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Abstract

Women in the Caribbean are much more likely than men to be unemployed, as evidenced by the economies studied here—Barbados, Jamaica, and Trinidad and Tobago. This paper explores the factors that contribute to gender differentials in unemployment. National economic conditions and job segregation explain a portion of gender differences in unemployment. Men appear more likely to find employment during an economic upturn than women. Even within job categories, however, women's unemployment rates are higher than men's, suggesting discrimination by employers. Relying on economic growth to reduce gender inequality in job access then may not suffice, indicating more targeted efforts are needed to ensure that women stand a fair chance of being hired.

Keywords: Gender analysis, unemployment, growth and development, Caribbean.

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I. Introduction

Women in the Caribbean are almost twice as likely as men to be unemployed. This is a troubling finding, given the high rate of female headedness among households, and therefore, extensive reliance of women on paid work to support children. Women's difficulty in securing paid work makes them dependent on men, the state, and kin to help makes ends meet. Further, the relatively higher female unemployment rates in the Caribbean have likely contributed to the relatively higher out-migration of women from the region.[1]

The purpose of this paper is to explore the causes of the wide gender gap in access to paid work in the region. The focus is on the economic causes of wide gender gaps in access to paid work in three of the largest economies: Trinidad/Tobago, Barbados, and Jamaica. Explanations for differential rates of unemployment typically fall into supply- and demand-side causes. Supply-side explanations focus attention on individual characteristics, with the group with higher unemployment rates expected to have fewer marketable attributes and lower productivity than the group with lower unemployment rates. Demand-side explanations relate to structural economic conditions in society and in labor markets, as well as the country's development strategy and cultural norms that result in differing demands for female and male labor. If structural economic factors are the cause of the problem, appropriate economic policies, such as affirmative action, might be shaped to rectify imbalances in access to paid work. This would be particularly important to do in the case of gender differences in unemployment, since the affected group is not only women, but also the children for which they care.

From an economic perspective, the high ratio of female to male unemployment rates in the Caribbean is rather surprising (Table 1).[2] This outcome also contradicts claims that women's status has improved and indeed surpassed that of men (Miller 1991), with the region well on its way to gender equality. de Alburqueque and Ruark (1998), for example, point to the United Nations Development Programme's (UNDP) *1997 Human Development Report* which calculates a Gender Development Index (GDI), based on gender gaps in literacy, life expectancy, and income. The conclusion is that there is less gender inequality in the Caribbean than in other

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[1] Data from the US Immigration Service indicate, for example, that in much of the 1990s, female migration to that country from Jamaica and Haiti exceeded that for males (http://www.ins.usdoj.gov/graphics/aboutins/statistics/index.htm) (Recorded immigration rates for other countries also show a preponderance of females in the immigrant pool).

[2] Unless otherwise noted, data are from the ILO (1995, 2002years).

regions of the world. Apart from the difficulties with that index of well-being, which leads to a particularly high distortion in the case of some Caribbean economies, the fact remains that women's relatively greater difficulty in securing employment severely disadvantages them in a fundamental way.[3]

This problem is particularly perplexing since, from economic theory, several factors predict that, on the contrary, women's access to paid work should be at least equal to, if not better than, men's. First, women's educational attainment in the region rivals that of men, and in some cases, exceeds male educational attainment. Women's wages are lower than men's by some 20 percent. In a region characterized by open economies in which exports are a large component of aggregate demand, we might expect that low labor costs, coupled with political stability, would be attractive to firms producing for export, thus stimulating demand for female labor. Further, the major economies of the Caribbean have large service sectors, including tourism and informatics, which tend to be female-dominated. Finally, the high rate of female household headship in this region, signifying a large percentage of lone mother households with responsibility for providing for children, is an incentive for women to work at paid jobs and in general, lowers their reservation wages relative to those of women in two-adult households.[4] This also should boost their jobs chances relative to men's.

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[3] See, for example, Bardhan and Klasen (1998) and Seguino (2002).

[4] Reservation wages are defined as the minimum wage offer acceptable to an individual to accept or stay at a job. Usually, reservation wages rise with bargaining power. If there is a broad social safety net with substantial unemployment benefits, a person's reservation wage rises. A person who lives in a household with other adults who are employed will have a higher reservation wage than one who is the sole provider. Evidence of a lower reservation wage for female heads of household is found in a World Bank study (1995) where results from a probit regression to explore the determinants of unemployment by gender in Trinidad and Tobago show that being a female household head has a significant negative effect on the probability of unemployment. The report further states, "This is what we would expect, as these women generally have to work to support other household members (1995: 98)."

Table 1: Unemployment by Gender in the Caribbean

Country	Latest year available	Female	Male	F/M Ratio
Anguilla	1992	9.0	6.3	1.4
Antigua and Barbuda	1991	5.6	6.4	0.9
Aruba	1997	8.4	6.7	1.3
Bahamas	1999	9.7	6.0	1.6
Barbados	2001	11.7	8.3	1.4
Belize	1999	20.3	9.0	2.3
Bermuda	NA			
British Virgin Islands	1991	3.1	3.4	0.9
Cayman Isllands	1997	5.1	3.2	1.6
Grenada	1998	21.2	10.5	2.0
Guyana	2001	14.3	6.2	2.3
Jamaica	2000	22.3	10.2	2.2
Netherland Antilles	1998	19.5	14.1	1.4
St. Kitts and Nevis	NA			
St. Lucia	2001	20.8	12.6	1.7
St. Vincent and Grenadines	1991	22.1	18.4	1.2
Suriname	1998	17.0	7.2	2.4
Trinidad and Tobago	2001	14.4	8.6	1.7

Source: ILO (1995, 2002), Yearbook of Labour Statistics.

By way of comparison, in Asian semi-industrialized economies, female unemployment rates are on par with or lower than men's rates, despite women's lower average educational attainment. These economies are similar to those in the Caribbean in that they are export-oriented, although they differ in having larger manufacturing sectors. They bear out the promise of neoclassical economists that economic openness and an export-orientation are good for women, insofar as these create job opportunities and wage income that give women greater bargaining power within the household, and thus permit them more voice in determining how household labor and resources are shared.

To explore the causes of wide gaps in access to paid work in the Caribbean, the paper is laid out as follows. Section II provides data on trends in female and male unemployment rates and ratios over the last 20 years in Barbados, Jamaica, and Trinidad and Tobago. These trends are compared with unemployment outcomes in several Asian economies. This section also reviews descriptive data for evidence of the causes of gendered differences in access to work. Section III presents a statistical analysis of the effects of economic cycles on unemployment rates. Section IV presents the conclusions.

II. Gender Differences in Female and Male Unemployment Outcomes

A. Trends in the Caribbean and Asia

Caribbean labor market data are calculated differently than in many other countries, and permit a more accurate picture of gender differences in unemployment. This is related to the fact that in most Caribbean labor market surveys, "discouraged workers" are counted among the unemployed. Discouraged workers are those who have in the past sought employment but, due to repeated failure to find work, cease searching even though they would like to have a job if one were available. Women frequently figure high among this group, since their care responsibilities make it less likely they will take time away from family to search for a job if information gained through networking indicates a dearth of job openings. By including discouraged workers among the ranks of the unemployed, unemployment rate estimates are more accurate over the business cycle, rather than varying pro-cyclically.

The inclusion of discouraged workers, however, does not solve all the problems of gender distortions of the measured unemployment rate. For example, women are also more likely than men to work as "unpaid family workers" during economic hard times, when paid jobs are unavailable. Because this disguised unemployment goes unreported, the female unemployment rate is probably higher than the data indicate.
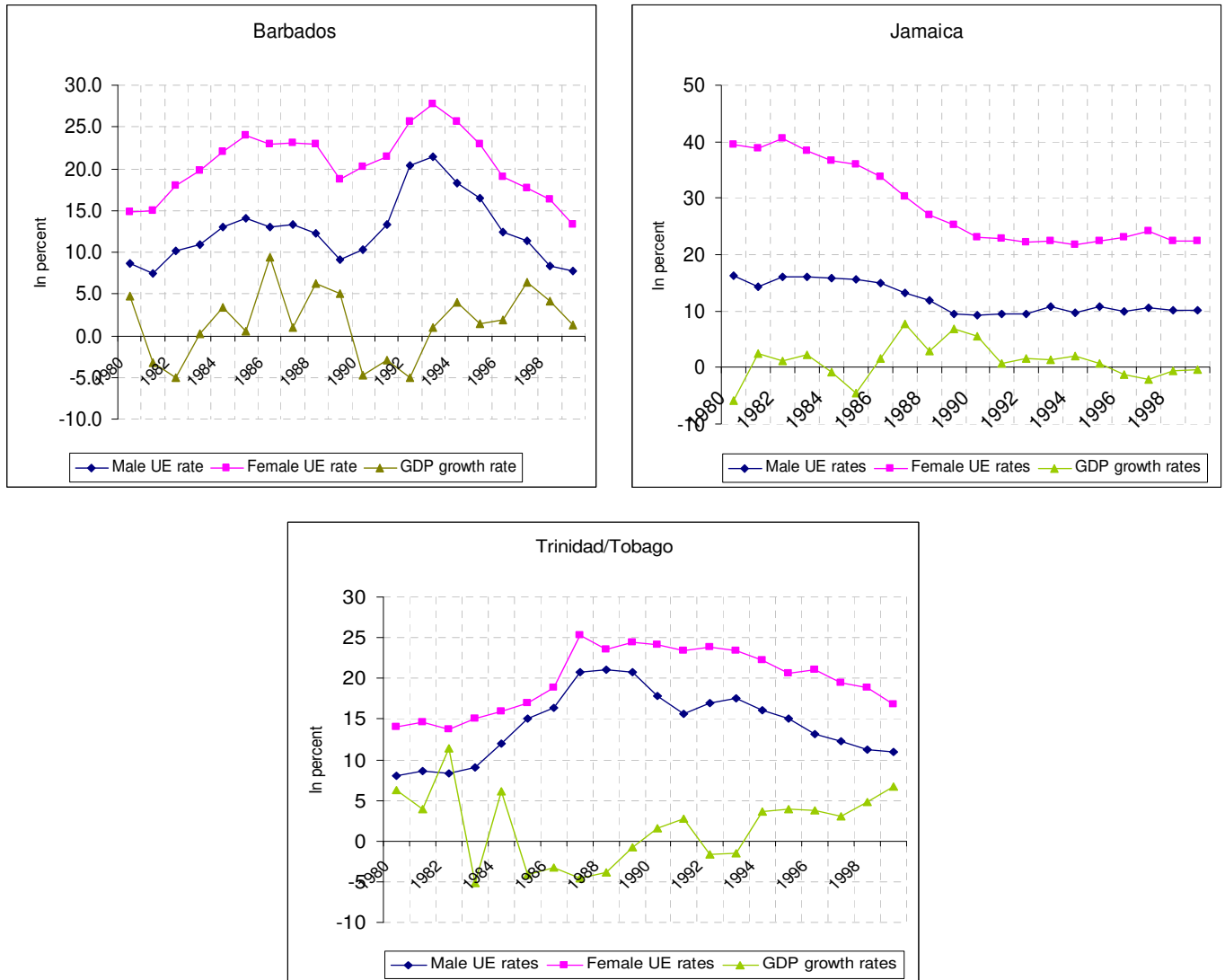
Trends in unemployment rates by gender and as well as economic growth rates are shown in Figure 1. Both male and female unemployment rates respond to changing economic conditions, as the data show, with declines in unemployment induced by positive rates of economic growth. While the gender gaps differ in each country, the higher probability of females being unable to find work is apparent in all three countries. Only in Jamaica has the gap between male and female unemployment rates narrowed between 1980-99, although there, even today women's chances of finding a job relative to a man's remain lower than in Barbados and Trinidad and Tobago. While Trinidad and Tobago shows a smaller gap than Jamaica, note that the gap has been widening in recent years, particularly since the 1990s, when economic crisis set in.[5]

Such wide gender gaps in unemployment are unusual in semi-industrialized economies such as those in Asian that tend to produce for export. An outward orientation theoretically pressures firms to seek least cost sources of labor, and as a result, because universally, women earn less than men per hour, female employment rates have risen relatively more quickly than

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[5] Time trends are determined statistically by regressing the unemployment ratio on a time trend variable.

men's.[6] In a number of countries, as pressures have worked to expand women's relative access to jobs, they have also undermined gender and cultural norms such as *purdah,* which restrict women's movement and thus access to work.[7] The result, particularly in Asia, has been a concomitant fall in female unemployment rates relative to male rates.

Figure 1: Trends in GDP Growth Rates and Unemployment Rates by Gender, 1980-99

Of particular note are the experiences of Asian economies such as Hong Kong and Singapore, both small open economies that are comparable to Caribbean economies, in particular Barbados and Trinidad and Tobago. To compare gender differences in unemployment in these countries, consider the female to male unemployment rate ratio (the ratio of female to male unemployment rates). The unemployment rate is itself a measure of the probability of individual members of a group being unable to find a paid job. The unemployment rate ratio then is a ratio of probabilities. The ratio is greater than one if women are more likely to be jobless than men. Conversely, the ratio is less than one if women are more likely to be able to find paid work than men. Figure 2 plots the unemployment rate ratio for the Caribbean as compared to Hong Kong and Singapore. The data in this figure emphasize that the probability of Caribbean women being unable to find work is significantly greater for women than men, and more than double in the case of Jamaica. In contrast, women's probability of being unemployed is equal or less than that of males in Hong Kong and Singapore (the ratio is below one).

Figure 2: Ratio of Female to Male Unemployment Rates for Selected Caribbean and Asian Economies
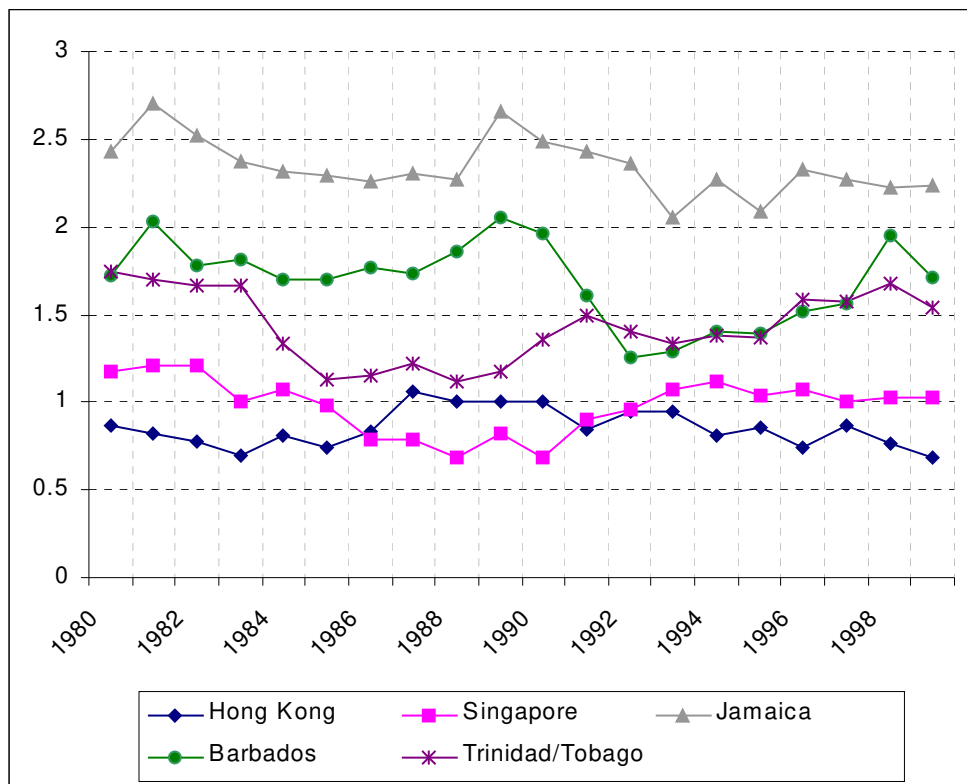
Table 2 provides some additional data on labor market outcomes in the Caribbean and an expanded set of Asian economies. Unemployment rates for men and women in Asia tend to be below those in the Caribbean, a fact that can be explained by the more rapid growth of Asian economies (at least until the Asian financial crisis in 1997).[8] Interestingly, women's lower relative probability (to men) of being unemployed in Asian economies exists, despite women's relatively lower educational attainment to men, as compared to women in the Caribbean. Indeed, in the Caribbean, women have a higher average endowment of education but lower returns to that education than men (Olsen and Coppin 2001).[9] Nor can it be argued that women in these Asian economies are less likely to participate in the labor market (which would reduce female competition for jobs and lower their unemployment rate), as the data in Table 2 show.

Table 2: The Caribbean and Asia: Comparisons of Gendered Labor Market Characteristics, 1999

	Female Unemployment Rate (%)	Male Unemployment Rate (%)	Ratio of Female to Male Unemployment	Ratio Female to Male Total Years Educ. Attainment	Female Labor Force Participation Rate (%)
Caribbean					
Barbados	13.3	7.7	1.7	0.98	47.3
Jamaica	22.4	10.0	2.2	1.15	48.5
Trinidad/Tobago	16.8	10.9	1.5	1.06	31.8
Asia					
Hong Kong	4.9	7.2	0.7	0.89	40.4
Korea, Rep. of	5.1	7.1	0.7	0.86	42.1
Singapore	4.5	4.6	0.9	0.89	39.3
Thailand	3.0	3.0	1.0	0.86	55.8

Source: Labor market data are from the International Labour Organization (2002) and education data are from Barro and Lee (2000).

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[8] Pre-crisis, rates in South Korea, for example, were about 3 percent for men, and about half that for women.

[9] For example, the ratio of female to male earnings in Barbados was found to be 85 % (Coppin 1996), 81% in Trinidad and Tobago (Olsen and Coppin 2001), and 75% in Jamaica (Hotchkiss and Moore 1996). After controlling for gender differences in productivity characteristics, the authors found the unexplained portion of the gender wage gap to be 99-113% for Barbados, 114-121% in Trinidad and Tobago, and 114-119% in Jamaica. These results imply that in the absence of gender wage discrimination, however that process unfolds, women's wages would be at least at parity with men's and up to 21% higher than men's wages in the case of Trinidad and Tobago. It is very possible that women's much higher unemployment rates reduce their bargaining power vis-à-vis employers, thereby contributing to the gender wage gap.

B. Characteristics of the Unemployment by Gender

Women's experience of unemployment in the Caribbean differs from that of men for a variety of reasons. Not only are female rates much higher than male rates but also, in the case of Barbados and Jamaica, the variation in female rates exceeds that of male rates. That is, women in those countries have more insecure job status than males. Table 3 provides summary data on female and male unemployment rates as well as female to male (F/M) rate ratios for the period 1980-99. The higher female unemployment rate volatility is shown by the standard deviations from the mean. Note that male unemployment rates are more volatile in Trinidad and Tobago than female rates, and may be related to the larger share of men in the petroleum sector, where demand is also more volatile.

The negative effects of unemployment depend not only on the loss of a job, but also on the duration of the loss of job access. In this regard, women also fare worse than men. As the data in Table 4 show, women have a higher probability of being unemployed for a long period of time (12 months or more), while men are more likely than women to be unemployed only short term (6 months or less). In particular, the ratio of proportions of female to male workers unemployed for 6 months or less is below one for all but Barbados, where the ratio is close to one. This implies that a larger percentage of men than women remained unemployed for that period. Conversely, the percentage of women who remained unemployed for 12 months or more in 1999 was significantly higher than for men, and thus the ratio of probabilities is greater than one. Indeed, in the case of Barbados and Trinidad and Tobago, women are twice as likely as men to be among the long-term unemployed once losing a job.[10]

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[10] Data on this and other variables presented in this section are available for the period 1991 to 1999, but for reasons of space, only the most recent year is reported. Nevertheless, results are similar across the entire time period unless otherwise noted.

Table 3: Summary Statistics on Female and Male
Unemployment Rates (%), 1980-99

	Mean	Range	Minimum	Maximum	Standard Deviation
Barbados					
Females	20.6	14.2	13.3	27.5	0.88
Males	12.6	14.1	7.4	21.5	0.82
Ratio F/M	1.6	1.0	1.8	1.3	0.05
Jamaica					
Females	28.6	26.8	13.8	40.6	1.11
Males	12.2	7.0	9.2	16.3	0.62
Ratio F/M	2.3	3.8	1.5	2.5	0.04
Trinidad/Tobago					
Females	19.8	11.5	13.8	25.3	0.87
Males	14.3	13.1	8.0	21.1	0.94
Ratio F/M	1.4	0.9	1.7	1.2	0.05

Source: Author's calculations. Data are from ILO (1995, 2002), <u>Yearbook of Labour Statistics</u>.

Table 4: Ratio of Female to Male Probablities for Duration of Unemployment, 1999

	Barbados	Jamaica	Trinidad/Tobago
Never worked	0.63	1.03	n/a
Under 1 month	0.56	0.54	0.38
1 to under 3 months	0.74	0.61	0.62
3 to under 6 months	1.03	0.68	0.82
6 to under 12 months	1.63	0.99	1.09
12 months and over	1.90	1.57	1.90

Source: Data used in Tables 4-15 are from ILO/Caribbean (www.ilocarib.org.tt). Author's calculations.
Note: Categories of duration of unemployment are not strictly comparable across countries. For example, TT does not the have cateogry "never" and defines a period of 7 to 11 months instead of 6 to 12 months, as done by Jamaica and Barbados. For ease of comparison, I have matched the categories as closely as possible.

Gender differences in unemployment rates to some extent are class differentiated, with

greater gender inequality in job access among poorer groups. Using educational attainment as a proxy for class, we find that the ratio of the probability of being unemployed falls with more education. In Barbados, the gender gap in unemployment rates also falls (that is, gender inequality narrows) with higher education (Table 5). But even among those with a university degree, women are more likely than men to be unemployed, with university-educated women experiencing an unemployment rate more than 2 percentage points higher than men with the same education. Moreover, women with a secondary degree are less likely to be able to find work than men *at any level of education*. In Trinidad and Tobago, an inverse "U" pattern is observed, with gender gaps narrowing for those with no education, rising for those with primary education, falling again for those with secondary education, and falling still further for those with university education.[11] It is notable that in that country also, women with a secondary education have a higher unemployment rate than men with any level of education, including those with no education. Women with a university degree, however, have lower rates of unemployment than similarly educated men (although this difference is low and is not likely statistically significant). Thus the gender gap in job access is more pronounced among low- and middle-income workers. This is small comfort, given that the majority of workers of both sexes do not possess a university degree.

Table 5: Unemployment Rates and Ratios by Educational Attainment, 1999

	Barbados			Trinidad/Tobago		
	UE	Male UE	Rate	UE	Male UE	Rate
None	0.0%	0.0%	1.00	10.0%	7.7%	1.30
Primary	11.5%	6.7%	1.71	18.7%	10.8%	1.73
Secondary	18.8%	9.0%	2.10	16.5%	11.9%	1.39
University	5.7%	3.6%	1.57	1.5%	1.6%	0.95
Technical/Vocational	9.1%	4.5%	2.00	*n/a*	*n/a*	*n/a*

Note: For TT, university education includes those with some university education but no degree, those with a completed degree, and those educated abroad. Also, all those with some secondary education were included in the secondary education category. Thus the categories indicated here represent enrollment rather than completion rates.

The unemployment problem is often cited to be worse among young workers, and, indeed, this is the case. However, with regard to gender differences in unemployment, women are more disadvantaged than men in their prime years (20-54) as income providers for their children.

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[11] This "U" shaped phenomenon is unusual and was also noted by the World Bank (1995), although the reasoning for this outcome is unclear, and is a matter that merits further investigation.

This is revealed by the data in Table 6. To see this, consider that absent gender discrimination, women's share of unemployment in each age group should be roughly proportionate to the female share of the labor force. Those proportions (of the female share of the labor force) for Barbados, Jamaica, and Trinidad and Tobago, respectively are 48%, 45%, and 38%. While in almost all age groups, women's share of unemployment exceeds women's share of the labor force, the degree of gender disparity in job access is the most pronounced in the age groups 20-54, precisely the years women are likely to be providers not only for themselves but also for their children. The problem is particularly severe for lone mothers.[12]

Table 6: Female Share of Unemployment by Age Group

Age group	Barbados	Jamaica	Trinidad/Tobago
14-19	54.5%	52.9%	47.1%
20-24	58.1%	65.6%	47.5%
25-34	64.9%	72.6%	50.5%
35-44	67.7%	69.8%	50.4%
45-54	62.5%	59.7%	55.6%
55-64	50.0%	41.7%	31.8%
65 and over	50.0%	47.1%	20.0%
Female Share of Labor Force	48.0%	45.3%	38.2%

Freeman (2000) has pointed out that young women, even those with children, often live with family members on whom they can fall back, if they lose their jobs. (This may account for the perception among employers that women workers do not "need" their jobs since the women are perceived as having alternative sources of income). However, as Senior (1991), Freeman

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[12] While lack of access to jobs is problematic for lone mothers, leading to negative effects on child well-being, it can also have adverse effects on children in two-adult heterosexual households. Household budget surveys in a number of parts of the world indicate that men spend a higher share of their income for luxury goods, such as alcohol, tobacco, and gambling while women contribute a significant portion of their income to expenditures on children (Bruce and Dwyer 1988). Intrahousehold bargaining literature indicates that women's outside options influence the degree to which they are able to negotiate with adult males for a better distribution of resources within the family towards themselves and their children (Chant 1997, Lundberg and Pollack 1997, Haddad and Hoddinott 1998). Women's greater difficulty in finding paid work then can reverberate on the family's well-being by disproportionately reducing resources to children than if women in the family held the paid job. Further, lack of income makes it difficult for women to leave abusive relationships that cause trauma to themselves and their children. Thus women's relative lack of employment is a serious social problem, not only for lone mothers but also for married women as well as those in common-law relationships.

(2000), and others note, women lose the guaranteed support of extended family as they age. Thus, as women mature, those who head households do not have the same level of support to fall back on in times of economic distress, and job access is even more important for family survival for women of this age group.[13] As a result, their relative lack of job opportunities weighs more heavily than on younger women, who according to these data, are not as disadvantaged relative to young men in their age cohort.

C. Gender Differences in Employment

In exploring the causes for differentials in female and male unemployment rates, it is helpful to consider gender differences in job patterns by employment status as well as by occupation and economic sector (or industry). This is important since women as workers may be more concentrated in slow-growing occupations or sectors of the economy, either by choice or due to employment discrimination. For example, if women are concentrated in government work, economic upturns that are private sector-led may not greatly increase their access to jobs. Further, women concentrated in informal sector work may be more vulnerable than men to unemployment, since men's formal sector jobs tend to be more secure.

One of the most common explanations for gender differences in access to work is that women in the Caribbean are believed be concentrated in occupations and industries for which the demand for labor is relatively lower than the job categories in which men are concentrated. The inference is that this outcome generally occurs as a result of choice—female choice to work in "female" jobs, perhaps jobs that allow them to combine home and paid work, or jobs that are more compatible with their gender identity, even if lower paid.[14]

The data in table 7 show women's and men's employment status in 1998 in Barbados and Trinidad and Tobago. Unlike other middle income and developing economies, women's

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[13] Female headed households may receive remittances from abroad as an additional source of income, but according to the World Bank (1995), only 7 percent of those households receive income from this source.
[14] Freeman (2000) provides some evidence for this in her recent book, where she argues that women employed in the modern "clean" and high tech informatics industry earn less than they would in agricultural employment, but prefer this work as a clean industry, and because of the social status it affords them as women. While jobs may have "gendered" identities, thus influencing the employment choices of subsequent workers, it is not clear why women would willingly choose lower wage jobs where unemployment rates are higher, especially given their family income responsibilities. Choice seems to be an inadequate explanation for gender outcomes that broadly disadvantage women and advantage men. Nevertheless, as these data show, there is some evidence of "job sorting" by sex, and it would be useful to gain a deeper understanding of why that occurs. Although a frequent explanation is that women's skills differ from men's, even though they have similar levels of education, the fact is that most training occurs on the job, so that other factors other than choice and individual characteristics must contribute to job segregation.

representation in informal sector work ("self-employed") is less than men's. Women are also less likely than men to be employers. In fact, women are more likely to be private sector employees than men, with a relatively lower representation in government jobs. All else equal, we might expect women to benefit from economic upturns that are private sector-led (as compared to an economic boom fuelled by government spending).

The evidence in Tables 8-11 highlights the nature and degree of job segregation in Caribbean economies. The distribution of women and men in occupations and industries is quite similar to that in developed economies.[15] The data in Table 8 show that women in all the economies in question are concentrated in just two industries—wholesale and retail trade (which includes tourism), and community, personal, and business services. Women's greater economic concentration is evidenced by the higher standard deviation on women's distribution than men's in each country. The standard deviation is a measure of variability in the distribution of workers in industries. The more evenly distributed a group is across a set of industries, the smaller the standard deviation (variability). The higher female standard deviation suggests that women face more job segregation or "crowding" by industry. Clearly, also, women and men occupy different positions in the economy, and this is particularly pronounced in Jamaica, and Trinidad and Tobago. This is shown further by the data in Table 9, which give women's share of jobs in each industry. A very interesting difference in the Caribbean from, say Asian semi-industrialized economies, is the low female share of manufacturing jobs in Jamaica and Trinidad and Tobago, which are male-dominated (and less so in Barbados). On the other hand, women tend to form the majority of workers in tourism, or wholesale and retail trade, as well as the finance, insurance, and real estate sector (FIRE) and community, personal, and business services.

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[15] For evidence on job segregation in developed and developing economies, see Anker (1998) and Jacobsen (1998). For details on abbreviations for occupations and industries used in this paper, see Appendix A.

Table 7: Employment Status in Trinidad and Tobago and Barbados, 1998

	Employer	Gov't Employee	Pvt. Employee	Self-Employed	Unpaid Family Worker	Apprentice	Not Stated	Total
Distribution of Men								
Barbados	0.6%	20.7%	62.6%	15.1%	0.0%	0.6%	0.5%	100%
Trinidad and Tobago	5.3%	27.6%	47.3%	17.5%	0.7%	1.5%	0.0%	100%
Distribution of Women								
Barbados	0.5%	23.0%	67.2%	8.5%	0.0%	0.2%	0.5%	100%
Trinidad and Tobago	2.2%	25.8%	54.4%	12.9%	4.0%	0.5%	0.1%	100%
Ratio of F/M Distributions								
Barbados	0.9	1.1	1.1	0.6	na	0.3	1.2	1.0
Trinidad and Tobago	0.4	0.9	1.2	0.7	5.9	0.4	1.8	1.0

Table 8: Distribution of Women and Men in Industries, 1999

	Barbados		Jamaica		Trinidad/Tobago	
Economic activity	Women	Men	Women	Men	Women	Men
Agriculture	3.2%	5.2%	9.7%	29.5%	2.8%	11.2%
Petroluem and gas					1.3%	5.3%
Manufacturing	8.6%	8.2%	6.6%	4.7%	8.8%	12.0%
Electricity and water	1.1%	2.1%	0.5%	0.8%	0.5%	1.7%
Construction	1.4%	20.2%	0.6%	13.7%	2.3%	18.3%
Wholesale and retail trade	29.9%	19.1%	32.8%	23.4%	27.5%	12.7%
Tourism	12.3%	8.1%				
Transport and comm.	2.1%	5.0%	3.0%	8.1%	3.5%	9.5%
FIRE	7.7%	4.0%	6.9%	4.6%	10.6%	6.0%
Comm. and personal services	45.7%	45.7%	39.6%	18.9%	42.6%	24.3%
Standard Deviation	0.160	0.144	0.201	0.075	0.156	0.075

Note: The standard deviation represents a measure of variablity in employment concentration.

Table 9: Female Share of Total Employment by Sector, 1999

Economic Activity	Barbados	Jamaica	Trinidad/Tobago
Agriculture	34.6%	19.0%	12.8%
Petroluem and gas			15.9%
Manufacturing	47.6%	32.9%	29.6%
Electricity and water	30.0%	29.2%	14.5%
Construction	5.7%	3.2%	6.9%
Wholesale and retail trade	36.6%	62.8%	55.5%
Tourism	56.9%		
Transport and comm.	15.6%	21.0%	55.5%
FIRE	62.9%	52.0%	50.5%
Comm. and personal services	52.3%	60.0%	50.4%

Note: The male share is (1-female share).

Tables 10 and 11 provide similar data by occupation. The majority of women are employed in just three occupational groups—clerks, service workers, and elementary occupations. Their representation in service work and as clerks is much greater than men's, as evidenced by the data in Table 11, which show these to be largely female occupations.

Table 10: Distribution of Women and Men in Occupations, 1999

	Barbados		Jamaica		Trinidad/Tobago	
Occupation	Women	Men	Women	Men	Women	Men
Managers	5.3%	5.5%	20.9%	11.9%	7.7%	6.2%
Professionals	10.5%	6.0%			3.9%	2.9%
Technicians	5.8%	7.6%			16.3%	7.6%
Clerks	20.7%	4.7%	15.8%	3.3%	22.1%	4.3%
Service workers	22.8%	12.2%	22.3%	10.6%	19.6%	11.3%
Agricultural workers	0.7%	3.4%	7.8%	27.0%	1.2%	4.5%
Craft workers	4.2%	25.5%	5.7%	25.0%	5.7%	24.0%
Plant, machine operators	3.7%	10.7%	3.0%	8.8%	2.8%	13.5%
Elementary occupations	25.7%	23.8%	24.5%	13.4%	20.7%	25.6%
Standard deviation	0.095	0.082	0.087	0.086	0.084	0.085

Note: Jamaica's data combine managers, professionals, and technicians into one category.

Table 11: Women's Share of Employment in Occupations, 1999

Occupation	Barbados	Jamaica	Trinidad/Tobago
Managers	45.5%	55.5%	41.9%
Professionals	60.6%		43.5%
Technicians	39.8%		55.3%
Clerks	79.2%	77.5%	75.0%
Service workers	61.9%	60.0%	50.1%
Agricultural workers	15.4%	17.1%	13.0%
Craft workers	12.6%	14.0%	12.1%
Plant, machine operators	23.1%	19.6%	10.9%
Elementary occupations	48.3%	56.7%	31.9%

A number of scholars have suggested that economic crisis in the Caribbean in the 1980s and 1990s has led to an increase in women's labor force participation as women attempt to make up for income losses experienced by male family members (French 1994, Senior 1991, Morrissey 1998). The problem of higher rates of female unemployment, given job segregation by gender, may have been exacerbated by greater female than male increases in labor market participation, since the ratio of female to male labor force participation rates has been rising (Figure 3). This produces a "crowding" effect of females into a given set of job slots, leading to higher unemployment rates and putting downward pressure on wages

It may be then that differences in industry and occupational distribution of women and men, coupled with higher relative rates of female labor force participation, explain at least some of the differing rates of unemployment by gender. Absent any discrimination, however, we would expect the probability of women being unemployed *within* an industry or occupation to be similar to that of men. This, however, is not the case. As the data in Tables 12 and 13 show, in 1999 women's probability of being unemployed is higher than men's in almost every industry and occupational group in all three countries.

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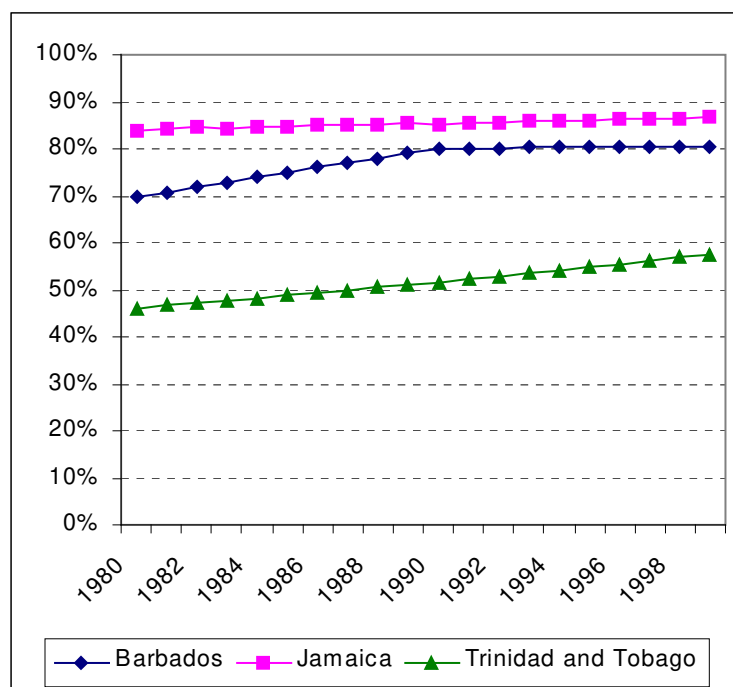Figure 3: Trends in Ratio of Female to Male Labor Force Participation Rates

Table 12: Ratio of F/M Probabilities of Being Unemployed by Economic Sector, 1999

	Barbados	Jamaica	Trinidad/Tobago
Agriculture	1.76	4.34	4.99
Petroleum and gas	n/a	9.20	1.26
Manufacturing	2.04	4.07	1.97
Electricity and water	n/a	1.20	6.88
Construction	1.03	2.91	2.52
Wholesale and retail trade	2.11	2.51	2.03
Tourism	2.92	n/a	n/a
Transport and comm.	2.62	1.29	1.63
FIRE	6.72	2.80	0.15
Comm. and personal services	0.80	2.83	1.97

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Table 13: Ratio of F/M Probabilities of Being Unemployed by Occupation, 1999

	Barbados	Jamaica	Trinidad/Tobago
Managers	1.19	1.74	1.04
Professionals	3.23		1.00
Technicians	2.17		2.95
Clerks	1.86	2.19	5.57
Service workers	2.56	2.26	3.86
Agricultural workers	2.00	3.53	1.00
Craft workers	0.99	1.39	0.25
Plant, machine operators	5.41	4.04	0.78
Elementary occupations	1.25	1.20	0.98

In the case of Table 12, which presents the ratio of female to male unemployment rates, women in Barbados in most industries have a significantly higher chance of being unemployed than men, while this is the case for women in all industries in Jamaica. In Trinidad and Tobago, the same pattern emerges with the exception of the FIRE industry. Here women's probability of being underemployed is much lower than men's, given that the ratio is below one. This, however, appears to be a statistical anomaly that is not replicated in other years. Between 1991 and 1998, for example, the ratio of female to male unemployment in that industry is approximately 1.45. That is, women employed in this sector were 45% more likely to be unemployed than men. Table 13 demonstrates a similar pattern of women's much higher probability of being unemployed than men in all occupational groups, with the notable exception of professionals in Trinidad and Tobago.

In my view, the data suggest that some portion of women's higher unemployment rates is due to their differential treatment by employers within occupations and industries, apart from their distribution across those jobs. Why women are treated differently than men and face a lower probability of receiving an acceptable job offer is an important question that must be answered at the micro level, but in any event, the data do support the hypothesis of differential treatment.

An interesting question is, what if women *were* treated the same as men by having the same access to jobs within industries and occupations, or put differently, the same probabilities of being unemployed? How then would gender differentials in unemployment rates be affected?

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Tables 14 and 15 provide data that help us approximate an answer to this question. The table gives the male unemployment rate in each industry and occupation, respectively. Using those numbers, I calculate the absolute number of women that would be unemployed, if females experienced the same rate of unemployment as men in that industry or occupation (shown in the second column for each country). Those numbers are summed to produce a hypothetical female unemployment rate. This is compared to the actual female and male unemployment rate, all for the year 1999.

In the case of economic sectors, if women were treated the same as men in access to employment, women's unemployment rate would fall to 6.1% in Barbados, a rate that is below the male rate, and less than half the current rate of 13.3%. Similarly, in Jamaica, the female rate would fall by half, and it would be only slightly higher than the male rate. Finally in Trinidad and Tobago, the effect on female to male unemployment rate ratios would be the most dramatic, with women's rate falling by almost two thirds to 6.6%, a rate that is 4 percentage points below of men's.

Table 14: Effect on Female Unemployment Rates of Experiencing
Male Unemployment Rates in Sectors, 1999

Occupation	Barbados		Jamaica		Trinidad/Tobago	
	Actual Male UE Rate	Female UE Using Male Rate (000s)	Actual Male UE Rate	Female UE Using Male Rate (000s)	Actual Male UE Rate	Female UE Using Male Rate (000s)
Agriculture	8.1%	0.1	1.8%	0.7	6.2%	0.3
Petroluem and gas			2.2%	0.0	13.7%	0.4
Manufacturing	6.9%	0.4	11.4%	4.3	9.0%	1.7
Electricity and water	0.0%	0.0	13.2%	0.3	3.6%	1.1
Construction	10.8%	0.1	13.7%	0.5	23.0%	2.3
Wholesale and retail trade	6.7%	1.3	9.2%	14.5	9.0%	5.4
Tourism	5.4%	0.4				
Transport and comm.	2.9%	0.0	7.9%	1.0	5.4%	6.8
FIRE	1.8%	0.1	5.6%	1.8	7.0%	1.3
Comm. and personal services	5.1%	1.4	5.4%	13.7	6.8%	6.0
Hypothetical Female UE Rate		**6.1%**		**11.5%**		**6.6%**
Actual Male UE Rate		7.7%		10.3%		10.9%
Actual Female UE Rate		13.3%		22.5%		16.8%

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Table 15: Effect on Female Unemployment Rates of Experiencing
Male Unemployment Rates in Occupations, 1999

	Barbados		Jamaica		Trinidad/Tobago	
Occupation	Actual Male UE Rate	Female UE Using Male Rate (000s)	Actual Male UE Rate	Female UE Using Male Rate (000s)	Actual Male UE Rate	Female UE Using Male Rate (000s)
Managers	2.7%	0.1	5.1%	5	2.0%	0.3
Professionals	1.0%	0.1			0.5%	0.1
Technicians	3.8%	0.1			3.5%	0.5
Clerks	6.1%	0.8	9.1%	9	6.8%	1.5
Service workers	5.9%	0.9	9.3%	10	10.6%	2.5
Agricultural workers	8.3%	0.0	1.1%	1	2.0%	0.3
Craft workers	7.7%	0.2	8.5%	7	36.1%	5.5
Plant, machine operators	4.1%	0.1	8.1%	7	10.2%	1.5
Elementary occupations	10.9%	1.8	13.6%	14	50.0%	13.6
Hypothetical Female UE Rate		**6.8%**		**14.0%**		**12.1%**
Actual Male UE Rate		7.7%		10.3%		10.9%
Actual Female UE Rate		13.3%		22.5%		16.8%

The data on occupations, shown in Table 15, present a similar story for Barbados, with women's rate falling to 6.8% as compared to men's actual rate of 7.7%. Again in Jamaica, female rates would fall, but by a lesser amount, to 14.0% as compared to a rate of 10.3% for men. In Trinidad and Tobago, female rates would also fall, by 4.7 percentage points, but women would still experience a higher unemployment rate than men.

What do these data tell us? First, they tell us that apart from women's and men's different distribution across occupations and industries, within job categories, women are treated differently than men. One interpretation is that employers appear to show a favoritism for males as workers by giving them preferential access to jobs.[16]

If women were treated similarly to men, their unemployment rates would fall substantially, so much so in Barbados that women's unemployment rates would be lower than men's. This is exactly what we would expect, given the export orientation of the economy, women's higher educational attainment, and lower wages. In Jamaica and Trinidad and Tobago, however, the occupational data tell us a different story. Women's higher unemployment rates are

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[16] Gender gaps may be due to "unobserved" productivity differentials, such as commitment to work, docility, and potential for absenteeism. If so, such factors might lead to hiring preferences that favor one group over another. There is, to my knowledge, no research on the Caribbean that suggests women and men differ substantially in work attitudes in a way that might affect employer preferences. While such differences may not exist in fact, it does not prevent employers from holding to prejudicial gender stereotypes that influence hiring decisions

not entirely due to discrimination in job access within job categories, and therefore must to some extent be due to their differing distributions within industries and occupations, as well as the growth path of the economy.

III. Impact of the Economic Cycle on Gender Differences in Unemployment Rates

As the previous discussion suggests, women's higher unemployment rate may be related to economic conditions, particularly given different industry and occupational concentrations among women and men workers. It is therefore informative to examine how economic upturns and recessions affect gender unemployment differentials. Indeed, promotion of economic growth is often offered as a solution to ending inequality, and thus it is useful to explore the extent to which this strategy will solve gender inequality in job access in the Caribbean.

Analysis of the effects of economic booms and recessions on women and men can tell us if there are gender differences in bearing the burden of economic insecurity resulting from a recession, and conversely, whether economic prosperity affects women and men differently. If women suffer more than men during a downturn due to a higher probability of job loss, then it may be especially socially desirable to mend the social safety net so that women are not disadvantaged in caring for families. We may also want to know if economic prosperity is sufficient for closing gender unemployment gaps or whether additional interventions are necessary. In the event the unemployment rate ratio falls during an economic boom, full employment policies are gender-enabling. If, however, the ratio falls, further targeted efforts beyond full employment policies will be necessary to close the gender gap in job access.

Econometric analysis is used to explore possible answers to these questions. In particular, the ratio of female to male unemployment rates is regressed on several macro-level variables. An analysis of this sort can tell us if there are gender differences in probabilities of being unemployed, related to the macroeconomic cycle itself. In simple terms, the idea behind this analysis is to ask how an economic recession or boom affects the ratio of female to male unemployment rates. We define the macroeconomic variable as the natural logarithm of the deviation of the rate of GDP growth from its trend. A positive value for the variable indicates an economic boom, and a negative value reflects an economic downturn. In a subsequent analysis, this variable is disaggregated by economic sector so as to capture the effect of recessions and booms in the various sectors of the economy on female and male employment. The disaggregation by sector is useful, given our results in the previous analysis, which showed that

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employment segregation may be a factor affecting differentials rates of unemployment.

In addition to these aggregate demand-side variables, a measure foreign direct investment (FDI) is used to determine whether liberalization of FDI has had any effect on women's relative chances of getting a job. Mainstream economists have touted the positive impact of FDI on employment.[17] It is therefore useful to see if this is the case and whether there are gender-differentiated effects of FDI. A time trend is also included in order to capture the long-term trend in female and male unemployment rates, beyond the effect of the other macroeconomic variables included in the model.

Changes in female and male labor supply, measured as the change in the female share of the labor force, are controlled for.[18] This variable, which reflects the percentages of female and male working age population willing and able to work, can affect the relative probabilities of being unemployed. If women increase their supply of labor to the market faster than men, then the relative probability of a woman being unemployed may rise. The variable is thus expected to be positively related to the ratio of female to male unemployment rates, and the female unemployment rate, but not the male rate.[19]

This analysis is conducted using a pooled cross-sectional time-series panel data set for 1980-99.[20] A fixed effects model is employed to capture the effect of changes in variables within countries over to time to account for time-varying country-specific effects.[21]

In these regressions, the determinants of female and male unemployment rates are separately estimated and then the determinants of the ratio of unemployment rates are also estimated. The equations below show two examples of the equations to be estimated, with the

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[17] FDI is measured as net capital inflows.

[18] I also included a variable that measures women's and men's secondary educational attainment, under the assumption that skill-biased growth will advantage those with higher education, and gender differences in secondary education might explain unemployment rates. That variable was not significant in any of the regressions and thus those results are not reported here. Results available on request.

[19] FSHLF is measured as the change in that variable to avoid multicollinearity with the GDP variable. Ordinary Least Squares (OLS) is used in these estimations and a correction is made for autocorrelation where necessary.

[20] Heteroskedasticity problems are frequently encountered with cross-sectional data, and therefore the regressions use GLS, with cross-sectional weights derived from the residual cross-sectional standard deviations. While this procedure corrects for heteroskedasticity across countries, a more general form is necessary to allow variances within a cross section to vary over time. This was done by obtaining standard errors in accordance with White's variance-covariance matrix in all regressions. I corrected for autocorrelation using an autoregressive process modeled as an AR(1) with a common country coefficient.

[21] Given the openness of these economies and their regional integration, it is possible that exogenous factors common to all countries but not captured in the model affect unemployment outcomes (such as, say economic conditions in the U.S). In that case, the error terms will be correlated, indicating an indirect linkage through "ripple" effects from shocks, and it is useful to use SUR (seemingly unrelated regressions) estimation techniques. I did this, and the results are largely comparable to those obtained with a fixed effects model using GLS. Results, not reported here, are available on request.

female unemployment rate as the dependent variable in this case. In equation (1), the deviation of GDP from its trend is the macroeconomic variable of interest and in equation (2), economic activity is disaggregated into sectors:

$$UEF_{it} = \beta_1 + \beta_2 GDPd_{it} + \beta_3 FDI_{it} + \beta_3 FSHLF_{it} + \eta_{it} \tag{1}$$

and

$$UEF_{it} = \gamma_1 + \gamma_2 SERVd_{it} + \gamma_3 MFGd_{it} + \gamma_4 INDd_{it} + \gamma_4 AGd_{it} + \gamma_5 FDI + \gamma_6 FSHLF_{it} + v_{it}$$
$$\tag{2}$$

where, in equation (1), *UEF* is the female unemployment rate in country *i* in time *t, GDPd* is the logarithmic deviation of GDP from its trend, *FDI* is foreign direct investment as a share of gross fixed capital formation, *FSHLF* is the change in the female share of the labor force, and *η* is the error term. In equation (2), *SERVd* is the deviation of service sector output growth from trend, *MFGd* refers to the manufacturing sector deviation from trend growth, and equivalently, *INDd* is industry output deviation from trend growth, and *AGd* is agricultural output deviation from trend growth. All deviations are measured in natural logarithms. The error term is represented by *v*.

Table 16 reports the regression results, with equations 1-3 using *GDPd* to capture the effect of macroeconomic conditions. The coefficients on that variable indicate that female and male unemployment rates fall in an economic upturn, and rise during a recession, as would be expected. Interestingly, however, economic upturns contribute to a *rise* in the rate of female unemployment relative to the male rate (equation 3). That is, men benefit more than women from economic upturns by greater access to newly created jobs, thus widening the gender gap in access to paid work.[22]

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[22] In a more in-depth study that considers the determinants of the female share of the labor force, Cagatay and Olzer (1995) found an inverted feminization U—at earlier stages of development, women's share of the labor force falls, since economic development is accompanied by urbanization and a separation of productive from reproductive work, with women finding it difficult to combine both roles. As growth proceeds, however, female labor force participation rises with the commodification of domestic labor, falling fertility, and more education for women. That study uses per capita income as a measure of the stage of development. Given that unemployment is also determined to some extent by increases in women's labor supply, gender gaps in unemployment may at least in part be attributable to the stage of development. Indeed, a number of economists have attempted to explain the mass unemployment of the 1980s and 1990s in industrialized economies by the rise in female labor force participation rates. If there is inelastic substitution of males by females in the labor market, we might expect that rising female labor force participation over time that accompanies economic growth will lead to greater increases in female than male unemployment. To test this, I regressed the ratio of unemployment rates on the natural logarithm of per capita income and that term squared (to capture non-linearities). Neither of these variables was significant for any of the countries in question.

The coefficient on the time variable indicates the long-term time trend of unemployment rates by gender and the unemployment rate ratio. The negative coefficients on the time variable indicate that for the period 1980-99, female and male unemployment rates have been declining at a statistically significant rate. The ratio of female to male unemployment rates, however, has not declined significantly (in a statistical sense).[23] That is, the high female to male unemployment rate ratio has not trended downward over this time, indicating a resilience of gender inequality, measured as access to work.

Equations 1-3 in Table 16 also show that FDI has not had a significant effect on unemployment rates, suggesting the limited use of this strategy to reduce high unemployment in the region, or to reduce gender inequality in access to work. Finally, an increase in the female share of the labor force has contributed positively to the unemployment rate ratio. That is, as the share of women in the labor force has risen, so too has the female to male unemployment rate ratio. This result is consistent with the notion that women and men are not substitutes in the labor market, so that an increase in female labor supply relative to male labor supply leads to "crowding" of women into a fixed number of job slots.

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[23] There are in fact contradictory trends. Jamaica has experienced a statistically significant declining trend in the female to male unemployment rate ratio. In contrast, the ratio has been trending upward (but not statistically significantly so) in Barbados and Trinidad and Tobago.

Table 16: Effect of Economic Conditions and Labor Supply
on Unemployment Rates and Ratios, 1980-99

| Independent Variables | Dependent Variables | | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
	Female Unemploy-ment Rate	Male Unemploy-ment Rate	F/M UE Rate Ratios	Female Unemploy-ment Rate	Male Unemploy-ment Rate	F/M UE Rate Ratios
Time	-0.66	-0.46	-0.002	0.86	-0.48	-0.01
	(-1.86)**	(-2.05)**	(-0.16)	(-2.79)**	(-2.14)**	(-0.45)
GDPD	-23.97	-20.96	1.34			
	(-3.39)***	(-2.99)***	(2.72)***			
Service				-7.88	-10.67	0.73
				(-1.83)*	(-2.53)***	(2.38)**
Industry				-10.10	-7.80	0.67
				(-4.98)***	(-3.63)***	(3.03)***
Mfg.				-7.98	-4.75	0.24
				(-2.32)**	(-1.55)	-0.84
Agric.				-1.77	-1.85	0.16
				(-1.43)	(-1.91)**	(1.55)
FDI	-0.002	0.005	0.001	0.03	0.02	-0.001
	(-0.06)	(0.17)	(0.22)	(0.99)	(0.85)	(-0.03)
FSH LF	1.40	-1.74	1.35	2.21	-2.20	0.54
	(0.75)	(-0.44)	(2.12)**	(0.65)	(-0.63)	(2.68)***
Adj. R^2	0.821	0.958	0.835	0.991	0.967	0.641

Note: A single asterisk (*) denotes signficance at the 10% level, two asterisks (**) at the 5% level, and three asterisks (***) at the 1% level. N=51. The method of estimation is Generalized Least Squares (GLS) with an AR(1) correction for autocorrelation. T-ratios (in parentheses) are shown below coefficient estimates. Fixed effects are not reported here.

Again in Table 16, Equations 3-6 report results from disaggregating the economy into four sectors. I focus here on the coefficient estimates on the sector variables. Interestingly, the most important sectors in reducing female and male unemployment are the service sector and industry (which includes electricity, water, gas, and construction, excluding manufacturing).[24]

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[24] Industry sector data typically include the manufacturing sector. I disaggregated manufacturing from the other industries so as to assess the separate effect of this sector on unemployment rates.

Increases in manufacturing output also have a statistically significant effect on female unemployment rates (at the 5% level) but not men's, while the reverse holds for agriculture.

Increases in service sector and industry output *raise* the ratio of female to male unemployment rates, suggesting a male bias in job access. This can be more easily explained in the industry sector where most jobs are associated with male-dominated occupations. It is surprising that expansion of the service sector, however, which tends to have a larger share of women workers, leads to a rise in gender inequality in job access during economic upturns, and again reinforces the view that males have preference in access to service sector jobs. Economic conditions in the manufacturing and agriculture sector do not have any effect on the relative access of women and men to jobs, however, according to this analysis. Finally, as would be expected, the effect of a relative increase in the female labor supply contributes to some of the gender gap in unemployment rates, with women's unemployment rising relative to men as women's relative labor supply increases.

In sum, over the last twenty years, cyclical economic conditions as well as increases in women's labor force participation relative to men's explain some of the wide gaps in female and male unemployment rates. Economic booms are associated with an expansion of gender inequality in job access as men are hired at a faster rate than women. This is especially noteworthy, since women are more concentrated in private sector employment than men, and to the extent economic booms are private sector-led, women would be expected to have greater access to newly created jobs. They do not. This is also striking in that men's preferential access to employment during economic upturns is as a result of expansion of both male- *and* female-dominated sectors. The results presented here show that relative increases in female supply have also contributed to the higher female than male unemployment rate, a finding that is consistent with job segregation by sex.

VII. Summary and Conclusions

This paper has sought to explore the economic factors that contribute to women's high unemployment rates relative to men in three Caribbean economies.[25] Part of the explanation is shown to be due to the increase in women's labor force participation relative to men's. Women's higher labor force participation rates during this period of time have been attributed in part to the effects of economic crisis and structural adjustment, which reduced male job prospects

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[25] This analysis would have been improved and enriched by the availability of data on unemployment by ethnicity, particularly for Trinidad and Tobago. Unfortunately that data gap could not be filled, and thus our understanding of the dynamics of this is limited to an examination along the lines of gender only.

(Morrissey 1998). The result, some argue, is the "added worker" effect: as men's incomes have fallen, more women have been forced into the paid labor market to make up for income shortfalls. Women, in other words, engage in "distress" sales of their labor, with the implication they have lowered their reservation wage.[26]

Women's unemployment rates would be higher absolutely, and relative to those of men, were they not to have out-migrated to the extent they did in the 1980s and 1990s. Other potential supply-side factors, such as women's relative educational attainment, or their job preferences relative to those of men, do not contribute a great deal to understanding the sources of the problem of unequal access to paid work.

On the aggregate-demand side, a second explanation for women's higher unemployment rates, and perhaps the longer duration of their unemployment, is that men appear to be the first hired during economic upturns, even in the service sector, which has typically been a female-dominated sector. These results should be viewed with some caution, since further disaggregation of sectors might provide different results. To the extent the results presented here are accurate, however, they imply that employers exhibit a preference for male workers when hiring, even in sectors not marked by a high degree of segregation. To understand why this is so requires further research. Perhaps social legislation, such as maternity leave, disadvantages women in employment.[27] It is also possible that women's child care responsibilities lead employers to prefer men, who they believe will exhibit a lower rate of absenteeism. Those costs, however, should be offset to some extent by women's high educational attainment, and their lower wages relative to men. Indeed women's greater difficulty gaining employment during economic upturns seems in some sense economically irrational.[28] But of course, economic "rationality" must be counter-posed with other social and political institutions that shape gender relations, and in particular, the apparent preference by males for dominance, buttressed by an income advantage.

The result that men possess an advantage in obtaining employment during economic upturns suggests that national level policies to stimulate economic growth are inadequate to resolve this fundamental inequality. Further opening of economies to foreign direct investment,

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[26] The data indicate, though, that that is the case only in Barbados, from 1986 onward. Evidence for this is found by plotting the female share of employment against GDPd, and for Barbados, that relationship is negative. That is, in recession, female shares of employment appear to rise, but this result does not hold for Jamaica or Trinidad and Tobago, or pre-1986 in Barbados.

[27] In that case, a solution is to extend leave to fathers as well as mothers, and to fund the costs of parental leave centrally, so that individual firms do not directly bear the burden of the leave costs (which would otherwise cause them to prefer male workers, and/or those of a non-child bearing age).

[28] In fact, some employers note their preference for cheaper female labor (Sutton and Makiesky-Barrow 1981, Yelvington 1995, Freeman 2000). According to Freeman (2000), they also indicate their preference for mothers, who they see as a more stable, reliable source of labor.

also, does not seem to be the answer. Rather, more targeted policies, including perhaps affirmative action policies, that promote greater female job access will be needed. This is not to ignore the very beneficial effects of economic growth on female and male unemployment rates, since women and men are absolutely better off as the economy booms. Given the poor economic performance of these economies over the last two decades (1.3% annual average growth in Barbados, 1.7% in Jamaica, and 0.4% in Trinidad and Tobago), policy makers are rightly concerned with what mix of levers will generate faster growth.

But the point to be underscored is that women are relatively worse off in an economic boom, since men's access to jobs increases more, and this expands income inequality between women and men. It is known from recent research on intrahousehold distribution of income that if men's income rises relative to women's in their household, it may or may not be shared equitably with other members of the family. Indeed, recent evidence suggests that family members are better off if women's income rises rather than men's since women spend a significant portion of earnings on nutrition, health care, and education for their children. Also, if income inequality between women and men widens, a man's relative bargaining power increases.[29] He may use this bargaining power to ensure his control over a greater share of household income, and shift a larger burden for unpaid labor onto his female partner, while increasing his own leisure time. Thus, greater gender inequality in unemployment can have substantially negative effects for women and the children they care for through a variety of avenues.

To understand further the cause of gender differences in access to work during economic upturns, future research may usefully be directed at understanding employer decision-making in hiring across industries and occupations to better guide national level policies to alleviate women's unequal access to work. This problem is particularly important to solve, given the lack of public commitment to social safety nets and assistance targeted to single women and their children (Morrissey 1998). Because women rely heavily on the labor market for income, their relatively higher unemployment rates produce severe negative effects on the children they are responsible for. If not solved, this problem can lead to a deterioration of care and investment in children's well-being with negative effects for future economic and social well-being.

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[29] How these dynamics play out in visiting relationships as compared to situations of marriage or cohabitation is not clear.

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Abbreviations for Occupations and Economic Sectors

To facilitate presentation of data in the tables, occupational categories are abbreviated, as are full descriptions of economic sectors. Below, I set out the abbreviations used in the tables and the actual ILO and country categories.

Table A.1.-:Occupational Categories

Abbreviations	**Designation in Official Statistics**
Management	Legislative, senior officials, and managers
Professionals	Same
Technicians	Technicians and associate professionals
Clerks	Same
Service workers	Service workers and shop sales workers
Agricultural workers	Skilled agricultural workers (Barbados); Agriculture, forestry and fishery workers (Jamaica and TT)
Craft workers	Craft and related workers
Plant, machine operators	Plant and machinery operators and assemblers
Elementary occupations	Same

Table A.2.-:Economic Sectors

Abbreviations	Designation in Official Statistics
Sugar	Sugar (cultivation and manufacture)
Other agriculture	Other agriculture, forestry, and fishing
Petroleum and gas	Petroleum and gas, and other mining and quarrying
Manufacturing	Manufacturing
Electricity and water	Same (For Barbados, gas workers are represented here).
Construction	Same
Wholesale/retail trade	Wholesale, retail trade, restaurants and hotels (Barbados disaggregates tourism from this sector. I have followed that disaggregation in the tables here, given the importance of that sector).
Transport and comm.	Transport, storage, and communications
FIRE	Finance, insurance, real estate, and businesses
Comm. and personal services	Community, social, and personal services (For Barbados, these data are disaggregated into government and general services. I have aggregated them here).