definitive. This is because the 1985 birth

cohort that fairly benefitted from free public elementary school education earned almost similar wages to the pre-1985 birth cohort when post-secondary training is accounted for. While we appreciate that affluence presents an individual with initial advantages that raise the chances of schooling (Enfield, 2019), we find insignificant differences in single years of schooling between the 1985 and the pre-1985 birth cohorts. Similar to Ibourk & Elouaourti (2023) and Jones et al (2023), we attribute the high labor incomes reported among post-secondary trained women relative to their counterparts with lower educational attainment to high reservation wages. Besides, only a small fraction of individuals enrolls in and graduates from post-secondary training (Jones et al, 2023). Hence, individuals with post-secondary training receive a labor income premium. Lastly, our hypothesis that labor market outcomes among women are affected by the number of sexual partnerships is discarded. We treat such partnerships as convenience arrangements and pleasure-seeking endeavors rather than initiatives strategically exploited to shape labor market outcomes.

5. CONCLUSIONS AND RECOMMENDATIONS

We conclude that education subsidies targeting lower educational levels such as the Free Public Elementary School Education in Kenya have minor effects on single years of schooling not exceeding 5 months. Similarly, the number of sexual partners drastically erodes labor incomes only for women in the 50th quantile. Much of the observed women's labor income wedge in Kenya depends on post-secondary school training and the years spent furthering a woman's study beyond grade 12. We suggest that the Government of Kenya and its developmental partners invest in enhancing the enrolment and completion of further studies, notably; college, TVET, and university.

REFERENCES

Alesina, Alberto, Paola Giuliano, and Nathan Nunn. "Traditional Agricultural Practices and the Sex Ratio Today." *PLOS ONE* 13, no. 1 (January 16, 2018): e0190510. https://doi.org/10.1371/journal.pone.0190510.

Annan, Jeannie, Aletheia Donald, Markus Goldstein, Paula Gonzalez Martinez, and Gayatri Koolwal. "Taking Power: Women's Empowerment and Household Well-Being in Sub-Saharan Africa." *World Development* 140 (April 1, 2021): 105292. https://doi.org/10.1016/j.worlddev.2020.105292.

Banerjee, Madhusree. "Gender Equality and Labour Force Participation: Mind the Gap." *ANTYAJAA: Indian Journal of Women and Social Change* 4, no. 1 (June 1, 2019): 113–23. https://doi.org/10.1177/2455632719831827.

Borrowman, Mary, and Stephan Klasen. "Drivers of Gendered Sectoral and Occupational Segregation in Developing Countries." *Feminist Economics* 26, no. 2 (April 2, 2020): 62–94. https://doi.org/10.1080/13545701.2019.1649708.

Brown, Camila, Dante Contreras, and Luis Schmidt. "Sexual Orientation and Labor Force Participation: Findings from Chile and Uruguay." *Feminist Economics* 25, no. 2 (April 3, 2019): 90–115. https://doi.org/10.1080/13545701.2018.1554905.

Bursztyn, Leonardo, Thomas Fujiwara, and Amanda Pallais. "'Acting Wife': Marriage Market Incentives and Labor Market Investments." *American Economic Review* 107, no. 11 (November 2017): 3288–3319. https://doi.org/10.1257/aer.20170029.

Cifre, Eva, María Vera, Israel Sánchez-Cardona, and Nele de Cuyper. "Sex, Gender Identity, and Perceived Employability Among Spanish Employed and Unemployed Youngsters." *Frontiers in Psychology* 9 (2018). https://www.frontiersin.org/articles/10.3389/fpsyg.2018.02467.

Clark, Shelley, Laszlo, Sonia, Kabiru, Caroline, and Muthuri, Stella. "Can Subsidized Early Child Care Promote Women's Employment? Evidence from a Slum Settlement in Africa." GrOW Research Series. (2019). https://aphrc.org/wp-content/uploads/2019/07/Mat-Employment_gwp-05-2017.pdf

Cortés, Patricia, and Jessica Pan. "Children and the Remaining Gender Gaps in the Labor Market." Working Paper. Working Paper Series. National Bureau of Economic Research, October 2020. https://doi.org/10.3386/w27980.

Delhommer, Scott. "Effect of State and Local Sexual Orientation Anti-Discrimination Laws on Labor Market Differentials." SSRN Scholarly Paper. Rochester, NY, June 16, 2020. https://doi.org/10.2139/ssrn.3625193.

Denier, Nicole, and Sean Waite. "Sexual Orientation at Work: Documenting and Understanding Wage Inequality." *Sociology Compass* 13, no. 4 (2019): e12667. https://doi.org/10.1111/soc4.12667.

Enfield, Sue. "Gender Roles and Inequalities in the Nigerian Labour Market," May 21, 2019. https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/14727.

Fairlie, Robert W. "Racial Segregation and the Private/Public School Choice," 2006.

Galiè, Alessandra, Nelly Njiru, Jessica Heckert, Emily Myers, and Silvia Alonso. "Gendered Barriers and Opportunities in Kenya's Informal Dairy Sector: Enhancing Gender-Equity in Urban Markets." *Gender, Technology and Development* 26, no. 2 (June 27, 2022): 214–37. https://doi.org/10.1080/09718524.2022.2084491.

Gebreyes, Bisrat Worku. "Socio-Demographic Determinants of Female Labor Force Participation in Ethiopia: Evidence from Gondar City, Amhara Region. 2019.

Grantham, Kate, Dowie, Gillian, and de Haan, Arjan. "Women's Economic Empowerment; Insights from Africa and South Asia," Routledge Studies in Development and Society. (2021).

Guli, Victoria Matatio Elia, and Nigatu Regassa Geda. "Women's Participation in Labor Force in Sub-Saharan Africa (SSA): A Review of Determinants and Impacts." *Archives of Current Research International*, April 17, 2021, 1–13. https://doi.org/10.9734/acri/2021/v21i230228.

Halpern-Meekin, Sarah, and Adam Talkington. "'Disconnected' Men: Understanding Men's Joint Roles as Workers and Romantic Partners." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 8, no. 5 (August 1, 2022): 98–119. https://doi.org/10.7758/RSF.2022.8.5.05.

Hassan, Mai, Larreguy, Horacio, and Russell, Stuart. "Who Gets Hired? Political Patronage and Bureaucratic Favoritism." (July 2023). https://www.dropbox.com/s/bjb1z0i8udcyjr8/biasedhiring_July2023.pdf?dl=0&s=03

Heintz, James. "Chapter Two: Stalled progress: Why labor markets are failing women." In Women's Economic Empowerment: Insights from Africa and South Asia. Routledge Studies in Development and Society. (2021); 51-74. https://idl-bncidrc.dspacedirect.org/bitstream/handle/10625/59714/Women%E2%80%99s%20Economic%20Empowerment%20-%20Insights%20from%20Africa%20and%20South%20Asia.pdf#page=74

Ibourk, Aomar, and Zakaria Elouaourti. "Revitalizing Women's Labor Force Participation in North Africa: An Exploration of Novel Empowerment Pathways." *International Economic Journal* 0, no. 0 (June 28, 2023): 1–23. https://doi.org/10.1080/10168737.2023.2227161.

Jayachandran, Seema. "Social Norms as a Barrier to Women's Employment in Developing Countries." *IMF Economic Review* 69, no. 3 (September 1, 2021): 576–95. https://doi.org/10.1057/s41308-021-00140-w.

Jones, Sam, Ricardo Santos, and Gimelgo Xirinda. "Employment Mismatches Drive Expectational Earnings Errors among Mozambican Graduates." *The World Bank Economic Review*, July 27, 2023, lhad018. https://doi.org/10.1093/wber/lhad018.

Kamau, Paul, and Wambui R. Wamuthenya. *Accounting for the Gender Gap in Urban Youth Unemployment in Africa: Evidence from Kenya*. AERC, 2021. http://18.184.231.194/handle/123456789/1974.

Karney, Benjamin R. "Socioeconomic Status and Intimate Relationships." *Annual Review of Psychology* 72, no. 1 (2021): 391–414. https://doi.org/10.1146/annurev-psych-051920-013658.

Klasen, Stephan. "What Explains Uneven Female Labor Force Participation Levels and Trends in Developing Countries?" *The World Bank Research Observer* 34, no. 2 (August 1, 2019): 161–97. https://doi.org/10.1093/wbro/lkz005.

Klasen, Stephan, TU THI NGOC Le, Janneke Pieters, and Manuel Santos Silva. "What Drives Female Labour Force Participation? Comparable Micro-Level Evidence from Eight Developing and Emerging Economies." *The Journal of Development Studies* 57, no. 3 (March 4, 2021): 417–42. https://doi.org/10.1080/00220388.2020.1790533.

Kyegombe, Nambusi, Rebecca Meiksin, Joyce Wamoyi, Lori Heise, Kirsten Stoebenau, and Ana Maria Buller. "Sexual Health of Adolescent Girls and Young Women in Central Uganda: Exploring Perceived Coercive Aspects of Transactional Sex." *Sexual and Reproductive Health Matters* 28, no. 1 (January 1, 2020): 1700770. https://doi.org/10.1080/26410397.2019.1700770.

Le, Kien, and My Nguyen. "Education and Political Engagement." *International Journal of Educational Development* 85 (September 1, 2021): 102441. https://doi.org/10.1016/j.ijedudev.2021.102441.

Leder, Stephanie. "Linking Women's Empowerment and Their Resilience," 2016.

Leon, Erendira. "Estimating Compulsory Schooling Impacts on Labour Market Outcomes in Mexico: Fuzzy Regression Discontinuity Design (RDD) with Parametric and Non-Parametric Analyses," 2022.

Lim, HanNa, and Preston Morgan. "Financial Integration and Financial Conflict: Does Less Financial Integration Relate to Increased Financial Conflict Between Romantic Partners?" *Journal of Family and Economic Issues* 42, no. 2 (June 1, 2021): 273–81. https://doi.org/10.1007/s10834-020-09703-x.

Lleras-Muney, Adriana, Matthew Miller, Shuyang Sheng, and Veronica T. Sovero. "Party On: The Labor Market Returns to Social Networks and Socializing." Working Paper. Working Paper Series. National Bureau of Economic Research, June 2020. https://doi.org/10.3386/w27337.

Longwe, Sara Hlupekile. "Education for Women's Empowerment or Schooling for Women's Subordination?" *Gender & Development* 6, no. 2 (July 1, 1998): 19–26. https://doi.org/10.1080/741922726.

Martell, Michael E. "Labor Market Differentials Estimated with Researcher-Inferred and Self-Identified Sexual Orientation." *Economics Letters* 205 (August 1, 2021): 109959. https://doi.org/10.1016/j.econlet.2021.109959.

McDonald, Patrick. "The Male Marriage Premium: Selection, Productivity, or Employer Preferences?" *Journal of Marriage and Family* 82, no. 5 (2020): 1553–70. https://doi.org/10.1111/jomf.12683.

Mijs, Jonathan J. B., and Elizabeth L. Roe. "Is America Coming Apart? Socioeconomic Segregation in Neighborhoods, Schools, Workplaces, and Social Networks, 1970–2020." *Sociology Compass* 15, no. 6 (2021): e12884. https://doi.org/10.1111/soc4.12884.

Moeeni, Safoura. "Married Women's Labor Force Participation and Intra-Household Bargaining Power." *Empirical Economics* 60, no. 3 (March 1, 2021): 1411–48. https://doi.org/10.1007/s00181-019-01800-7.

Mulwa, Martin, and Timothy Gichana. "Does Education Reduce Gender Differentials in Labor Market Participation? A Kenyan Perspective." *African Development Review* 32, no. 3 (2020): 446–58. https://doi.org/10.1111/1467-8268.12451.

Nelson, Alex J. "Sacrifice and the Agapic Love Gender Gap in South Korean Romantic Relationships." In *International Handbook of Love: Transcultural and Transdisciplinary Perspectives*, edited by Claude-Hélène Mayer and Elisabeth Vanderheiden, 1013–27. Cham: Springer International Publishing, 2021. https://doi.org/10.1007/978-3-030-45996-3_53.

Olarewaju, Tolu I. A., Tomasz Mickiewicz, and Jagannadha Pawan Tamvada. "The Returns to Occupations: The Role of Minimum Wage and Gender in Nigeria." *World Development Perspectives* 13 (March 1, 2019): 75–86. https://doi.org/10.1016/j.wdp.2019.02.012.

Olarewaju, Tolulope, and Julia Fernanado. "Gender Inequality and Female Entrepreneurship in Developing Countries." Switzerland: Springer, 2020. https://doi.org/10.1007/978-3-319-71058-7_92-1.

Ostry, Mr Jonathan David, Jorge Alvarez, Mr Raphael A. Espinoza, and Mr Chris Papageorgiou. *Economic Gains From Gender Inclusion: New Mechanisms, New Evidence*. International Monetary Fund, 2018.

Pedulla, David S., and Devah Pager. "Race and Networks in the Job Search Process." *American Sociological Review* 84, no. 6 (December 1, 2019): 983–1012. https://doi.org/10.1177/0003122419883255.

Pimkina, Svetlana, and Luciana De La Flor. *Promoting Female Labor Force Participation*. World Bank, 2020. https://doi.org/10.1596/34953.

Reichelt, Malte, Kinga Makovi, and Anahit Sargsyan. "The Impact of COVID-19 on Gender Inequality in the Labor Market and Gender-Role Attitudes." *European Societies* 23, no. sup1 (February 19, 2021): S228–45. https://doi.org/10.1080/14616696.2020.1823010.

Rose, Evan K, and Yotam Shem-Tov. "How Replaceable Is a Low-Wage Job?" *NBER Working Paper Series*, July 2023.

Rutherford, Blair, and Doris Buss. "Gendered Governance and Socio-Economic Differentiation among Women Artisanal and Small-Scale Miners in Central and East Africa." *Third World Thematics: A TWQ Journal* 4, no. 1 (January 2, 2019): 63–79. https://doi.org/10.1080/23802014.2019.1646614.

Sunder, Naveen. "Marriage Age, Social Status, and Intergenerational Effects in Uganda." *Demography* 56, no. 6 (December 2, 2019): 2123–46. https://doi.org/10.1007/s13524-019-00829-8.

Tanaka, Tomomi, K. Takahashi, and K. Otsuka. "Gains from Female Education in Rural Bangladesh: A Multidimensional Approach." *International Journal of Educational Development* 81 (March 1, 2021): 102344. https://doi.org/10.1016/j.ijedudev.2020.102344.

Tanaka, Tomomi, Kazushi Takahashi, and Keijiro Otsuka. "Increasing Female Education, Stagnating Female Labor Force Participation, and Gains from Marriage: The Case of Rural Bangladesh." *GRIPS Discussion Paper 19-34*, February 2020.

Waite, Sean, Vesna Pajovic, and Nicole Denier. "Lesbian, Gay and Bisexual Earnings in the Canadian Labor Market: New Evidence from the Canadian Community Health Survey." *Research in Social Stratification and Mobility* 67 (June 1, 2020): 100484. https://doi.org/10.1016/j.rssm.2020.100484.

Wamoyi, Joyce, Lori Heise, Rebecca Meiksin, Nambusi Kyegombe, Daniel Nyato, and Ana Maria Buller. "Is Transactional Sex Exploitative? A Social Norms Perspective, with Implications for Interventions with Adolescent Girls and Young Women in Tanzania." *PLOS ONE* 14, no. 4 (April 2, 2019): e0214366. https://doi.org/10.1371/journal.pone.0214366.

Xiao, Saizi, and M. Niaz Asadullah. "Social Norms and Gender Differences in Labor Force Participation in China." *Feminist Economics* 26, no. 4 (October 1, 2020): 114–48. https://doi.org/10.1080/13545701.2020.1758337.

Zhang, Kechun, Siyu Chen, Shiben Zhu, Yuan Fang, Huachun Zou, Yong Cai, Bolin Cao, et al. "Multifaceted Determinants of Sexual Intercourse with Non-Regular Female Sex Partners and Female Sex Workers among Male Factory Workers in China—A Cross-Sectional Survey." *International Journal of Environmental Research and Public Health* 19, no. 23 (January 2022): 16008. https://doi.org/10.3390/ijerph192316008.