

November 2006

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Recommended Citation

Elliott, Dawn Richards (2006). The Jamaican Female Skills Surplus and Earnings Deficit: A Holistic Explanation. *Journal of International Women's Studies*, 8(1), 65-82.

Available at: <https://vc.bridgew.edu/jiws/vol8/iss1/5>

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The Jamaican Female Skills Surplus and Earnings Deficit: A Holistic Explanation

By Dawn Richards Elliott¹

Abstract

This paper addresses the poor socio-economic performance of Jamaican females despite superior human capital. A holistic explanation exploring female lifestyle choices is advanced since discipline-specific theories fail to explain occupational clustering and the resulting earnings gap. It is hypothesized that both reflect lifestyle constraints, which may be linked to characteristics of the social environment. Since these constraints affect different groups of women differently, then policies designed to reduce occupational dis-similarity and female-male earnings gap must adapt a dis-aggregated analysis. Catherine Hakim's model of female dis-aggregation and data from the World Bank's Living Standards Measurement Survey, LSMS, are used to advance the underlying thesis.

Keywords: gender earnings gap, Jamaican institutions, occupational segregation

Introduction

Errol Miller (1994) first advanced the twin theses that Caribbean males are marginalized and that the source of the marginalization, in the case of Jamaica, is the result of education reforms that created a female teacher dominance in the classroom. The rapid response by Caribbean scholars, both empirically and otherwise, have undermined the thesis that male marginalization is the result of female classroom dominance. Unfortunately, the responses left the original claim of marginalization intact. The hypothesis explored here assumes that since a marginalized² group is one that carries neither socio-economic nor political power or leadership, then Jamaican males cannot be described as marginalized. This remains true even if as a group they exhibit a greater likelihood of socially deviant behavior such as relatively high school drop-out and crime rates. This definition of marginalization accepts the views of many Sociologists much of which are summarized in Peter Morrell's (2001) review essay titled "On Deviance, Marginality, and Social Exclusion" in the following ways: a marginal person is "...one who does not belong", pp.1, ..and marginal groups are ..."dislocated and dis-empowered people", pp.3, ; marginalized people ..."do not enjoy the same opportunities as the rest of us... They lack fulfillment of personal potential, cannot easily move towards independence", pp. 4,and their marginality means that they usually have a ..."lack of participation in social institutions...deprivation and exclusion from the social structures", pp. 4. Good examples of marginalized groups according to Morrell (2001) are the "disabled and previously long-term unemployed.....and ethnic minorities", pp.4. While it is often the case that the degree of deviation from social norms is greater among the marginalized, it is not the case that all marginalized peoples may be described as socially deviant. Equally true is the observation that while the centralized or non-

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² The verb marginalized means to "prevent from having attention or power - to take or keep somebody or something from the center of attention, influence, or power"
http://encarta.msn.com/dictionary_181628398/marginalize.html.

marginalized social groups are less likely to be socially deviant, the converse does not follow. In other words evidence of social deviance is not inconsistent with social dominance. In light of this, it is impossible to accept Miller's argument that Jamaican males with their political and economic dominance are an example of a marginalized group simply because as a group they demonstrate a greater tendency for socially deviant behaviors.

If this sociological view of marginalization is accepted, then this means that the aspect of the original Miller thesis that has not been adequately dealt with is why and how the Jamaican male with a wide range of socially deviant behaviors nonetheless remains socio-economically dominant. The reciprocal implications which has also not been addressed adequately, is why and how the allegedly relatively skilled Jamaican female with her implied superior human capital and a range of accepted social behaviors remain persistently marginalized; earning less than males; underrepresented in key decision making and leadership roles both in the private and public sectors; have relatively higher and longer rates of unemployment and lower rates of labor force participation; and relative to Jamaican males face a socio-economic deficit. While these issues are effectively both sides of the same coin, in this paper I focus on the female perspective, attempting to understand the long-run persistence of the Jamaican female socio-economic deficit as a key source of female marginalization.

In an attempt to explain this glaring counter-factual, that Jamaican males are marginalized while socio-economically dominant, Errol Miller (2004) has re-defined/sharpened the concept of male marginalization. Using a model that is rooted in his three-dimensional theory of patriarchy that includes "genealogy, gender, and generation" pp. 103, he argues that male marginalization is consistent with male socio-economic dominance and, by implication the reverse, female socio-economic deficit is consistent with female superiority. He explains that patriarchy, as the source of male and female marginalization, is the dominance exerted by older men on younger men and women within a given social group of which there are many in an advanced society. Within the dominant social group there is some upward female mobility as all the members of that group have a vested interest to collude against marginalized groups in the society. This situation results in male-female partnership within the dominant group. The negative effect of this collusion, what economists would call a market failure due to a negative externality, is the marginalization of men and women by the members of the dominant group. Additionally, women in the dominant group are themselves marginalized by men in the group despite some opportunities for upward mobility. In a nut-shell, the women in the dominant group are complicit in their own marginalization and that of other women and men as they collude to keep the group dominant.

This argument remains difficult to accept for a number of reasons. First, Miller continues to equate marginalization with social deviance, using evidence of social deviance, pp100, to justify claims of marginalization for men. This complicates his recent explanation as he ends up with marginalized men and women in his model despite offering no evidence, of female social deviance. Second, the idea that the dominant but marginalized women remain committed to group dominance at their own expense and despite equal opportunities demands an explanation of why individual goals are secondary to group goals that is simply not forthcoming. Third, while his model demonstrates the co-existence of marginalized men and women with dominant men, Miller cannot explain why men in all groups, dominant and otherwise, dominate women. Just a bothersome is the way in which Miller seems to accept

this as secondary simply because it is an un-intended consequence of women and men's collusion to maintain their group dominance over all. Fourth, it fails to account for the possibilities of collusive agreements outside of a particular group, for example women motivated by advancing the equal opportunities to all women or similarly a men's group. Finally, despite Miller's (2004) claim that marginalization is not permanent and instead subject to change, his model suggests a high degree of permanence. By subjugating the individual motivations of women in the dominant group, women will necessarily remain in subordinate positions to men. In Miller's words; "The fact that men of the dominant group retain most of the top positions and most strategic occupations and women of the dominant group are assigned mainly to the intermediate positions and less strategic levels in the occupational structure highlights the demarcation between senior and junior membership of the partnership. The fact that female marginalization in the dominant group is manifest in this arrangement is secondary to the fact that men and women in the dominant group are acting collectively in the interest of the group and against the other groups in society. Put another way, equality of access to opportunity within the dominant group is unlikely to make any material or substantial difference to the establishment, extension or consolidation of the hegemony of the dominant group over the other groups. Men and women of the dominant group are united in their intention to advance the interests of their groups against that of the others", pp123.

In light of the failure to explain why women in Jamaica despite tremendous gains in skills continue to operate with a socio-economic deficit this paper seeks an alternative explanation that explores the role of women's choices. In doing so, it must first be recognized that the co-existence of a female skills surplus with an earnings and power deficit is not unique to Jamaica as earlier Caribbean discussions seemed to imply. While empirical research throughout the world highlight a number of sources of female-male earnings gap including: (1) discrimination, Marianne Ferber and Helen Lowry (1974), Katherine Terrell (1992); (2) the distribution of females and males by job and skills type, Teresa Rees (1990), Derek Robinson (1998); and Richard Anker (1997); (3) hours worked; Christine Craig, Elizabeth Garnsey and Jill Rubery (1985); Mary Corcoran and Paul Courant (1980); Sara Horell, Jill Rubery, and Brandon Nurchell (1990), the theoretical explanations are less conclusive. These explanations are readily summarized as one of three types: (1) the assumption of male patriarchy, for example the Miller (2004) theory, as the underlying reason for earnings gap that are not the result of demand side discrimination; (2) differences in skills which favor men over women; and (3) cultural stereotypes that are used in hiring decisions. Despite varying degrees of usefulness, the long-run and apparently permanent nature of the earnings gap in Jamaica and other countries is not explained by these theories, Anker (1997). In the tradition of Nancy Folbre (1994) and Catherine Hakim (2000) I explore the alternative idea that women's choices, which is missing in these theories, may account for the failure to explain the observed earnings/skill gap.

Are Jamaican females really more skilled than Jamaican males?

Across the Caribbean region scholars have accepted the claim that Jamaican females are more skilled than Jamaican males, typically citing years in school, Katherine Scott (1992) enrollment at the tertiary level, and CXC³ general I and II passes, Christopher

³ CXC exams replaced most subject areas that were once dominated by the GCE Ordinary Level exams that

Crowe (2002), Eudine Barriteau (2001), Elsa Leo-Rhynie (1989), Hyacinth Evans (1998); Mark Figueroa (1996) and Verene Shepherd (2002). I too will use education as a proxy of skills with the implication that more education implies greater skills. While this introduces some inevitable bias in the discussion, it is unavoidable for two main reasons. First, the incidence of on the job training in Jamaica is small, a fact that is reflected in the World Bank's Living Standards Measurement Survey for 1997, LSMS97 data used. Since few Jamaican workers gain access to on-the-job training, outside of years worked, the classroom remains the primary source of skills acquisition. Second, while classroom training differs by school type and quality, for example vocational training compared to the traditional education route, there are no published data that makes this distinction. In the LSMS97 the 8083 respondents are simply asked about their years in school and the number of CXC passes. Since both CXC passes and school enrollment indicate the potential skills of individuals which may or may not be realized, then education is clearly not an ideal measure of skills. However, both the availability of education data and its unambiguous positive correlation with skills make it a useful proxy.

Of the three most used education criteria for skill measurement, two of them, the tertiary level enrollment and CXC passes may reflect a female bias. In order to illustrate this, I use data on CXC passes obtained from the Ministry of Education in Jamaica, reported in the appendix, at the general I and II for Mathematics, English, Caribbean History, Physics, and Biology. While it is readily apparent that, using this criteria, Jamaican females are more skilled than Jamaican males it is also clear that more Jamaican females sit for these exams, which are pre-requisites for tertiary enrollment and competitive job placement. Over the available nine year span, 1993-2001, it is without exception that the number of female participants in the CXC increased and male participants declined. Using the year 2000 for illustration, Jamaica had 293,900 students aged 12-18 enrolled in secondary schools, or approximately 71% of the 413,943 that were eligible. In that same year, 110,726 or 37.67 % of students enrolled in at least one CXC exam of which 40,690 or 13.84% were males and 70,036 or 23.83% females. This CXC participation gap is impossible to reconcile with the trends in secondary school enrollment for females and males. The female/male secondary school enrollment ratio declined between 1970-1998, achieving a 74/73% rate in 1998, World Bank Database (2004) and the trend continued through 2004, World Population Survey (2004). Assuming a 1% gap in 2000 in favor of female secondary enrollment this compares with a 10% CXC participation gap in favor of females.

While not reconcilable with enrollment trends, the increasing gap between female and male participation in CXC exams is easy to reconcile with a long tradition of academic screening in Jamaica. This is not an official policy of the Jamaican government, but it remains a key solution to the problem of limited resources and is widely practiced. Hyacinth Evans

(1998) reports on this practice pointing out that the criteria used in selecting students for the secondary school entrance examination are adhoc, reflecting teacher and school specific criteria of success. With widespread acceptance of the thesis that girls are stronger students than boys it is not surprising that more girls are selected for participation in the CXC.

were administered in the UK and offered to Caribbean students at the end of their 5th year in high school, 11th grade. The successful completion of a competitive number of passes at the general I and II levels determine a student's job and tertiary opportunities. They are administered by the Caribbean Examinations Council.

Despite the inability to confirm a causal relationship between academic screening and the dominance of females sitting for the CXC, the evidence offered is highly suggestive. This creates a challenge for claims of a female surplus that rely exclusively on CXC passes. Since a successful CXC performance is a prerequisite for tertiary enrollment, the same argument is true for claims of a female skill surplus that rely exclusively on tertiary enrollment.

Using a single variable as a basis for skill comparison is also problematic as the conclusions drawn are dependent on the unit of measurement. For example, when CXC general levels I and II passes mean years of schooling, and adult and youth literacy rates are used then females are more skilled than males with varying degrees. If, however, CXC general level III and CXC basic levels I, II, and III passes, appendix, are used then a female skill gap is not readily apparent. If the distribution of males and females in trade specializations, technology and office procedure, are used, appendix, then males carry a skill surplus under the assumption that technology based specializations are more skill intensive. Since the conclusion about female/male skills is important, I propose that a female and male skills index replace the trend of using a single variable. Based on the available data, skills are calculated as an average of secondary/tertiary enrollment and youth literacy rates. Following the methodology employed in the Human Development Index (2003), literacy is weighted 2/3 and the sum of secondary and tertiary enrollments are weighted 1/3.

Table 1 - Skills Index*

	1975	1980	1985	1990	1998	2000
FSEC	0.62	0.68	0.60	0.65	0.74	0.85
FTERT	0.04	0.04	0.04	0.06	0.07	0.21
MSEC	0.53	0.61	0.55	0.62	0.73	0.82
MTERT	0.05	0.05	0.05	0.08	0.09	0.11
FLIT	0.91	0.92	0.94	0.95	0.96	0.97
MLIT	0.81	0.83	0.85	0.87	0.89	0.91
FSI	0.83	0.85	0.84	0.87	0.91	1.00
MSI	0.73	0.77	0.77	0.81	0.86	0.92
FSI-MSI	0.10	0.08	0.07	0.06	0.05	0.08

FSec = female secondary enrollment; FTert = female tertiary enrollment; MSec = male secondary enrolment; Mttert = male tertiary enrollment; Flit = female literacy rate; Mlit =

male literacy rate; FSI = female skill index; MSI = male skill index.

Are Jamaican females more skilled than Jamaican males? Using the skills index for the period 1975 -2000, Jamaican females were on average more skilled than Jamaican males. Both male and female skills improved resulting in a closure in the skills gap between 1975-1998, which then widens in 2000 to the 1980 level. The source of the increased gap, between, 1998-2000, is the jump in female tertiary enrollment with two females per male. If this continues, the female skill surplus will continue to increase offsetting the longer-term closure in female-male school enrollment gaps.

Do the more skilled Jamaican female earn more than the less skilled Jamaican male?

All things constant, economic theory predicts a positive relationship between skills, productivity, and earnings. Using the skills index, national data reveal that on average Jamaican women are more skilled than men. This implies—all things constant—that females on average should earn more than men. Table II reports summary statistics derived from the LSMS97 data set on education and earnings for women and men in both rural and urban parishes of Jamaica and based on employment in both government, private, and the unregulated sector. From the 8083 responses, there were 3984 and 3711 reported women and men respectively of which 2573 women and 2473 men were between 14-72 and considered here. More men work than women, 72% of men compared to 55 % of women. Since it is impossible to distinguish between self-employment in the formal sector and work in the informal sector, I assume that all reported “own account” employment in the LSMS97 survey represent employment in the informal or un-regulated sector. I justify this assumption on the prevalence of the informal economy in Jamaica, which has been placed as high as 50% of GDP in recent public documents and even higher in the unpublished works of a few Caribbean scholars. In the informal economy women are the largest group of workers and it is estimated that at least one-half of self-reported incomes in Jamaica represent work in the informal sector.

On average Jamaican men earn more than Jamaican women. These findings are independent of location, skills, and whether employment is in a regulated sector or not. For example, in the Kingston, St. Andrew, and St. Catherine parishes, all urban areas, females in the informal sector earn 22%, 176%, and 65% less than the similarly employed males.

Table II - Skill and Monthly Income of Urban and Rural Jamaican Workers

	KG^N4	AND	CATH	JMES	CLAR	PORT	ELIZ	MANC
%FOWNP	89	74	83	100	93	83	89	94
%FOWNS	18	38	37	30	44	0	7	3
%FEMPLP	77	75	98	100	88	87	95	100
%FEMPLS	30	68	70	54	58	12	32	14
FOWNIN	11808	8042	6776	10522	7125	2564	4954	4966
FEMPLIN	7476	14881	12383	10488	3315	6581	4736	7027
%MOWNP	88	72	91	100	89	100	90	89
%MOWNS	40	43	31	17	25	35	19	11
%MEMPLP	91	75	88	100	96	67	95	100

⁴ Kingston (KGN); St. Andrews (AND); St. Catherine (CATH); St. James (HMES); Clarendon (CLAR); Portland (PORT); St. Elizabeth (ELIZ); and Manchester (MANC). FOWNP = %Female own account workers completed primary school; %FOWNS = %female own account workers completed secondary schools; %FEMPLP = %female employed by the formal sector completed primary school; %FEMPLS = %female employed by the formal sector completed secondary school; FOWNIN mean income of female own account workers; FEMPLIN = mean income of females employed by the formal sector; %MOWNP = %male own account workers completed primary school; %MOWNS = %male own account workers completed secondary school; %MEMPLP = %males employed by the formal sector completed primary school; %MEMPLS = % males employed by the formal sector completed secondary school; MOWIN = mean income of male own account workers; MEMPLIN = mean income of males employed by the formal sector; %FCOLLEGE = % females completed college; %MCOLLEGE = %males completed college; %F1CXC/OLEVEL = % of females with at least 1 CXC/OLEVEL subject; %M1CXC/OLEVEL = %males with at least 1 CXC/OLEVEL subject.

%MEM PLS	46	59	56	46	52	36	36	14
MOWN IN	14444	22213	11197	7172	9208	3427	8207	5382
MEMP LIN	10747	37317	17772	10674	10192	4924	12478	18363
%FTE RT	2	12	6	6	3	4	0	0
%MTE RT	0	8	5	5	4	0	2	2
%F1CX C	2	19	17	15	11	7	4	6
%M1C XC	0	15	15	7	7	0	4	4

For the formal sector, in the same parishes, the typical female earns 44%, 151%, and 46% less than similar males. On average, Jamaican men also earn more than Jamaican women in rural parishes. For Clarendon, Portland, St. Elizabeth, and Manchester, all rural parishes, males in the informal sector earn 29%, 34%, 66%, and 8% more than similarly employed females while those males employed by the formal sector earn 207%, -34%, 163%, and 16% more. From this data and the remaining unpublished six parishes, a number of stylized facts are worth noting:

1. More females and males in the formal economy completed secondary schools, and not surprisingly females and males in this sector earn more than females and males in the informal sector.
2. More men completed secondary schools than women in the LSMS97 sample. In 5 of 8 parishes the share of men who completed secondary schools exceeds that of women.
3. Women are more skilled than men. In 6 of 8 parishes more women had at least one CXC pass than men and more women were enrolled in tertiary institutions than men.
4. Men, on average, earn more than women. In 7 of 8 parishes, men employed by the informal sector earn more than women despite strong similarity in the skill levels. In 7 of 8 parishes, men employed by the formal sector earn more than women despite a trend of greater female skills in this cohort.

So why do Jamaican women earn less than Jamaican men?

Theoretically earnings gap reflect differences. These differences may be due to a number of variables, of which the more common sources include; skills, gender (demand side discrimination), occupational segmentation, hours worked, labor market participation, and female choices. Female choices are the focus of this paper simply because it is difficult

to reconcile the popular alternatives within the Jamaican context. It is clear from the reported tables, for example, that the earnings gap is not readily reconciled with the skills gap explanation. Jamaican women do not earn less than Jamaican men because they are less skilled. This has also been confirmed by regression analysis, Katherine Scott (1992). The second explanation that the earnings gap is due to discrimination while often cited as an explanation of last resort is in fact notoriously difficult to prove. As Derek Robinson (1998) notes, without an observation of women and men in the same establishment performing the same duties, under the same conditions, and with similar duties, skills, experience, and levels of training it is most difficult to attribute higher earnings for men to systematic discrimination against women by men. In the case of Jamaica it is particularly difficult to attribute these gaps to one of systematic discrimination, because women in Jamaica earn less than men in all sectors, formal and informal, for all type of employers, public or private, and in all parts of the Island, urban or rural. The channels for discrimination typically involve a male dominated hiring structure that, while present in the formal sector, is completely absent in the very large and female dominated informal sector. While women may still face discrimination in the informal sector, if for example consumers purchasing from street vendors have a preference for male sellers, opportunities for demand-side discrimination are not present. Of the remaining standard explanations, both unemployment rates and labor force participation rates favor Jamaican men and their earning potential. Nationally, the unemployment rate of women to men is approximately 2:1, and labor force participation rates for men while falling recently remains in the low-mid 70% range and for women low-mid 50% range, www.statinja.com. While more men work than women, a fact that is confirmed in the LSMS1997 there is no apparent trend of employed men working more hours than employed women. These statistics shed no light on why women choose to work less than men and without a more explicit focus on women's choices little insight is possible.

This is also true regarding the question of why women choose to work in the sectors/job categories that they do. The fact is that Jamaican employment exhibits a very high degree of asymmetry across occupation categories, and it has been documented and confirmed that occupation differences is an important source of earnings gap throughout the world. Earlier evidence on CXC passes indicate a skill-segmentation with defined female and male specializations, typically with participation rates in excess of ninety percent. For the larger population, a high degree of dis-similarity of women's and men's work is and has been the norm for Jamaica and other countries in the region. George Psacharopoulos and Zafiris Tzannatos (1992) confirm a high concentration of women in services, relative to industry and agriculture, for nine countries in the Latin America and Caribbean region. For Jamaica they report that during the 1980s the female:male concentration was 80:32 for services; 12:30 for industry; and 8:39 for agriculture. From the same study, the authors calculate the degree of occupational dissimilarity for Latin American and Caribbean countries, depending on data availability, and noted that for Jamaica and Peru, from 1960 to 1982 the degree of occupational segregation increased for the entire labor force. The degree of dissimilarity may be determined by the Duncan index:

$$D = 0.5 \sum_{i=1}^N |f_i - m_i|$$

Where, f_i and m_i are the share of females and males in each occupation respectively and there are a total of N occupations. The index, which is equal to one-half of the sum of the absolute difference in female and male employment ratios, takes a value between 0 and 1. If

the distribution is perfectly symmetrical then $D = 0$ and there is no need for a redistribution in the population in order to achieve occupational symmetry. If there is perfect asymmetry, then D is one and this implies that a 100% shift in the population is needed to bring about symmetry. Using the LSMS97 data I calculate the Duncan Index for Jamaica using the 253 reported occupations in the LSMS97. The Index value of 0.6298 indicates that the occupation distribution would have to shift by approximately 63% in order to achieve equal shares of women and men across the 253 industries. Using the same data, I aggregate the occupations using the Occupation Classification Code that was available, 1984, as a guide where the lowest numbers indicate the greatest levels of skills and the highest numbers the lowest, Table III. In between these two extremes, are various occupation levels that while relatively low in traditional education they exhibit varying degrees of skill, for example woodwork and stone cutting professions that demanded vocational or similar training. The raw data indicate that for mid-level occupations there are more occupational categories in which men work, and not surprisingly the degree of dissimilarity is greatest.

Table III - Duncan Index by Occupation Categories

Occupations	Duncan Index
1111-1392: Professional, Technical, Services, Health, Teaching, Accountant, Law	0.4612
2113-2461: Administrative, Executive	0.5179
3113-2461: Clerical, Sales, Transportation	0.7154
4111-4241: Self Employed	0.5365
5111-5232: Service, Sports, Recreation	0.3686
6111-6153: Craftsmen, Production Processes	0.1887
7112-7442: Wood and Stone	0.8496
8111-8422: Electrical, Assembling, Installing	0.8581
9110-9998: Unskilled	0.5705

At the highest skill level the index reveals the greatest symmetry an observation that is reconcilable with the strong female performance at the highest levels of education. The increase in the index at the Administrative, Executive rank is also reconcilable with the business structure in Jamaica which remains a male domain at the level of director and executive management, at least for publicly traded companies. The very high value in the

strongly male dominated areas of electrical equipment and wood working are not surprising, and neither is the high value in the clerical occupations which have a strong female presence.

The earnings gap in Jamaica: Making the case for a Holistic explanation

The need for a holistic approach exists because of a persistent earnings and occupation gap, in Jamaica and around the world that is not explained by discipline-specific theories which invariably fail to account for women's choices and the conditions that influence those choices. Occupational segregation, like other cases of segregation, are social concerns and a social science approach offer opportunities that are missed by discipline-specific theories. The call for a general approach was first made and answered by Myra Strober (1984) who chose to merge the feminist perspective of patriarchy with the neoclassical focus on income maximization, in this case as pursued by males, while acknowledging the social limitations afforded to various groups. Strober (1984) argues that since males are the hiring agents and since they are vested in maintaining patriarchy they discriminate against females in hiring decisions. Given the assumption that these discriminating agents are also motivated by the goal of profit-maximization, such discrimination invariably affects the profit payoff, and hence, over time, Strober's (1984) theory implies that discrimination will end and so too will female clustering and the female-male earnings gap. It is precisely because of these persistent gaps why Karen Oppenheim Mason (1984) rejects the explanation offered by Strober (1984). While for the same reason, and the observation that it is not general enough to explain earnings gap in the large informal sector of developing countries, I too reject Strober's (1984) explanation. Unlike Mason (1984), I retain Strober's (1984) call for a general theory that needs, however, to be holistic in scope. Like Strober (1984) I share the view that a general theory provides an opportunity for explaining the global persistence of female-male earnings gap that are not reconcilable with mainstream economic theory. Unlike Strober, this general theory needs to reflect the contributions of the social science community as neither occupational segregation nor earnings gap are purely economic concerns. It is not surprising that in the absence of a holistic approach economic self-correcting explanations of occupational segregation, and the earnings gap it perpetuates, fail to explain these persistent labor market outcomes. This failure is also true of the attempt by the Caribbeanist Mark Figueroa (1996) to broaden the economic explanations with the Male Privileging Thesis. Like Strober (1984) he extends his analysis beyond the idea of economic rationality to include the role of culture. Figueroa (1996) argues that men, with their historical advantages continue to dominate Caribbean societies despite the female skill surplus because the culture adopted a male bias. This male biased socioeconomic culture, which is similar to the feminist's notion of patriarchy, is, the theory goes, not unusual and will necessarily be altered with cultural changes over time. Figueroa's (1996) thesis is also highly reconcilable with the statistical discrimination explanation that is common in US labor market analysis. While neither are self-correcting processes there is still an inevitability associated with both of these theories which predict that when the culture and perceptions of the average woman change, then the male and female clustering and the female-male earnings gap will be eliminated. In addition to the failure to explain long-run gaps, none of these theories factor in the role of women's choices and hence their employment choices are purely exogenous.

A relatively smaller number of economists disagree. These include Julie Matthaei (1982); and Alice Kessler-Harris (1981). Theories in this tradition explicitly model the role

that women play in perpetuating prevailing gaps, an approach that is strongly critiqued for what appears to be their “blame the victim” style, Strober (1984). Ignoring the role of the supply side or women’s choices while common in economics, is much less so in other social sciences, including sociology and psychology and the broader political economy where scholars argue that social and historical contexts help to explain patterns of segregation and labor force participation; Margaret Mooney Marini and Mary C. Brinton (1992); Randy Albelda, Robert Drago and Steven Shulman (1997). In order to better explain occupational segregation in general and the special case where females and males are similarly trained, a holistic approach modeled around female choices which reflect social and historical constraints is proposed.

Understanding Female Lifestyle Choices: A Holistic Approach

Motivated by the observation that Jamaican females, like many in the greater world, make lifestyle choices that do not lead to equitable socio-economic nor political outcomes, this paper offers a holistic explanation that draws on insights from the institutionalist school of thought; the feminist economist Nancy Folbre’s structures of constraint theory; identity theorists George A. Alkerolf and Rachel Kranton (2000) and the sociologist Catherine Hakim’s preference theory. All conjectures that are made assume an environment in which social institutions constrain individual choices. The term institutions refer to the formal and informal codes that direct human behavior. Social institutions direct human behavior by conferring social identities which influence decision making. Since there are many socially constructed identities there are necessarily many sub-groups within any broader social group, e.g. there are many categories of females⁵ within a given society. In order to better understand lifestyle choices, especially where they generate or exasperate relative disadvantages, a social decomposition of the relevant group is both appropriate and useful. Dis-aggregation recognizes that since social identities constrain decision making, then individuals may engage in behaviors that are difficult to understand when the constraints they face are ignored, Alkeroff and Kanton (2000). In addition to social identities, which are culturally bounded, private decision-making may also be influenced by the policies of the state.

Women, like all other social groups, make lifestyle decisions that balance cost/benefit trade-offs given the social constraints they face. Since each social group of women face a different set of constraints, a dis-aggregation by lifestyle choice will help to explain why Jamaican women make choices that do not create an opportunity for socio-economic parity with Jamaican males. I use Catherine Hakim's (2000) dis-aggregation, which models three types of females: the career only, home only and the adaptive. Hakim (2000) argues that in developed nations adaptive females are the largest group and includes both career and non-career full time female workers as well as those working part-time. All adaptive women balance child-care and other familial responsibilities with work. On the polar ends are the

⁵ Audrey VandenHeuvel (1997) points out that typing women based on their labor force participation is not new. The trend, however, was a dual one: women either worked or not. She argues that this is not true, and instead there is significant fluidity that depends on a number of variables including the number of children. Hakim's (2000) Preference Theory is reconcilable with this as the adaptive female implicitly recognizes fluidity in female lifestyle choices.

career and home only females neither of which face the same trade offs in their lifestyle choices as adaptive females. While Hakim's (2000) proposed dis-aggregation of females by lifestyle choice reflects the social conditions of high income countries, the level of aggregation and generality is very high and that allows the classification to be useful for a low/middle income nation like Jamaica with noted adaptations. For Jamaica I hypothesize, like Hakim (2000), that there are three broad categories of females: adaptive, home and career only. The social context of Jamaica requires some re-definition of the characteristics of these categories of women. These adaptations will, however, make greater sense with a prior summary of relevant aspects of the institutional setting of Jamaica.

In Jamaica, like many other Caribbean nations, marriage rates are very low, fertility rates are high and there is a high incidence of absentee fathers. Using 1998 data, the International Planned Parenthood Federation country profiles indicate that over half of Jamaican households are headed by females. Ten years earlier, the Survey of Living Conditions reported that the share of female-headed households was 39.3 percent for all of Jamaica and confirmed that this share was sensitive to income levels. Specifically, for 1988 the poorest 20% of the population had a female headship of 47.4% while the wealthiest 20% had a female headship of 31.9%. Jamaican females have a high fertility rate of 3 per woman. In Jamaica the birth rate is greatest for the 15-19 age cohort, 108 per 1000 of live births, and by the age of 19, 45% of Jamaican women have given birth, Contraceptive Prevalence Survey (1993). The single-female-headed household in the Caribbean has been researched by many including Barrow (1986); Massiah (1983; 1986); Shepherd (2002) and there is a high degree of consensus regarding the characteristics of these households. These include the fact that they are larger and poorer than male-headed or married households. While the disadvantages of increased household socioeconomic responsibilities are generally the focus of most analysis, others argue that there is an advantage that is conferred on women. It is argued that females invariably assume a more prominent position at home and in the community and in the overall socialization process. It is reasonable to expect that with a socialization advantage, single-female-headed households influence the choices of female offspring's and this may contribute to female clustering in service occupations, a link that was confirmed for the US by Corcoran and Courant (1987). Additionally, the institutional setting described places significant limits on female lifestyle choices by raising the opportunity cost of work outside the home and effectively reducing the employability of women relative to men.

Given this environment I expect like Hakim (2000) that the adaptive female and the home only female will be the largest groups of women. Unlike Hakim (2000) the Jamaican home only is not likely to be engaged exclusively in home production. Instead, I expect her to be engaged in a range of income-generating activities outside of the formal economy. I justify this based on the high incidence of poverty; poor distribution of income; large and upward trend in the informal economy that is largely female; relatively high but declining female labor force participation rates; and limited welfare policies by the state. There is substantial evidence that in general Caribbean women are active participants, in some cases leading participants, in their nation's informal economy, Michael Witter (1989); Annette Isaac (1986). What might then appear to be a high incidence of non-working or home only women in the Hakim (2000) sense could be highly mis-leading for Jamaica and countries with a large informal economy. Re-defining home-only females to include the traditional home-only females as well as females engaged in the informal economy, if this group of

females is not already the largest group it is certainly conceivable that they will be in the near future. Currently there are approximately 915 million women older than fourteen years and of that about one-half participate in the formal labor force. With the social environment just discussed and with secondary school and CXC participation rates relatively low, it is reasonable to assume that the majority of the remaining 457.5 million women are not career only women. I retain Hakim's (2000) description of the career only female. I expect a relatively small but increasing share of this group given the academic advances of women and the documented declines in fertility rates, Survey of Living Conditions (1989: 1974).

Using these three categories of women, I propose that in Jamaica occupational segregation and the earnings gap persists because the social constraints on women are great, especially for the two largest groups the adaptive and home-only as defined by this study. These constraints are exasperated by the poor record of the state, private employers, and non-governmental organizations in areas that would provide relief. For example, gross income less the universal tax-free threshold of J\$120,000 less pension is taxed at the same rate of 25% irrespective of family size or income. This regressive tax structure implies that the tax burden is greatest on the poorest Jamaican households, of which large numbers are female-headed and their dependent children. Support for the hypothesis that Jamaican female lifestyle choices are limited by social constraints is gained from the LSMS97 data for females not employed but seeking work. Of 2573 women between 14 and 72, 55% work and 45% do not. Of that 45%, 771 or 30% are reported as "stay at home", 322 or 13% attend school full time and 146 are reported as "other". Of the 917 "stay at home" and "other" non-working women, 31% or 286 provided information on the reasons why they find it difficult to accept employment. Of this group of women 57% cited home/child care constraints; 35% cited no constraints; 6% cited illness; and 2 % cited "other." These figures stand in strong contrast to the 204 men who responded. Of this group 79% saw no constraints on accepting work; 14% illness; and 5% other/school. None of the male respondents saw familial duties as a constraint on their work choices compared to 57% of women. While the LSMS97 survey does not provide the same information for the working Jamaicans, the constraints revealed by the unemployed group of men and women is strongly supportive of the argument that the structures of constraints influence work lifestyle choices in general. What is not apparent from the LSMS97 survey, but nonetheless reasonable, is the conjecture that these constraints serve to direct males and females into those jobs/careers that minimize the reported constraints. Pat Ellis's (1986) study on the greater Caribbean supports this idea, however. She reports that in the Caribbean there are a number of constraint minimization efforts including: the formation of social networks; clustering in low-skilled occupations, and employment opportunities outside of the formal economy.

Conclusion

Errol Miller (1994) correctly recognizes that Caribbean societies need to address the relative under-performance of males. The reciprocal of this, which has been the focus of this paper, is the relative superior performance of females in an environment for which males continue to dominate the socioeconomic landscape. The recent Miller (2004) explanation that a marginalized social group may also be a socio-economically dominant group is inconsistent with the experiences of socially under-represented groups. While a socio-economically dominant group is not consistent with marginalization and a marginalized group is not consistent with socio-economic dominance, both the marginalized and the socio-

economically dominant groups may exhibit socially challenging behaviors. These behaviors, while detrimental in many ways both to the group and society at large, do not prevent socio-economic gains. The issue that remains un-addressed by the Miller (2004) thesis is why women in Jamaica continue to earn less than men despite greater skills, or for that matter the reverse—why men with relatively limited skills earn more than women in Jamaica. This paper demonstrates that Jamaica has an institutional environment that encourages the marginalization of females, and the socio-economic dominance of men despite a greater tendency for socially challenging behaviors from men. Despite the fact that Jamaican females are taking advantage of academic opportunities and are succeeding, the outcome of academic and occupational segregation and its consequence of a persistent socio-economic divide prevail. Education by itself cannot be expected to reduce the constraints on female lifestyle choices. Instead, the private sector, NGOs, the state, and the community all have a role to play in alleviating the structures of constraints faced by various groups of women in the region. A first step in identifying the degree to which these constraints prevail, is the recognition that females need to be analyzed at a micro-level, in this case by lifestyle choice, in order to better gauge the factors to which each category of female responds. Through disaggregation of females the opportunity for policy efficiency can only improve.

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Appendix

CXC General Passes by Sex and Subjects - Jamaica 1993 (1998) [2001]							
Subject	% F	% M	%F I	%M I	% F II	% M II	%F/M III
Biology	63.53 (64.3) [70.06]	36.47 (35.8) [29.94]	4.02 (3.3) [2.06]	3.03 (2.2) [2.22]	35.15 (14.2) [11.03]	32.29 (14.1) [14.06]	0.964 (0.836) [0.953]
Chem	51.94 (56.7) [61.44]	48.06 (43.3) [38.56]	8.73 (1.8) [3.30]	7.11 (2.7) [2.52]	36.85 (14.9) [9.89]	37.75 (15.7) [12.08]	1.157 (0.939) [1.093]
Physics	33.31 (41.3) [42.9]	66.69 (58.7) [57.2]	16.25 (5.3) [6.91]	13.26 (4.0) [3.98]	34.55 (22.3) [21.29]	28.57 (18.7) [16.14]	0.959 (1.297) [1.128]
Math	59.93 (59.7) [60.25]	40.07 (40.3) [39.75]	4.79 (2.5) [2.62]	6.69 (2.9) [2.81]	17.23 (6.2) [8.02]	22.64 (7.6) [8.33]	1.023 (0.857) [0.998]
History	64.84 (66.4) [68.1]	35.16 (33.6) [31.92]	17.14 (12.2) [10.51]	11.01 (8.3) [6.11]	33.95 (30.8) [28.88]	32.79 (25.2) [23.20]	0.891 (0.943) 0.903
English	72.20	27.80	11.32	4.94	42.37	31.83	0.908

CXC General Passes by Sex and Subjects - Jamaica 1993 (1998) [2001]							
Subject	% F	% M	%F I	%M I	% F II	% M II	%F/M III
	(71.3) [74.16]	(28.7) [25.84]	(14.8) [10.56]	(6.8) [5.18]	(23.9) [23.06]	(16.8) [15.93]	(0.986) [1.175]

Appendix

CXC Passes - Trade Specializations - General 1993(1998)[2001]								
Subject	%F	%M	%F1	%M1	%FII	%MII	%FIII	%MIII
Building Tech.	7.47 (3.10) [10.00]	92.43 (97.00) [90.00]	15.38 (20.00) [10.00]	9.32 (4.40) [12.54]	76.92 (40.00) [20.00]	65.84 (39.00) [38.28]	7.69 (30.00) [53.33]	21.12 (43.40) [29.70]
Electrical Tech.	6.23 (8.00) [8.40]	93.77 (92.00) [91.60]	0.00 (0.00) [3.03]	3.15 (2.20) [1.53]	36.84 (14.00) [22.73]	37.76 (21.70) [22.92]	52.63 (60.50) [51.52]	47.90 (54.60) [43.75]
Food Nutrition	94.66 (91.00) [87.44]	5.34 (9.00) [12.56]	9.74 (9.00) [3.45]	4.76 (4.40) [1.24]	43.88 (42.60) [39.53]	36.90 (28.30) [24.50]	34.01 (30.30) [41.41]	40.48 (40.70) [47.52]
Home Econ.	95.62 (94.50) [89.89]	4.38 (5.50) [10.12]	14.76 (21.50) [15.25]	5.56 (7.40) [7.69]	47.84 (36.90) [45.12]	41.67 (28.40) [39.32]	28.88 (32.00) [28.19]	44.44 (45.30) [39.32]