

Unlimited unskilled labour and the sex segregation of occupations in Jamaica

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***Abstract.** In the developing world, standard measures of occupational segregation by sex may be deeply misleading because of structural, cultural and historical differences between developing countries and the developed countries that often feature in studies of segregation. In Jamaica in particular, the legacy of slavery has made female labour an integral part of the workforce for centuries – whereas large-scale female participation in the developed countries can only be measured in decades. The authors find that the country's large, undifferentiated pools of unskilled labour ironically translate into lower levels of occupational segregation, with women outpacing men in the professional categories.*

High levels of occupational segregation by sex do not always translate into simple narratives about male domination or female disadvantage – especially in the developing world. Before we can make sense of occupational segregation and wage differentials, we must first ensure that structural or cultural factors – like a country's labour force composition and its history – are not unduly shaping what these measures mean. While wage differentials will be addressed in a subsequent paper, we argue here that, in Jamaica in particular, certain structural and cultural peculiarities make analyses of sex segregation misleading at best. The reason for this is the large proportion of unskilled labour that tends to exist in poor countries – and the way that such large, undifferentiated pools of labour can influence observed occupational segregation.

In the Caribbean, plantation economies emerged from the system of slavery (see Beckford, 1972). Slavery depended on those pools of unskilled manual labour, and so it used the brutal architecture of the plantation economy to control that labour. Plantation economies defined the structure of the

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labour force, shaped gender relations and produced social dynamics that are strikingly different from those that exist in the developed countries.

The remainder of this article is organized into four main sections. The first discusses some of the structural determinants of occupational segregation by sex in the developing world. The second presents our data and measurement methodology. The third section descriptively reviews available labour force statistics on age, education, training and occupational categories, and analyses the data on segregation. The fourth section concludes.

Structural determinants of occupational segregation by sex in the developing world

After the Second World War, the Saint Lucian economist and Nobel Prize laureate, W. Arthur Lewis (1958) drew attention to the “unlimited” supply of unskilled labour in poor countries by noting that there were typically more people willing to work at the subsistence wage than there were jobs. Lewis highlighted the “disguised unemployment” that existed in the small agricultural holdings that were typical of the rural Caribbean (*ibid.*, p. 402). For example, while all the members of a (family) farm might technically be listed as farmers, the productivity of the land would be unaffected if some members sought employment outside the farm. Lewis noted similarly large pools of casual workers and small retailers in the developing world’s urban areas. Though nominally employed, they were in fact surplus, unskilled labour. To put this in perspective, in 2010, 71.1 per cent of Jamaica’s employed labour force had no training whatsoever – no vocational training, no tertiary training, no on-the-job training. In that same year, 65.7 per cent of Jamaica’s total employed labour force had never passed a regional or national qualification exam, or attained a degree. Such a large, undifferentiated pool of unskilled labour is bound to have a profound effect on calculations of occupational segregation like the Duncan and Duncan (1955) Index of Dissimilarity. It would necessarily translate into low levels of segregation, making the findings either misleading or irrelevant. Indeed, if the vast majority of people (both male and female) are unskilled labourers, then the most pressing concern is not segregation *per se*, but the fact that most workers are unskilled.

Similarly, due to the peculiarities of the plantation economy, the social structures of Caribbean countries exhibit crucial differences from those of the developed countries typically featured in studies of occupational segregation by sex. For one thing, given the realities of slavery – and indentured servitude after emancipation – large-scale female labour force participation has a history stretching back five hundred years, not mere decades as is the case in the developed economies. Joycelin Massiah, the former head of the University of the West Indies’ Institute of Social and Economic Research (ISER) at Cave Hill, Barbados, put it succinctly when she said, “women in the Caribbean have always worked” (1986, p. 177). Massiah highlighted the condition of female slaves “as labourers in the canefields alongside the male slaves, as

domestic labourers in the plantation houses and as primary goods producers and distributors in the slave community” (ibid., p. 178). After emancipation, Caribbean women, like men, merely went on to engage in wage labour. In this sense, Caribbean labour markets have never been defined by a rigid division of labour, where males were the only breadwinners and females stayed home. There was of course rigid stratification on the basis of race and class; but for the poor, black majority, labour force participation was more fluid, with females often becoming the primary breadwinners. Indeed, not only have Caribbean women always worked, but “work outside of the home [has always been] an integral part of their identity” (Ellis, 2003, p. 21).

Anthropologists have also explored the notion of “matrifocal” family structures (see Smith, 1988, p. 126, and 1996, on Jamaica and Guyana; Quinlan, 2006, on Dominica). Smith defined matrifocality as “the tendency for the unit of a woman, her children, and her daughter’s children to emerge as a particularly solidary unit, often constituting the core of a domestic group” (1996, p. 40). Quinlan went further, suggesting that mothers in a rural Dominican community actually favoured daughters – and invested more heavily in them. Since sons faced greater risks in their society (violence, alcoholism, etc.), daughters were therefore better investments – simply because they were more likely to be around to support their mothers in the future.

At one point, Quinlan argues that “Caribbean mothers also appear stricter and more demanding with daughters than sons, which may indicate indifference rather than indulgence toward sons” (2006, p. 465). Other scholars have presented an alternate theory to explain this phenomenon. For example, in *Learning to be a man*, Barry Chevannes (2001) argues that the looser requirements of boys are important to their socialization in that this steels them to the outside world and prepares them to take on the male provider role as they assist their siblings and mothers (see also Leo-Rhynie, 1998, p. 246). Either way, in the long term, this differential socialization could have consequences for gender relations and the labour force opportunities of men and women.

This brings us to the question of how we address high (or increasing) levels of occupational segregation by sex – especially if the statistics show higher levels of female education and employment in professional occupational categories. Some have argued that the Caribbean is witnessing some version of male marginalization (Miller, 1994) or the loss of male privilege (Figueroa, 2000). Miller’s thesis in particular has drawn the ire of those who claim male marginalization implies males are being marginalized by female success. For example, Prendergast and Grace (2006) argue that males (and male organizations in particular) should be more proactive in the gender debate instead of wallowing in the “marginalization” debate. In explaining the relative lack of academic/social achievement by males, Prendergast and Grace also touch upon the Caribbean’s problematic male gender identities. Indeed, in the literature, Caribbean masculinity is often problematized, since it is thought to lead boys to take greater risks and pursue physical, overtly masculine

activities instead of applying themselves in the “feminized” sphere of schooling (Plummer, McLean and Simpson, 2008). Even though these “gender identity” arguments are beyond the scope of this article, we will return to them in our conclusion, as we consider their possible connection with the sex segregation of occupations in Jamaica and the wider Caribbean. At this juncture, the relevant point is the extent to which Caribbean social structures (and gender power relations) differ from those of the developed countries.

The problem of aggregation

There is a compelling case to be made that even though women now seem to be doing well, segregation may in fact be “hidden” within overly broad occupational categories. Richard Anker noted that “[w]hen very aggregated data (such as the usual seven major ISCO occupations) are used, occupational segregation’s effect is underestimated, mainly because most occupational segregation by sex remains unobserved” (1997, p. 333). For this reason, Chang’s (2004) study of 16 developing countries uses 43 occupational categories, instead of the usual seven or so. After noting the problem of aggregation, she goes on to explain that “while the professional category as a whole may appear to be fairly well integrated by sex, the occupations that comprise the professional category may be quite segregated. At this level of aggregation, traditionally female-dominated occupations such as nursing and teaching are in the same category as traditionally male occupations such as doctors and physicists” (ibid., p. 115).

This may all be true, but it still overlooks the glaring structural problem that exists in societies shaped by the legacy of the plantation, namely, the vast pool of unskilled labour. In poor countries, there are not large cadres of male physicists and scientists balancing out nurses, teachers and office managers.

The role of social policy

Social policy is often used to explain and combat occupational segregation by sex. While governments often pass laws and fund agencies that have no discernible influence on society, Jamaica’s social policy with regard to women has been remarkably progressive. In 1974, a woman’s desk was established in the Ministry of Youth and Community Development; a year later, there was a full-fledged Women’s Bureau in the Prime Minister’s office. By 1979, the Maternity Leave Act was signed into law, offering paid and unpaid maternity leave to Jamaican women.¹ In 1981, Jamaica ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). The country’s current Prime Minister is a woman; and its Director of Public Prosecutions, Chief Justice, Solicitor General and Auditor General are also women. This is not to say that discrimination does not exist in Jamaica – but that women’s progress and women’s entry into the annals of power are cultural, legal and political

¹ In the United States, by contrast, it was not until 1993 that Congress passed the Family and Medical Leave Act, which offered unpaid leave to women.

realities. When combined with the legacy of matrifocality, hundreds of years of large-scale female participation in the labour force, and undifferentiated pools of manual labour, we again have a social structure that may defy the simple logic of the sex segregation of occupations in the developed countries.

The composition of occupational categories

Comparing sex segregation results over a long time frame can be misleading if occupational categories have changed. Blau and Hendricks noted that “studies that take in a reasonably long time period have not used comparable occupational categories across years... Thus, measured changes over time in the degree of segregation may be affected by alterations in the Census occupational classification scheme” (1979, p. 197). They also noted that when occupational categories change, they usually become more precise, allowing sex segregation to be better documented and exposed. This would eventually lead Blau to studies that attempted to “crosswalk” results after coding schemes had changed (Blau, Brummund and Yung-Hsu Liu, 2012).

Jamaica’s sex segregation over the period 1969–2012 can thus be explained by a combination of two structural factors: large undifferentiated pools of labour in the beginning; and then, as occupational categories changed and became more specific, a precipitous increase in observed sex segregation driven by women’s ascension in the labour force – particularly within the category of highly trained professionals. This is, again, why simple narratives about sex segregation remain elusive in the developing world.

Data and methodology

Data

Our data are transcribed from the Labour Force Survey of the Statistical Institute of Jamaica (STATIN), a quarterly survey usually based on a 1 per cent sample of the Jamaican population. In 2012, this represented some 28,448 individuals. All available years are used (1968–1969 and 1972–2013). STATIN usually conducts the survey in January, April, July and October; where possible, we have exclusively used the October data. The exceptions are 1988 (for which November data are used), 2001 and 2013 (for which the April data are used). It has been suggested that because newly graduated students might be entering the labour force in October (and driving up unemployment numbers), April might be a more stable month. However, we figured that if there was a bias, it was a systematic one, which would therefore have a negligible effect on long-term trends. Moreover, STATIN’s yearly reports typically use October data.

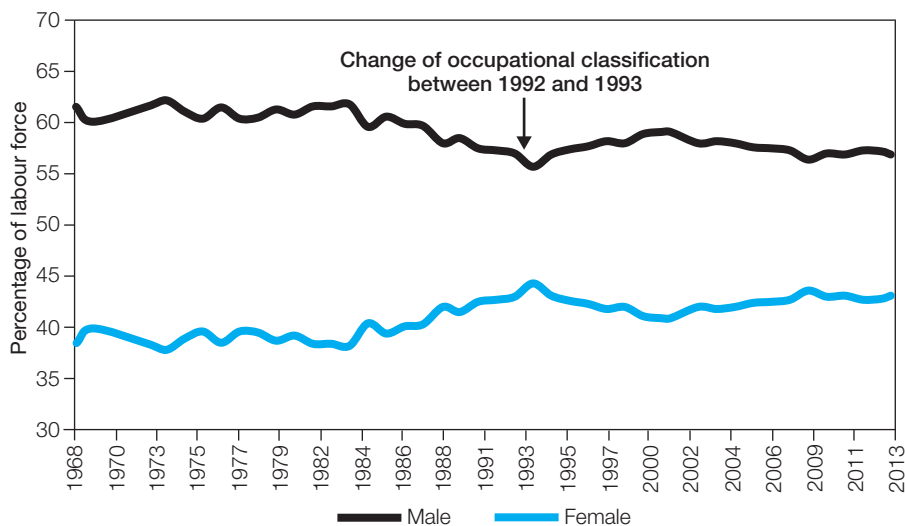
In 1993, the occupational categories used in the survey were changed (see table 1). For example, the pre-1993 category of “Professional, technical, administrative, executive, managerial and related occupations” became “Professionals, senior officials and technicians”. Other categories were consolidated, re-conceptualized or added. What seems more problematic is that the change

Table 1. Change in Jamaica's occupational classification

Pre-1993	1993 to present
<ul style="list-style-type: none"> • Professional, technical, administrative, executive, managerial and related occupations • Clerical and sales occupations • Self-employed and independent occupations • Service occupations • Craftsmen, production process and operating occupations • Unskilled manual and general occupations • Occupation not specified 	<ul style="list-style-type: none"> • Professionals, senior officials and technicians • Clerks • Service workers and shop and market sales workers • Skilled agricultural and fishery workers • Craft and related trades workers • Plant and machine operators and assemblers • Elementary occupations • Occupation not specified

Source: STATIN.

Figure 1. Labour force composition by sex, 1968–2013



Note: 2001 and 2013 values are from April; 1988 values are from November; all other values are from October.
Source: Authors' calculations based on STATIN data.

of occupational classification may have had a larger methodological effect within STATIN. For example, as shown in figure 1, the 1993 sex composition of the employed labour force seems anomalous. In 1992, 57 per cent of the labour force was male; and in 1993, the male proportion was at its lowest recorded level, at 55.7 per cent; a year later, however, it was back to 56.9 per cent. Thus, it is possible that the change of occupational classification caused a temporary (at the very least) change in STATIN's overall methodology.

Another problem is that analysis of formal versus informal employment was complicated by the inclusion of the categories "Agriculture sector" and "Domestic workers" in the new employment typology introduced in 2011 (see table 2). STATIN's explanation was that these additional categories

Table 2. Jamaican labour force by type of employment and by sex, 2012

	Numbers	Percentage
<i>Male</i>		
Formal	199 400	32.4
Informal	249 800	40.6
Agriculture sector	159 000	25.8
Unclassified	7 500	1.2
Total	615 700	100
<i>Female</i>		
Formal	231 000	49.0
Informal	166 300	35.3
Domestic workers	32 800	7.0
Agriculture sector	37 300	7.9
Unclassified	3 900	0.8
Total	471 300	100
<i>Total</i>		
Formal	430 400	39.6
Informal	416 100	38.3
Domestic workers	32 800	3.0
Agriculture sector	196 300	18.1
Unclassified	11 400	1.0
Total	1 086 900	100

Source: STATIN.

were in accordance with ILO methodology, and that the first (“Agriculture sector”) reflected the difficulty of determining whether agricultural workers were producing for their own consumption or the marketplace. STATIN also argued that the “informal sector” was primarily urban, but this assumption could under-represent the true extent of informal employment – especially in a country with so many unskilled workers.² The “Domestic workers” category presented similar complications – and left open the possibility that the proportion of informal female employment would be larger if some domestic workers were to be categorized as informal workers. That said, taking table 2 at face value, we see a higher proportion of males in informal employment, namely 40.6 per cent versus 35.3 per cent of females. Unfortunately, since STATIN only started collecting these data in 2011, there is no way to determine whether the proportion of males in informal employment has always been larger than that of females (even though this seems likely). Many of

² In short, workers were classified in the informal sector based on the type of *enterprise* they were in – rather than the kind of work they performed. In Jamaica, these were primarily enterprises with fewer than ten workers, and paying no contributions to the National Insurance Scheme (for social security coverage in old age/retirement and in the event of industrial injury incapacitation).

the people in the “Agriculture sector” and “Domestic workers” categories would otherwise fall into the “Unskilled manual and general occupations” category in table 1 (pre-1993) or “Elementary occupations” (1993 to present). The key point here is that the large “informal sector” is another component of the unskilled labour force.

Measuring occupational segregation by sex

The Duncan and Duncan (1955) index of dissimilarity (ID) or sex segregation index measures the percentage of males or females who would have to switch occupations for there to be equality in the labour force. Richard Anker actually argues for a more exacting definition of the index “*as the sum of the minimum proportion of women plus the minimum proportion of men who would have to change their occupation in order for the proportion female to be identical in all occupations*” (1998, p. 75; italics in original). Either way, an index of 100 would represent total segregation, and an index of 0 would mean total equality. The formula is

$$S_i = (0.5) \sum_i \left| \frac{F_{it}}{T_{it}} - \frac{M_{it}}{T_{it}} \right|$$

where F_{it} denotes the number of females in a particular occupation at a particular point in time, M_{it} is the number of males in that occupation at that time, and T_{it} is the total number of males *and* females in that occupation. In other words, for each occupation, $T_{it} = F_{it} + M_{it}$. To calculate the formula, we first subtract the proportion of males in each occupation from the proportion of females. Next, we sum the absolute values of those calculations. Last, the summed values are multiplied by 0.5, to create the segregation index (S_i) for that particular time.

Blau, Brummund and Yung-Hsu Liu (2012) provide a good discussion of some of the problems with the ID. Segregation can be caused by two factors: change in the occupational distribution of the labour force by sex (e.g. more women becoming doctors) or change in the occupational mix of the labour market (e.g. the decline of manufacturing jobs and the rise of service-oriented jobs). By itself, however, the ID cannot tell us which of these changes is taking place. Accordingly, two additional measures are often used to supplement the ID:

The sex composition effect measures how much the segregation index would have changed if just the percentage male (female) within occupations changed, but the relative size of each occupation remained constant; the occupation mix effect measures how much occupational segregation would have changed if just the relative size of occupations changed, but the sex composition of each occupation remained constant (ibid, p. 12).

Both effects are calculated by introducing two distinct times into the ID formula (t and $t-1$). For instance, if we were calculating the sex composition effect between 1980 and 1990, 1990 would be t and 1980 would be $t-1$, as follows:

$$\left[(0.5) \sum_i \left[\frac{\frac{F_{it}}{T_{it}} T_{it-1}}{\sum_i \frac{F_{it}}{T_{it}} T_{it-1}} - \frac{\frac{M_{it}}{T_{it}} T_{it-1}}{\sum_i \frac{M_{it}}{T_{it}} T_{it-1}}} \right] \right] - S_{t-1}$$

The occupation mix effect is given by:

$$S_t - \left[(0.5) \sum_i \left[\frac{\frac{F_{it}}{T_{it}} T_{it-1}}{\sum_i \frac{F_{it}}{T_{it}} T_{it-1}} - \frac{\frac{M_{it}}{T_{it}} T_{it-1}}{\sum_i \frac{M_{it}}{T_{it}} T_{it-1}}} \right] \right]$$

Note that both formulas incorporate the occupation total from the earlier time (T_{it-1}), and that the formula for the sex composition effect uses the segregation index from the earlier time (S_{t-1}) while the occupation mix formula uses the segregation index from the current time (S_t).

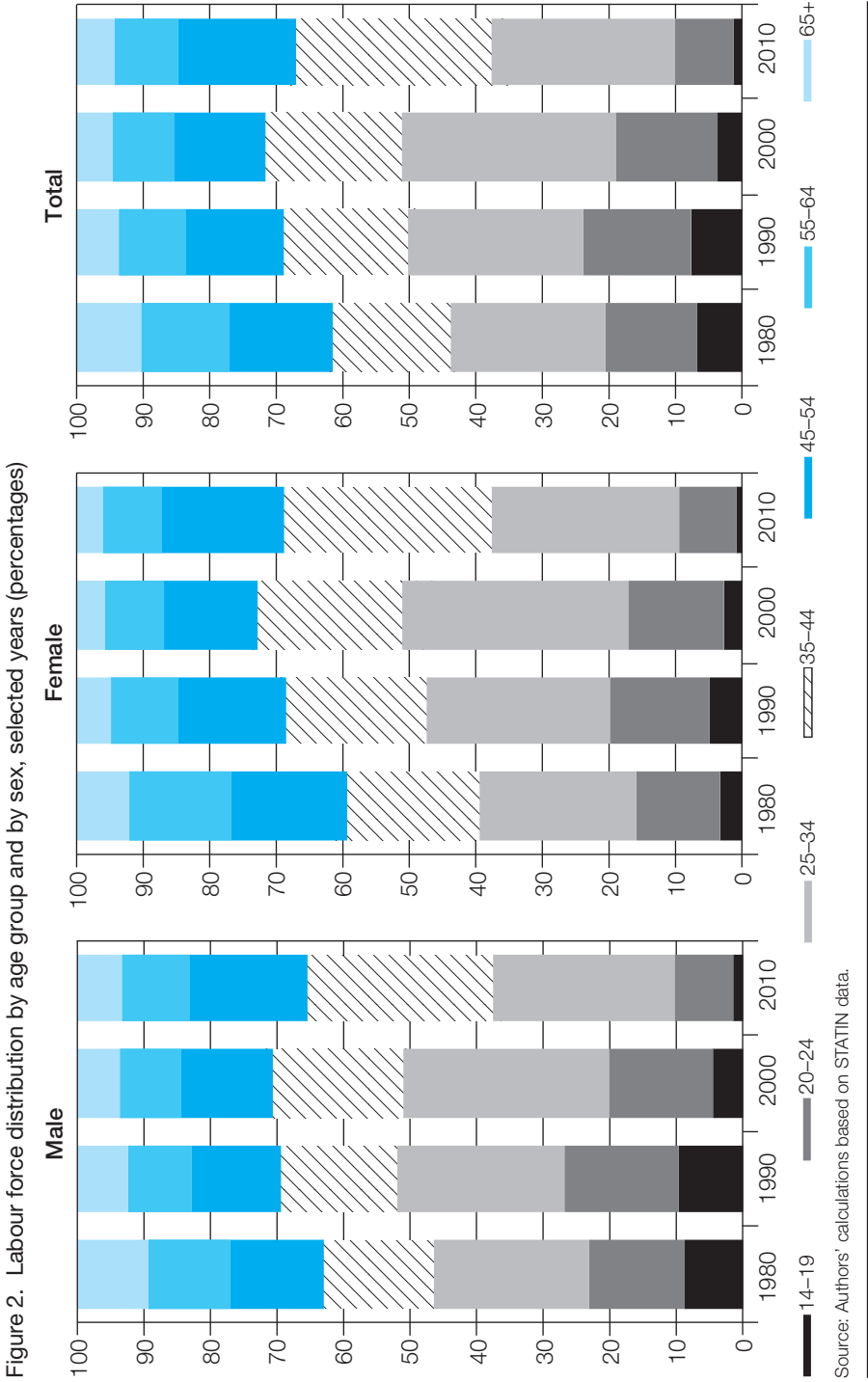
Data analysis and interpretation

Even though there are still more males in the Jamaican labour force, the percentage of females has grown steadily over the years (see figure 1). For example, females accounted for 38.2 per cent of the labour force in 1968, compared to 43.1 per cent in 2013. As we will see, however, their growing labour force participation has increased rather than decreased occupational segregation by sex.

Age groups

The main age group trend is that there are now fewer young people in the labour force (see figure 2). For example, in 1980, 6.8 per cent of those in the 14–19 age group (and 13.7 per cent of those in the 20–24 age group) were in the labour force. By 2010, the proportions were 1.3 and 8.9 per cent, respectively. However, while these aggregate numbers are relatively low, the percentage of males in the 14–19 age group was twice that of females in 1980 and 1990. In 1980, 8.9 per cent of males in that age group were in the labour force as against 3.5 per cent of females. This may be a reflection of the willingness of young males to work, more unskilled jobs tailored to males, an acceptance of their labour, more pressure for them to work, or some combination of these factors. But female pursuit of higher education is also a factor – which we will consider during our discussion on training.

In 1980, 1990 and 2000, the 25–34 age group was the largest segment of the labour force, accounting for 23.3, 26.1 and 31.9 per cent, respectively. By 2010, however, this age group accounted for only 27.5 per cent of the labour force, while the largest segment was the 35–44 age group, at 29.3 per cent. This trend holds for both males and females. Several things may be going on here: (1) the 25–34 cohort of 2000 may have been extraordinarily productive,



meaning that they carried that productivity over as they entered the 35–44 age group; (2) the apparent productivity of the 35–44 age group in recent years may merely be masking a lack of opportunity for younger workers; or (3) there may again be some combination of these processes. Indeed, between 2000 and 2010, all workers below 35 saw their labour force participation drop, while those aged 35 and older saw their labour force participation increase.

Training received

The vast majority of Jamaican workers have no training. In 2010, this applied to 71.1 per cent of the workforce. However, among those who did have training, a higher percentage of females had professional degrees (see figure 3). For example, in 2010, 53.3 per cent of females with training were in the “Professional with degree or diploma” category, compared to 38.6 per cent of males. Moreover, females constituted 64.2 per cent of this category – even though there were *fewer* females in the labour force (see figure 1). As one might expect, (female) teachers and nurses are heavily represented here.

On-the-job training used to account for a large share of training, especially among men. In 1980, 46.4 per cent of men with training had on-the-job training, but by 2010 the proportion had dropped to 25.1 per cent. Among females, the proportion declined from 27.5 to 8.7 per cent. Also interesting is the increasing prominence of vocational certificates. In 1980, 16.6 per cent of males and 31.9 per cent of females had vocational certificates. By 2010, the percentage had almost doubled among males (to 30.6 per cent) while showing a more modest increase among females, to 34.8 per cent. Lastly, the growing importance of formal credentials in the Jamaican labour market is also reflected in the decline of three categories, namely, “Vocational without certificate”, “Professional without degree or diploma”, and “Apprenticeship”.

Highest examination passed

As shown in table 3, a higher proportion of Jamaican men have never passed a formal education exam. More importantly, the gender gap in this respect has been widening. In 2000, 79.4 per cent of men had never passed an exam, compared to 66.2 per cent of women, resulting in a gap of 13.2 percentage points. By 2010, the proportions were 73.8 and 55.7 per cent, respectively, widening the gap to 18.1 points. For both males and females, the proportion of those who have never passed an exam has gone down, but it has gone down further for women. Furthermore, the percentage of females holding a degree has increased to more than double that of males, with the gap widening to some 8.9 percentage points in 2010. Higher percentages of females also had secondary level qualifications such as the General Certificate of Education at the Ordinary and Advanced levels (GCE “O” and “A”) and their Caribbean Examinations Council (CXC) equivalents. Five or more of these subject passes allow

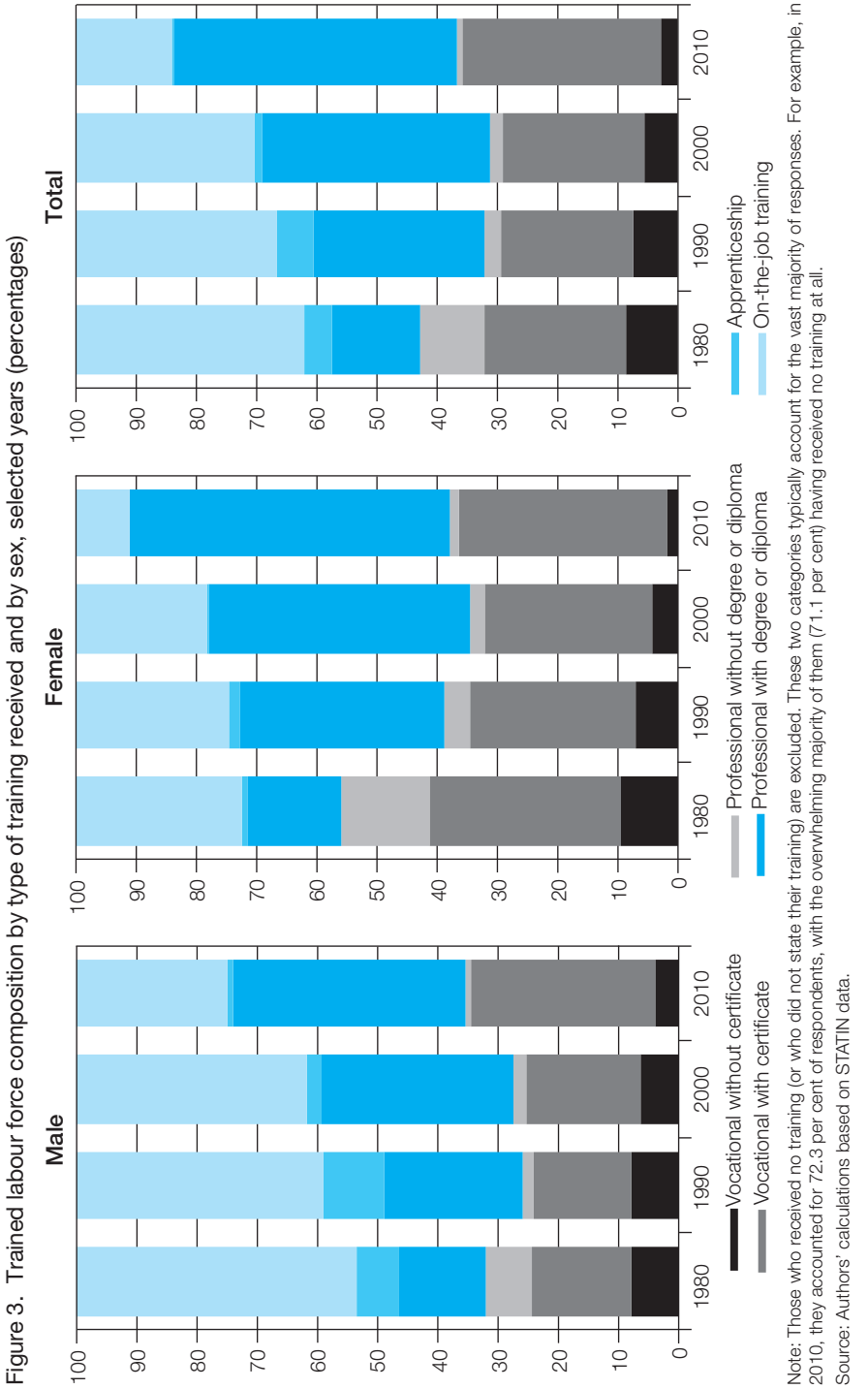


Table 3. Labour force distribution by highest examination passed and by sex, selected years

	Number			Percentage		
	2000	2005	2010	2000	2005	2010
<i>Male</i>						
None	488 200	521 800	503 000	79.4	76.8	73.8
CXC Basic J.S.C. etc.	15 100	12 700	11 000	2.5	1.9	1.6
CXC Gen., GCE "O" 1-2	11 200	11 600	16 400	1.8	1.7	2.4
CXC Gen., GCE "O" 3-4	18 000	22 500	19 700	2.9	3.3	2.9
CXC Gen., GCE "O" 5+ or GCE "A" 1-2'	12 000	20 200	23 700	2.0	3.0	3.5
GCE "A" 3+	1 500	600	800	0.2	0.1	0.1
Degree	21 900	33 800	49 400	3.6	5.0	7.2
Other	16 300	12 900	14 200	2.6	1.9	2.1
Not stated	31 000	43 200	43 400	5.0	6.4	6.4
Total	615 200	679 300	681 600	100	100	100
<i>Female</i>						
None	326 900	332 300	311 200	66.2	60.9	55.7
CXC Basic J.S.C. etc.	23 300	21 400	14 500	4.7	3.9	2.6
CXC Gen., GCE "O" 1-2	20 100	19 800	16 000	4.1	3.6	2.9
CXC Gen., GCE "O" 3-4	30 400	33 200	36 300	6.2	6.1	6.5
CXC Gen., GCE "O" 5+ or GCE "A" 1-2'	15 100	25 300	33 500	3.1	4.6	6.0
GCE "A" 3+	1 600	1 200	1 600	0.3	0.2	0.3
Degree	28 900	51 500	90 100	5.9	9.4	16.1
Other	20 800	25 200	24 500	4.2	4.6	4.4
Not stated	26 600	35 800	30 800	5.4	6.6	5.5
Total	493 700	545 700	558 500	100	100	100
<i>Both</i>						
None	815 100	854 100	814 200	73.5	69.7	65.7
CXC Basic J.S.C. etc.	38 400	34 100	25 500	3.5	2.8	2.1
CXC Gen., GCE "O" 1-2	31 300	31 400	32 400	2.8	2.6	2.6
CXC Gen., GCE "O" 3-4	48 400	55 700	56 000	4.4	4.5	4.5
CXC Gen., GCE "O" 5+ or GCE "A" 1-2'	27 100	45 500	57 200	2.4	3.7	4.6
GCE "A" 3+	3 100	1 800	2 400	0.3	0.1	0.2
Degree	50 800	85 300	139 500	4.6	7.0	11.2
Other	37 100	38 100	38 700	3.3	3.1	3.1
Not stated	57 600	79 000	74 200	5.2	6.4	6.0
Total	1 108 900	1 225 000	1 240 100	100	100	100

Note: See footnote 3. The numbers after the GCEs indicate the number of subjects passed.

Source: STATIN.

for matriculation into university or another tertiary level institution – as well as greater chances of employment.³

Occupational categories: Pre-1993

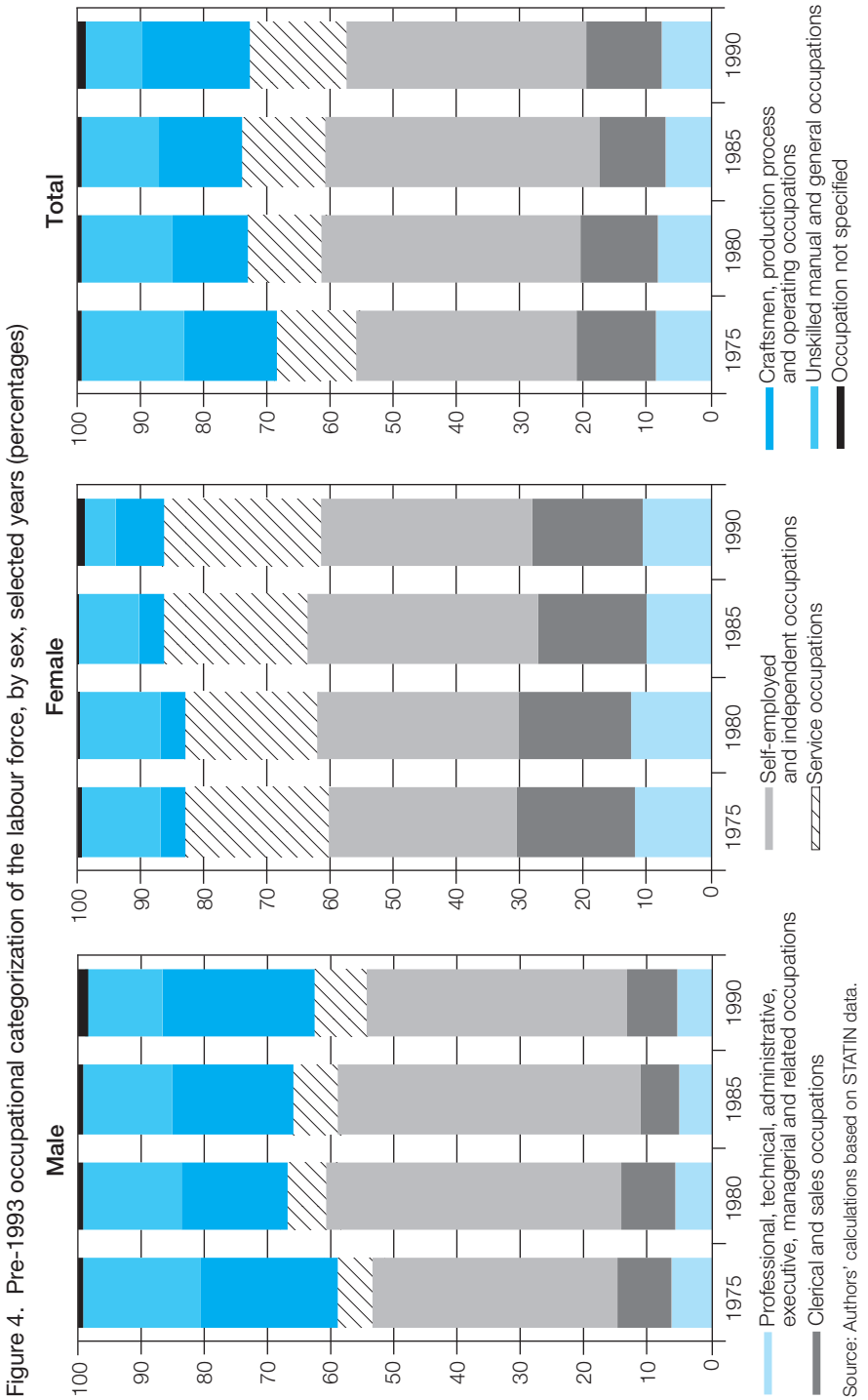
Before the occupational classification changed in 1993 (see table 1), the largest category by far was “Self-employed and independent occupations” (see figure 4). This “catch-all” category encompassed any labour scheme whereby people managed to make money without legally being in the employ of someone else.⁴ In 1975, it accounted for 35.1 per cent of the Jamaican labour force, growing further to 41 per cent in 1980 and 43.4 per cent in 1985. Its share then declined to 38 per cent in 1990. Yet the key factor is, here again, the unskilled nature of the Jamaican labour force, especially in the early years: in 1975, the category of “Unskilled manual and general occupations” accounted for 16.2 per cent of the labour force; and when this is added to the category of “Self-employed and independent occupations”, it turns out that 51.3 per cent of the Jamaican labour force was in categories that were essentially – or potentially – low skilled. Significantly, by 1990, 53.5 per cent of males fell into these categories, as against 38.8 per cent of females. On the other hand, women dominated two other categories – “Clerical and sales occupations” and “Service occupations”. In 1990, the first of these accounted for only 7.8 per cent of males but 17.5 per cent of females, while the second accounted for 8.3 per cent of males as against 24.7 per cent of females. These differences need to be borne in mind for our discussion of occupational segregation by sex below.

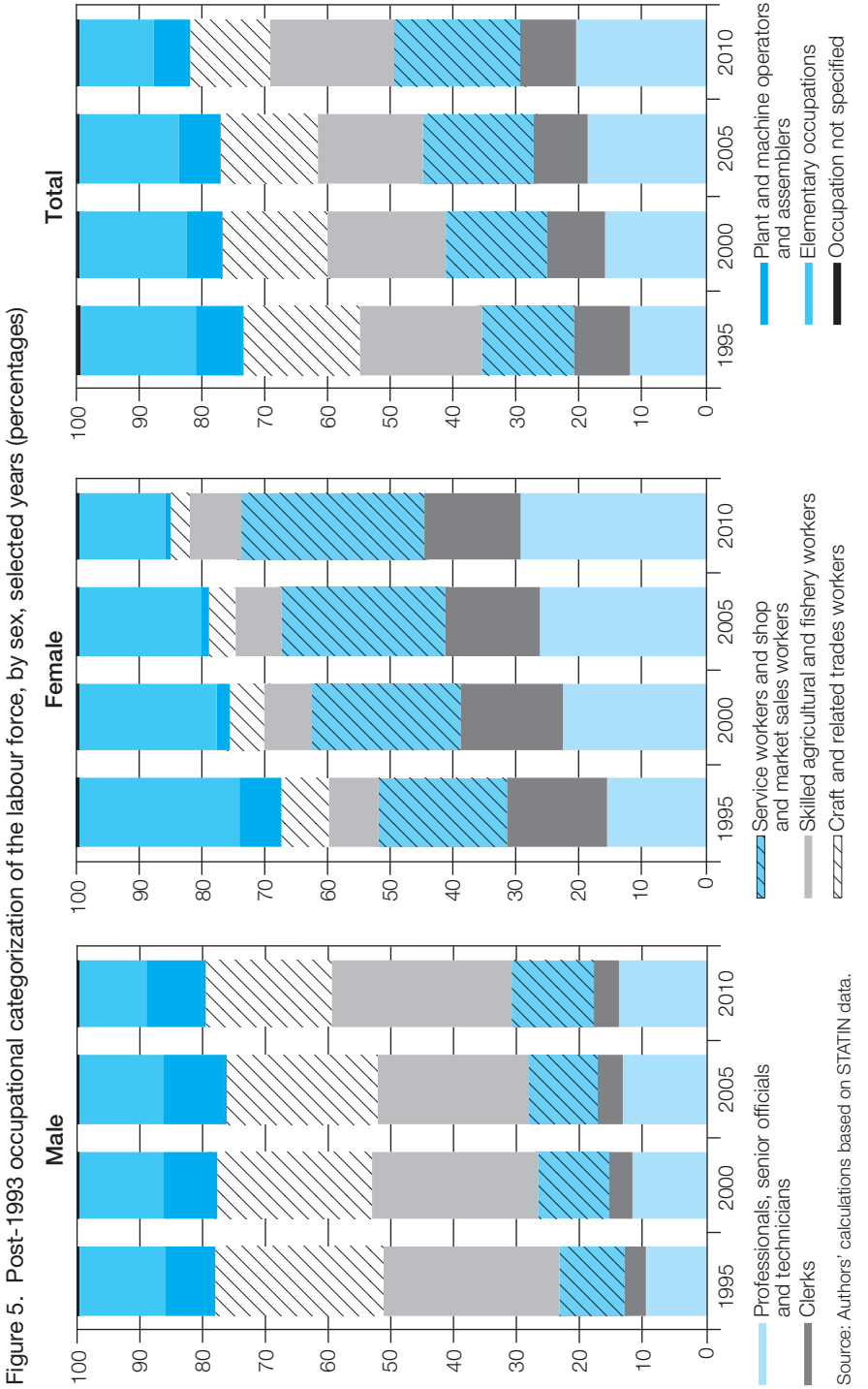
Occupational categories: Post-1993

After 1993, the catch-all category of “Self-employed and independent occupations” disappeared, and the functionally “self-employed” were distributed across other categories (see table 1). In other words, *whom* one worked for ceased to matter. Women continued to dominate the professional and service-related categories (see figure 5). By 2010, 74 per cent of females – as against only 31 per cent of males – were concentrated in three categories: “Professionals, senior officials and technicians”; “Clerks”; and “Service workers and shop and market sales workers”. On the other hand, men dominated the

³ The GCE and CXC examinations, respectively, are British and Caribbean exit examinations taken at the end of secondary schooling. The English speaking Caribbean’s history of colonization explains the GCE, which was the sole exit examination and matriculation requirement until the introduction of the CXC examinations in 1979. Because the CXC only offered ordinary level examinations between 1979 and 1998, its examinations were known simply by the CXC abbreviation. After 1999, when advanced level examinations were introduced, CXC examinations were distinguished between the Caribbean Secondary Education Certificate (CSEC) – which referred to examinations taken at the end of grade 11 – and the Caribbean Advanced Proficiency Examination (CAPE) – which was taken at the end of grade 12 (Level 1) and 13 (Level 2).

⁴ While the category could technically include the owners of stores and other lucrative enterprises, someone with a fruit stand on the side of the road would also qualify for inclusion; and indeed, in the Jamaican context, this type of labourer would be the most likely occupant of this category.





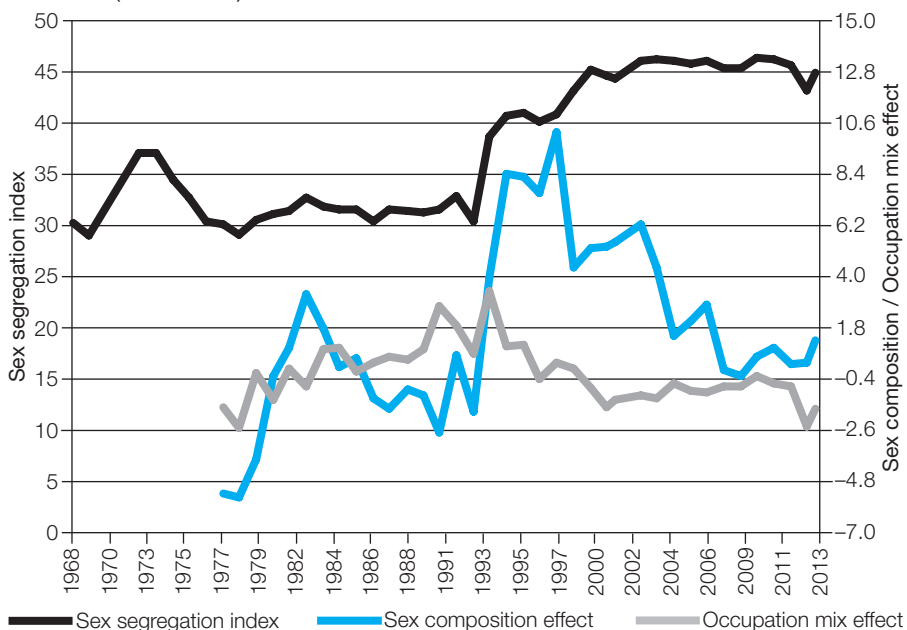
categories of “Craft and related trades workers” (20.2 per cent of males as against 2.9 per cent of females) and “Plant and machine operators and assemblers” (9.38 per cent of males versus 0.8 per cent of females).

Sex segregation index, sex composition effect and occupation mix effect

The problematic 1993 change in the occupational classification (see table 1) also had an effect on sex segregation (see figure 6). In 1992, the sex segregation index was 30.4; a year later, after the change, the index reached 38.7. Since then, the general pattern has been one of increasing sex segregation of occupations, with the index reaching 45 in 2013. This trend differs from that observed in Europe and the United States, where occupational segregation by sex has steadily declined. For example, Blau, Brummund and Yung-Hsu Liu (2012) put the index for the United States in the high 60s in 1971 and in the low 50s by 2009. This apparent contrast, however, is somewhat misleading.

As argued in the beginning of this article, the colonial plantation economy has had a profound effect on the nature of Caribbean labour. Given this legacy, there has never really been a time when Caribbean women were

Figure 6. Sex segregation index, sex composition effect and occupation mix effect (1968–2012)



Note: The sex composition and occupation mix effects were calculated using the year indicated on the chart and the year five years previous.

Source: Authors' calculations based on STATIN data.

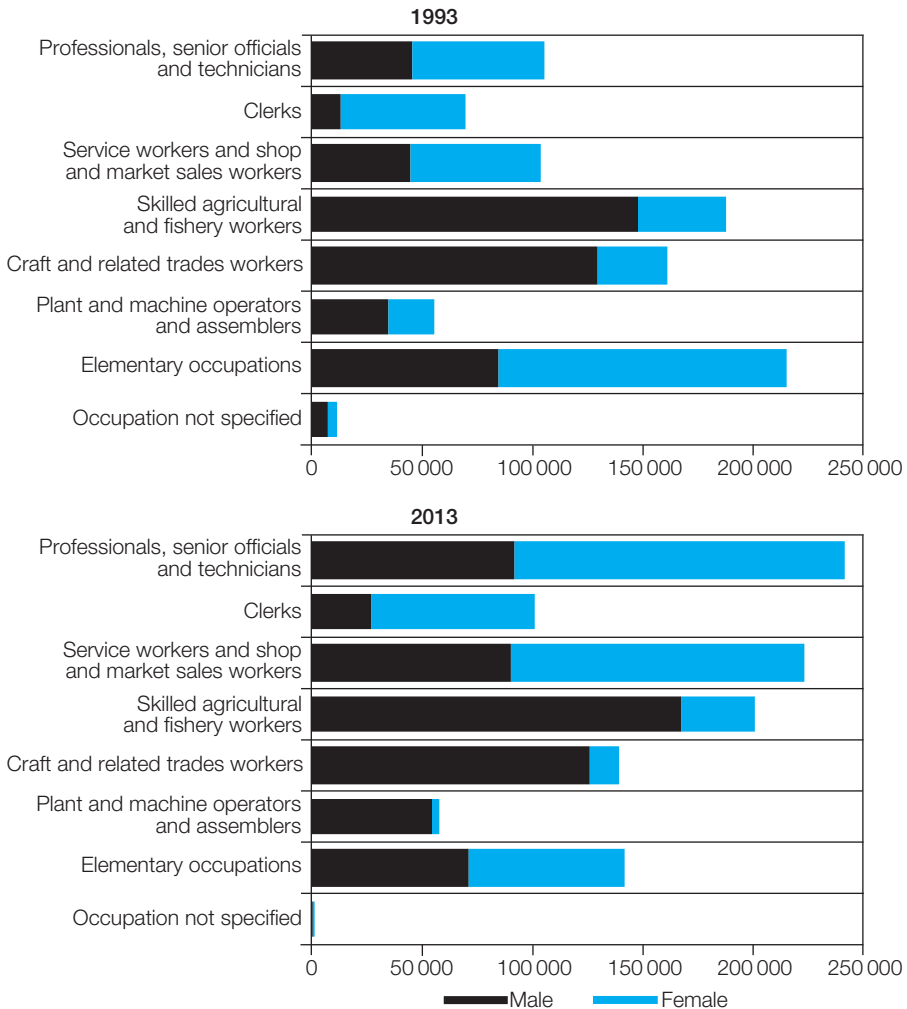
outside the labour force, whereas it was only in the 1960s that substantial numbers of women began to enter the labour force in Europe and the United States. Even Jamaica's *male* labour force participation was high by international standards. For example, the World Bank noted "extraordinarily high participation rates in Jamaica, with the labor force (on the broad definition) representing 74% of the population over 14 years of age, with a participation rate of 65% for women. These are among the highest rates in the world" (1984, p. 3). The historically high participation rate of Jamaican women is indeed one reason why Jamaica's occupational segregation by sex has been lower than that of the developed countries – especially if one takes a point of comparison in the 1970s.

Another factor that explains Jamaica's relatively low sex segregation of occupations in the early years was the use of those "catch-all", low-skill occupational categories discussed above. In particular, the pre-1993 occupational classification aggregated much unskilled and ad hoc labour into two categories – "Self-employed and independent occupations" and "Unskilled manual and general occupations" – which together accounted for 47.3 per cent of the Jamaican labour force in 1990. Since this gave the outward appearance that very large proportions of men and women were in the same occupations, sex segregation was (technically) relatively low. With the reclassification of workers into more specific categories following the demise of the catch-all self-employment category in 1993, sex segregation therefore seemed to rise precipitously between 1992 and 1993. Since then, as Jamaica's labour patterns have slowly come to resemble those of more developed countries, its occupational segregation by sex has inched *up*, towards the index value of 50, while such segregation has been inching *down* in the developed countries. The long-term trend therefore seems to be towards convergence as occupational categories and labour patterns become standardized internationally.

Either way, Jamaica's increasing sex segregation is almost certainly a story about female success – or at least numerical dominance – in fields that may have had a more even mix of males and females in the past. Indeed, the sex composition effect for 1992, which measures the difference between 1992 and five years earlier (1987), was -1.8 . This means that the 1992 sex segregation index would be 1.8 lower if the number of males/females within occupations changed but the occupations themselves remained the same. Yet, the sex composition effect has been very volatile. A year later, it was 3.9; and it reached an all-time high of 10.2 in 1997. But here again, the 1993 change of occupational classification comes into play, because the 1997 value is based on 1992 (i.e. $t-1$) in the formula.

At any rate, the sex composition effect has had a positive value for every year after 1992, except for 2007 and 2008, when it was -0.04 and -0.2 , respectively. On the other hand, the occupation mix effect (which measures the change in sex segregation that would have occurred if the occupational mix had been adjusted but sex composition remained the same) peaked at 3.4 in 1993 and has not risen above 1 since.

Figure 7. Occupational distribution of the labour force by sex, 1993 and 2013



Source: Authors' calculations based on STATIN data.

Between 2002 and 2011, the sex segregation index was stable, which is reflected in the fact that the sex composition effect and the occupation mix effect have been less volatile and closer to zero.

The above developments happened during a period when the formal labour force was shifting towards more professional categories. As shown in figure 7, in 1993, most of the labour force was in the “Elementary occupations” category – which women dominated (at 60.6 per cent). By 2013, however, females only accounted for 50.5 per cent of this category. Indeed, the largest occupational category in 2013 was “Professionals, senior officials and

technicians”; and while women already dominated this category in 1993 (at 56.6 per cent), their dominance had increased to 62 per cent by 2013. In short, females have moved from lower occupational categories into higher ones, while males have continued to dominate occupations in agriculture and trades, which are less reliant on credentials and less prestigious.

Concluding discussion

Ironically, patterns of occupational segregation by sex in Jamaica show clear evidence of females outpacing males in professional categories – and this may foreshadow a discussion looming in the developed countries too. Richard Anker once commented that

integrating men into typical “female” occupations is a controversial issue, since most labour market discrimination is directed against women, not men; moreover, such measures would contribute to eliminating one of the few labour market advantages women have. Yet breaking down the sex segregation of occupations is critical to improving women’s labour market situation, and this goal cannot be accomplished without breaking down the sex stereotyping of men, women and occupations (Anker, 1997, pp. 328–329).

Like elsewhere in the developed and developing world, there is persistent discrimination against women in Jamaica for a host of reasons; but the story of sex segregation of occupations is not that simple. At the very least, this cannot be the entirety of the discussion. For example, what do we do if efforts to reduce sex segregation are actually successful – or if the pattern of segregation no longer fits (or never did fit) the patterns prevalent in developed countries? The vast pool of unskilled Caribbean labour, the long-standing labour force participation of Caribbean females, matrifocality, and the increasing success of Caribbean females calls for a more nuanced approach to occupational segregation by sex in this setting.

In the opening sections of this article, we noted the “gender identity” arguments commonly used in the Caribbean to explain the paucity of males in the upper echelons of the labour force. There is a stream of thought, exemplified by Prendergast and Grace (2006), which presents problematic masculinities as a root cause of this phenomenon. Yet, such arguments are largely ahistorical. In the case of Prendergast and Grace, they did a contemporary study of Caribbean attitudes on masculinity, interviewing *only* males, and then argued that the problematic views emerging from the interviews were the cause of male failure. However, they never established that male attitudes were markedly different in the past (when males were supposedly successful). A more historical and *empirical* argument is that a change in the structure of the economy – namely, the change from an agricultural economy with a large mining sector, to a service-based economy – has meant the ascension of classically “female” jobs while key “male” jobs have either disappeared or gone into decline. Could problematic masculinities be exacerbating males’ achievement woes? Certainly. However, as these “gender identity” arguments typically focus on problematizing masculinity, we rarely (if ever) get a sense of

the extent to which females also share the “problematic” views to which we attribute male failure. Masculinity has tended to be viewed in isolation, as if the female population – indeed, *society* – has nothing to do with its construction. Feminists have long understood that femininity is not solely something created by females, so why would masculinity solely be a male creation, which must be “fixed” by males?

Moreover, many of those “female” occupations that Anker mentioned – like teaching, nursing and clerical jobs – are now more stable, more lucrative and more in demand, than traditional “male” occupations. The rise of (traditionally “female”) service sector jobs may thus require greater emphasis on breaking down the stereotyping of classically “female” occupations – so as to provide opportunities (and realistic expectations) to young men entering the labour force. We can no longer afford to hold off on these “controversial” issues for fear that women’s “few” advantages will be lost – especially when the sex segregation of occupations we observe in reality does not fit the pattern of (and the policy positions demanded by) segregation in the developed countries.

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