Empowered or Not? Exploring the Conundrum of Increasing Female Schooling and Stagnant Female Labor Market Participation in Japan, China and India

[A version of this paper has been published in Gender and Education in November 2015 (online)]

This paper attempts to explore the connections between expanding female education and the participation of women in paid employment in Japan, China and India, three of Asia's largest economies. Analysis based on data and literature shows that despite the large expansion in educational access in these countries in the last half century women lack egalitarian labour market opportunities. A combination of social discouragement and individual choice largely explains the withdrawal, non- participation or intermittent female presence in the labour force notwithstanding increased educational access. In taking stock, parallel experiences of women in these countries can be traced back to persistent gender norms which imply the centrality of marriage and non-market unpaid labour for women. The paper argues the need for gender sensitive public policy in order for increased education to translate to labour market gains for women leading to sustainable development outcomes.

Keywords: female education; female employment; gender inequality in Asia; education and development.

Introduction

Education is possibly one of the most popular policy prescriptions for women's empowerment defined by Kabeer (1999) as the ability to "…make strategic life choices

in a context where this ability was previously denied to them". Apart from varied individual and societal benefits associated with female education such as child and maternal health and greater self- awareness as pointed out by Ware (1984), the popularity of education as a panacea for gender inequality largely stems from its human capital value leading to paid employment. This paper engages in a comparative study of female education and labour market experiences in Japan, China and India three Asian countries having in common large expansions in female educational access in tandem with relatively recent economic expansion. As pointed out by Mammen and Paxson (2000) women's paid work in any economy depends a mesh of factors ranging from those that are easily quantifiable to those that are complex and culturally embedded. The relationship between female education and employment is therefore by no means a simple one, evident from the vast contrasts in female labour force participation rates (LFPRs) among industrialized countries. This being said there is broad evidence of women's paid employment in increasing in tandem with education, noted by Goldin (1995) for example for countries of Northern Europe and North America. Through an analysis of secondary data and relevant literature this paper seeks to take stock of the parallels in the experiences of educated women in the labour market and thus understand the role played by female education as an instrument of gender equality in Japan, China and India.

The obvious question that might arise at the outset is one regarding the choice of studying these economically and culturally diverse countries on a common platform. Historical parallels in women's experiences in these countries however serve to remove

doubts. Ancient religious texts dating as far back as 1500 BCE such as the *Manusmriti* in India (Singh 2008) as well as Confucianism adopted in Han China in 206 BCE (Stacey 1984) describe the denial of economic and social rights to women. Combined influences of Confucianism and Buddhism established a patriarchal society along similar lines in Japan by the 8th century (Sievers 1999). Women in each society were largely uneducated and paid economic activity was largely discouraged. Poorer women who engaged in compulsion-driven paid labour readily abandoned such work with economic prosperity. With little or no property inheritance rights and access to employment women lived dependent lives.

Female education received an impetus in Japan in the 19th century and in the 20th century in China and India for reasons expanded upon subsequently in this paper, though the pace of expansion picked up following economic restructuring in each country, that is, in Japan post WWII, China post 1978 and India post 1991. Recent data, described in Section 2 below, shows increasing enrolments at all levels of education albeit with inter-country differences commensurate with the level of economic development. However, broad-based gender inequality indicators computed by the United Nations such as the Gender Development Index (GDI)[i] and the Gender Inequality Index (GII)[ii] note persistent and rising gender inequalities in the three economies. Implicit in these indices and

relevant to this paper, data on female labour force participation rates[1] (LFPRs) shows LFPRs to be low in absolute terms and declining in India, relatively (compared to other developed countries) low and increasing in Japan and though notably high in China to be declining (Figure 1). These preliminary observations shows apparent disconnect between female education and labour market activity in all three countries. Similarities between Japan and India might be more apparent at first glance. While policies of the Communist Party of China (CCP) post 1949 explain the rather high LFPRs for Chinese women (Stacy 1984) the recent decline in LFPRs accompanying economic changes post 1978 which have aligned the Chinese economic structure closer to that of Japan and India is of interest here.

As summarized by Duflo (2012) directional linkages between gender inequality and economic development are ambiguous. This paper adds to that literature by specifically exploring links and disconnects between female education and employment in three of Asia's largest economies. In doing so, the primary contribution of this paper is to argue that the persistence of traditional gender norms largely accounts for sustained gender inequality in paid employment opportunities despite expanded female educational access. While the argument may not generate surprise, the parallel ways in which historical perceptions of women continue to influence present experiences posits a strong

1 Labour force participation is defined as the proportion of the population aged 15-64 that is economically active (all people who supply labour for the production of goods and services during a specified period) (World Bank 2014).

case in favour of gender sensitive public policy. To structure that argument Section 2 of the paper describes female educational access and experiences in the labour market in each country followed by Section 3 which explores possible reasons why the link between the two maybe weak or non-existent. Section 4 takes stock of the role of female education in empowering women (or not) followed by Section 5 which concludes the paper.

Summarising female education and labour force participation

Education

(Table 1)

Female education has substantially expanded in each country since the last century. In Japan, while primary education for girls was made compulsory by the Meiji, secondary education was given a boost by the Fundamental Law of Education in 1947 which allowed for coeducation of female and male students (Hara 1994). According to recent data for 2012 not only was female secondary education universal in Japan, a greater percentage of female graduates (55.5%) from Japanese upper secondary schools advanced to higher education compared to males (51.6%) (GOJ[2] 2015c). However, female advantage seems to end with the choice of higher education with a large and increasing percentage of females entering junior colleges[iii] as opposed to males opting for

[2] GOJ wherever used in this paper is an abbreviation used for the Government of Japan.

four year universities and colleges of technology[3] (Table 1). As Matsui (1996) notes, fewer females at universities implies fewer enrolling in post graduate courses.

(Table 2)

In China, female education got its first push with the establishment of the Chinese Republic in 1911 and further expanded under the CCP post 1949. Post 1978 legislation such as the Compulsory Education Law of 1986 helped raise secondary education especially for females (Bailey 2007). According to recent statistics secondary enrolment rates of Chinese females exceed those of males (World Bank 2014) and more females seem to be completing secondary schools. However, much like the case of Japan, female advantage lags behind at advanced educational levels (Table 2). While almost 50% of graduates from regular undergraduate courses were females as were 50% of the Master's Degree graduates, females comprised only 35.4% of doctor's degree graduates (NBSC[4] 2011b).

(Table 3)

In India, the first impetus for female education came from the 19th century efforts of Indian social reformers and missionaries, subsequently taken up by the Colonial

[3] Colleges of technology accommodate students after lower secondary education and offer training in specialized technological areas for five years or more after which students could be eligible for university education.

[4] NBSC wherever used in this paper is an abbreviation used for the National Bureau of Statistics China.

government (Basu 2005). The rather slow progress of female literacy rates[5] post-independence, from 8.86% to only 53.87% between 1951 and 2001 stirred more concrete action such as the constitutional right to education in 2002 (GOI[6] 2014a). Though, female illiteracy (37.7%) remains substantially higher than that of males (19.5%) (GOI 2014a) increasing gender parity in enrolment rates is evident with females outnumbering males in terms of middle school enrolment and with increasingly equal number of girls and boys in high schools (Table 3). Tertiary education has also shown a steady rise from females being less than 10% of total enrolments at independence to 43.28% in 2012-13 (UGC 2013). While this is a remarkable achievement given that less than 90 women were were enrolled to get university degrees in 1897 and only 457 in 1915-16 (Basu 2005), the gross enrolment ratio for females yet lags behind at 19.4% compared to 22.3% for males (GOI 2014b) and female comprise only around 45% of the total students in higher education (Table 4).

(Table 4)

It is clear from this summary analysis that despite the rather late start female education has expanded in all three countries especially at primary, secondary and higher secondary levels though unlike the case of their North American, European or Latin American counterparts, females seem to be falling behind at the higher education levels.

[5] Refers to the percentage of population with an ability to read and write a short and simple sentence.

[6] GOI wherever used in this paper is an abbreviation used for the Government of India.

Labour market participation

(Figure 1)

Turning now to LFPRs which were preliminarily discussed in Section 1, at the outset it is important to begin by noting that in Japan and India, where female LFPRs are low in relative and absolute terms respectively, higher educational achievements do seem to be associated with more employment. As evident from Tables 5 and 6, a greater percentage of females with higher education are in the labour force relative to those with lower levels of schooling. What is also evident is the relatively small percentage of females with higher education who participate in the labour market. In India, only 29.7% of females who were college graduate and above in rural areas and 27.9% in urban areas were workers and even for those with professional diplomas and certificates only 40.8% in rural areas and 34.4% in urban areas were in the workforce (GOI (2014c). Similarly, in the case of Japan, 35.83% of females who had a junior college degree and 30% of those who had college, university or graduate school degrees were not workers (GOJ 2015f). (Table 5) (Table 6)

Data shows relatively fewer opportunities for female employment in both the growing economies of China and India where overall LFPRs have also been declining. Female unemployment rates in China increased between 2001 and 2008 (even as those for men declined from 5.2% to 4.4% during the same period) and in urban China between 2008 and 2012 females experienced higher unemployment compared to men at every age cohort between 25 and 49 years and increasing unemployment above 40 years (NBSC 2011a, 2014). This mirrors the experience of Indian women in the decade of 2000s and in

urban India unemployment rates for females are almost double that of males (GOI 2014a). Further, the data does not seem to suggest employment opportunities to be reducing unemployment either. In India female unemployment rates are higher and have increased for those with middle school and above education and while unemployment rates for males and females are broadly comparable in Japan, a smaller percentage of female hired employees have university and graduate school education (GOJ 2015b). Similarly, in China a large percentage of employed females were illiterate or with only primary school education while the percentage of employed with junior school education is lower especially when compared to males (NBSC 2012).

The apparently smooth assumed relationship between education and employment certainly seems less than perfect for all three countries. To explore this relationship further we next turn to the labour market returns or wages received by females and especially the gender wage gap which reflects both their desire to be employed as well as the value received for their efforts. At this juncture it is important to make note of the fact that the discussion in this section will only focus on employment in urban areas of China and India where the connection between employment and education is the strongest.

The gender wage gap

Recent data[7] shows Indian women in salaried employment earned 62.5% of the wages earned by their male counterparts and even in urban India where education and salaried employment are both relatively high, women earned only 77.9% of male wages. In Japan, female wages were 63.01% of male wages in 2012, up from 60.42% in 2009. However, while the gender wage gap seems to be declining in both countries, it seems to be increasing in China where studies such as by Tatlow (2012) and Hong Fincher (2014) note the average annual female income to be 67.3% of males in urban areas and 56% in rural areas in 2010 both having declined by 10% since the 1990s. While education seems to be lowering the gender wage gap as expected, educated women in all three countries earn less than their male counterparts suggesting the persistence of labour market inequalities. In urban India, females who were college graduates and above earned 75.6% of male wages and Japanese female graduates of universities and graduate schools earned 63% of male wages while those who were graduates of higher professional schools and junior colleges earned 78.17%. Gustafsson and Li (2000) note the positive effect of education on gender wage gaps in China as well.

Given that overt wage discrimination is illegal in all three countries possible explanations of the gender wage gap could be found in the kinds of work women do and

[7] These figures have been calculated from the 2011-12 National Sample Survey (GOI 2014b) for India and from the 2009 and 2012 Year Book of Labour Statistics for Japan (GOJ 2015a and 2015b).

the time they spend in paid employment. On closer look significant parallels emerge in all three countries.

(Table 7)

Segregation of labour markets:

The relatively large share of manufacturing output in China and India (World Bank 2014) makes it a destination for female employment though female workers in both countries, maybe proportionately more engaged in unskilled manual jobs in areas like textiles and garment making where their low skills and willingness to accept low wages add to their attractiveness.

(Table 8) (Table 9)

The service or tertiary sector accounts for a bulk of female employment in Japan as well as the urban areas of China and India as is evident from Tables 7, 10-12. In all three countries a relatively large percentage of women are employed as professionals though horizontal segregation within the service sector is evident from the concentration of female workers in areas like accommodation, eating, drinking, retail, education and health. The engagement of women in the latter "care providing" areas is possibly to be expected given teaching and health services were among the first areas to absorb female workers, as pointed out by Basu (2005) in India and Johnson (1990) for Japan. However, the gender wage gap is possibly also explained by the concentration of females in stereotypical sub-areas like nursing and lower level school teaching within these sectors. For example, in Japan, where 55.2% of workers in the educational sector were females, the percentage of female teachers steadily declines from the Kindergarten (93.3%) to

upper secondary (42.3%) to junior colleges (50.4%) to universities (21.2%) (GOJ 2015d). In India the number of female teachers also declines from primary to higher education levels (GOI 2014b). Chanana (2004) notes an overall low presence of female teachers at the university level (11.6%) and a majority of them employed as lecturers and instructors rather than professors of any rank (UNESCO 1993).

(Table 10) (Table 11) (Table 12)

Contributing to the wage gap is also vertical segregation evident from the relatively low employment of females in administrative and managerial positions and high concentration in clerical and retail sales and service jobs. This is most noticeable in Japan where in 2012 only 3.21% of the total female employees were executives compared to 8.35% for males (GOJ 2015f) and according to The Economist (2014) in 2011 only 4.5% of Japan's company division heads were female and even in education, females were only 60.5% of Kindergarten principals and 8.7% of university presidents (GOJ 2015d). In India too Budhwar et al (2005) note females to comprise 5.8% to 3% of all administrative positions. While higher education could be helping to reduce these gaps but clearly does not seem sufficient to help break the glass ceiling completely. In China for example, 4.05% of females with graduate degrees were unit heads compared to 0.61% of those who were illiterate but only2.85% of females with college degrees and 3.22% with university degrees were unit heads, compared to 6.64% and 8.28% of males (NBSC 2012).

Finally, the gender wage gap is also possibly explained by the proportionately greater engagement of females in jobs located in sectors which offer relatively lower

wages and fewer benefits. In India for example, though the percentage of female employment in the "organized sector"[iv] has gone up over time, according to government data (GOI 2014a) females comprise only a fifth of employees with only 18% of the total employees in the public sector where wages and benefits are generous in comparison to smaller private sector jobs. While the employment of female workers in the well-paying Chinese State Owned Enterprises (SOEs) has traditionally been low (Stacey 1984), this trend has continued in the post 1978 period with female employment in SOEs declining from 60.9% of total female employment in 2003 to 48.3% in 2011 (NBSC 2012). In Japan too, relatively smaller percentage of females are government employees and relatively fewer females are employed by larger (with 500 employees or more) private enterprises which offer higher wages and benefits. Even as female employees with higher education get high wages at enterprises with more than 1000 employees, the gender wage at such enterprises is considerably larger relative to smaller enterprises (GOJ 2015b).

Duration and kind of employment:

Wage gap between women and men is also explained by the relatively less time spent by the former in paid employment, lowering both retirement benefits and lifetime income receipts. In Japan for example, recent data clearly shows sustained evidence for the "M-shaped" nature of female age-specific LFPRs, peaking at 20-24 and then dipping before peaking again at 45-54 years (GOJ 2015e). Accordingly, a relatively larger percentage of total female employees are classified as temporary, daily employees and part time workers in contrast to being regular workers (GOJ 2015f).

This trend however does not seem to be apparent for China and India where the percentage employed steadily rises at every age cohort between 15 and 50 before declining, possibly because the level of economic development in these countries may not permit enough jobs for labour market re-entry at later ages. However, intermittent work for Indian females is evident in the substantially larger difference in the worker population ratios for females when only considering those who worked for "relatively long part of 365 days" compared to the percentages when also taking into account those workers who had worked any stretch of 30 days in the past 365 days (GOI 2014c). Engagement as family workers does not necessarily correlate with the receipt of wages. In China, the percentage of unpaid family workers in the population above 15 steadily rises for females between 20 and 65 years and while family work reduces with education female engagement in such work remains high compared to males. For example, in urban areas, 4.6% of females with senior secondary school education. 1.5% of those with college education, 0.6% of those with university education and 0.2% of those had completed graduate school or higher were engaged in unpaid family work in comparison to 1.4%, 0.7%, 0.2% and 0% for males (NBSC 2014).

The discussion in this section clearly shows that contrary to the unambiguous expansion in female educational access in all three countries, labour market experiences for women have been somewhat checkered. While education does seem to be mitigating gender wage gaps to an extent, the relatively low wages received by females with higher education, the stereotypical labour market opportunities they face, their non-participation or relatively low participation in employment suggests that labour markets in all three

countries remain highly unequal. The following section engages into a deeper analysis of the apparent disconnect.

Exploring the (dis) connect between female education and employment

In exploring the missing links between female education and LFPRs, immediate explanations may centre on whether educational skills adequately equip women to participate in labour markets. In view of earlier reflections on the complexity of factors influencing female LFPRs, equally relevant here are questions regarding the flexibility of social institutions which might impede the use of educational skills in paid employment by limiting for example, available labour market time or influencing perceptions about women workers.

What are women studying?

The discussion in Section 2 notes that despite the impressive expansion of overall female educational achievements in all three countries, female higher education looks less than impressive. On looking *within* higher education females seem to be concentrated in stereotypical areas of study in all three countries, a bias which possibly carries over to the labour market.

(Table 13) (Table 14) (Table 15)

In the case of Japan, disciplinary segregation is apparent even at the upper secondary level and relatively fewer female students seem to be engaged in vocational courses (43.8%), especially technical ones (10%) in contrast with areas like Nursing (100%) and Home Economics (88%) ((GOJ 2015h). Even in junior colleges where

females make up almost 90% of the enrolments, majority are concentrated in Home Sciences and Nursing rather than Engineering (Table 13). In the case of India too, Arts (Humanities), Education and Medicine have been traditional areas of female concentration (Table 14) and though more female students have moved on to Medicine, Science and Commerce (Accounting) in recent years, the largest percentage of females get undergraduate and post graduate education in Arts (Table 15) with markedly lower percentages studying Technology and Engineering. Chinese women too are concentrated in Humanities rather than in Science and Technology fields. Even as a large percentage of them attend vocational colleges post high school Hooper (1984) notes them to be gravitating to stereotypical areas like foreign language, pre-school education and fashion training.

While there is nothing inherently limiting in the study of Humanities or Education, these disciplinary choices either by not having a professional orientation or by leading to stereotypical occupations or by implying skill gap for employment in the technologically intensive areas are associated with relatively low wage jobs. Moreover, in line with observations on vertical segregation in the labour market, women may not pursue higher education in traditional areas to levels which correspond to higher ranked jobs. For example, in Japan, Education which is female dominated at lower levels has a more balanced sex composition at the male-dominated University and Graduate studies level (Table 13). This lines up with previous observations about occupational segregation within the Education sector at higher levels. Again, while females comprise a large majority of students in Health and Social Sciences in Junior Colleges these disciplines

become male dominated at the university level corresponding possibly with the segregation in occupations following from these disciplines such as higher education and medicine. Further, disciplinary biases remain even as females select non-traditional areas of study as Krishnaraj (1991) finds in India, noting the concentration of females in the study of Biological Sciences and Chanana (2004) finds female students flocking to Human Resource Management, both choices leading to relatively less paid job opportunities within non-traditional fields like Science and Management.

At this juncture, it could be tempting to attribute disconnect between expanding female education and low or declining female labour force participation to lack of adequate skill formation in non-traditional areas. However, the question as to what influences these choices in higher education remains unanswered and is possibly at the heart of discussion. We shall come to back to that query in Section 4 after exploring the other component influencing female participation in paid labour besides necessary skills, namely the time available to engage in such work.

Do women have time for paid labour?

(Figure 2)

Providing unpaid labour for the care of dependents as well as for performance of domestic chores have historically comprised women's gender roles in most societies. Economic development in most societies in Europe and North America encompassing greater gender equality in paid labour markets has been accompanied by expanding participation of men in unpaid labour. Patriarchal boundaries have been traditionally stringent in these three Asian societies and as *neiren* (inside person) in imperial China,

sengyo sufu (full time house wife) in Japan and the wives of upper class men in India, women have traditionally picked up the entire burden of social reproduction. OECD data on male and female paid and unpaid work (Figure 2) shows the persistence of a traditional gender division of labour in all three countries, a finding that is amply supported by country-specific research. For example, in China, Attane (2012) finds the average time working women devoted to household tasks was 2.5 to 3 times longer than men while Gustafsson and Li (2000) find in urban China while men worked ½ hour more in paid work women worked 2 hours more in the household. Nishioka et al (2012) find married Japanese women, who are full time workers, to be spending long hours in household work and Batalova and Cohen (2002) point out the Japanese economy to be an "outlier" with regard to men's participation in unpaid work among a group of countries with similar development indicators. Recent data for India shows *declining* participation of men in unpaid work related to domestic activities (Ghosh 2014).

Unpaid labour expected from women has not only remained virtually unchanged in terms of its traditional expectations but has acquired additional dimensions often having root in the same economic expansion which has allowed for expanding female education. The biggest example of this is the Japanese economy where women's unpaid labour within the household and as sole care providers to the young as well the elderly formed a backdrop of the famous work ethic of Japanese men, widely regarded as the cornerstone of Japan's economic success. Day care usage remains limited in Japan compared to other OECD countries (The Economist 2011) and though Retherford and Ogawa (2006) note scarcity to be an issue Hwang (2014) points out it is rather the social

construction of motherhood which necessitates personal childcare by mothers. Similarly in the transformed Chinese economy, Hooper (1998) as well as Cook and Dong (2011) note women to be increasingly shouldering heavier unpaid burdens resulting from both the reduction in state support for elderly care and the absence of state support for early childhood education which is nonetheless noted as critical for child development.

Women's traditional roles as wives and mothers play significant roles in their labour market decisions as well as higher education choices influencing both their individual decisions as well the perceptions regarding them.

Withdrawal or non-participation or intermittent participation in employment

One of the notable observations from Section 2 was the non-participation or the intermittent participation of women, even those with higher education, in paid employment. Evidence from data and literature suggests that choices regarding time spent in paid employment is strongly connected with non-market work time.

The intermittent participation of women is most evident in the Japanese case where the persistent "M-shaped" age specific labour force participation graph continues to reflect withdrawal from employment and subsequent re-entry post decline in domestic care responsibilities, despite the 1986 Equal Employment Opportunity Act[v] offering women protection from overt labour market discrimination, discussed among others by Lee and Hirata (2001). Junior college education is thus sufficient the large percentage of female temporary workers engaged in low skill clerical jobs or as Kameda (1994) finds in academia as adjunct instructors.

In the context of China and India, where the range of labour market options do not (yet) allow for large scale re-entry in the labour market, flexible and fragile labour market options are nonetheless on the rise. Chandrasekhar and Ghosh (2011) note large increases in “informal”/“unorganized”/“casual” female workers in urban India and Lin (2003) points out the employment of female Chinese workers in factories under fragile and flexible contracts. A large percentage of Chinese and Indian women workers thus employed are in low skill intensive, low paying manufacturing as well as service sector jobs as domestic helpers and workers in commercial day-care centres, hotels and restaurants. Such employment is hardly related to higher education and women employed hence have relatively low education and receive scant training in sectors where their paid work closely resembles their domestic chores. As noted by Dong and Cook (2011) much of such work is likely to be abandoned with improvement in family incomes lining up with data from the NBSC (2014) showing 17. 5% of college educated, 9.6% of university educated and 23.2% of graduate school educated Chinese females remaining unemployed for “doing housework” with negligible numbers for males. Analogously, in India, Eapen and Mehta (2012) attribute the decline in female LFPRs to an absence of opportunities apart from those in domestic and personal services. Even as recently available Business Process Outsourcing jobs afford greater opportunities for India’s college educated women Thomas (2013) notes that such work mostly involves low skill activities such as data processing with strong health risks due to odd hours of work (Babu 2004). Schomer (2013) further notes Indian professional women in higher ranks to be more likely to suffer ill health on account of heavy double burdens and are therefore more likely to quit

employment for care of the young and elderly. Schomer's findings echo Chanana (2000) and Arun and Arun (2001) the latter study discussing women's experiences in the Indian IT industry

"Choosing paid work" to internalize the double burden

Occupational choices made by women in paid employment may also be a reflection of attempts to balance their twin roles in paid and unpaid work. For example Krishnaraj (1991) and Budhwar et al (2005) both note Indian women scientists and graduates with management degrees from premiere institutes to be deliberately selecting lower-end jobs, a finding which mirrors that by Steinberg (2012) in the context of Japanese women choosing employment options lighter than those commensurate with their education. Qi and Dong (2013) further note that Chinese women's occupational choices may internalize distractions of unpaid work performed during the paid work day. Further, Brinton and Lee (2001) for Japan, Lin (2003) for China and Gupta et. al (2003) and Bal (2004) for India all note isolation from social networks due to time constraints on travel and after-hour socialization keeps women invisible from male dominated cliques and worker unions hurting their opportunities for career advancements. The use of the word "choice" should therefore not allow semantics to obfuscate the barriers experienced by professional women stuck at low end jobs.

Workplace discrimination

While the paragraphs above discuss the decisions made by women themselves, the role of women as primary care givers and performers of household chores also

influences perceptions regarding their ability and commitment to paid work resulting in discriminatory treatment from co-workers and employers alike. Jensen (2010) and Kameda (1994) note employers to be bypassing women candidates for men with similar credentials and Hong Fincher (2014) notes that discrimination may be higher for higher end jobs. Notwithstanding professional qualifications women may face higher performance expectations (Hooper 1984, Budhwar et al 2005) and may be forced to retire early or as found by Xiaojiang (1994) immediately following maternity leaves. Lee and Hirata (2001) in the context of Japan note men dominating the workplace to be uncomfortable with working with women subordinates while Basu (2008) making a similar observation for India notes this also to be true of female intensive sectors like health, social service and education. Cook and Dong (2011) find more explicit discrimination in Chinese labour markets where females including those with college education, face repeated pressures to "return home" to the domestic domain especially in periods of higher unemployment.

Dispensability of women workers

While women's unpaid work accounts for their discrimination in paid labour markets, their availability allows employers in all three economies to have at their disposal at dispensable labour force to be exploited in sync with global ups and downturns. Fujimura-Fanselow (1994) for example notes Japanese women to have been among the first to let go during Japan's prolonged recessionary downturn, a trend which *The Economist* (2014) notes to be a continuing one. Similar experiences have been true for Chinese women who have lost jobs in large numbers during SOE restructuring in the

post 1978 period and those reemployed could at best find temporary jobs with wage cuts (Hong Fincher 2014) while in the case of India Deshpande (2005) finds available labour market opportunities for women are those which have been vacated by males transitioning to higher paying jobs thus leaving the gender wage gap unchanged or only slightly altered.

In summary it can be posited that while stereotypical skills of women with higher education may indeed be limiting them from lucrative non-traditional or adequate employment options, their unpaid burdens have real and potential influences on their paid work time. What stands out as critical for these societies seems to be a realignment of gender roles and perceptions *along* with an expansion of educational opportunities for women to enable them to be equal actors in the labour markets. Contrary to popular belief, expansion of education even at higher levels does not seem to have led to the dispelling of traditional gender norms, creating more self-awareness among women themselves and broadening social horizons in general. The role of female higher education and its ability to transform norms at the individual and social levels are the questions that are explored in the following section.

Taking Stock: The role of female higher education and economic development in Japan, China and India

In tracing the role of higher education and understanding the societal value of females receiving it, it is useful to once again revisit the past. This “historical sensibility”, as elaborated by Tinkler and Jackson (2014), enables us to understand the present disconnect between higher education and female employment on a continuum stemming

from the initial role envisaged for female education in the three countries under study in this paper. Understanding how contemporaneous contexts reflect persistence of past norms and values regarding gender roles is valuable not only to identify the present as a reflection of the past but also to be conscious of explicitly addressing past expectations and norms in order for present policy prescriptions to be effective.

Historical analyses of female education such as by Hara (1994) for Japan, Basu (2005) for India and by Bailey (2007) for China shows that in sharp contrast to other industrialized countries where female education expanded as response to labour market opportunities, it was rather a tool for nation building and societal progress through the creation of better wives and mothers in these countries. This is evident from curricular emphasis focussing on the development of domestic skills through compulsory study of courses variedly called Home Economics in Japan or Domestic Sciences in China or Home Science in India. While this was altered to an extent by a combination of factors such as activism led by women's movements in India (Chanana 2004) and Japan (Kameda 1994) and the CCP in China and by a recognition of societal health and other benefits from more broad based primary and secondary education for females, the goals of female education were never consciously reoriented to connect to women's employment options apart from health and primary education related as discussed in Section 2 above. Hence, insipid biases such as the stereotypical depictions of women in school textbooks as pointed out by Bhog (2002) and Kameda (1994) for example and blatant biases in the social environment continue to emphasize women's primarily domestic roles even as they receive education in schools.

Doubts regarding the overall intellectual ability of female students is easily negated by their performances at lower levels of education though it is not clear as to whether female students are able to breakthrough stereotypes. In terms of 2012 PISA scores reported by the OECD, Japanese girls outperformed boys in reading but lagged behind in both science and mathematics. However, for the two non OECD countries female students seemed to be breaking stereotypes. For example, in China as reported by Farrar (2012) girls seem to be outperforming boys in science as well as humanities subjects and statistics from India also report higher passing percentages for females via-vis males at the secondary and higher secondary levels in Science, Arts and Commerce streams (GOI (2014b).

Social expectations may however constrain women's higher education choices both by overtly limiting them from access such as by the imposition of upper age limits on females seeking doctoral degrees in China as pointed out by Hooper (1984) or illegal discrimination against female candidates seeking entrance to Chinese universities as reported by Tatlow (2012) and Hong Fincher (2014) or by covert after-hour mobility restrictions preventing the study of laboratory intensive science subjects noted by Chanana (2004). Further, higher education choices made by women may be in response to labour market opportunities, which as pointed out above, may themselves be conditioned by prevalent gender norms. For example Lin (2003) notes underemployment of Chinese females with university degrees and Wolf (1985) notes the reluctance of Chinese parents to invest in technical education for daughters who had no commensurate labour market opportunities. Similarly, Matsui (1996) notes that a four year university

education (and subsequent graduate study) may be irrelevant for Japanese women for whom work experience may be more critically needed in order to be hired for available clerical jobs. She further notes the gradual increase in female students in areas like Social Sciences and Engineering in recent years has followed the expansion of available professional careers possibly contributing to lowering the gender wage gap in Japan noted earlier. In India too, Chanana (2004) makes similar observations on the growing number of urban Indian parents supporting their daughter's education in Sciences, Commerce and Medicine.

On the other hand, even with an expansion of opportunities, female higher education appears a secondary concern for parents exemplified by the greater willingness of Indian parents to save for their daughters marriage rather than education found by Eapen and Mehta (2012) or the reluctance of Chinese parents to hire tutors for their daughters to crack competitive university entrance tests found by Hooper (1998) or the resource constraints faced by Japanese women attempting to attend expensive private rather than publicly funded universities. Resource availability is hardly a precondition for a sharper link between education and employment and among upper classes, where female higher education is more feasible, it may serve as a marriage market signal for securing marriages to more educated (and hence better employed) grooms as found by Chanana (2000) in India and Raymo and Lim (2011) in Japan. The "leftover women" campaign propagated by the women's wing of the CCP, stigmatizing Chinese women over the age of 27 seeking careers or higher education as doomed never to get married reported by Hong Fincher (2014), apprehensions of Japanese parents about "over

education" eroding marriageability of their daughters noted by Brinton and Lee (2001) or reluctance of Indian parents to encourage their daughter's education in science and technology in fear of them appearing career focussed observed by Mukhopadhyay (1994) all suggest persistence of traditional goals for female education associated with marriage and disconnected from labour market outcomes.

Relatively better off women may be in positions to avoid paid employment and the possible double burden it may imply. Kumaga and Kato (2007) for example, find Japanese women married to full time professionals in salaried employment to be more likely to quit jobs on marriage in contrast to wives of self-employed or part time workers. However, such choices may define the aspired gender norms as found by Thapan (2007) in her study of the attitudes of young girls in elitist Indian schools thus disconnecting female education with employment at the very outset of education. Chauhan (2013) corroborates the lack of labour market aspirations for Indian women with higher education. Education may be intrinsically useful for the pursuit of knowledge as pointed out by Krishnaraj (1991) in her observations on Indian women engaged in studying non-traditional disciplines like sciences or engineering and have sporadic connection with the labour market as Pharr (1990) finds in the case of Japanese women seeking higher education to find self-expression through temporary work before marriage, while its larger purpose may be for "status production" (Papanek 1979) in traditional marriages through the education of children and maintenance of household chores.

(Figure 3)

Can expanding female education coexist with labour market barriers?

While the discussion so far suggests that the present disconnect between female education and employment could be understood as a continuation of unaltered gender norms coexisting with economic progress in these countries, it is important to conclude this Section pondering on the long term viability of these gender norms alongside expanding female education.

Demography, while seeming unrelated at the outset, turns out as closely connected to the discussion in this paper via the link between female education, employment and fertility rates. As evident from Figure 3, TFRs (total fertility rates) have been steadily declining in all three Asian economies and while the rather steep downward trend in China is partially explained by interventions such as the One-Child Policy, the role of female education in reducing fertility is unquestionable. As newer additions to the population decline coupled with longer life expectancies, the rising old age dependency posits a challenge which is common to the experiences of all developed economies. The shrinking workforce on the one hand and the need for expanding safety nets for dependents via taxes necessitates fertility rates to be at replacement level and women to be part of the paid labour force.

In the case of Japan, a developed society having completed the demographic transition, fertility rates are not only below replacement levels, but also among the lowest in the world with a resulting high old age dependency ratio. While China's ageing may not appear critical momentarily, growing life expectancy and premature fertility decline certainly poses a potential threat which is increasingly documented. Finally, India's

fertility decline though a welcome developmental outcome reflects substantial regional heterogeneity with fertility rates in the most developed urban pockets of the country being below replacement levels (GOI 2014b). The Economist (2011) and Hong Fincher (2014) both note sharp increases in marriage ages in Japan and China respectively accompanied by a rise in the percentage of unmarried population at every age cohort having direct implications for fertility decline in the absence of socially sanctioned pre-marital cohabitation in Asia.

While comprehensively analysing fertility decline is outside the purview of this paper three trends indicate that the conflict between female education and labour market roles discussed in this paper could be a large part of the story. First, there is growing evidence on marriage avoidance by an increasing percentage of educated and career oriented women suggesting their reluctance toward traditional marriages. The second trend describes the reluctance of men to marry such women who are less likely to conform to gender roles. Finally, fertility declines have been particularly large for women with higher educational qualifications, especially those in the labour market. While these concerns have been extensive for Japan as discussed by Retherford and Ogawa (2006), Raymo and Lim (2011) and Hwang (2014) for example, Hong Fincher (2014) notes a perceptible trend for China as well. While it is premature to discuss widespread trends for India given the overall lower level of economic development, data on marriage ages (GOI 2014a) and references made in the context of working women by Patel (2010) for example definitely suggest movements along similar directions.

Concluding remarks

Parallels in the experiences of women in the three Asian economies, Japan, China and India discussed in this paper, shows gender inequalities in employment notwithstanding expanded educational access for women in the wake of increased economic prosperity in the past half a century. The persistent gender wage gap in each country bears testimony to this and though access to higher education does seem to help narrow the gap, participation of highly educated females in the labour market is far from universal, validating the weak link between higher education and employment.

Data and literature on female education and employment in these countries shows that the historical roles for and the expectations from women have remained relatively unchanged notwithstanding expanded educational access to them. On the one hand, a majority of women with higher education may have degrees in stereotypical areas of study which reduces access to high paid employment options. On the other hand, non-market work, almost entirely in women's domains leads women to withdraw from employment, intermittently participate or choose occupations to balance the double burden. On the demand side, a perceived double burden may also imply the exclusion of women from higher paid jobs and their labour market aspirations may be bypassed in favour of men despite possessing higher education skills. Women with higher education even in non-traditional areas, more likely to belong to relatively prosperous households, may be among those who quit paid work more often setting the dominant social norm for future generations as well as those engaging in work out of economic necessity.

All of this suggests that even while receiving paramount importance in public policy of developing and newly developed economies, educational skills attained by women, while no doubt contributing to increased personal and social well-being do not necessarily imply women's empowerment via income earning in the absence of accompanying public policy which works to dispel existing social norms related to gender roles of men and women. While this observation is almost obvious in its simplicity, it points to the need for a holistic and broad approach to gender empowerment which accounts for historical gender norms, in the absence of which education would be subsumed within the existing patriarchal social structures and may also be rendered a vehicle of propagating those norms.

While, the limited though growing trend of highly educated women rejecting patriarchal institutions such as traditional marriage is also evident especially with more widespread availability of educational opportunities such as in Japan, its spread is by no means rampant across the countries and even so implies a limiting decision to be made by women looking for labour market success. Either way, lack of female employment in tandem with expanded educational access implies a social cost in terms of the wastage of actual and potential skills of women and could also imply a dwindling potential work force if a larger percentage of educated women postpone or avoid child birth. While this paper limits its scope to the case of China, India and Japan, its broad conclusion is globally relevant even for countries in Europe or North America where women's labour market choices though expanded remain limited despite the educational strides they continue to make.

Tables

Tables

Table 1. Percentage of female students, higher education, Japan.

	Junior Colleges	University	Graduate Schools (Master's and Doctoral: Subset of University Students)	Colleges of Technology
1955	81.1	12.4	5.8	
1960	78.7	13.7	7.1	
1962				1
1965	85.3	16.2	7.5	1.6
1970	90.1	18	8.7	1.5
1975	91.2	21.2	9.4	1.5
1980	90.9	22.1	11.6	2
1985	89.7	23.5	13.2	3.6
1990	91.4	27.4	16.1	8.8
1995	92.4	32.3	21.5	17.7
2000	91.2	36.2	26.4	18.7
2005	92.7	39.3	29.8	16.6
2008	93.9	40.2	30.5	15.6
2009	93.8	40.7	30.5	15.7
2010	94.1	41.1	30.3	15.7
2011	94.3	41.5	30.3	15.9
2012	94.4	41.9	30.6	16.2

Source: GOJ 2015c.

Table 2. Educational attainment of the population 15 and over, China

	2006		2010	
Educational Level	Males	Females	Males	Females
No Schooling/Per-primary	1.3	4.5	1.3	4.1
Primary	8.4	10.2	7.4	9.6
Lower Secondary Education	8.8	7.7	8.1	7.8
Upper Secondary Education	16.5	18.7	16.6	19.9
Non-Degree Higher Education	4.0	4.1	3.7	3.7
University Degree	8.2	7.6	9.2	8.9

Source: NBSC 2011b

Table 3. Female and male schooling achievements, India

Year	*Gross Enrollment Ratio as Percentage of Population in Appropriate Age Groups*						Number of Girls per 100 Boys Enrolled in Schools		
	Primary Classes		Middle Classes		Higher Secondary Classes		Primary Classes	Middle Classes	Higher Secondary Classes
	6-11 years		11-14 Years		14-18 Years				
	Female	Male	Female	Male	Female	Male			
1961	41.40	82.60	11.30	33.20	4.10	16.70			
1971	60.50	95.50	19.90	46.30	10.20	26.80			
1981	64.10	95.80	28.60	54.30	11.10	23.10			
1991	85.50	113.90	47.00	76.60	11.10	24.10			
2001-02	86.91	105.29	52.09	67.77	27.74	38.23	79	72	65
2013-14	102.65	100.2	92.75	86.31	51.58	52.77	93	95	90

Source: GOI 2014a; GOI 2011

Table 4. Level-wise female enrolment in higher education, India, 2012-13

Ph. D	40.48
MPhil	54.29
Post Graduate	48.34
Under Graduate	45.95
PG Diploma	23.72
Diploma	29.38
Certificate	53.98
Higher Education - Total	44.89

Source: GOI 2014b

Table 5.

Female workers as a percentage of female population above 15 by educational level, India, 2011-12

	Percentage of Workers	
Education Level	Rural	Urban
Not literate	41.8	24.0
Literate including primary	36.1	22.3

Middle	27.6	15.8
Secondary	22.2	11.0
Higher secondary	17.6	10.8
Diploma/certificate	40.8	34.4
Graduate& above	29.7	27.9
All	35.2	19.5

Source: GOI 2014c.

Table 6. Female workers as a percentage of female population above 15 by educational level), Japan, 2012

Education Level	Percentage of Workers
Primary school or junior high school	22.87
Senior high school	50.57
Junior college	64.17
College or university, including graduate school	70.43

Source: GOJ 2015e

Table 7. Proportion of female employment by industry Japan, 2013

Primary Industry	38.6
Agriculture and Forestry	39.6
Secondary Industry	24.5
Manufacturing	29.5
Tertiary Industry	49.2
Electricity, Gas, Heat Supply and Water	13.3
Information and Communications	26
Transport and Postal Activities	18.2
Wholesale and Retail Trade	51
Finance and Insurance	53.9
Real estate and goods rental and leasing	37.3
Scientific research, professional and technical services	33.8
Accommodations, eating and drinking services	62.2
Living-related and personal services and amusement services	59.1
Education, learning support	55.2
Medical, health and welfare	75.5
Compound services	37.5
Service industry (unclassified)	38.2
Government, except elsewhere classified	25.3

Source: GOJ 2015d

Table 8. Proportion of female employment in urban units in selected sectors, China, 2011

Agriculture	41.8
Manufacturing	39.5
Manufacture of Textile	61.7
Manufacture of Textile Wearing Apparel, Footwear and Caps	65.6
Manufacture of Articles for Culture, Education and Sport Activity	58
Manufacture of General Purpose Machinery	27.2
Manufacture of Special Purpose Machinery	28.6
Manufacture of Transport Equipment	26.7
Wholesale and Retail Trade	47.7
Wholesale	39.9
Retail Trade	55.3
Accommodation and Restaurants	54.2
Finance	50.8
Education	50.7

Primary Education	54.3
Sanitation, Social Security & Social Welfare	60.6

Source: NBSC 2012

Table 9. Distribution of female workers across selected industries, urban India, 2011-12

Agriculture	10.91
Manufacturing	28.7
Trade, Hotel and Restaurant	12.81
Information and Communication	2.02
Financial and Insurance Activities	2.23
Public Administration and Defense	2.63
Education	13.34
Human Health and Social Work	4.62
Other Service Activities	5.85
Producing Household Activities for Own Use	8.32

Source: GOI 2014c

Table 10. Selected occupations of urban female workers, India, 2011-12

Legislators, senior officials and managers	10.80
Professionals	11.6
Technicians and Associate Professionals	9.5
Clerks	5
Service Workers and Shop and Market Sales Workers	11.5
Craft and Related Trades Workers	19.9
Elementary Occupations (Sales, agricultural laborers, laborers in Mining etc.).	22.5

Source: GOI 2014c

Table 11. Selected occupations of urban female employees, China, 2012

Unit Head	1.93
Technical and Professional Personnel	18.92
Clerk and Related Workers	8.85
Business Service Personnel	35.43
Agriculture and Water Conservancy Labors	16.17

Production, Transport Equipment Operators Etc.	18.31

Source: NBSC 2014

Table 12. Selected occupations of female employees, Japan, 2013

Administrative and managerial workers	0.59
Professional and engineering workers	17.18
Clerical workers	27.18
Sales workers	13.66
Service workers	19.51
Manufacturing process workers	9.59
Transport and machine operation workers	0.19
Carrying, cleaning, packaging, and related workers	7.15

Source: GOJ 2015d

Table 13. Percentage of female students in selected disciplines, Japan, 2009, 2013

	Junior Colleges		Universities		Masters		Doctoral	
	2009	2013	2009	2013	2009	2013	2009	2013
Home Economics	96.60	95.52	90.00	90.40	85.15	84.58	77.87	81.89
Education	94.62	94.43	59.23	59.12	50.68	50.50	51.60	50.13
for kindergarten	94.72	94.93	NA	NA	NA	NA	NA	NA
Humanities	92.23	89.40	66.53	65.83	59.72	59.38	51.03	53.43
Health	88.35	85.48	56.79	58.75	54.09	54.71	32.65	33.61
Nursing	89.40	89.17	89.83	89.46	NA	NA	NA	NA
Arts	89.36	86.55	70.84	71.52	62.57	66.98	57.94	57.91
Science	NA	NA	25.68	26.24	21.29	21.54	19.10	18.47
Social Science	80.90	77.20	32.13	33.60	38.38	39.66	35.90	36.41
Engineering	20.05	13.26	10.72	12.32	10.37	10.88	14.21	16.69
Mechanical engineering	2.27	2.85	2.78	3.64	NA	3.93	NA	10.22
Civil engineering and construction engineering	25.95	31.64		16.73		20.49		25.17

Source: GOJ 2015f; GOJ 2015g

Table 14. Number of females per 100 males in university education in major disciplines, India

Year	Arts (Humanities and Social Sciences)	Science	Commerce	Engineering & Technical	Medicine
2000-01	81.4	61.4	55.3	28.7	68.2
2004-05	87.3	84.3	51.6	31.1	53.1
2009-10	86	72.7	67.3	40.3	90.9

Source: GOI 2011; GOI 2014a

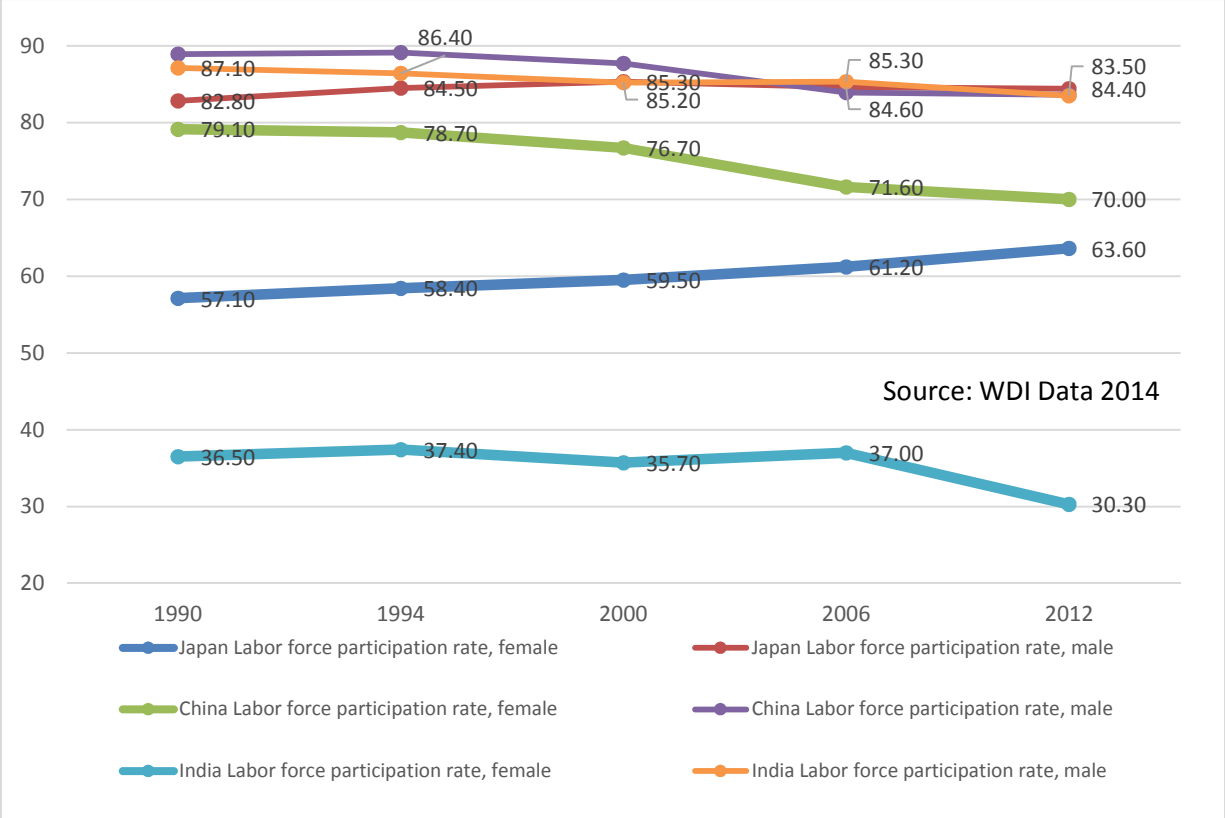
Table 15. Percentage of enrolment in different programs in higher education, India, 2012-13

	Male	Female
B.A.-Bachelor of Arts	28.22	37.84
B.Com.-Bachelor of Commerce	11.51	11.30
B.Sc.-Bachelor of Science	10.41	12.09
Beach.-Bachelor of Technology	9.10	4.46
B.E.-Bachelor of Engineering	8.07	4.06
B.Ed.-Bachelor of Education	1.34	2.84
M.A.-Master of Arts	3.45	5.42
M.Sc.-Master of Science	1.59	2.31
M.B.A.- Master of Business Administration	2.25	1.44

Source: GOI 2014b

Figures

Figure 1. Labor force participation rate ((% of population aged 15-64)

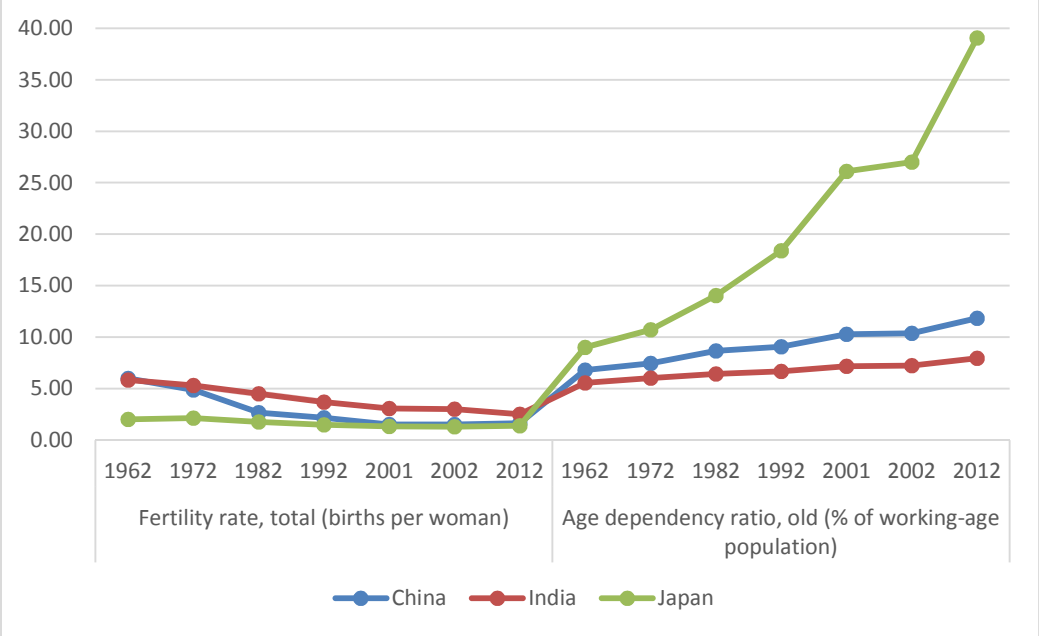


Source: World Bank 2014.

Figure 2: Minutes per day spent in paid and unpaid work by sex

Source: OECD 2015.

Figure 3: Fertility rates and old age dependency ratios



Source: World Bank 2014.

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[i] The GDI measures the gap in human development achievements in male and female life expectancy at birth (measuring health), female and male schooling and mean years of adult education and male and female estimated earned income (UNDP 2014).

[ii] The GII measures the losses to economic development in terms of gender inequalities in the dimensions of reproductive health, political empowerment, secondary education and economic achievements of women (ibid.)

[iii] Junior colleges in Japan offer associate degrees and require less years of study.

[iv] In India, organized manufacturing involves units registered under the Factories Act of 1948 and are governed by legislation such as the Minimum Wages Act, Labour Welfare Regulations and Contract Labour Act.

[v] The EEOA sought to address the hiring practices of employers hiring women solely as "temporary track" workers in anticipation of their post marriage withdrawal from the labour force. This law thus sought to provide college educated women chances for permanent employment by creating two separate tracks for working women namely managerial and general with workers hired in the former track being eligible for training leading to promotion and wages including welfare benefits (Sievers 1999).