

Gender Inequality, Growth and Global Ageing

- Reducing gender inequality could play a key role in addressing the twin problems of population ageing and pension sustainability. In countries where it is relatively easy for women to work *and* have children, female employment and fertility *both* tend to be higher.
- Economies where the problem of population ageing is most acute – such as Japan and Italy – also tend to be those where female employment is lowest.
- Closing the gap between male and female employment would have huge economic implications for the global economy, boosting US GDP by as much as 9%, Eurozone GDP by 13% and Japanese GDP by 16%.
- A reduction in the male-female employment gap has already been an important driver of European growth and Europe is best placed to benefit over the next 10 years. Japan has the biggest potential windfall but has made little progress in the past 10 years. The US has the smallest gender gap of the G3, but this gap has risen in the past 10 years.
- Governments could do much more to narrow the gender employment gap: reducing tax distortions that discourage female employment, eliminating differences in retirement policies and subsidising childcare are three obvious examples.
- The rise in female employment has important implications for equity market performance. We highlight 30 stocks that are benefiting from higher disposable income growth among women.

Important disclosures appear at the back of this document

Thanks to Jim O'Neill,
Erik Nielsen, Kathy Matsui,
Inês Lopes and Loretta Sunnucks
for advice and comments.

Kevin Daly

April 3, 2007

Goldman Sachs Economic Research Group

* Jim O'Neill, M.D. & Head of Global Economic Research

Global Macro & Markets Research

² Dominic Wilson, M.D. & Director of Global Macro & Markets Research
¹ Francesco Garzarelli, M.D. & Director of Global Macro & Markets Research
¹ Michael Buchanan, E.D. & Director of Global Macro & Markets Research
² Sandra Lawson, V.P. & Senior Global Economist
² Jens J Nordvig-Rasmussen, V.P. & Senior Global Markets Economist
¹ Binit Patel, E.D. & Senior Global Economist
¹ Thomas Stolper, E.D. & Senior Global Markets Economist
¹ Dambisa Moyo, E.D. & Economist, Pension Fund Research
¹ Kevin Edgeley, E.D. & Technical Analyst
² Mónica Fuentes, V.P. & Global Markets Economist
¹ Fiona Lake, E.D. & Global Markets Economist
¹ Salman Ahmed, Associate Global Markets Economist
² Themistoklis Fiotakis, Associate Global Markets Economist
¹ Michael Vaknin, Associate Global Markets Economist
² David Heacock, Research Assistant, Global Macro
¹ Anna Stupnytska, Research Assistant, Global Macro
¹ Sergiy Verstyuk, Research Assistant, Global Markets

Americas

⁹ Paulo Leme, M.D. & Director of Emerging Markets Economic Research
² Jan Hatzius, M.D. & Chief US Economist
² Edward McKelvey, V.P. & Senior US Economist
² Alberto Ramos, V.P. & Senior Latin America Economist
⁸ Alec Phillips, V.P. & Economist, Washington Research
² Andrew Tilton, V.P. & Senior US Economist
² Pablo Morra, V.P. & Latin America Economist
⁸ Chuck Berwick, Associate, Washington Research
² Malachy Meechan, Associate, Latin America/Global Markets
² Seamus Smyth, Associate US Economist
² Raluca Dragusanu, Research Assistant, US
² Kent Michels, Research Assistant, US

Europe

¹ Erik F. Nielsen, M.D. & Chief European Economist
¹ Ben Broadbent, M.D. & Senior European Economist
⁴ Rory MacFarquhar, E.D. & Senior Economist
¹⁰ Dirk Schumacher, E.D. & Senior European Economist
³ Nicolas Sobczak, E.D. & Senior European Economist
¹ Ahmet Akarli, E.D. & Economist
¹ Ashok Bhundia, E.D. & Economist
¹ Kevin Daly, E.D. & European Economist
¹ Javier Pérez de Azpillaga, E.D. & European Economist
¹ Istvan Zsoldos, E.D. & European Economist
¹ Inês Calado Lopes, Associate European Economist
¹ Saleem Bahaj, Research Assistant, Europe
¹ AnnMarie Terry, Research Assistant, Europe
¹ Anna Zadornova, Research Assistant, Europe

Asia

⁶ Sun Bae Kim, M.D. & Co-Director of Asia Economic Research
⁷ Tetsufumi Yamakawa, M.D. & Co-Director of Asia Economic Research
⁶ Adam Le Mesurier, V.P. & Senior Asia Pacific Economist
⁵ Hong Liang, V.P. & Senior China Economist
⁷ Naoki Murakami, V.P. & Senior Japan Economist
¹¹ Tushar Poddar, V.P. & Economist
⁷ Yuriko Tanaka, V.P. & Associate Japan Economist
⁵ Enoch Fung, Associate Asia Pacific Economist
⁵ Helen Qiao, Associate Asia Pacific Economist
⁷ Chiwoong Lee, Research Assistant, Japan
⁵ Yu Song, Research Assistant, Asia Pacific
⁶ Mark Tan, Research Assistant, Asia Pacific
⁵ Eva Yi, Research Assistant, Asia Pacific

Admin

¹ Linda Britten, E.D. & Global Economics Mgr, Support & Systems
¹ Philippa Knight, E.D. & European Economics, Mgr Admin & Support

Location

¹ in London +44 (0)20 7774 1160
² in NY +1 212 902 1000
³ in Paris +33 (0)1 4212 1343
⁴ in Moscow +7 495 645 4000
⁵ in Hong Kong +852 2978 1941
⁶ in Singapore +65 6889 2478
⁷ in Tokyo +81 (0)3 6437 9960
⁸ in Washington +1 202 637 3700
⁹ in Miami +1 305 755 1000
¹⁰ in Frankfurt +49 (0)69 7532 1210
¹¹ in Mumbai +91 (22) 6616 9000

Summary

- **Closing the gap between male and female employment rates would have huge implications for the global economy**, boosting US GDP by as much as 9%, Eurozone GDP by 13% and Japanese GDP by 16%. The experience in Scandinavia suggests that such an outcome is achievable, given the right government policies and a wide cultural acceptance of equal female employment.
- **Increasing female employment has already been an important driver of European growth in the past 10 years**. A narrowing of the difference between male and female employment rates has accounted for half of the rise in Eurozone's total employment rate and 0.4pp of its 2.1% trend growth since 1995. Encouraging more women into the labour force has been the single-biggest driver of Eurozone's labour market success, much more so than 'conventional' labour market reforms. The US and Japan, while starting from very different positions, have both made little progress in narrowing the gap between male and female employment in the past 10 years.
- **For some European countries, there are hopeful signs that the narrowing in the male-female employment gap will continue**. Female participation rates among younger age cohorts in the Mediterranean countries (and in Spain in particular) are high, suggesting that total female participation is likely to continue to rise. The same is not true for the US and Japan, where age-specific participation rates have been broadly stable for some time.
- **We project that rising female employment will boost Eurozone growth by 0.25 percentage points over the next 10 years**. The projected boost to Japanese growth is +0.1pp, reflecting slow progress in young female employment rates. For the US, where female employment in younger age cohorts has fallen from (relatively) high levels in the past 10 years, the projected boost to growth is zero.
- **With the right policies in place, the growth contribution could be much bigger than our central projections**. The good news for countries such as Japan and Italy, where female employment is lowest, is that the potential windfalls from putting things right are biggest.
- **In addition to raising incomes, facilitating women's labour force participation would help to boost low fertility rates**. Women in many countries are effectively faced with the choice of *either* working *or* having children (because the tax and benefits system penalises second household earners and because childcare is expensive). In countries where it is relatively easy to work *and* have children, female employment and fertility *both* tend to be higher. It is no coincidence that Italy and Japan have both the lowest levels of female employment and the worst demographic prospects.
- **Closing the male-female employment gap would help to address the problem of pension sustainability** in two ways: directly, through boosting employment among those of working age (thereby reducing the dependency ratio), and indirectly, through boosting fertility rates.
- **Governments could do much more to close the male-female employment gap**: reducing tax distortions that discourage female employment, eliminating differences in retirement policies and subsidising childcare are three obvious examples. Progress in this area would both significantly boost potential growth *and* help to solve the global ageing problem.
- **The rise in female employment has, and will continue to have, important implications for equity market sector performance**. Higher disposable income growth among women boosts, for instance, the consumption of luxury clothing and accessories.
- **We identify 30 global companies that are well-positioned to benefit from relative gains in female disposable income**. The 'Women 30' index has significantly outperformed global equities over the past 10 years.

Gender Inequality, Growth and Global Ageing

Gender Inequality and Labour Market Performance

Employment rates differ substantially across countries. The proportion of 15-64 year olds in employment in the Eurozone is 64%, 8 percentage points lower than the corresponding figures for the US and the UK, 9pp lower than Sweden, and 12pp lower than Denmark. Economists have probably written more on the causes of low European employment than on any other economic issue facing Europe today. Encouragingly, some progress has been made in recent years in boosting European employment and most analysts have attributed this improvement to the effect that market reforms (such as the Hartz reforms in Germany) and a fear of outsourcing have had in reducing the real cost of labour.

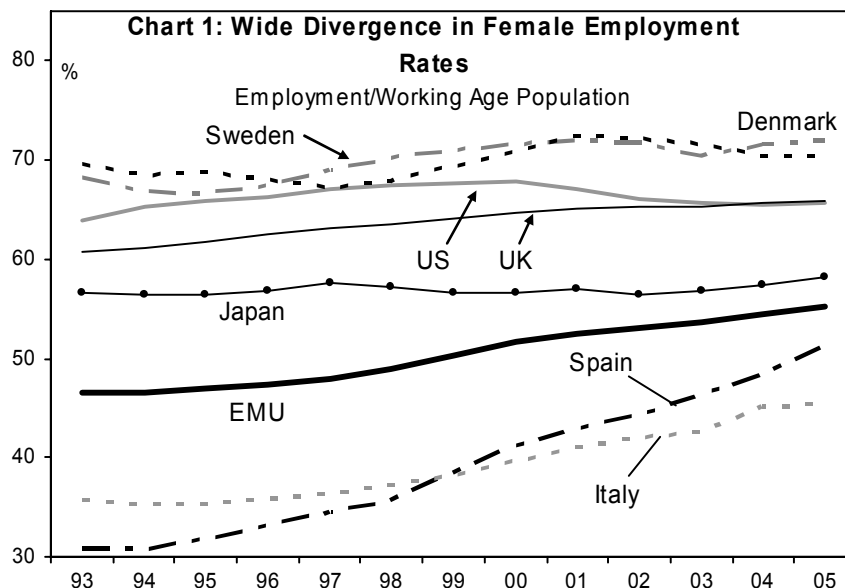
Yet, for all the attention paid to differences in employment rates across countries, the role that gender inequality plays in driving these difference is not widely appreciated. While total employment in the Eurozone is substantially lower than in the US, UK and Scandinavia, this gap becomes a gulf when female employment rates are considered in isolation. Female employment in the Eurozone is 10pp below the US, 11pp below the UK, 15pp below Sweden and 17pp below Denmark (see Chart 1). The gap between female employment in the Mediterranean and Scandinavian countries is a massive 20-25pp.

Gender inequality is a major cause of low employment in many countries.

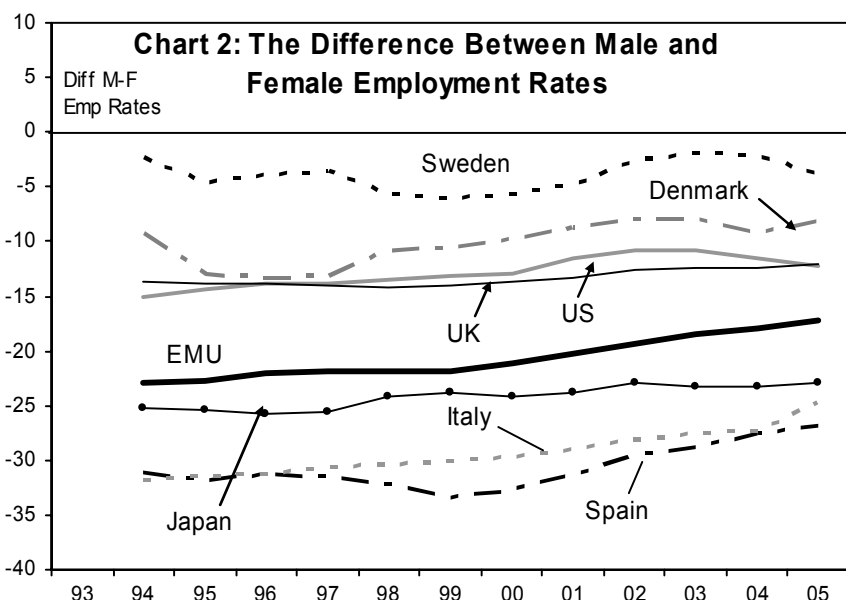
Is Low Female Employment Simply a Symptom of Europe's Wider Labour Market Woes?

To some extent, of course, the problem of low female employment simply reflects wider labour market rigidities and is not specifically a gender issue. Female employment in Germany and France, for instance, although lower than female employment in the US, is no lower *in relative terms* than male employment. This suggests that, compared with the US at least, Germany and France have a generalised employment problem rather than a female employment problem.

To isolate the gender effect from wider labour market problems, we focus on the difference between male and female employment rates.



Source: Eurostat, BLS, Japanese Cabinet Office



Source: Eurostat, BLS, Japanese Cabinet Office

But this is not true for other countries. In order to isolate the gender effect from wider labour market problems, we consider the difference between male and female employment rates for each country in Chart 2.¹

For the Eurozone as a whole, and for Italy and Spain in particular, the male-female employment gap is especially large, indicating that gender inequality plays an important part in its low overall employment. Italy's female employment rate, for instance, is 25pp below its male employment rate.

Japan also comes out badly in this comparison. Male employment in Japan is highest of all the major industrialised countries. But its overall employment rate is no better than average because the male-female employment gap is so large.

Note also that the US – often considered the benchmark for structural economic comparisons – does not represent ‘best practice’ in terms of female employment. While the US female employment rate is 12pp below male employment, the gap is less than 5pp in Sweden. The examples of Sweden and the other Scandinavian countries suggest that, with the right policies and a wide cultural acceptance of equal female employment, the difference between male and female employment rates can be reduced to close to zero.

The Economic Implications of Closing the Male-Female Employment Gap

Closing the gap between male and female employment rates would boost GDP significantly. Were Italian female employment to rise to the level of male employment, then the level of GDP (assuming everything else equal) would be boosted by 21%. For Spain, GDP would be 19% higher, Japan 16%, the Eurozone 13%, Germany 9%, France 9%, the US 9%, the UK 8%, Denmark 5% and Sweden 3% (see Chart 3).²

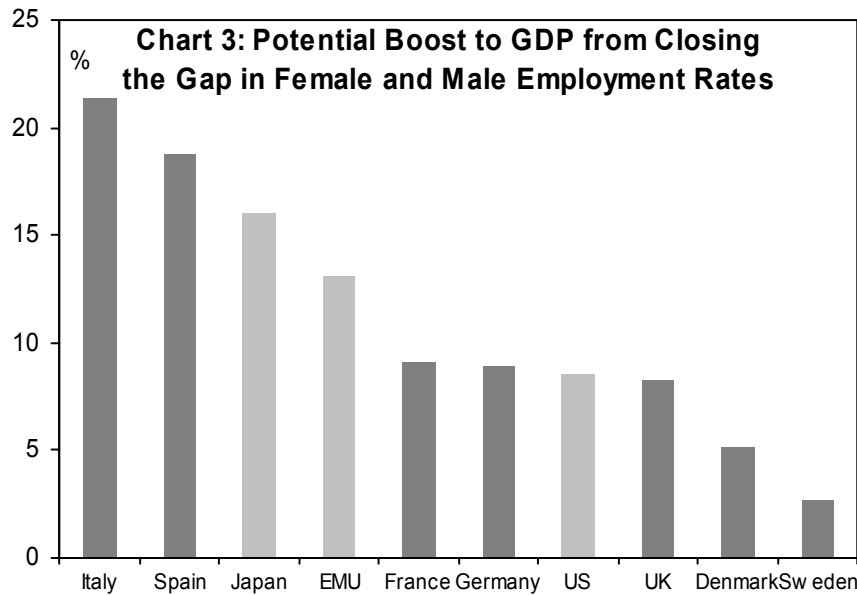
These estimates assume that raising female employment would leave average productivity (output per hour) and average hours worked unchanged, but it is

If female employment were as high as male employment (assuming all else equal), then the level of GDP would be boosted by 21% in Italy, 19% in Spain, 16% in Japan, 13% in the Eurozone, 9% in Germany, 9% in France, 9% in the US, and 8% in the UK.

The experience in Scandinavia suggests that, with the right policies and a wide cultural acceptance of equal female employment, the male-female employment gap can be reduced to close to zero.

1. As the examples of Germany, France and the US illustrate, using the difference between male and female employment rates to isolate the effect of gender inequality rather than simply comparing the level of female employment is an important distinction. It is also an innovation in the literature on gender inequality – previous studies, such as those by the OECD (2003), only compare the level of female employment and, as a result, the countries that emerge relatively well from this comparison and the implied policy conclusions are somewhat different from our analysis.

2. These estimates are derived as follows (taking the Eurozone as an example): Eurozone male employment in 2005 stood at 71.8%, 8.3 percentage points, or 13.1%, higher than the overall employment rate of 63.5%. Raising female employment to the male employment level would, therefore, boost overall employment by 13.1% and, assuming everything else is equal, GDP by a similar amount.



Source: National Sources, GS Estimates.

probably unrealistic to assume that everything else would be equal in this way. First, raising the employment rate (for males or females) tends to lower productivity, because it reduces the capital-to-labour ratio and new hires typically have fewer work-related skills than those already in employment. Second, the ability to work on a part-time basis appears to be one of the key factors in attracting women back into work after child birth, so policies designed to boost female employment could also result in a decline in average hours worked.

It is difficult to assess what the offsetting impact on productivity and hours would be. Empirical estimates suggest that raising the employment rate by 1 percentage point has, on average, an offsetting drag on output per person of 0.3pp-0.4pp (i.e., leaving a net overall impact on GDP of 0.6pp-0.7pp). But the offsetting drag on productivity may be less than 0.3pp-0.4pp when the rise in employment is due to a narrowing of the male-female employment gap rather than, for instance, a generalised reduction in unemployment. Moreover, even accounting for these offsetting effects, the potential boost to income from raising female employment would still be substantial.

To put the Eurozone's potential gain of up to 13% into context, the (much more commonly cited) objective of raising Eurozone productivity to US levels would boost GDP by 'only' 7%. An increase of 13% would close around half of the Eurozone's income per capita gap with the US.

The Causes of Low Female Participation

Low female employment is typically due to a combination of cultural and policy-related factors. Culture and policy are clearly related, in that a country's policies largely reflect its culture. The Scandinavian economies, for instance, have a long tradition of female equality and policies that reflect this tradition.

But policies and culture can also be distinct. The US has a long tradition of female equality in the workforce but has few of the state-sponsored policies that would facilitate women returning to the workforce after child birth. This perhaps reflects its tradition of limited state intervention of any form.

As it is easier for a government to address a country's policies than its culture, we focus on three policy areas where practical changes could be made to level the playing field and boost female employment. As things stand, tax and

To put the Eurozone's potential gain of up to 13% into context, the (much more commonly cited) objective of raising Eurozone productivity to US levels would boost GDP by 'only' 7%.

Tax and retirement policies in many countries actively discourage women from obtaining paid work.

retirement policies in most countries contribute to the existence of a male-female employment gap. (In Box 1 on pages 8 & 9, we provide a more detailed analysis of the policies that affect female employment.)

- **Equality of tax treatment:** The existence of a married-couples' tax allowance has traditionally discouraged women from entering the workforce. Most (but not all) countries have now moved away from joint taxation and towards tax individualisation, but distortions in the tax and benefits system persist. According to the OECD, the average tax rate for a second earner in the OECD is 1.4 times that of the first earner. In Sweden, the ratio is exactly 1.0 (i.e., there is no distortion), but in Italy and Spain it is 1.6, in Germany 1.5, in the US and UK 1.3, and in France and Japan 1.2.
- **Equality in statutory retirement ages:** A number of European countries – including Germany, Italy and the UK – have a lower statutory retirement age for women than for men. (This is somewhat perverse given that male life expectancy is typically less than for women.) Germany and the UK are both phasing out these differences from 2009 and 2010, respectively. Other countries should follow suit.
- **Subsidised childcare:** Cross-country studies, conducted by the OECD among others, find that subsidised childcare boosts female participation by raising the rate of return to work. Public expenditure on childcare averages 0.7% of GDP in the OECD. It is relatively low in countries such as Japan (0.3%), Spain (0.4%), the US and UK (both 0.5%); it is relatively high in Denmark (2.7%), Sweden (1.9%) and France (1.3%).³

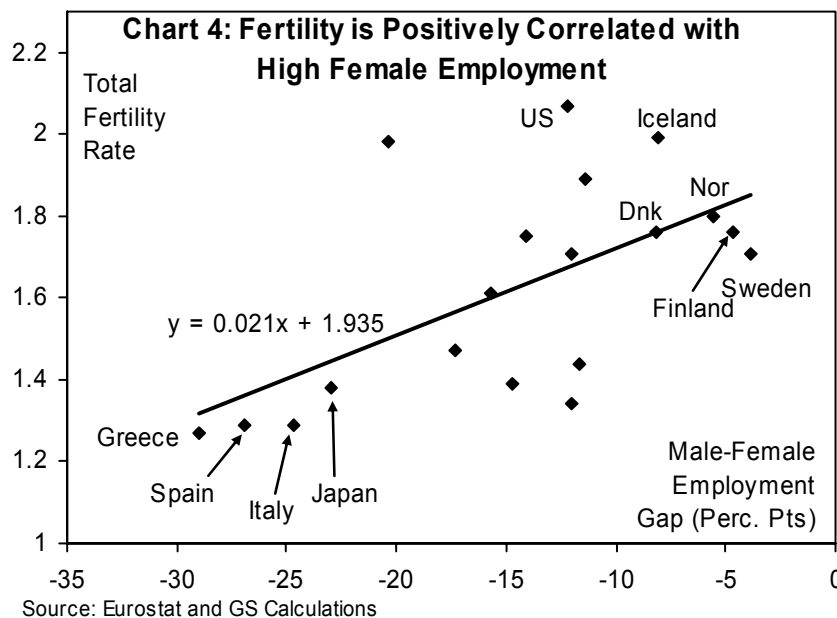
Given that male life expectancy is typically shorter than female life expectancy, the common practice of having a later official retirement age for men is somewhat perverse.

Gender Inequality and Global Ageing

Changes in these three policy areas would boost female employment and economic growth. But the issue of female employment is not merely economic in nature. Some fear that the breakdown of the traditional family model is contributing to lower fertility rates in the developed world. However, the evidence contradicts this view. Chart 4 plots the male-female employment gap against fertility rates, revealing a significant *positive* correlation between fertility and high female employment.

In countries where it is difficult for women to combine employment with having children, female employment and fertility rates both tend to suffer. As a result, there is a positive correlation between female employment and fertility.

This result is not as surprising as it may seem: faced with punitive tax rates and expensive childcare, women in many countries effectively have the choice of



3. There are no data for the public funding of childcare in Italy.

Box 1: Policies Affecting Female Employment ⁴

1. Taxation: Significant progress has been made since the 1970s to remove tax distortions that discourage female participation. In particular, most OECD countries have abandoned the married couples' tax allowance in favour of some degree of tax individualisation (if spouses are taxed separately, the second earner retains his or – more often – her tax free allowance). But some distortions persist as a result of the loss of allowances/benefits, and these can result in large distortions to the effective marginal tax rate for the second earner, especially at low incomes. Table B1 shows that Italy and Spain have the highest distortion rate, while in Sweden tax rates are the same for single people and second earners.⁵ The removal of these distortions would present women with a more neutral tax treatment. Empirical studies have found female participation to be especially sensitive to changes in the effective marginal tax rate (see, for instance, OECD (2003)).

B1: Comparison of Second Earners and Single Tax Rates (Women earning 67% of APW, 2001)

	Second earner	Single	Ratio
US	29	22	1.3
Japan	18	15	1.2
Germany	50	34	1.5
France	26	21	1.2
Italy	38	24	1.6
Spain	21	13	1.6
Sweden	30	30	1.0
Denmark	50	41	1.2

Source: OECD, APW: Average Production Workers' Earnings

2. Childcare and female participation: Having children is one major factor hindering female employment. Table B2 shows the gap in employment rates for men and women both with and without a child. The gap is much higher for women with one child and increases with every additional child. Italy, Spain and Germany are the worst performers in this regard. In Denmark, by contrast, the gap actually narrows for women with one child. The importance of childcare is also reflected in a 2004 Eurostat survey, which found that about half of inactive

B2: Women's Employment Rates and Gender Gap by Presence of Children (persons aged 25 to 54)

	No children		One child	
	Empl. rate	Gender gap	Empl. rate	Gender gap
US	78.6	7.2	75.6	17.4
Japan	na	na	na	na
Germany	77.3	7.2	70.4	21.2
France	73.5	9.6	74.1	18.7
Italy	52.8	26.2	52.1	40.9
Spain	56.4	26	47.6	44.7
Sweden	81.9	-0.4	80.6	9.8
Denmark	78.7	7.7	88.1	3.5

Source: OECD. Gender gap = diff. betw een men and w omen emp. rates

women in Euroland cite personal and family responsibilities as the main reason for being inactive in the labour force.

Most countries have policies to help overcome this hurdle to female employment:

- **Childcare subsidies:** Increasing/introducing childcare subsidies has been shown to increase female participation, as they raise the return to work relative to staying at home. The manner in which the subsidy is implemented also matters: making it conditional on labour force participation has a bigger impact on employment. Empirical studies, both at a micro and a macro level, find consistently that childcare subsidies significantly boost female labour supply (see, for instance, Gelbach (2002), and Chevalier and Viitanen (2002)).

- **Child benefits:** Although childcare subsidies have a positive effect, unconditional child benefits are much less effective in boosting female employment. While childcare subsidies boost the relative return to work, child benefits only provide an income effect (which may act to reduce labour supply).

- **Parental leave:** Parental leave boosts female labour supply in two ways: first, it encourages women to work before having children so as to become eligible to maternity leave. Second, it makes it easier for women to remain in the labour market, compared with women who leave the labour market after having children and try to re-enter it at a later stage. However, very long periods of parental leave have their disadvantages: they can reduce job progression and lifetime earnings and, in the absence of strong anti-discrimination policies, can deter employers from hiring women in the first instance.

Sweden and Denmark spend more on childcare (both formal and informal) and, as a result, although (maternity and paternity) leave is shorter in those countries, they still

B3: Childcare Support and Leave

	Public spending childcare % GDP	Maternity Leave (wks)	
		Paid	Unpaid
US	0.5	0	12
Japan	0.3	8	58
Germany	0.8	38	162
France	1.3	73	162
Italy	na	30	65
Spain	0.4	16	164
Sweden	1.9	40	85
Denmark	2.7	42	54

Source: OECD (2003). Data for 1999.

4. Much of the material within this Box is sourced from the OECD (2003) study "Female labour force participation: past trends and main determinants in OECD countries".

5. Defined as $1 - (\text{household net income } (b) - \text{household net income } (a)) / (\text{household gross income } (b) - \text{household gross income } (a))$, where a represents a situation in which the wife does not earn an income.

B4: Female Employment Rates

	Not adjusted	Adjusted for hours worked*
Germany	59.1	45.5
France	57.5	49.0
Italy	45.6	39.0
Spain	50.2	45.7
Sweden	71.6	60.9
Denmark	72.5	59.3

Source: OECD and Eurostat. *Adjusted measure is total weekly hours divided by 40 and by the working age population

fare better in terms of women's employment rates (see Table B3).

3. Part-time work: Flexibility of working hours is an important factor in boosting female participation after child birth. But the offsetting effect is that it reduces average hours worked per employee (see Table B4).

4. Retirement policies: Retirement policies are also an obstacle to female employment. In Germany, Italy and the UK, the statutory retirement age is lower for women than men (see Table B5).

B5: Retirement Age

	Women	Men
Germany	62	65
France	60	60
Italy	60	65
Spain	65	65
Sweden	65	65
Denmark	65	65

Source: OECD

5. Other factors: Anti-discrimination laws are clearly favourable to female employment. High levels of welfare and income support will tend to discourage participation for both men and women but, empirically, female participation appears to be more sensitive to these factors. Lastly, excessive regulation of services both increases childcare costs and limits the creation of employment in the service sector in general, which is the sector that tends to create more jobs for women.

Inês Lopes

either working or having children. (This is especially true of low-income families where the return to employment relative to the cost of childcare is low.) Faced with such a choice, fertility and employment rates both suffer. By contrast, in the countries where it is relatively easy to work *and* have children, female employment and fertility both tend to be higher.

It is no coincidence that the economies where the problem of ageing populations/pension sustainability is most acute – namely Italy and Japan – are also those where female employment is lowest. With low fertility rates and overall employment dragged down by low female participation, old-age dependency (the ratio of retirees to employees) is high and rising.

Closing the male-female employment gap would help to address the problem of pension sustainability in two ways: directly, through boosting employment among those of working age (thereby reducing the retiree-to-employee dependency ratio), and indirectly, through boosting fertility rates.

The Wider Benefits of Higher Female Employment

In addition to the economic benefits outlined here, increasing paid female employment would also bring wider social gains:

- **More women would prefer paid work.** Surveys indicate that more women would like to be in paid work than are currently able to due to the constraint of having to care for children in the home. The OECD (2001) provides survey evidence that, while 77% of European couples believe that the ideal family arrangement is one in which both partners are either in full or part-time employment, only 53% of couples manage to live in such an arrangement. In labour force survey data across countries, the childcare requirement is consistently the most commonly cited reason for female inactivity in the labour force. From a welfare maximisation perspective, therefore, policies that enable women to satisfy their goal of entering the labour force should be viewed positively.

- **Formal childcare appears to be beneficial for childhood development.** There is evidence that formal childcare is beneficial for children's educational and language development (see Kamerman *et al.* (2003)).

Closing the male-female employment gap would help to address the problem of pension sustainability in two ways: directly, through boosting employment among those of working age (thereby reducing the dependency ratio), and indirectly, through boosting fertility rates.

However, these benefits appear to be age-dependent: they are clearest for children of three years and above; the evidence is less clear between the ages of six months and two years, while childcare appears to have a mildly negative effect in the first six months.

The Case Against Policies to Boost Female Employment

Three arguments are sometimes made against the implementation of policies that enable more women to enter paid employment. We find none of these arguments convincing:

- One argument against higher female employment is that it undermines the ‘traditional family model’. We are agnostic on the choice of family ‘model’ – we would argue merely that couples should have the freedom to choose the model that suits them. And surveys suggest more couples want both partners to be in paid employment than is the case currently.
- Another argument is that the government should not interfere with family life. But one of the key results from an analysis of existing tax and benefits policies is that the status quo in most countries actively discourages female employment. The policies sponsored in this paper would help to correct an existing distortion, not create a new one.
- A third argument made against higher female employment is that it is resulting in a reduction of fertility rates. This claim is simply contradicted by the facts.

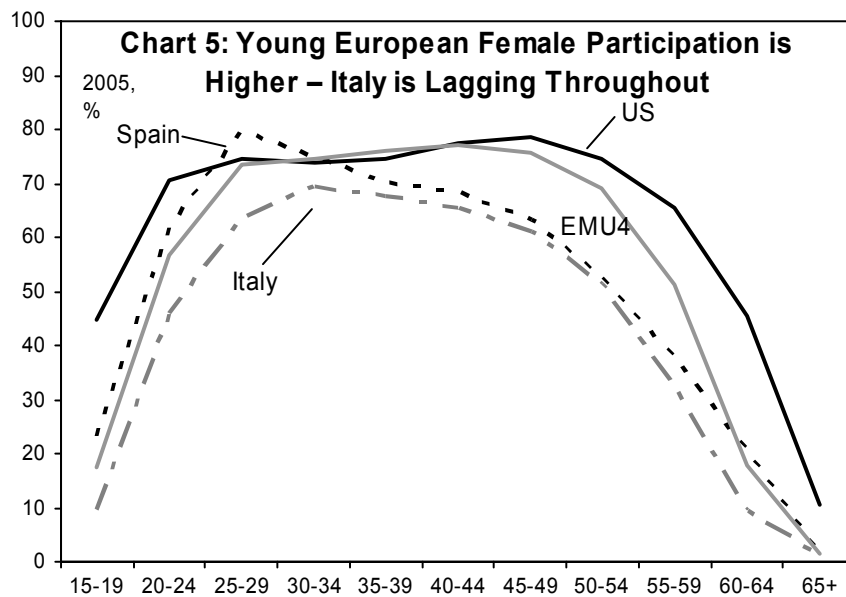
Women Drive Economic Growth

Raising female employment to male employment levels would boost US GDP by as much as 9%, Eurozone GDP by 13% and Japanese GDP by 16%. Realistically, such a transformation could only take place over a number of years, so what would be the potential impact on growth during the transition?

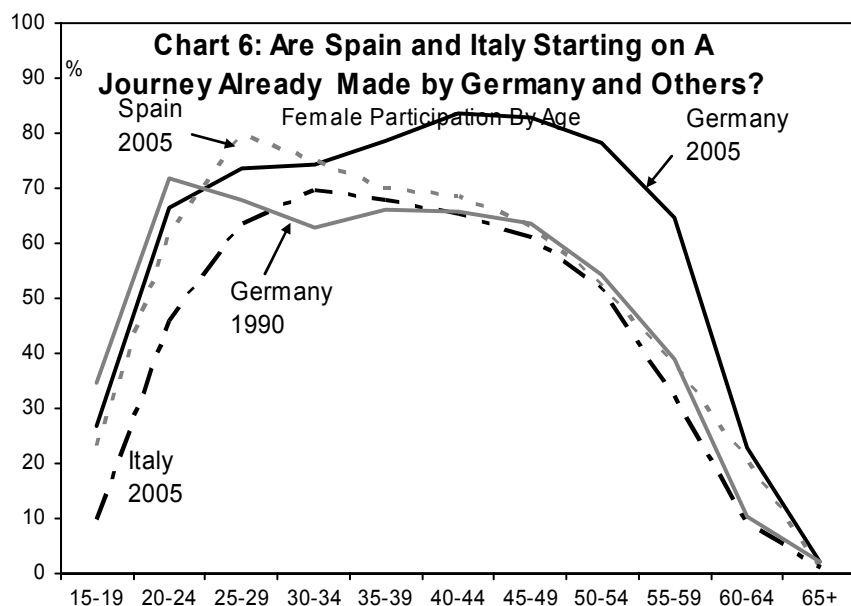
The process of raising Eurozone female employment is already underway – the male-female employment gap has narrowed from 23pp to 17pp in the past 10 years – and the impact on overall employment and growth has been substantial. Of the 6pp rise in Eurozone’s total employment rate witnessed since 1995, around half was due to a narrowing of the difference between male and female employment rates alone. Encouraging more women into the labour force has

Some argue that the government should not interfere with family life. But the policies sponsored in this paper would help to correct an existing distortion, not create a new one.

One-half of the rise in the Eurozone’s employment rate since 1995 was due to a narrowing of the male-female employment gap. Encouraging more women into the labour force has been the single-biggest driver of Eurozone’s labour market success, much more so than ‘conventional’ labour market reforms.



Source:OECD



Source: OECD

been the single-biggest driver of Eurozone’s labour market success, much more so than ‘conventional’ labour market reforms.

The good news is that this process appears likely to continue. Age-specific data on participation rates in the Mediterranean countries reveal much higher female participation among younger age cohorts than in older age cohorts, suggesting that changes in female participation are ongoing (see Chart 5). The outlook in Spain is especially encouraging: participation rates among Spanish women in their 20s is now higher than among US women in their 20s and there has been a rapid progression in female participation across all age groups. Some improvement in Italy also appears to be underway, but it is less marked.

In other countries where female employment has already risen significantly, the transition started with higher female participation in younger age cohorts. The age-specific profile of female employment in Spain today looks much like Germany or France 15 years ago (see Chart 6). Given high participation rates among younger age cohorts, the passing of time alone is likely to reduce further the difference between male and female employment rates, as older cohorts (where participation is low) are replaced by younger cohorts.

On page 12 we provide individual graphs for Sweden, Denmark, UK, Germany, Italy, Spain, the US and Japan, outlining the progression of age-specific female labour force participation since 1970.

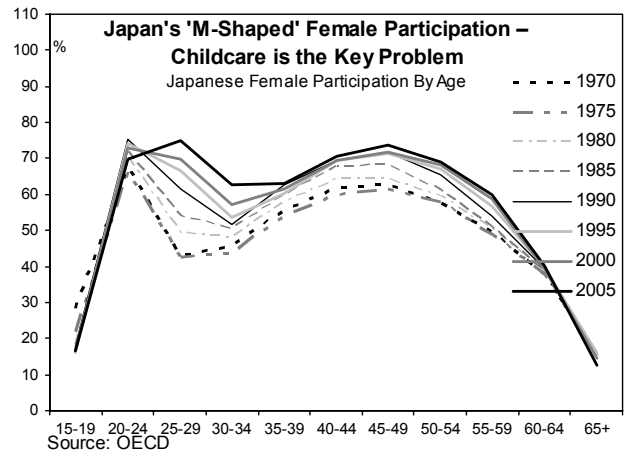
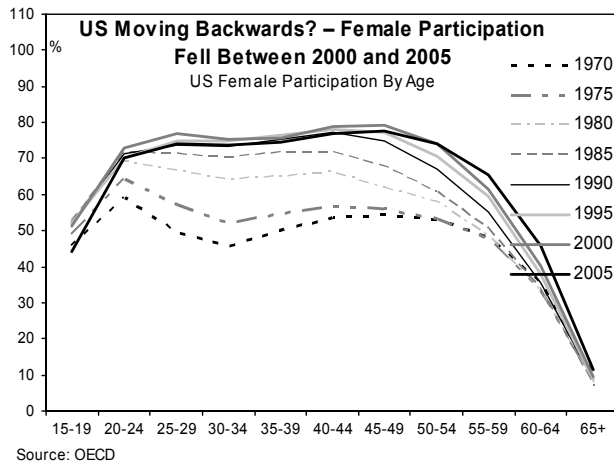
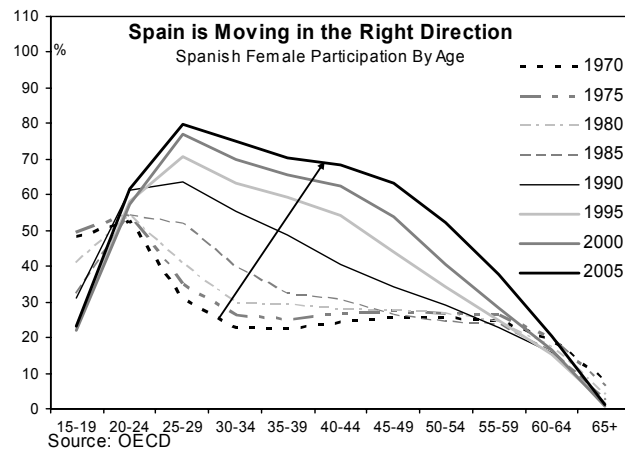
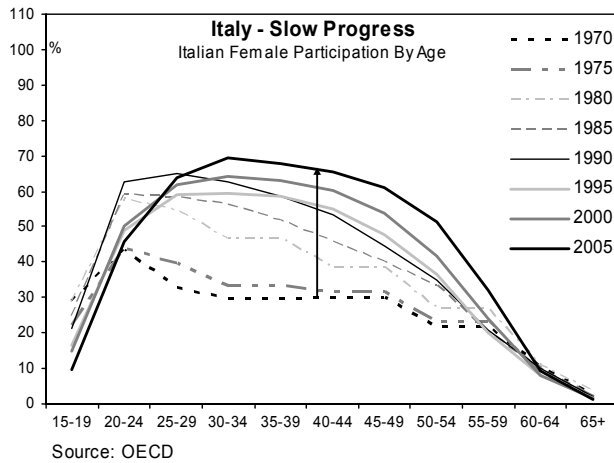
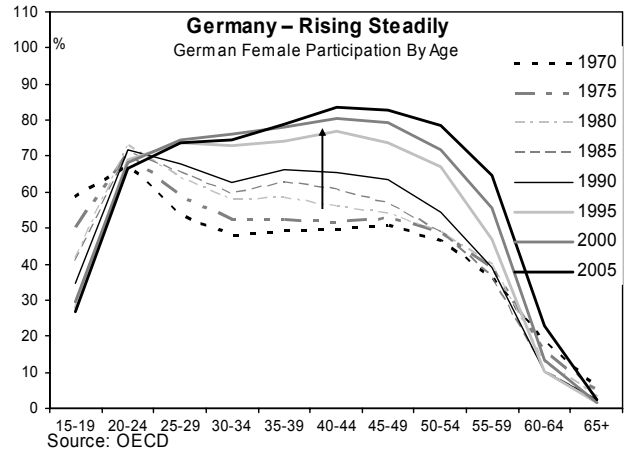
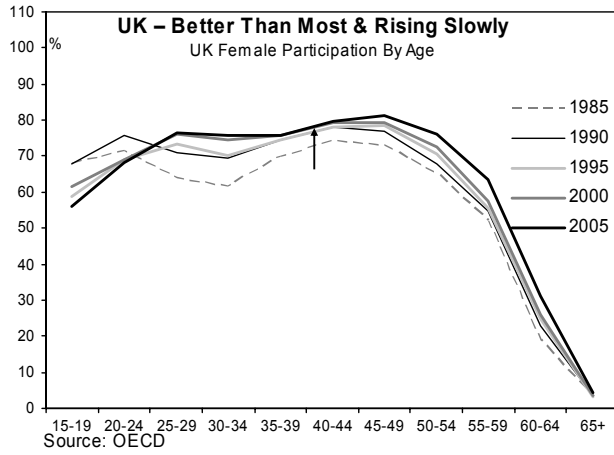
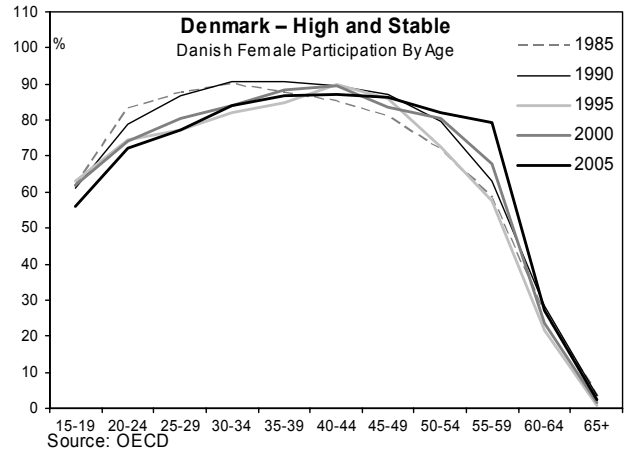
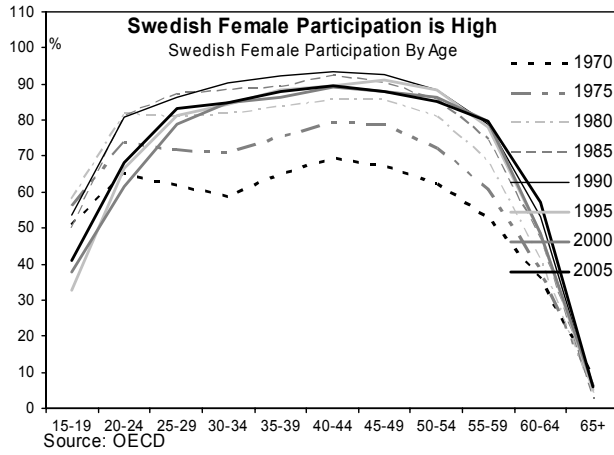
In Table 1 we present a range of potential contributions to GDP growth from rising female participation over the next 10 years for the US, Japan, the UK and the four large EMU countries. The central estimates assume unchanged policies and that higher female participation in younger age cohorts translates into

Participation rates among Spanish women in their 20s is now higher than among US women in their 20s.

We present a range of potential contributions to GDP growth from rising female participation over the next 10 years for the US, Japan, the UK and the four large EMU countries.

Table 1: Projected Boost to GDP from Rising Female Employment (percentage points)

2005-2015	US	Japan	UK	Germany	France	Italy	Spain	EMU4
Low	-0.15	0.00	0.00	0.05	0.10	0.10	0.20	0.10
Central	0.00	0.10	0.10	0.15	0.20	0.30	0.45	0.25
High	0.15	0.50	0.20	0.25	0.30	0.60	0.60	0.40



higher participation across all age spectrums with the passing of time.⁶

The central projection for the Eurozone is 0.25%, reflecting the relatively high participation rates among younger age cohorts. The central estimate, while high, is actually lower than the contribution over the past 10 years (+0.25% vs. +0.4%) and may prove to be too cautious given legislative changes that have already been passed and are due to come into effect (such as Germany's higher retirement age for women).

For the UK, the central estimate is only +0.1%, reflecting the fact that female participation is already reasonably high (and so the room for further improvement is more limited) and that there has been a stabilisation of female participation rates in younger age cohorts.

For Japan, it is also only +0.1%. This reflects that female participation there has risen little in the past 10 years in any age cohort, despite the fact that participation rates are rising from low levels.

For the US, the central estimate is zero. Strictly speaking, given that female employment in younger age cohorts has actually fallen in the past 10 years, our methodology suggests that total female participation is likely to fall in the next 10 years. However, we assume that the decline is partly cyclical in nature, reflecting the sharp downturn in the early-2000s, and that lower female participation in younger age cohorts will not be passed through to older age cohorts.

The ranges around the central estimates are as important as the central estimates themselves. With the right policies in place, the boost to growth could be much bigger than our central projections. In the absence of the right policies, equally, it is also possible that higher young female participation will not translate across the age spectrum.

These ranges are wide, reflecting the fact that policy implementation will have a material impact on the actual outcome. But in some countries they are wider than others. In Japan, for instance, the upper bound of the potential boost is much higher than the central estimate (+0.5% vs. 0.1%), suggesting that, while little progress has been made in boosting female employment in recent years, much more progress could be made with the right policies because female employment is starting from such a low level.

The good news for countries such as Japan and Italy, where female employment is lowest, is that the potential windfalls from putting things right are bigger than for other countries. With such high stakes to play for, governments have no excuse for inaction.

The Power of the Purse: Investing in Rising Female Consumption

The rise in female employment has, and will continue to have, important implications for equity market performance. As the male-female employment gap closes, female disposable income growth will surpass male income growth. Some of this income gain will simply boost the joint household income, raising household consumption without necessarily changing the type of products that are consumed. But the relative rise in female affluence is also likely to result in a shift in consumption patterns; a shift that is likely to be most

The central projection for the Eurozone is 0.25pp, 0.1pp for Japan and the UK, and flat for the US.

These ranges are wide, reflecting the fact that policy implementation will have a material impact on the actual outcome.

The rise in female employment has, and will continue to have, important implications for equity sector performance.

6. Some readers may be concerned that increased labour supply could be translated into higher unemployment rather than higher growth. As a general point, we would argue that there is no correlation between labour supply and unemployment. This is true across countries (economies with rapid population growth do not have higher unemployment rates than economies with slow population growth) and across time (global unemployment has not risen over time with rising population). The belief that there are only a fixed number of jobs is called the 'lump of labour fallacy' and it is a fallacy because supply creates its own demand in a self-correcting feedback (known as Say's Law). A parallel can be drawn in this regard between higher female participation and immigration – neither should result in higher unemployment. Note, finally, that this is a moot point in the case of our European projections over the next 10 years because, even accounting for higher female participation, Eurozone labour supply growth will be less over the next 10 years than it was over the past 10 years (when unemployment actually fell).

Box 2: Childcare Support is Key to Boosting Japanese Female Participation

Japan's Demographic Challenge

While demographics pose a challenge to every developed economy, none is expected to be as hard hit as Japan. Over the next two decades, Japan's population is forecast to shrink by 6% from the current level of 127mn, but its workforce population (age 15-64) is already shrinking and forecast to fall by nearly 10% within the next 20 years (see Chart 7).⁷ As a result, based on current forecasts, Japan will have only two workers for every one retiree within the next 30 years and two retirees for every three workers by 2050.

In the 2005 publication, "*Womonomics: Japan's Hidden Asset*", our Japanese Portfolio Strategy Team outlined the potential that boosting female employment could have in addressing Japan's demographic problems. The male-female employment gap is 23pp in Japan; among large developed economies, only Italy and Spain have larger gender gaps. Moreover, while the male-female employment gap is shrinking steadily in Italy and Spain, progress has been slow in Japan.

Japan's 'M-curve' phenomenon

The key reason behind Japan's low female participation rate is the so-called 'M-curve' phenomenon. Up to the age of 30 and again after 45, female participation rates are broadly comparable with other developed countries. However, between the ages of 30 and 45, female participation drops sharply as women exit the workforce in order to raise children. This M-shaped profile in female participation is unique to Japan (see Chart 8).

Japan is also unusual in that female participation is relatively low across all levels of education. In most developed economies, the participation rate of women with at least high-school diplomas is 70%-85%, while the equivalent ratio in Japan stands at just 63%-70%. This suggests that, relative to other countries at least, a lower marginal return to paid work for women is not the

key reason for low female participation (because participation rates are also low among highly-educated women who have a relatively high return to paid work).

These two distinctive features of Japanese female participation suggest that the principal cause of the problem (and the key to solving it) lies in the supply of childcare.

Boosting Childcare Provision in Japan

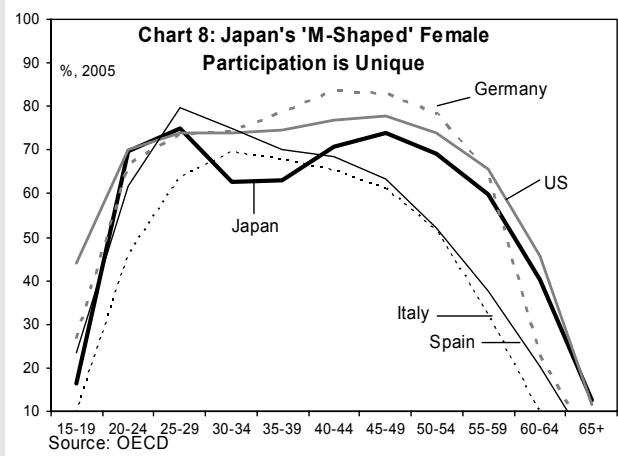
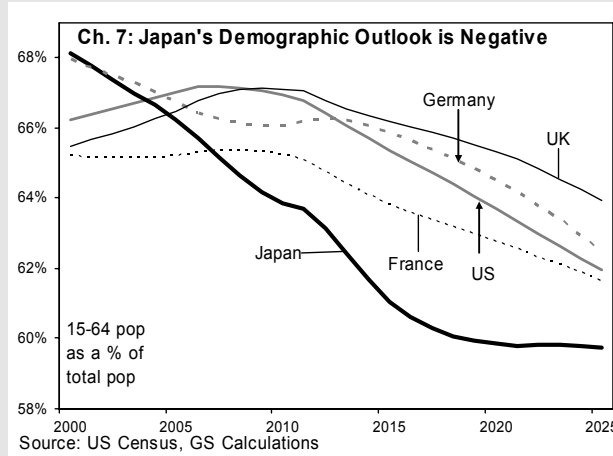
The proportion of Japanese children at day-care centres stood at just 13% for children under three years of age and 34% for those between three years and the age of mandatory enrolment in school. This is far lower than the respective ratios of the US and Eurozone.

A key reason for low childcare usage is a lack of public spending in this area. According to the OECD (2003), Japan's public spending on childcare provision is among the lowest within the OECD (at 0.3% of GDP vs. an OECD average of 0.7%).

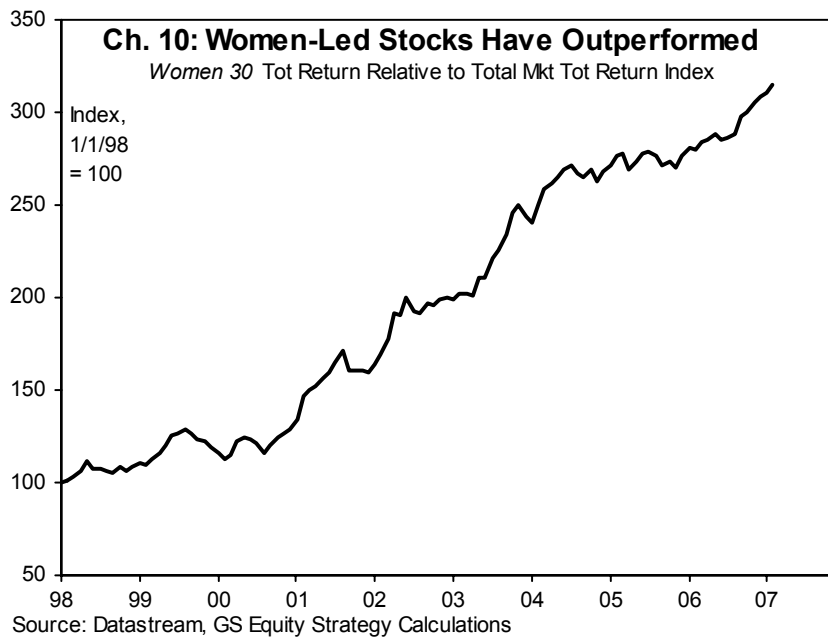
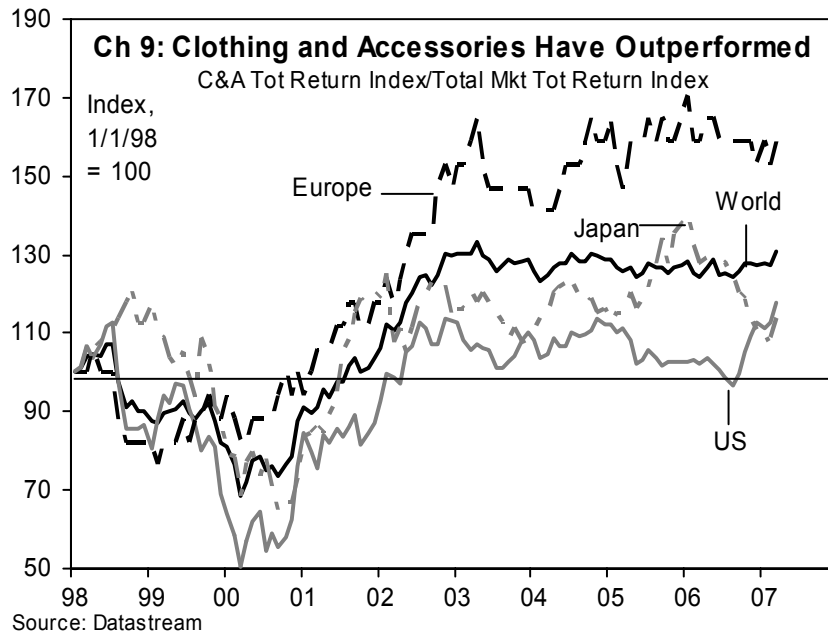
Would the supply of childcare be responsive to an increase in public expenditure in this area? Blau (2001) finds that childcare supply is very responsive to demand, in part because the capital requirements of childcare facilities are limited.

In order to ensure maximum value for money from boosting public expenditure on childcare provision, however, the government also needs to loosen the (currently very strict) immigration laws for foreign day-care providers. The wages of Japanese day-care providers are already high relative to the median wage and they are only likely to rise higher if the Japanese government significantly increases expenditure in this area.

Kathy Matsui



7. Based on results of the medium variant projections from "Population Projections for Japan: 2001-2050," National Institute of Population and Social Security Research.



notable as female incomes exceed the level required to acquire essential goods and services, and rise to the point where a significant proportion of income can be spent on discretionary goods. Such a shift is likely to boost both the consumption of goods and services marketed exclusively to women (such as luxury women’s clothing and accessories) and also the consumption of products that are not gender-specific.

The global male-female employment gap has been closing gradually in the past 10 years, with the fastest progress registered in European countries. Has this translated into the outperformance of companies that are well positioned to benefit from this secular shift? The evidence is complicated by the fact that there are few quoted companies that sell products primarily to women. However, where such companies can be identified, these have tended to perform more strongly.

At a sector level, Clothing and Accessories has the highest proportion of companies selling predominantly to women and, as Chart 9 illustrates, total

The ‘Women 30’ index has outperformed global equities over the past 10 years. We believe that this outperformance is part of a secular trend that will be maintained over the next 10.

returns (including re-invested dividends) of this sector have outstripped global returns over the past 10 years. Significantly, the outperformance has been greatest in Europe, where the biggest narrowing for the male-female employment gap has taken place.

But, in order to focus more precisely on the impact of rising female participation on equity performance, we have created our own global index of 30 companies that should benefit from an increase in female incomes in particular.

The companies within this 'Women 30' are listed in the Appendix. They are drawn predominantly from the sub-sectors of Clothing and Accessories, Footwear, Personal Products, and Apparel Retailers. This is because it is possible to identify companies within these sub-sectors that sell products primarily to women.⁷

This 'Women 30' index has outperformed significantly over the past 10 years: total returns were three times greater than for global equities (see Chart 10). Not all of this outperformance is attributable to the 'power of the purse' – the index is weighted towards luxury goods providers that have also benefited from the emergence of a BRICs middle class and from an increase in income inequality in many countries. But we believe that a significant portion is also due to higher female incomes, a secular trend that is likely to be maintained over the next 10 years.

Kevin Daly

The rise in female incomes is not the only reason why the 30 selected companies have outperformed, but we believe it is an important part of the story.

7. A number of companies across a large range of industries have products that are targeted specifically at women. But these usually represent a selection of products within a wider suite of products. It is more difficult to identify, for instance, a major financial service provider or a automobile producer whose entire suite of products is marketed exclusively to women.

Appendix

Women 30' Constituent Companies

1	ADOLFO DOMINGUEZ (Zara)	16	GUESS
2	AVON PRODUCTS	17	HENNES & MAURITZ
3	BENESSE	18	HERMES INTL.
4	BULGARI	19	INDITEX
5	BURBERRY GROUP	20	KAO
6	CHRISTIAN DIOR	21	LIZ CLAIBORNE
7	CLAIRES STORES	22	L'OREAL
8	CLARINS	23	LVMH
9	COACH	24	MOTHERCARE
10	ELIZABETH ARDEN	25	NEXT
11	ESCADA	26	PUMPKIN PATCH
12	ESPRIT HOLDINGS	27	RICHEMONT (Cartier)
13	ESTEE LAUDER	28	SHISEIDO
14	ETAM DEVELOPEMENT	29	TOD'S GROUP
15	FOLLI-FOLLIE	30	WACOAL HDG.

Bibliography

Blau, D, 2001, “The child care problem: an economic analysis”, New York Russell Sage Foundation.

Chevalier, A. and T. Viitanen, 2002, “The causality between female labour force participation and the availability of childcare”, *Applied Economics Letters*, Volume 9, Issue 14.

Gelbach, J., 2002, “Public Schooling for young children and maternal labor supply”, *American Economic Review*, Vol. 92, Issue 1.

Jaumotte, F., “Female labour force participation: past trends and main determinants in OECD countries, 2003, *OECD Economics Working Papers No. 376*.

Kamerman, S., Neuman, M., Waldfogel J. and J Brooks-Gun, 2003, “Social policies, family types and child outcomes in selected OECD countries”, *OECD Social Employment and Migration Working Papers*, No. 6.

Matsui, K., “Womenomics: Japan’s hidden asset”, 2005, *Goldman Sachs Japanese Portfolio Strategy*.

National Institute of Population and Social Security Research, “Population Projections for Japan: 2001-2050”.

OECD, 2001, *Employment Outlook*, Paris.

Recent Global Papers

Paper No.	Title	Date	Author
153	The N-11: More Than an Acronym	28-Mar-07	Dominic Wilson and Anna Stupnytska
152	India's Rising Growth Potential	21-Jan-07	Tushar Poddar
151	US Balance of Payments: Is It Turning and What Is Sustainable?	16-Jan-07	Jim O'Neill
150	The 'B' in BRICs: Unlocking Brazil's Growth Potential	04-Dec-06	Paulo Leme
149	Bonding the BRICs: The Ascent of China's Debt Capital Market	20-Nov-06	Francesco Garzarelli, Sandra Law son and Michael Vaknin
148	You Reap What You Sow : Our 2006 Growth Environment Scores (GES)	08-Nov-06	Dominic Wilson and Anna Stupnytska
147	Globalisation and Disinflation – Can Anyone Else 'Do A China'?	05-Oct-06	Jim O'Neill, Sun-Bae Kim and Michael Buchanan
146	China's Investment Strength is Sustainable	03-Oct-06	Hong Liang
145	Japan's Pension Story	06-Sep-06	Dambisa Moyo
144	Capital Markets and the End of Germany Inc.	23-Aug-06	Dirk Schumacher
143	The US Productivity Boom: Far From Finished	17-Jul-06	Andrew Tilton
142	Europe in a Globalised World: Winners and Losers	06-Jul-06	Ben Broadbent and Erik F. Nielsen
141	GloCo-Motives: Arguing the Case for Globalization	01-May-06	Jim O'Neill and Sandra Law son
140	Can Hong Kong Afford to Keep the Peg?	27-Apr-06	Enoch Fung
139	Long-Term Price Forecast vs. Inflation-Linked JGB (JGBI)	19-Apr-06	Tetsufumi Yamakawa, Naoki Murakami, Yuriko Tanaka and Daisuke Yamazaki
138	Will China Grow Old Before Getting Rich?	13-Feb-06	Helen Qiao
137	Housing Holds the Key to Fed Policy	03-Feb-06	Jan Hatzius
136	Dark Matter or Cold Fusion?	16-Jan-06	Willem Buiter
135	German Manufacturing Will Survive EU Enlargement	09-Dec-05	Dirk Schumacher
134	How Solid are the BRICs?	01-Dec-05	Jim O'Neill, Dominic Wilson, Roopa Purushothaman and Anna Stupnytska
133	China's Ascent: Can the Middle Kingdom Meet Its Dreams?	11-Nov-05	Hong Liang and Eva Yi
132	60 Is the New 55: How the G6 Can Mitigate the Burden of Aging	28-Sep-05	Sandra Law son, Roopa Purushothaman and David Heacock
131	Is Foreign Direct Investment An Engine for Economic Growth?	16-Sep-05	Binil Patel, Mónica Fuentes and Anna Stupnytska
130	What Italy Needs to Do	14-Sep-05	Kevin Daly and Inês Calado Lopes
129	China and Asia's Future Monetary System	12-Sep-05	Jim O'Neill
128	The Impact of Pension Reform on the Capital Markets	08-Sep-05	Dambisa F. Moyo
127	The "ABC" of Asia's FX Regime Shift	01-Sep-05	Sun-Bae Kim and Tetsufumi Yamakawa
126	Europe: Challenged by Globalisation	13-Jul-05	Erik F. Nielsen and Nicolas Sobczak
125	Inflation Targeting —The Case for More?	15-Jun-05	Jim O'Neill

GOLDMAN SACHS GLOBAL RESEARCH CENTRES

New York

Goldman Sachs & Co.
New York Plaza, 45th Floor
New York, New York 10004, USA
Tel: +1 212 902 1000

Washington

Goldman Sachs & Co.
101 Constitution Ave, NW
Suite 1000 East
Washington, DC 20001
Tel: +1 202 637 3700

London

Goldman Sachs International
Peterborough Court
133 Fleet Street
London, EC4A 2BB, England
Tel: +44 (0)20 7774 1000

Frankfurt

Goldman Sachs & Co. oHG
MesseTurm
D-60308 Frankfurt am Main,
Germany
Tel: +49 (0)69 7532 1000

Moscow

Goldman Sachs OOOGS
14th floor, Ducaat III
6, Gasheka Street
Moscow 125047
Russian Federation
Tel: +7-495-645-4000

Paris

Goldman Sachs Inc et Cie
2, rue de Thann
75017 Paris, France
Tel: +33 (0)1 4212 1341

Hong Kong

Goldman Sachs (Asia) L.L.C.
Cheung Kong Center,
68th Floor
2 Queen's Road Central
Hong Kong
Tel: +852 2978 1000

Tokyo

Goldman Sachs Japan Co, Ltd.
Roppongi Hills Mori Tower
47th Floor, 10-1, Roppongi 6-chome
Minato-ku, Tokyo 106-6147, Japan
Tel: +81 (0)3 6437 9960

Singapore

Goldman Sachs (Singapore) Pte.
1 Raffles Link, #07-01 South Lobby,
Singapore 039393
Tel: +66 889 1000

Copyright 2007 The Goldman Sachs Group, Inc. All rights reserved.

This material should not be construed as an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. We are not soliciting any action based on this material. It is for the general information of clients of The Goldman Sachs Group, Inc. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Before acting on any advice or recommendation in this material, clients should consider whether it is suitable for their particular circumstances and, if necessary, seek professional advice. The price and value of the investments referred to in this material and the income from them may go down as well as up, and investors may realize losses on any investments. Past performance is not a guide to future performance. Future returns are not guaranteed, and a loss of original capital may occur. The Goldman Sachs Group, Inc. does not provide tax advice to its clients, and all investors are strongly advised to consult with their tax advisers regarding any potential investment. Certain transactions - including those involving futures, options, and other derivatives as well as non-investment-grade securities - give rise to substantial risk and are not suitable for all investors. The material is based on information that we consider reliable, but we do not represent that it is accurate or complete, and it should not be relied on as such. Opinions expressed are our current opinions as of the date appearing on this material only.

We endeavor to update on a reasonable basis the information discussed in this material, but regulatory, compliance, or other reasons may prevent us from doing so. We and our affiliates, officers, directors, and employees, including persons involved in the preparation or issuance of this material, may from time to time have "long" or "short" positions in, act as principal in, and buy or sell the securities or derivatives (including options) thereof of companies mentioned herein. For purposes of calculating whether The Goldman Sachs Group, Inc. beneficially owns or controls, including having the right to vote for directors, 1% of more of a class of the common equity security of the subject issuer of a research report, The Goldman Sachs Group, Inc. includes all derivatives that, by their terms, give a right to acquire the common equity security within 60 days through the conversion or exercise of a warrant, option, or other right but does not aggregate accounts managed by Goldman Sachs Asset Management. No part of this material may be (i) copied, photocopied, or duplicated in any form by any means or (ii) redistributed without The Goldman Sachs Group, Inc.'s prior written consent.

The Global Investment Research Division of Goldman Sachs produces and distributes research products for clients of Goldman Sachs, and pursuant to certain contractual arrangements, on a global basis. Analysts based in Goldman Sachs offices around the world produce equity research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy.

This research is disseminated in Australia by Goldman Sachs JBWere Pty Ltd (ABN 21 006 797 897) on behalf of Goldman Sachs; in Canada by Goldman Sachs Canada Inc. regarding Canadian equities and by Goldman Sachs & Co. (all other research); in Germany by Goldman Sachs & Co. oHG; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd. in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs JBWere (NZ) Limited on behalf of Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman, Sachs & Co. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom and European Union. This material has been issued by The Goldman Sachs Group, Inc. and/or one of its affiliates and has been approved for the purposes of section 21 of the Financial Services and Markets Act 2000 by Goldman Sachs International, which is regulated by the Financial Services Authority, in connection with its distribution in the United Kingdom, and by Goldman Sachs Canada, in connection with its distribution in Canada. Goldman Sachs International and its non-US affiliates may, to the extent permitted under applicable law, have acted on or used this research, to the extent that it relates to non-US issuers, prior to or immediately following its publication. Foreign-currency-denominated securities are subject to fluctuations in exchange rates that could have an adverse effect on the value or price of, or income derived from, the investment. In addition, investors in securities such as ADRs, the values of which are influenced by foreign currencies, effectively assume currency risk. In addition, options involve risk and are not suitable for all investors. Please ensure that you have read and understood the current options disclosure document before entering into any options transactions.

Further information on any of the securities mentioned in this material may be obtained on request, and for this purpose, persons in Italy should contact Goldman Sachs S.I.M. S.p.A. in Milan or its London branch office at 133 Fleet Street; persons in Hong Kong should contact Goldman Sachs (Asia) L.L.C. at 2 Queen's Road Central; persons in Australia should contact Goldman Sachs JBWere Pty Ltd. (ABN 21 006 797 897), and persons in New Zealand should contact Goldman Sachs JBWere (NZ) Ltd. Persons who would be categorized as private customers in the United Kingdom, as such term is defined in the rules of the Financial Services Authority, should read this material in conjunction with the last published reports on the companies mentioned herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risk warnings is available from the offices of Goldman Sachs International on request. A glossary of certain of the financial terms used in this material is also available on request. Derivatives research is not suitable for private customers. Unless governing law permits otherwise, you must contact a Goldman Sachs entity in your home jurisdiction if you want to use our services in effecting a transaction in the securities mentioned in this material.