



Working Paper
No. 511

Gender trends in developing countries during financial crises

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December 2010

ISSN 0921-0210

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Abstract

The paper looks at several financial crises in the past: the Asian financial crisis, the Brazilian, Argentine and Turkish financial crises, around the turn of the last century. Data are analyzed for a 10-year period around these crises. The data include gender indicators (mostly female-male gaps) in education, health and the labour market and show lack of progress or even declines in gender equality in these periods of crises in the eight countries analyzed. Moreover, a control group of countries is used as counterfactual, indicating better performance on gender equality and hence, a diverging trend between the two country groups.

Keywords

Financial crisis, gender, inequality

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1 Development, gender and the financial crisis

The current financial crisis, and the great global recession that has unfolded, has clear negative impacts beyond those on governments, tax payers, home owners, workers, firms, and investors in the US and Europe. Recent studies point at risks as well as negative impacts for developing countries (van Bergeijk et. al, 2011; IDS, 2009; van Staveren, 2011a; UNCTAD, 2010).

Since the crisis has started only recently and is still unfolding, both in financial and in real economy effects, it is too early to be able to analyze impacts that go beyond the standard macroeconomic aggregates such as GDP, investment flows, exports and imports. In particular it is very difficult to assess any effects that require disaggregated data such as those on gender. That is why the few studies that have tried to analyze gender impacts of the current crisis have been limited to case studies and mostly qualitative information which nevertheless gives relevant insights into the effects that seem often to be negative for women and for gender equality (King and Sweetman, 2010; Pearson and Sweetman, 2010; Antonopoulos, 2010; WIDE, 2010). Others have analyzed gender impacts of financial crises in the past, such as the 1997 Asian financial crisis (van Staveren; Hung, 2009). As an indirect way to address possible gender impacts of the current crisis, I have looked at effects of the volatility of foreign direct investments (FDI) over a longer period of time on some real economy variables (van Staveren, 2011b). I found that both male and female vulnerable employment is statistically significantly positively related to FDI inflows as a share of GDP as well as to FDI volatility. This implies that both an increase in FDI inflows and an increase in the volatility of these inflows tend to increase vulnerable employment, both for women and men.

Next to gender impact analysis there is another gender dimension to the financial crisis that has received attention from researchers. That research may be grouped under the label of the “Lehman Sisters’ hypothesis”: if women had run the financial sector, would we have had this crisis? Research in this area, relying on empirical and experimental research in psychology, behavioral finance, ethics and economics, management, and sociology, indicates that there is a gender dimension to financial decision making and financial management itself that has likely contributed to the cases of the crisis (Crespo and van Staveren, 2010; Sent, 2010).

In order to be able to have some insight into possible gender impacts of the current financial crisis and global recession, this paper has taken a historical and comparative perspective on developing countries suffering from financial crises. It looks into trends of important gender variables in crisis-hit developing countries and compares these with the trends in the same variables in non-crisis-hit developing countries. The next section will

explain the methodology used before going to the comparative data analysis in the following section.

2 Methodology

This paper provides a comparative analysis of gender trends during financial crises. The methodology is a comparative descriptive data analysis, in which two groups of countries are compared: crisis countries and non-crisis countries. For these two groups the paper compares trends in gender gaps in education, the labour market and health. The variables are either measured as changes in female/male ratio, such as for primary school enrolment, or they are measured as changes in measures for women's achievements in a particular aspect, such as the maternal mortality rate.

The crisis countries that are the focus of the analysis here are first the five countries that were hardest hit by the Asian financial crisis of 1997: Indonesia, Korea, Malaysia, Philippines and Thailand. Next are included two Latin American countries that each suffered a financial crisis: Brazil in 1999 and Argentina in December 2001. Finally, Turkey is included which suffered a financial crisis in 2002. Most of these financial crises involved a currency crisis, often combined with a stock market crash, explosion of a real estate bubble, a sudden net-outflow of foreign investment, a government debt problem, and subsequent real economy effects. Since all these crises happened around the turn of the century and were so severe that it took several years for countries to recover, I could select the same ten-year period for all the countries involved in the analysis. This period runs from 1996 till 2005, starting two years before the Asian financial crisis and ending three years after the Brazilian and Turkish crises. Hence, the period is long enough to encompass the building up to the crisis, the crisis itself as well as the stimulus package and policy reform periods and finally the recovery period.

In order to be able to assess the trends in gender gaps for these countries over this period of time, I have constructed a counterfactual, a group of non-crisis countries consisting of relatively similar economies and for the same period of time. This group of countries also consists of five Asian countries, including also one OECD member, namely Japan. The other four Asian countries in the control group are India, Pakistan, Mongolia, and Vietnam. None of these countries was affected in any serious way by the Asian financial crisis, except for real economy effects due to losses of exports to the crisis countries. The country in this group that would be likely to come close to the Turkish economy, in terms of level of development and economic structure as well as financial development may be Egypt, which was therefore included. For the two Latin American crisis countries, Argentina and Brazil, the counterfactuals were found in Chile and Mexico, again at similar levels of economic and financial development, as well as integration in the world economy. The eight countries in the non-crisis country group are further characterized by protective measures of their

financial markets, through various capital controls, which is particularly the case for India and Chile. Obviously, none of these countries provides a perfect counterfactual for the crisis countries. But as a group, they are arguably a relevant set of countries with which the crisis economies may be compared.

The gender data were taken from the World Development Indicators online database, with except for the GDI data which were taken from the UNDP Human Development Reports¹. The data concern the labour market (four variables: female labour force participation rate, female share in non-agricultural employment, the gender gap in unemployment rates, and the vulnerable employment rate), health (one variable: maternal mortality), education (three variables: the gender gap in primary and secondary school enrolment, and persistence to the last grade in primary education), and finally a general indicator for gender inequality in development, the Gender-related Development Index (GDI).

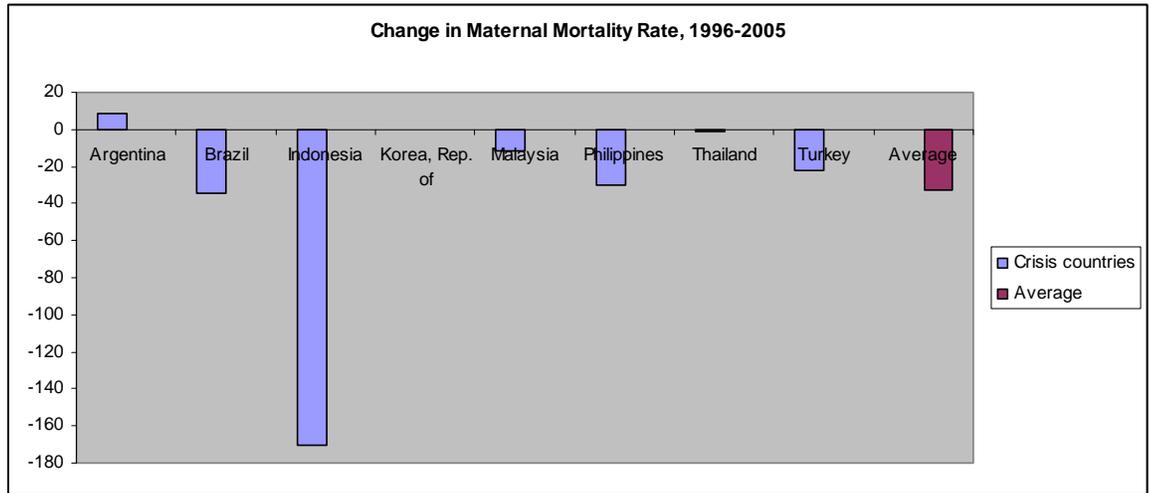
3 Comparative analysis of gender trends

This section presents the gender trends for nine variables for each of the two country groups. For each variable the trends are presented in two diagrams, the first one for crisis countries and the second one for non-crisis countries. The trends all show the expected direction of differences in trends between the two countries: the crisis countries show less improvements, or even deteriorations in gender gaps, except for the two variables that reflect women's responses to crises, namely labour force participation rates. The trends are much better in the non-crisis countries, except, again, for the labour force participation rates, where the gender gaps have narrowed rather than increased with the crisis countries. In addition, t-tests were done for the comparison of the mean differences in the trends in gender gaps. The results of the t-tests are only significant for three out of nine variables, due to a very low number of degrees of freedom, with only eight countries per group². Hence, the statistical reliability of the results is weak due to the fact that only a few countries fit the crisis-group over the ten-year period of the analysis. The divergence in gender gaps between the two country groups therefore needs to be taken with caution, as they do not necessarily imply a causal relationship with financial crises.

¹ Missing data for particular country-years were addressed by using either data for one previous year (1995 instead of 1996), or by using a shorter period of time for the change calculations. Only in rare cases data were missing for a country for all years, so that the country was excluded from the group average.

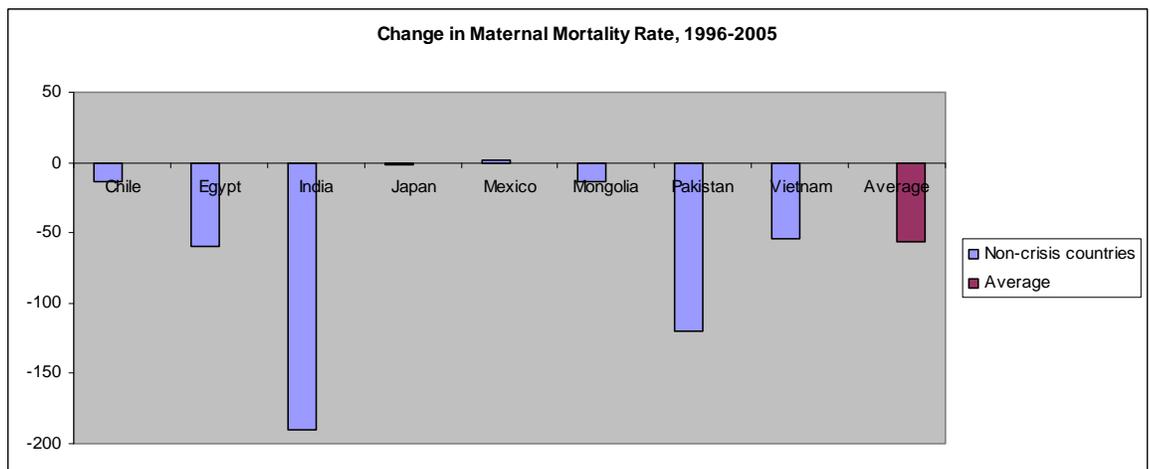
² The t-test was statistically significant for the following variables: (1) the gender gap in primary schooling ($p < 0.1$), (2) the gender gap in vulnerable employment ($p < 0.05$), and (3) the gender gap in GDI ($p < 0.1$).

FIGURE 1
Maternal mortality in crisis countries



Source: authors' calculations

FIGURE 2
Maternal mortality in non-crisis countries

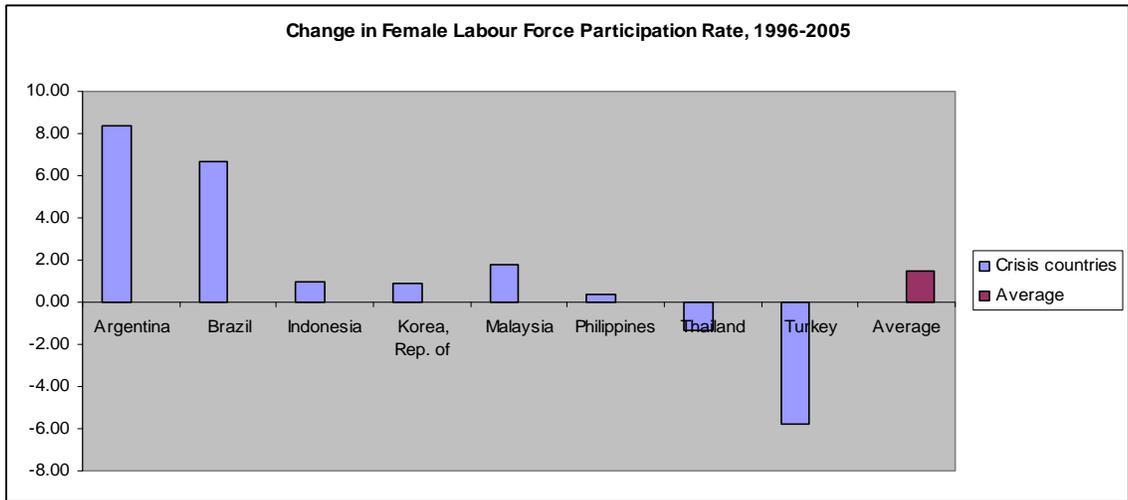


Source: authors' calculations

Diagrams 1 and 2 show that in both groups of countries the maternal mortality rate has improved. But the improvement in the non-crisis countries was bigger than in the crisis countries, although Indonesia is a good positive exception with a decrease of maternal mortality of 170 maternal deaths per 100,000 live births. In Argentina, however, the figure worsened by 9 over the ten year period. The decline in the crisis countries was 33, while in the non-crisis countries it was 57 per 100,000 live births. The average was

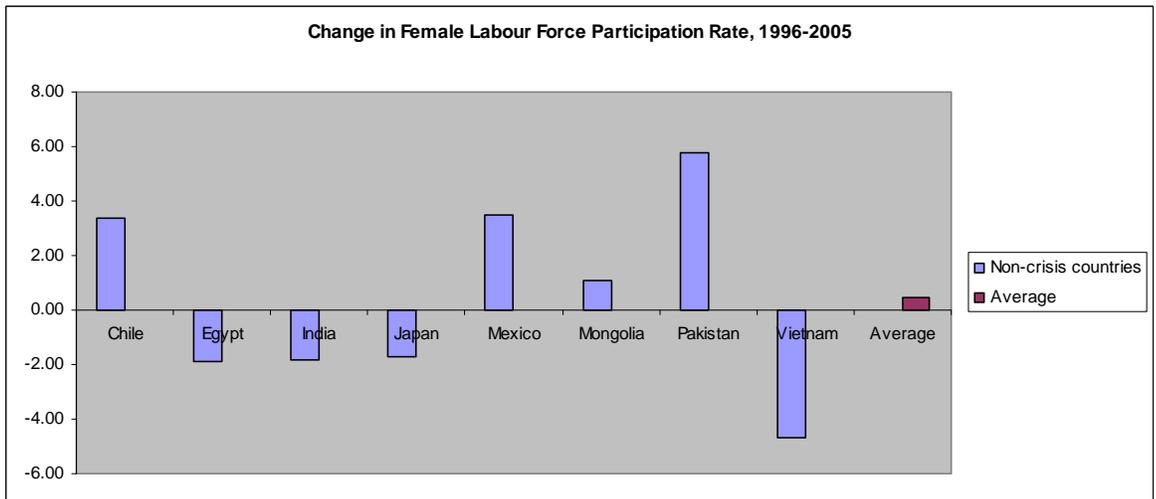
much better in the crisis countries: 97 against 144. This implies that over the ten year period, the gap has narrowed between these countries, because the decline was slower in the crisis-hit countries, where the rate was already better.

FIGURE 3
Female labour force participation in crisis countries



Source: authors' calculations

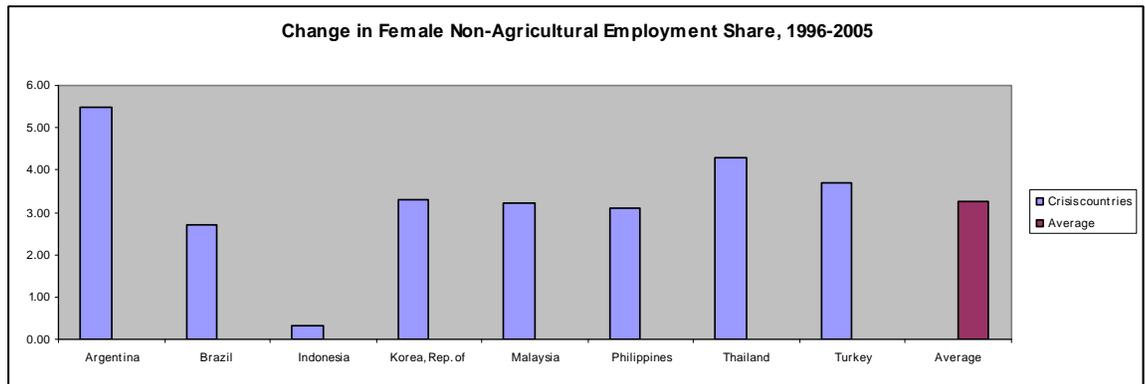
FIGURE 4
Female labour force participation in non-crisis countries



Source: authors' calculations

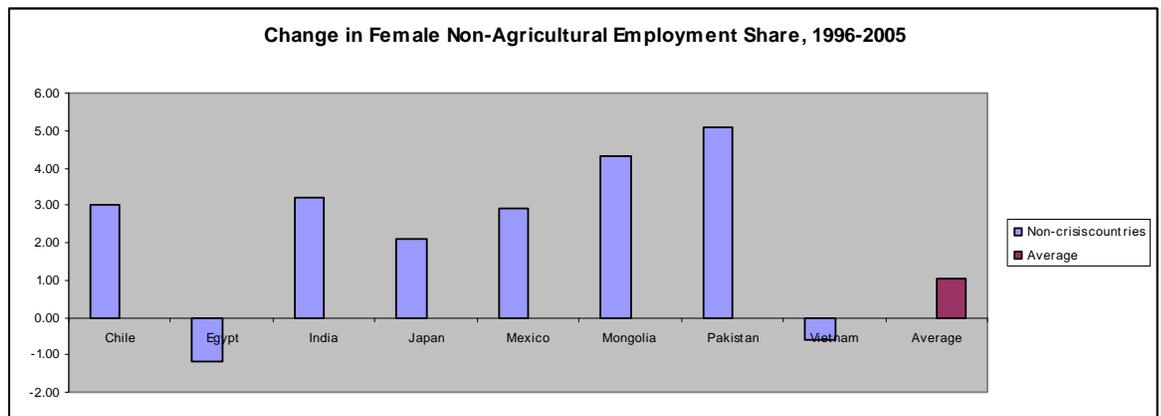
Diagram 1 and 2 show the change in the female labour force participation rate over 1996-2005 for the two groups of countries. In six out of the eight crisis countries the female labour force participation increased. In the non-crisis countries five of the countries showed an increase. The average change in the female labour force participation rate was three times higher in the crisis countries (1.51% change versus 0.46% change). This difference between the two country groups suggests that the crisis may have induced the added worker effect, which is a common female labour supply reaction in periods of increased unemployment, such as during financial crises. At the household level, women who had hitherto remained outside the labour force will join the labour force in order to compensate for lost household income by other earners. The average labour force participation rates were a bit higher for the crisis countries already, 48% against 42% in the non-crisis countries.

FIGURE 5
Female non-agricultural employment share in crisis countries



Source: authors' calculations

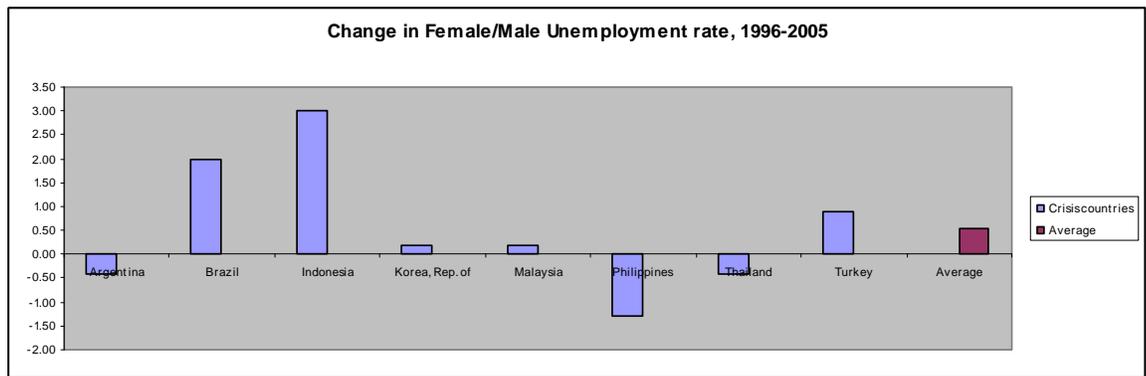
FIGURE 6
Female non-agricultural employment share in non-crisis countries



Source: authors' calculations

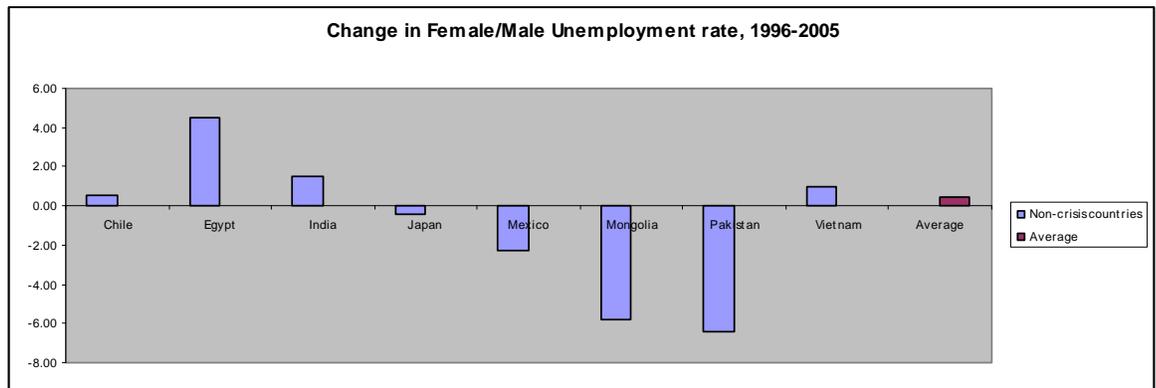
Diagrams 5 and 6 show, quite similar to diagrams 3 and 4, an increase of the share of women in the non-agricultural labour force. The increase is more than three times as much in the crisis countries as compared to the non-crisis countries. Again, we see here the added worker effect operating, with women moving out of the low value added agricultural sector into the manufacturing and services sectors. This is likely to include also a shift away from unpaid family labour on farms, a category that includes generally more women than men. The average share of women on non-agricultural employment was already higher in the crisis countries (37% against 28% in the non-crisis countries) so that the difference between the two country groups has become smaller.

FIGURE 7
Gender gap in unemployment in crisis countries



Source: authors' calculations

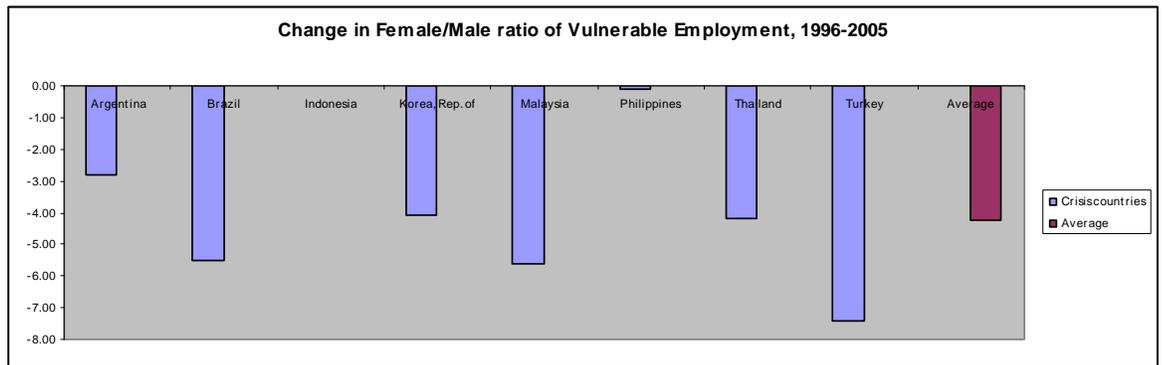
FIGURE 8
Gender gap in unemployment in crisis non-countries



Source: authors' calculations

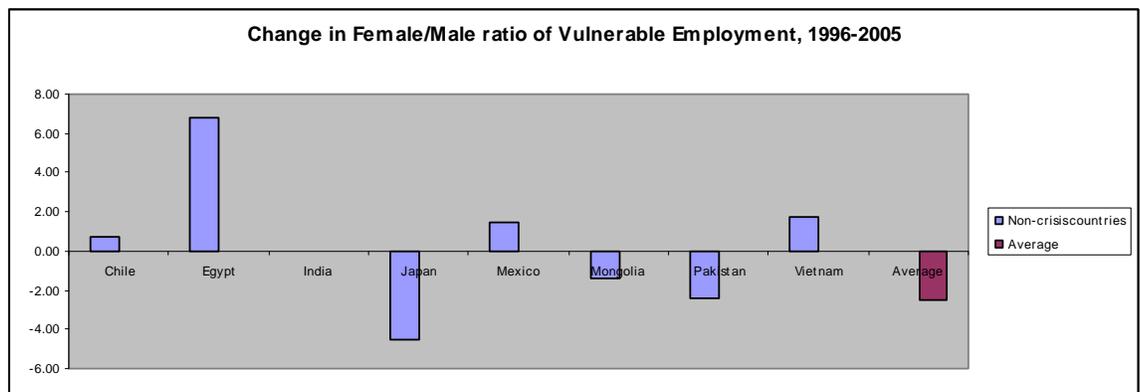
Diagrams 7 and 8 show the differences in the female/male unemployment rate for the two country groups. In both groups, the ratio went up, meaning that women's unemployment rates became worse than men's over the ten year period. The difference entails an increase in the ratio with 53% for the crisis countries against 41% for the non-crisis countries. The divergence may be related to the fact that women's labour force participation rate has increased faster in the crisis countries. With more exposure on the labour market, there is also an increased risk of unemployment, in particular for new entrants and re-entering women who come back to the labour force after having taken time out for childcare. Because the average female/male ratio of unemployment is higher in the non-crisis countries, the trend indicates a reduction of the difference between the two country groups.

FIGURE 9
Gender gap in vulnerable employment in crisis countries



Source: authors' calculations

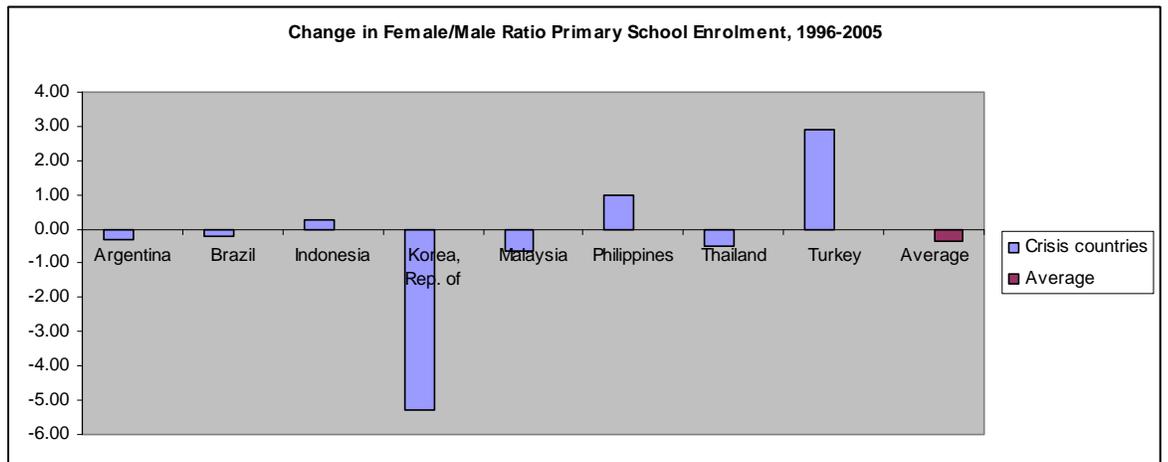
FIGURE 10
Gender gap in vulnerable employment in crisis non-countries



Source: authors' calculations

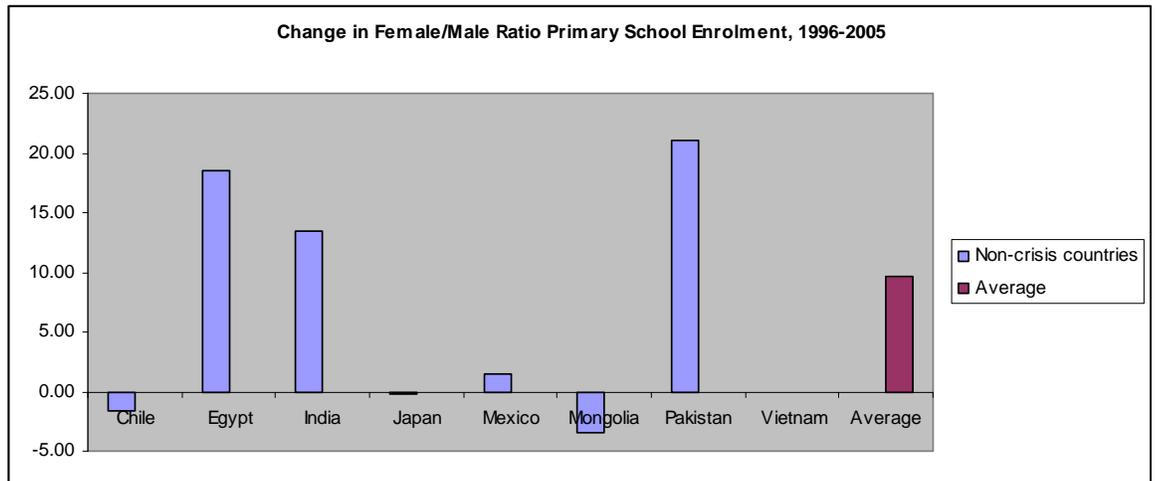
Diagrams 9 and 10 contrast the trends in the gender gaps in vulnerable employment. The diagrams point out that for this variable, the crisis countries perform better: the gender gap has reduced by 4.2% as compared with 2.5% in the non-crisis countries. Partly, this may be due to a worsening of labour market conditions for men, who than may choose for vulnerable employment – which may be regarded as a form of disguised unemployment – rather than for dropping out of the labour market. Vulnerable employment is largely unpaid employment for the market or the home, and consists mainly of unpaid family labour on farms and family businesses in the manufacturing and services sector. The rates are generally higher for women than for men. The average female/male ratio is above 1 for both groups, indicating than in both groups of countries there is a higher share of women in vulnerable employment than men. The average ratios are 1.13 for the crisis countries and 1.18 for non-crisis countries. The explanation of the different trends is likely related to the higher increase in female labour force participation in the crisis countries: during the crisis, women probably put in extra effort to find paid employment, reducing their leisure and unpaid work outside the labor force (such as domestic work, child care and voluntary work in communities) as well as their unpaid hours in family businesses inside the labour force. Hence, the crisis did provide women with the incentive to substitute unpaid work with paid work, and hence a reduction in the gender gap in vulnerable employment. What the figures do not show, however, is how strong this substitution has been: was it elastic so that all hours of additional paid work have been met with a similar reduction of hours in unpaid work? Or was the reduction in unpaid work (inside and outside the labour force) less than the increase in paid work? Without aggregate time-use data for women and men for these countries for the same ten year period, it is impossible to answer this question. Hence, the gain for women in terms of reducing vulnerable employment must be assessed with caution as long as information about unpaid work outside the labour market remains unknown.

FIGURE 11
Gender gap in primary schooling in crisis countries



Source: authors' calculations

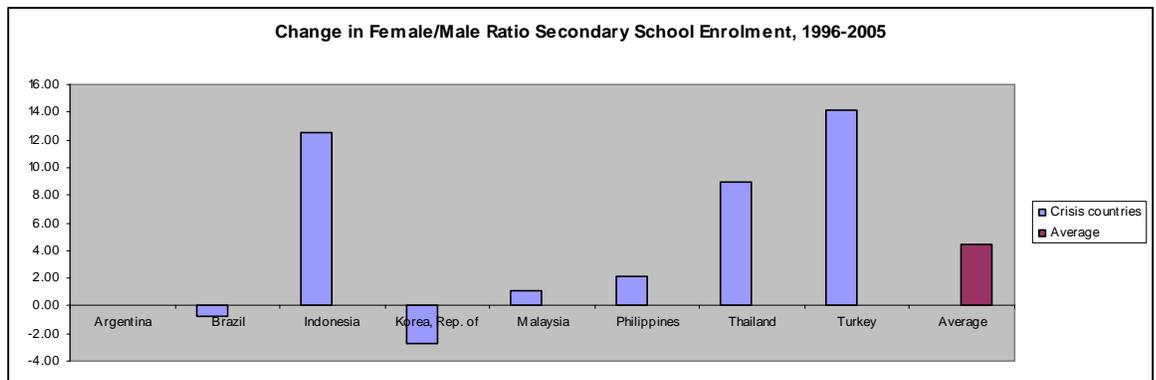
FIGURE 12
Gender gap in primary schooling in non-crisis countries



Source: authors' calculations

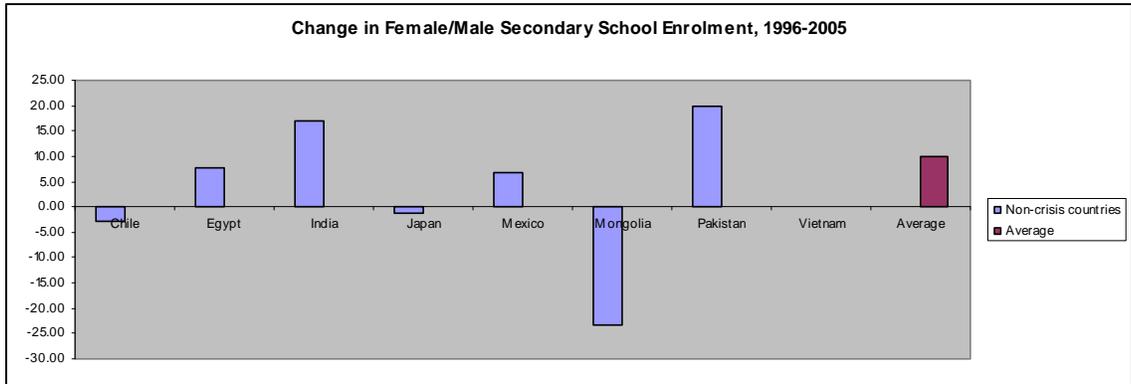
Diagrams 11 and 12 show the divergent development of the gender ratio in primary school enrolment. Whereas in the non-crisis countries the gender gap narrowed, with an increase of the female/male enrolment ratio of 9.7%, in the crisis countries the gap widened slightly, with 0.4%. This indicates that during the financial crises suffered by this group of countries, girls' increase in primary school enrolment fell behind that of boys. It may be that the crisis has induced rationing at the household level, which in combination with a patriarchal preference for boys education has resulted in a smaller improvement of girls' enrolment rates as compared to boys enrolment rates. The average ratio is higher in the crisis countries (97 versus 91) so that over the ten year period, the difference in the ratio has become smaller between the two groups of countries.

FIGURE 13
Gender gap in secondary schooling in crisis countries



Source: authors' calculations

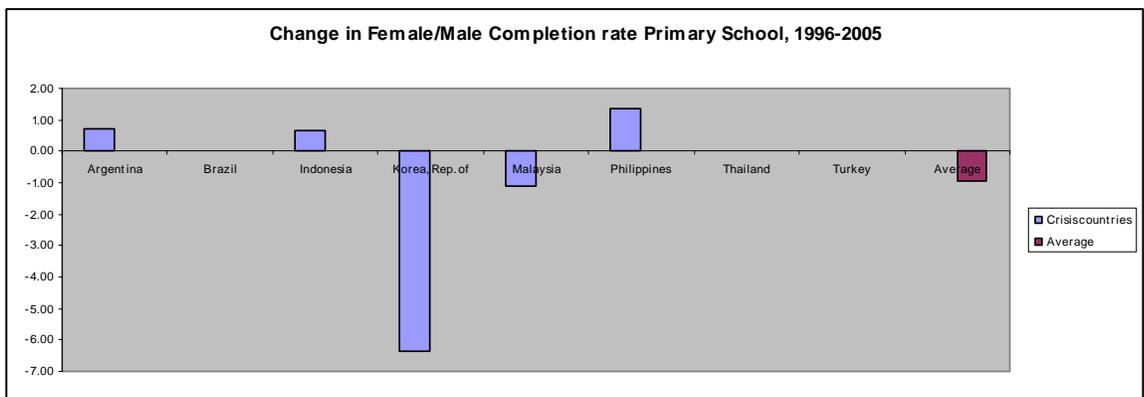
FIGURE 14
Gender gap in secondary schooling in non-crisis countries



Source: authors' calculations

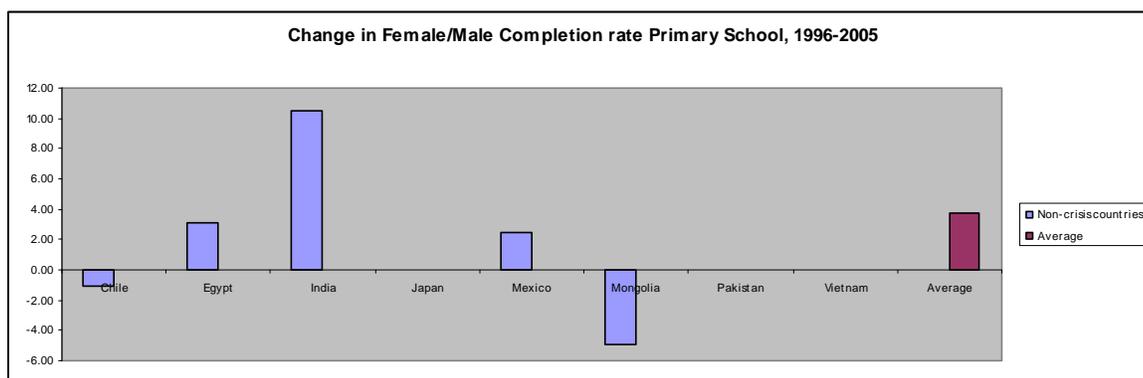
Diagrams 13 and 14 show the development of the female/male ratio in secondary school enrolment. Contrary to the case of primary education, these figures show an improvement in both groups of countries. But the improvement was more than twice as much in the non-crisis countries (10.1%) as compared to the crisis countries (4.4%). For the crisis countries this has resulted in equal enrolment for boys and girls (an average ratio of 101.2) over the period, whereas for the non-crisis countries the ratio is lower (an average over the period of 91.2).

FIGURE 15
Gender gap in primary school completion in crisis countries



Source: authors' calculations

FIGURE 16
Gender gap in primary school completion in non-crisis countries



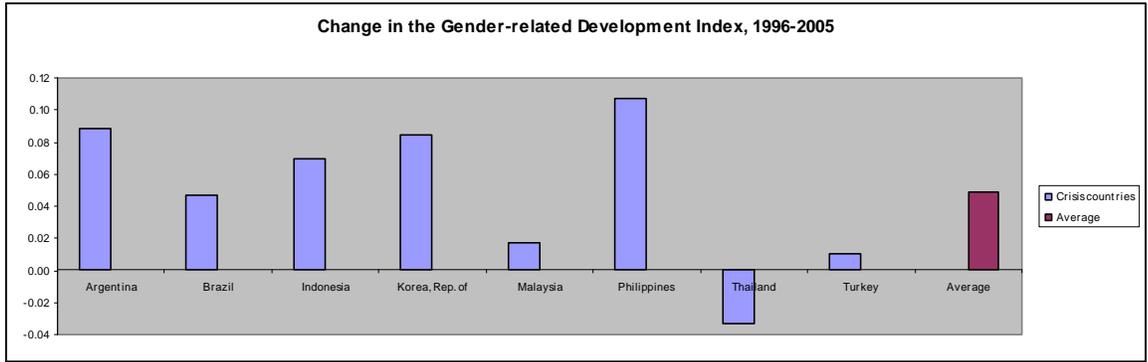
Source: authors' calculations

Diagrams 15 and 16 show the different trends in the gender gap in the primary school completion rate for the two groups of countries. Although both country groups had two out of the six countries with decreasing female/male ratios, the average change was negative for the crisis countries (-0.95%) and positive for the non-crisis countries (3.76). Hence, the gap has widened for the crisis countries whereas it has reduced for the non-crisis countries. Just like the different trends in the gender gap in primary school enrolment, these data suggest that increasingly less girls than boys attend primary education during financial crises. In this case it is not a matter of less girls starting with schooling, but a higher school drop-out rate for girls as compared to boys. This may be related to the increased labour force participation of women, and increased share of non-agricultural labour, probably further away from home for rural women. In the absence of affordable childcare or female relatives to do unpaid childcare, mothers may keep a daughter at home to care for siblings during her absence. Obviously, only micro level data can shed more light on this. Alternatively, it may be that with reducing household income, parents will favor boys over girls to finish their primary education.

Diagrams 17 and 18 show the trends in the Gender-related Development Index (GDI) of the UNDP, which is a composite measure which integrates gender inequalities into the Human Development Index (HDI). The HDI is a combination of income, school enrolment, literacy and life expectancy. The diagrams indicate that the improvement of gender equality in human development was twice as high in the non-crisis countries as compared to the crisis countries (91% versus 5%). The average GDI was higher in the crisis countries, so that the trends have led to a reduction in the difference in GDI between the two country groups. However, such comparisons over time need to be taken with caution, because the measure was developed for making countries rankings at a single point in time rather than to trace trends in gender equality over time. Nevertheless, the

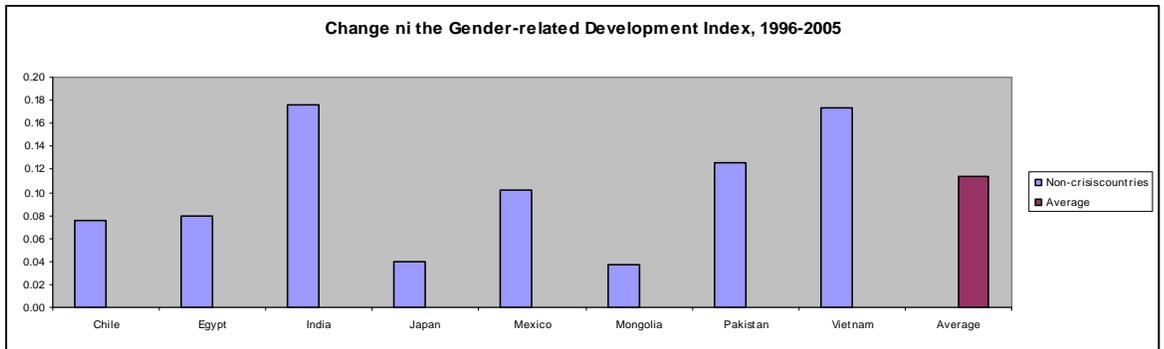
comparison suggests that crises are not very supportive of gender equality in human development, although they also do not seem to have affected it negatively, with the exception of Thailand.

FIGURE 17
Gender-related development index in crisis countries



Source: authors' calculations

FIGURE 18
Gender-related development index in non-crisis countries



Source: authors' calculations

4 Conclusion

The comparative data analysis presented above has provided an overview of important gender trends during financial crises. By using a comparative perspective, eight countries that had suffered from a financial crisis were compared to a group with eight counterfactuals. The trends indicate that for health and education, the trends were worse for the crisis countries. For the only health variable, the trend points out that maternal mortality rates have declined less in the crisis countries. Also for the three education variables,

the trends are worse for the crisis countries as compared to the non-crisis countries. The gender gap in primary school enrolment as well as in the completion rate of primary education has widened in the crisis countries, whereas for secondary education, the improvement has lagged behind that of the non-crisis countries. For the four labour market variables, the trends are different. That is because these variables can be regarded as crisis response variable, through which women's labour market responses at the household level to less male employment and lower male earnings are expressed. The trends show a larger increase in women's labour force participation, also in the non-agricultural sector, in crisis countries as compared to non-crisis countries. Also, the female/male ratio in vulnerable employment has shown a larger improvement for women in the crisis countries, indicating that they are substituting unpaid family labour for paid work at a higher rate than women in non-crisis countries. But the gender gap in unemployment rates worsened more strongly in the crisis countries, implying that the additional female labour supply has contributed to additional female unemployment, at a higher rate than those of men. So, for all nine indicators together, the trends show a worsening of women's relative health and education status, but an overall improvement of their labour market status, probably as a response to increased livelihood insecurity of households during the financial crises.

Another finding is that the divergent trends appear to be measurable for as long as ten years. This suggests that gender impacts of financial crises may go well beyond the crisis years and include the reform period, and perhaps recovery period, as well. Apparently, gender impacts of crises and crisis policies are not limited to the short run but stretch out over a longer period of time. And, finally, the trends show that even though the crisis countries had overall a better starting position on gender equality, this does in no way guarantee that gains made before a crisis broke out will be maintained throughout a crisis. Individual cases of crisis countries illustrate this very well. For example, Argentina was the only country in which maternal mortality rates went up, while Thailand was the only one in which the GDI score went down.

In conclusion, the gender trends point out that financial crisis may have long term negative effects on gender trends, either by slowing down progress or even by increasing existing gender gaps. These trends may establish yet another reason to prevent financial crises. Moreover, if a crisis does occur, the analysis above suggests that without sufficient attention to gender equality in stimulus packages and reform policies, girls and women's position may worsen, not only in the short run but even in the long run.

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