

Beyond gender: the impact of age, ethnicity, nationality and economic growth on women in the Singapore economy

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Abstract

This paper uses Singapore Labour Force and Census data to examine trends in women's labour force participation, sectoral and occupational distribution, and wage incomes relative to men, including by age-cohort and educational attainment. It finds that between 1980 and 2010, gender disparities in virtually all categories have substantially narrowed, and concludes that those which remain—such as women's continued under-representation at higher levels of the labour force and income distribution—result from their continued disproportionate responsibility for family care. The paper identifies some areas of concern for women's economic future in Singapore, including the impacts of ageing, foreign labour and immigration, and the wage stagnation experienced by low-income families under Singapore's economic development model.

Introduction

In 1982 I published an Occasional Paper on *Women in the Singapore Economy* for the Economic Research Centre at the National University of Singapore (which no longer exists).² My paper was based on national statistical data up to 1980, and employed an economic framework of labour force analysis common in international academic and public policy journals. It (1) showed that women then occupied an inferior labour market status relative to men in the Singapore economy and (2) attributed this to the primacy of their reproductive role in the family relative to their productive role in the labour force. I argued that women's lower labour force earnings reflected their lower labour productivity, itself the result of their (a) lower average educational attainment levels than men, (b) concentration in low-wage, low-productivity labour-intensive manufacturing, (c) shorter/interrupted working-lives and hence lesser work experience. These factors themselves reflected women's differential educational, industrial and occupational choices as influenced by differential sex-roles and sex stereotypes which also contributed to sex discrimination in the workplace.

At the same time I was somewhat optimistic that gender inequality in the labour force would diminish (though not disappear) as a result of (a) narrowing in the male-female educational gap, (b) technological upgrading and industrial restructuring minimizing female disadvantages in the workplace, (c) narrowing in the male-female seniority gap (in part because of higher female educational attainment increasing the opportunity costs of not working given the increased opportunities and rewards for higher-skilled, higher-wage employment), (d) human resource needs in a tighter labour market where labour scarcity would undermine the rationale for employer discrimination, (e) changes in social and cultural attitudes in the direction of greater gender equality. In other high-income developed economies like the U.S., these presumptions have generally been validated.³ The 25th anniversary of AWARE provides a good opportunity to investigate what the progress has been in Singapore, and what challenges remain.

Women in the Singapore Labour Force 2009⁴

Labour Force Participation

In 2009, women accounted for 43% of the Singapore labour force, a marked increase from their 35% share in 1980. The female labour force participation rate (LFPR)—the proportion of women who are economically active (employed or unemployed and looking for work)—was 55.2% (vs. 40% in 1980), compared with 76.3% for males.

Fewer females than males were in the labour force in every age-group, with the smallest gap in the 25-29 age cohort, when 93.3% of males and 85.5% of females were economically active. Between the prime working-age years of 25 and 64, 92.9% of men and 67.6% of women were economically active. Among both males and females, single and widowed or divorced persons had higher LFPRs than married persons, among whom over 80% of males in their 40's and 30's were in the labour force versus over 60% of females in their 40's and over 70% of females in their 30's.

Among economically inactive persons aged 25-54, 88% were females, and most cited “family responsibility” as the main reasons for being economically inactive. In contrast, economically inactive males cited “poor health/disability”, “schooling/ taking courses” and “taking a break” as their main reasons for not being in the labour force. Interestingly, 9.5% of economically inactive males but only 0.9% of females said they were “discouraged” (by inability to find a job).

For both males and females LFPRs are higher for those with higher educational attainment, but at the secondary education level and above, there is not much difference in the gender gap. Among those whose highest educational qualification is secondary school, 72.6% of males and 57% of females are in the labour force; among upper secondary graduates it is 78.8% of males and 65.1% of females; among those with polytechnic diplomas, 87.7% of males and 78.9% of females are economically active; while among those with university degrees, 94.6% of males but only 81.6% of females are in the labour force. Females in the labour force tend to be slightly better-educated than males, with 78% having an upper-secondary-or-higher-education compared with 74% of males, and 27.5% having a university degree versus 26.1% of males.

Unemployment rates in Singapore remain low by international standards, and female unemployment rates have historically been lower than male rates. In 2008, prior to the onset of

the global financial crisis, unemployment was 3.1% for males and 2.4% for females, rising in 2009 to 4.6% for males and 3.7% for females during the ensuing recession.

LFPRs by ethnic group which were available for 1980 are no longer provided. The implications of this, and of the now large proportion of non-residents and foreign-born residents in the Singapore labor force, will be considered in the Discussion below.

Sector, Occupation and Incomes

Table 1: Sector Distribution of Resident Labour Force 2009

<i>Sector</i>	<i>% of Total</i>	<i>% of Males</i>	<i>% of Females</i>	<i>Female % of Total</i>
Manufacturing	15.7	17.5	13.3	36.4
Construction	6.1	8.2	3.2	2.3
Services	77.1	72.3	82.8	46.2
Wholesale & Retail	14.6	13.4	16.1	47.5
Transport & Storage	9.6	13.1	5.0	22.5
Hotel & Restaurants	6.7	5.4	8.4	53.9
Info & Communications	5.0	5.3	4.8	40.5
Financial	6.5	5.1	8.5	55.8
Real Estate & Leasing	2.6	2.3	2.9	48.2
Professional	5.9	5.6	6.2	45.7
Administrative & Support	4.6	4.4	4.9	46.1
Public Admin & Education	12.6	12.3	13.1	44.5
Health & Social	4.1	1.8	7.2	75.3
Other Comm, Soc & Personal	4.9	4.3	5.7	50.1
Others	1.1	1.5	0.6	24.9
TOTAL	100.0	100.0	100.0	43.0

Source: Ministry of Manpower, *Report on Labour Force in Singapore 2009*, Table 35

The changed sectoral distribution of the female labour force since 1980 reflects changes in the composition of GDP, specifically a relative shift from manufacturing to services, and within *manufacturing, from labour-intensive, female-intensive low-skill, low-wage manufacturing to more capital-intensive, male-intensive, higher-skill, higher-wage manufacturing. In 1980 manufacturing employed 40.5% of all females in the labour force (24.7% of all males) and females accounted for 46.3% of all manufacturing workers, as compared with 34.4% of the labour force as a whole.⁵ By 2009 manufacturing employed only 13.3% of all females (but 17.5% of all males), and females accounted for 36.4% of all manufacturing workers, as compared with 43% of the labour force as a whole (Table 1).

Women instead flocked to the expanding services sector, where 82.8% of female workers (72.3% of males) were employed in 2009, accounting for 46.2% of total employment, slightly more than their 43% share of the labour force as a whole. While women are spread throughout the different services—most heavily in wholesale and retail trade, and in public administration and education—they are now particularly disproportionately represented among workers in health and social services (75.3%), financial services (55.8%), hotels and restaurants (53.9%), and other community, social and personal services (50.1%).

Table 2: Occupational Distribution of Resident Labour Force 2009

<i>Occupation</i>	<i>% of Total</i>	<i>% of Males</i>	<i>% of Females</i>	<i>Female % of Total</i>
Man, Admin & Proprietors	15.6	18.7	11.5	31.6
Professionals	16.1	16.7	15.3	40.8
Associate Prof & Technicians	20.3	17.7	23.8	50.4
Clerical	12.7	5.2	22.8	76.9
Sales & Service	11.2	10.3	12.4	47.7
Prod, Craftsmen & Related	4.7	7.3	1.2	10.7
Plant/Machine Op & Assembly	8.5	12.3	3.5	17.5
Cleaners, Labourers & Related	7.5	6.1	9.4	54.0
Others	3.4	5.9	0.1	1.4
TOTAL	100.0	100.0	100.0	43.0

Source: Ministry of Manpower, *Report on Labour Force in Singapore 2009*, Table 28

While occupational segregation, or “the tendency for men and women to be in different occupations” has declined over time, as of 2000 “females’ representation in higher-skilled occupations in Singapore still lagged that in the developed countries.”⁶ For the working population as a whole, this situation persisted in 2009, with women workers under-represented relative to their overall share in the labour force (43%) in the higher-skill job categories of management, administrators & working proprietors (31.6%, or 11.5% of all female relative to 18.7% of all male workers), and professionals (40.8%, or 15.3% of all female relative to 16.7% of all male workers) (Table 2). Females were over-represented in the middle-level categories of associate professionals and technicians (50.4%, or 23.8% of all female versus 17.7% of all male workers), clerical workers (76.9%, or 22.8% of all female versus 5.2% of all male workers), sales and service workers (47.7%, or 12.4% of all female versus 10.3% of all male workers), and in the lower-skill category of cleaners, labourers and related workers (54%, or 9.4% of all female versus 6.1% of all male workers).

Among government employees, females outnumbered males in higher-level jobs in Division I (60% more females) and Division II (25% more females), while males outnumbered females in lower-level jobs in Division III (49% more males) and Division IV (28% more males).⁷ This probably reflects female domination of the ranks of teachers in government service, and the greater preference of women high-level professionals such as doctors, lawyers and accountants for more stable employment government employment than higher-earning

private practice, thus contributing to women's lesser representation in higher-income job classifications. Women are also under-represented in the highest levels of the civil service e.g. as Permanent Secretaries.

Table 3: Occupational Distribution by Gender & Select Age-Group 2009

<i>Occupation</i>	<i>% of Total</i>	<i>% of Males</i>	<i>% of Females</i>	<i>Female % of Total</i>
Man, Admin & Proprietors				
age 20-29	5.0	4.6	5.4	52.1
age 30-39	17.5	19.9	14.9	40.3
Professionals				
age 20-29	20.7	18.4	23.2	53.7
age 30-39	26.4	29.9	22.5	40.4
Assoc Prof & Technicians				
age 20-29	25.0	23.2	34.7	57.9
age 30-39	25.8	23.8	28.1	51.5
Clerical				
age 20-29	15.3	8.5	22.7	71.1
age 30-39	11.4	3.5	20.2	83.9
Sales & Service				
age 20-29	12.0	12.4	11.4	45.6
age 30-39	8.3	8.3	8.4	47.7
Prod, Craftsmen & Related				
age 20-29	1.4	2.5	0.2	6.2
age 30-39	2.9	4.9	0.7	11.9
Plant/Machine Op & Assembly				
age 20-29	2.6	4.2	0.9	16.3
age 30-39	4.2	5.6	2.7	30.1
Cleaners, Labourers & Related				
age 20-29	2.0	2.5	1.4	33.3
age 30-39	2.3	2.2	2.4	50.5
Others				
age 20-29	12.4	23.7	0.0	0.0
age 30-39	1.1	2.0	0.1	5.6

Source: Ministry of Manpower, *Report on Labour Force in Singapore 2009*, Table 3

Disaggregating by age-cohort yields some potentially interesting results (Table 3). In the 20-29 age group, where women are 47.9% of all workers, females outnumber males in the

higher-skill categories of management, administrators & working proprietors (52.1% of all workers), and professionals (53.7% of all workers), and have a bigger lead among associate professionals and technicians (57.9% of all workers versus 51.5% in the 30-39 age cohort). At the same time, their disproportionate share of clerical workers (71.9%) is less than in the 30-39 age cohort (83.9%), and they account for only 33.3% of cleaners, labourers and related workers, as compared with 50.5% among those aged 30-39.

There are many possible explanations for this apparent trend toward increased female representation in higher-skill job categories and their lesser representation in lower-skill categories among those aged 20-29:

1. Women's increased (and possibly superior) educational attainment levels, particularly at younger ages, qualify more of them for higher-skilled occupations (see Table 5).
2. Women in their 20's are more likely to have completed their higher education and training, and to have had more years of work experience, than men in the same age cohort whose labour force participation would have been delayed by two years of compulsory military service in their late teens.
3. Highly-educated women in their 20's are more likely to be single and childless, which are positively correlated with labour force participation, whereas mothers in their 30's may have lost some seniority by temporarily dropping out of the labour force, or accepting less-responsible jobs, due to childcare obligations. Thus it is possible, even likely, that when the present 20-29 age cohort of highly-educated women moves into their 30's, their representation in higher-skilled jobs might also decrease.
4. The shift in Singapore's economic structure toward post-industrial status with a greater GDP and employment share for services, especially relatively female-intensive services like finance, health, education, retail trade, hotel and restaurants, would over time result in more higher-skill jobs in these sectors, and more women in these sectors reaching those job levels. This would be accompanied by a corresponding decline in the GDP and employment share of relatively male-intensive sectors like manufacturing, and hence in the share of highly-skilled jobs in these sectors which are more likely to be occupied by men. Further disaggregation and the passage of time are necessary to ascertain the likely relative weight of each of these potential explanations.

This pattern of greater gender equity/lesser disparity among those aged 20-29 holds also for income. While the ratio of female to male median gross monthly income in full-time work is 91.9% overall, among those in the 20-29 cohort, it is 106.8% overall, 100% among those with secondary education, 113.5% among those with upper secondary education, 95.6% among those with polytechnic diplomas and 97.6% among those with university degrees.⁸ The female-to-male income ratio at all educational attainment levels drops substantially for those in their 30's and above, with only upper-secondary-qualified women in their 30's earning more (108.1%) than similar males.

With the exception of the 20-29 age cohort, employed resident women earn less than men with the same educational qualifications, and in the same occupations and sectors. For example, in 2009 only 5% of women whose highest educational qualification was secondary school earned over \$5,000 a month, compared with 9.7% of men; among those with upper

secondary education, 14.7% of women but 17.6% of men earned over \$5,000; among those with a polytechnic diploma, the ratio was 9.5% of women and 18.5% of men; and among those with a university degree, the ratio was 37.6% for women and 41.7% for men.⁹

By occupation, the proportion of managers, administrators and working proprietors earning \$5,000 or more a month was 53.9% for males and 48.1% for females, with 22.5% of males, and 14.5% of females, earning over \$10,000. Among professionals, 50.2% of men, and 37.7% of women, earned over \$5,000, with 12.7% and 7.5% respectively earning over \$10,000. Among associate professionals and technicians, over half of whom are women, 17.8% of males and 12.6% of females earned over \$5,000.¹⁰

Within particular sectors, the income distribution for female workers is also lower than it is for males. For example, in financial services, where women represent 55.8% of all workers, 52.3% of males earn over \$5,000 and 26.3% earn over \$10,000, while the corresponding proportions for females are 32% over \$5,000 and 11.6% over \$10,000. In health and social services, where women are 75.3% of all workers, only 11.1% of them earn over \$5,000 and 2.2% over \$10,000, whereas 36% of males in this sector earn over \$5,000 and 17.8% over \$10,000. Only in the public administration and education services sector is income more similarly distributed, with 22% of both males and females earning over \$5,000.¹¹

Table 4: Gross Monthly Income from Work of Employed Residents by Gender

Gross Monthly Income	% of Males	% of Females	Females as % of Total
<\$500	4.1	4.6	45.8
\$500-\$999	9.0	14.6	55.2
\$1,000-\$1,499	12.5	13.0	43.9
\$1,500-\$1,999	12.6	12.0	41.7
\$2,000-\$2,499	10.9	11.4	44.1
\$2,500-\$2,999	7.8	8.6	45.2
\$3,000-\$3,999	12.7	13.6	44.7
\$4,000-\$4,999	7.7	7.2	41.3
\$5,000-\$5,999	5.9	4.9	38.4
\$6,000-\$6,999	3.5	2.8	37.5
\$7,000-\$7,999	2.6	2.0	36.5
\$8,000-\$8,999	2.1	1.3	31.5
\$9,000-\$9,999	1.3	0.8	32.2
\$10,000 and over	7.3	3.2	25.0

Source: Ministry of Manpower, *Report on Labour Force in Singapore 2009*, Table 63

The *Report on the Labour Force* does not provide median income by gender and occupation, or by gender and industry. But Table 4 shows that women workers, who form 43% of the labor force, are under-represented in the upper income brackets and over-represented in the lower income brackets.

Discussion: Gains, Lags, Cautions and Unknowns

Gains

The 2009 Labour Force data, compared with Labour Force and Census of Population data for 1980, show that women's labour force status in Singapore has improved substantially over the past thirty years. With respect to many variables, it is today probably on par with if not superior to that in most other developed countries at similar income levels. Though parity with men has not been achieved, most gender disparities in the labour force have been substantially reduced.

A higher proportion of women residents in Singapore now participate in the labour force, and they account for a higher proportion of the working population, though still less than in some other developed countries like the U.S. where women are now about half of the labour force. Women workers in Singapore are now more evenly distributed across more occupational categories and sectors than previously, and they earn 91.9% of the overall male median employment income, one of the smallest gender income gaps in the world. In younger age groups, female workers' occupational status and income levels are much closer to those of males, possibly suggesting that gender differentials are continuing to narrow.

These improvements are due primarily to (1) consistently rapid GDP growth generating strong demand for labour that exceeds the domestic supply,¹² (2) restructuring and diversification of the Singapore economy from male-intensive sectors (e.g. manufacturing) to more female-intensive services (e.g. finance, health and education) as economic development has proceeded and incomes have risen; (3) women's rising educational attainment levels and the diminution of gaps with men, especially among younger age cohorts. For example, among the citizen population in 2005, males were more likely than females to have university degrees, but the gap in the 25-29 age group (33.2% of males versus 31% of females) was much smaller than that in the 30-34 age group (24.2% of males versus 18.8% of females). Among those without tertiary education, 18% of males but only 9.9% of females continued their education to acquire technical, commercial or vocational qualifications.¹³

Table 5 shows that females accounted for just over half of all university students, and just under half of all polytechnic students graduating in 2009. Interestingly, in both types of institutions, they form the majority—in many cases a large majority—of graduates in most fields of study, including professional fields like accountancy, architecture, business and law, with the notable exceptions of engineering and information technology, which have larger intakes of mostly male students. Particularly notable are the 63.5% of accountancy and 63.2% of natural, physical and mathematical sciences university graduates who are female (a higher ratio than typically found in other developed countries), and the 44.3% female ratio in medicine (below the over-50% ratio now the norm in other developed countries).

Table 5: University & Polytechnic Graduates (Full-Time) in 2009

Courses	Females as % of All Graduates
UNIVERSITY	51.4
Accountancy	63.5
Architecture & Building	57.6
Business & Administration	57.7
Dentistry	61.3
Engineering Sciences	28.9
Fine & Applied Arts	65.2
Health Sciences	82.9
Humanities & Social Sciences	73.7
Information Technology	28.4
Law	57.0
Mass Communication	78.0
Medicine	44.3
Natural, Physical & Mathematical Sciences	63.2
Services	73.5
POLYTECHNIC	47.4
Applied Arts	57.4
Architecture & Building	56.9
Business & Administration	64.3
Education	97.7
Engineering Sciences	26.7
Health Sciences	79.4
Humanities & Social Sciences	62.7
Information Technology	43.3
Legal Studies	57.3
Mass Communication & Information Science	69.7
Science & Related Technologies	56.7
Services	40.4

Source, Ministry of Education, *Education Statistics Digest 2010*, Tables 16, 17

Lags

At the same time, occupational and sectoral segregation by gender persists, as does women's relative over-representation in lower-skill occupations and lower-income levels of the labour force, and their corresponding under-representation at higher occupation and income levels. Even within the same occupational category or sector, women are disproportionately clustered at lower levels, and under-represented at higher levels, with the notable exception of government service⁰. After 30 years of more-or-less “equal opportunity” in education and the labour market, this is no longer explicable by the “pipeline problem” i.e. the fact that women are only recent entrants to the labour force and thus disproportionately clustered in its lower ranks due to lack of seniority.

Instead, today continued occupational and sectoral segregation most likely reflect differences in seniority and job choices constrained by child-raising responsibilities or preferences, including for women at higher educational, occupational and income levels, where some residual discrimination likely persists, as it does in other developed countries. In addition to cultural factors, until relatively recently there were de facto restrictions on women's admission into particular courses of tertiary education (e.g. medicine, abolished in 2002). There remain other policy inequities which discourage or limit women's careers. For example, married women civil servants still do not receive health care for their dependents, and there are statutory provisions for maternity but not for paternity leave. Both of these may cause women to disproportionately drop out of the labour force temporarily or permanently, which then lead to some unwillingness among employers to recruit, train and retain women workers especially at more expensive higher levels of the labour force. Nearly three decades of government pro-natalist policies, though apparently ineffective in reversing the precipitously declining birth-rates characteristic of all rapidly-industrializing East Asian countries,¹⁴ may also contribute to such discriminatory employer behaviour.

Cautions

Higher female labour force participation rates and reduced gender gaps in occupational and sectoral distribution do not necessarily reflect an improvement in the economic status and well-being of low-income Singaporean families. The stagnation of individual wage incomes at the lower end of the income distribution¹⁵ may simply mean that both husband and wife must work because a single income is insufficient to support the family, thereby increasing female LFPRs. Economic restructuring and wage stagnation may also mean that low-skilled men can increasingly find jobs only in previously “female-dominated” low-skilled occupations such as “Cleaners, Labourers and Related Workers”, where they form two-thirds of such workers in the 20-29 age cohort (Table 3), thereby reducing previous male-female occupational and income gaps i.e. “downward leveling” rather than “upward leveling”.

The labour market is also only one—albeit the most important—way in which women participate in the economy. Disproportionately represented among the economically inactive because of family care responsibilities (which contribute indirectly to spousal and family income), and at the lower-end of the income distribution, and with a lower labour force participation rate, women are at risk of having inadequate personal savings (e.g. through CPF accounts) to support themselves in the event of family break-up (e.g. marital abandonment) and given their greater longevity than males. Presumably because of the rapid ageing of the population, there are already just 974 males per 1,000 females in Singapore's population, and this gap is likely to grow.

Population ageing is also likely to make disproportionate demands on the family care-giving responsibilities of women workers, forcing some of them to leave the labour force to supervise or provide elder care at the very ages where their own seniority-enhanced income (and thus saving-for-retirement potential) is likely to be greatest (in the 40-65 age cohort). It therefore poses a major risk to women retaining the labour force gains they have made in the past 30 years, “squeezing” or “sandwiching” them between the twin obligations of child- and elder-care.

Unknowns

Incompleteness in the *Report of the Labour Force* data may conceal pockets of vulnerability among particular groups of women, especially ethnic minorities, since no such information is provided for 2009, in contrast to 1980. While by 1980 LFPRs had ceased to differ among women by ethnicity, there are ethnic differences in educational attainment. For example, in 2010, the proportion of Singapore residents with tertiary (diploma, professional or university) qualification was 38.1% for Chinese, 16.7% for Malays and 49.1% among Indians (a large jump from 20% in 2000 due partly to the inflow of Indian permanent residents).¹⁶ There are thus likely to be ethnic differences by industry and occupation, as well as discrimination against minorities (e.g. in some service professions where there may be—however unjustified, and perceived rather than real—consumer preferences for being served by individuals from the same ethnic group as oneself). Fertility rates do differ by ethnicity, with women from the Malay and Indian minorities having more children, which could result in their suffering disproportionately in the labour market from the constraints resulting from childcare responsibilities (e.g. more interruptions and thus shorter working lives and accumulated experience), and associated employer discrimination.

But the biggest unknown in Singapore labour force data is the impact of recent immigrant labour on the employment status of Singapore citizens and residents, including women. Labour force data refer (without breakdown) to Singapore residents, who in 1980 accounted for 94.5% of the total population, while 96% of all residents were Singapore citizens. But in 2010, residents were only 74.2% of the population, and only 85.7% of residents were citizens, such that citizens accounted for 63.6% of the total population. Among residents, 22.8% were born outside of Singapore. Non-residents accounted for 25.7% of the population; together with permanent residents, they accounted for 36.4% of the total population. Since permanent residents accounted for 14.3% of the resident population, it appears that 8.5% of the population were Singapore citizens born outside of Singapore, for a total of 44.9% of the population being foreign-born.¹⁷

All these are extremely high ratios of the foreign- to domestic-born, non-residents to residents, and non-citizens to citizens, which must have a significant impact on employment and incomes.¹⁸ Non-resident workers are likely to be disproportionately temporary migrant labour i.e. work-permit or employment pass holders. Given the ease with which highly-skilled persons in working-age cohorts (presumably those aged between 30 and 60 years) and their family dependents can get permanent residence, and subsequently citizenship, they should have an impact on the labour force in middle- to higher-level occupational and income categories. For example, the influx of better-educated Indian migrants has resulted in Indian households having the highest median monthly income by ethnic group, or \$5,370 compared with \$5,300 for Chinese and \$3,844 for Malay households.¹⁹

How both temporary foreign labour and permanent immigration impact women, especially citizen and locally-born women, in Singapore cannot be ascertained without

disaggregated longitudinal data. Given the size of the phenomenon, and the fact that it is government-regulated and not purely market-determined, it is improbable that it has no impact on women's labour market status. Here are some a priori ways the increased foreign labour supply might affect women in the labour force.

1. The import of foreign female labour to provide domestic services could reduce the family care obligations and thus labour force disruptions otherwise incurred by women workers, helping to maintain their LFPRs through the child- and elder-care years.
2. At the same time, the ready supply of foreign female domestic help may (a) depress wages in this sector, making employment in it unattractive or unaffordable for resident/citizen females, and (b) discourage private and social investment in alternative institutional mechanisms especially for elder-care (e.g. collective housing arrangements by state, non-profit and for-profit providers such as occur in other developed countries). There are also well-known issues with regard to the status and welfare of foreign female domestic helpers themselves.
3. Wages may be depressed and upward mobility channels reduced by the import of foreign labour in other female-intensive sectors and occupations such as hotel and restaurants, and health and social services, where there is an inadequate supply of low- to medium-skilled citizen and resident female labour (e.g. in nursing, clerical services and retail sales) at the prevailing wage.
4. The import of highly-skilled foreign labour may reduce channels of occupational upward mobility and depress incomes beyond what they otherwise might be for locally-born women, who are more likely than men to be affected if they interrupt their working lives and careers for child- and family-care reasons (to be substituted for in the interim by long-staying foreigners, especially male foreigners).
5. Highly-skilled foreign workers are more likely to be male, both because this reflects labour force structures and opportunities in their foreign home countries—particularly those in Asia, from which most of Singapore's foreign-born population comes—and because in every society women are more likely to relocate/sacrifice their own careers to follow male spouses in their career advancement, resulting in expatriate labour force participants in every country being disproportionately male. This could help explain the under-representation of women in higher occupational and income categories (e.g. in financial services) despite the equalization of educational and employment opportunities for women in Singapore itself.
6. Foreign workers and immigrants from countries where women's educational and labour force status relative to men's is inferior to that of the domestic labour force in Singapore may import cultural patterns and habits, including among foreign-born employers, that could undermine the socio-cultural advances and labour force achievements of women in Singapore. Alternatively, different family structures (e.g. multi-generational extended versus single-generation nuclear models) could give foreign-born women from these cultures a competitive advantage over locally-born women in the labour market.
7. Employer, co-worker and consumer prejudices against foreign-born residents and temporary workers could have a negative impact on locally-born ethnic minority women of the same ethnic heritage.

Conclusions

The rapid growth, diversification and restructuring of the Singapore economy since 1980, together with expanded and increasingly gender-neutral educational and employment opportunities, and reduced policy and market discrimination, have greatly improved women's relative labour force status. These have resulted in reduced gender disparities in education, labour force participation, occupational and industrial distribution, and incomes. The gender disparities which persist reflect the continued, if diminished, constraints of family-care responsibilities on women's career choices and advancement. These are universal and unlikely to be completely eliminated even if there were to be innovative institutional developments for elder-care in particular.

More interesting and potentially concerning are three major demographic and labour market trends. The first is the ageing of the population, particularly the native-born population, which is likely to add elder-care to the child-care constraints on women's labour force participation and career and income advancement. In Singapore, as in other developed economies, women are disproportionately the care-givers not only because of cultural norms of the recent past, but also because their lower incomes mean lower opportunity cost for the family if women rather than men withdraw from or reduce their participation in the labour force. Because of women's greater longevity and lesser savings, they are expected to experience more financial insecurity and poverty in old age.²⁰

The second factor, more unique to Singapore, is the impact of the large foreign-born population on both resident and non-resident women in the labour force. This cannot be gauged without access to the relevant data. But foreign labour and immigration policy are intrinsic to Singapore's overall economic development strategy,²¹ and its impact on the domestic labour force, including any distinctive impacts on female labour, needs to be studied to discern any problems and issues that might require remediation through adjustment of government policy or business practice.

The third factor is the peculiar nature of Singapore's recent economic growth model—characterized as it is by high volatility and inequality,²² very low shares of consumption and of wage income in GDP²³, long working hours²⁴ and wage stagnation for the low-wage workers who constitute the bottom third of the domestic labour force, such that per capita GDP (on which Singapore has performed well) is a relatively poor indicator of individual, family and worker well-being.²⁵ This reduces the beneficial effects of reduced gender differences.

In sum, gender is inextricably inter-related with other economic, demographic, social and cultural phenomena that need to be considered as we look into women's future in the Singapore economy. Challenges for gender equity, and strategies to meet these challenges, must also be determined in the larger context of national economic development and social change.

¹ Thanks are due to Bernadette Tan for research assistance, and to many colleagues for their helpful comments.

² Linda Y.C. Lim, *Women in the Singapore Economy*, Occasional Paper No. 5, Economic Research Centre, National University of Singapore, Chopmen Publishers, Singapore, 1982

³ See, for example, *Women in the Labor Force: A Databook (2009 Edition)*, U.S. Bureau of Labor Statistics

⁴ Ministry of Manpower, Manpower Research and Statistics Department, *Report on Labour Force in Singapore, 2009*

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- ⁵ *Census of Population 1980*, cited in Lim (1982), p. 6. At time of writing (January 2011), the *Economic Characteristics* section of the *Census of Population 2010* has not yet been released.
- ⁶ *Occupation Segregation: A Gender Perspective*, Ministry of Manpower, April 2000
- ⁷ *Yearbook of Statistics Singapore 2010*, Table 4.7
- ⁸ Ministry of Manpower, *Report on Labour Force in Singapore 2009*, Table 21
- ⁹ *Ibid.*, Table 52
- ¹⁰ *Ibid.*, Table 57
- ¹¹ *Ibid.*, Table 61
- ¹² Hui Weng Tat and Aamir Rafique Hashmi, “Foreign Labour and Economic Growth, Policy Options for Singapore”, *Singapore Economic Review* Vol. 52 No. 1 (2007), pp. 53-72
- ¹³ Department of Statistics, Ministry of Trade and Industry, *General Household Survey 2005 Statistical Release 1: Socio-Demographic and Economic Characteristics*, Chapter 2, “Education and Language”.
- ¹⁴ See e.g. “An exercise in fertility”, *The Economist*, September 18, 2010, p. 60
- ¹⁵ Ishita Dhamani, “Income Inequality in Singapore: Causes, Consequences and Policy Options”, May 2008, http://www.mas.gov.sg/resource/eco_research/eco_education/Esss2007/uni_%201st_%20Ishita.pdf
- ¹⁶ *Census of Population 2010 Statistical Release 1: Demographic Characteristics, Education, Language and Religion*, Key Indicators of the Resident Population, p. ix.
- ¹⁷ *Census of Population 2010*, “Key Demographic Trends”
- ¹⁸ Non-residents accounted for 29% of the labour force in the 2000 census, the highest such ratio in Asia, and since then the influx of foreign workers has accelerated. Brenda S.A. Yeoh, “Singapore: Hungry for Foreign Workers at all Levels”, *Migration Information Source*, January 2007 <http://www.migrationinformation.org/Profiles/display.cfm?ID=570>.
- ¹⁹ *Census of Population 2010 Statistical Release 2: Households and Housing*, cited in Andrea Ong, “Households smaller but more affluent”, *Straits Times* 16 February, 2011.
- ²⁰ Dhamani 2008.
- ²¹ See e.g. Linda Y.C. Lim and Lee Soo Ann, “Globalizing State, Disappearing Nation: The Impact of Foreign Participation in the Singapore Economy” in Terence Chong, ed. *The Management of Success: Singapore Revisited*, Singapore: Institute for Southeast Asian Studies, 2010, pp. 139-158; Irene Y.H. Ng, “Globalization intentions in tension: the case of Singapore”, *International Social Work* 53 (5): 671-685, 2010.
- ²² For a popular review of recent studies on inequality in Singapore, see Li Xueying and Zakir Hussain, “Widening wage gap: Does it matter?” *The Straits Times* 11 December 2010.
- ²³ See e.g. Choy Keen Meng, “Singapore’s Changing Economic Model”, in Chong (2010), ed., pp. 123-138; Tilak Abeysinghe and Choy Keen Meng, “The aggregate consumption puzzle in Singapore”, *Journal of Asian Economics* Vol. 15, 2004, pp. 563-578; Lim and Lee in Chong (2010), ed.; Linda Y.C. Lim, “Rebalancing in East Asia”, in Stijn Claessens, Simon Evenett and Bernard Hoekman, eds., *Rebalancing the Global Economy, A Primer for Policymaking*, London: Center for Economic Policy-Making, 2010, pp. 32-35
- ²⁴ For example, in 2009 full-time resident male workers worked 49.3 hours a week, with 31% working more than 48 hours; sales and service workers worked 52.3 hours (53.9 hours for those aged 50-59) and plant and machine operators 52.1 hours (54 hours for those aged 50-59). Females worked fewer hours. *Report on Labour Force in Singapore 2009*, Tables 16, 19.
- ²⁵ See e.g. Charles I. Jones and Peter J. Klenow, “Beyond GDP? Welfare across Countries and Time”, NBER Working Paper No. 16352, September 2010, which finds that Singapore has the greatest (negative) gap between per capita GDP and well-being of any of the 134 countries studied. In particular Singapore has a welfare score less than half that of Hong Kong despite a slightly higher GDP per capita—the cumulative effect in their model of a slightly lower life expectancy, much lower share of consumption in GDP, greater income inequality, and less leisure (more hours worked). There are also indications of declining social mobility through the education system, as reported in Irene Y.H. Ng, “Growing worry of social immobility”, *Straits Times* 16 February 2011.