

Applying Quantitative Analysis to Development Issues

Case of Women's Empowerment

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Overview

- Women's equality largely seen as culture/religion/tradition everywhere.
- Though, general belief that education leads to empowerment.
- But, MDGs assessments showed despite rising human capital, women lag in economic and political empowerment

- Now, emerging literature focuses on costs of and benefits of gender equality.
- Rise of evidence-based analyses that impact policymaking for greater equality.

- Quantitative analyses demand sex- and gender-disaggregated data – with consistency across countries, periods, and organizations → SDGs.

Cost of Gender Inequality in MENA

- Gender gaps constrain overall development in MENA.
- Women constitute **48.3 percent of the population**; excluding such a large share of population from economic and social life is costly.
- Women only generate 18 percent of GDP in the MNA region, compared to a world average of 37 percent.
- Estimated loss of **USD 575 billion** in regional GDP caused by current levels of gender-based discrimination.
- Increasing female labor-force participation to the levels of men could boost regional **GDP by 47 percent**.

Source: World Bank 2017

Concerns of policymakers

- Income inequality
- Firm performance
- Industrial diversification & innovation

IMF STAFF DISCUSSION NOTE

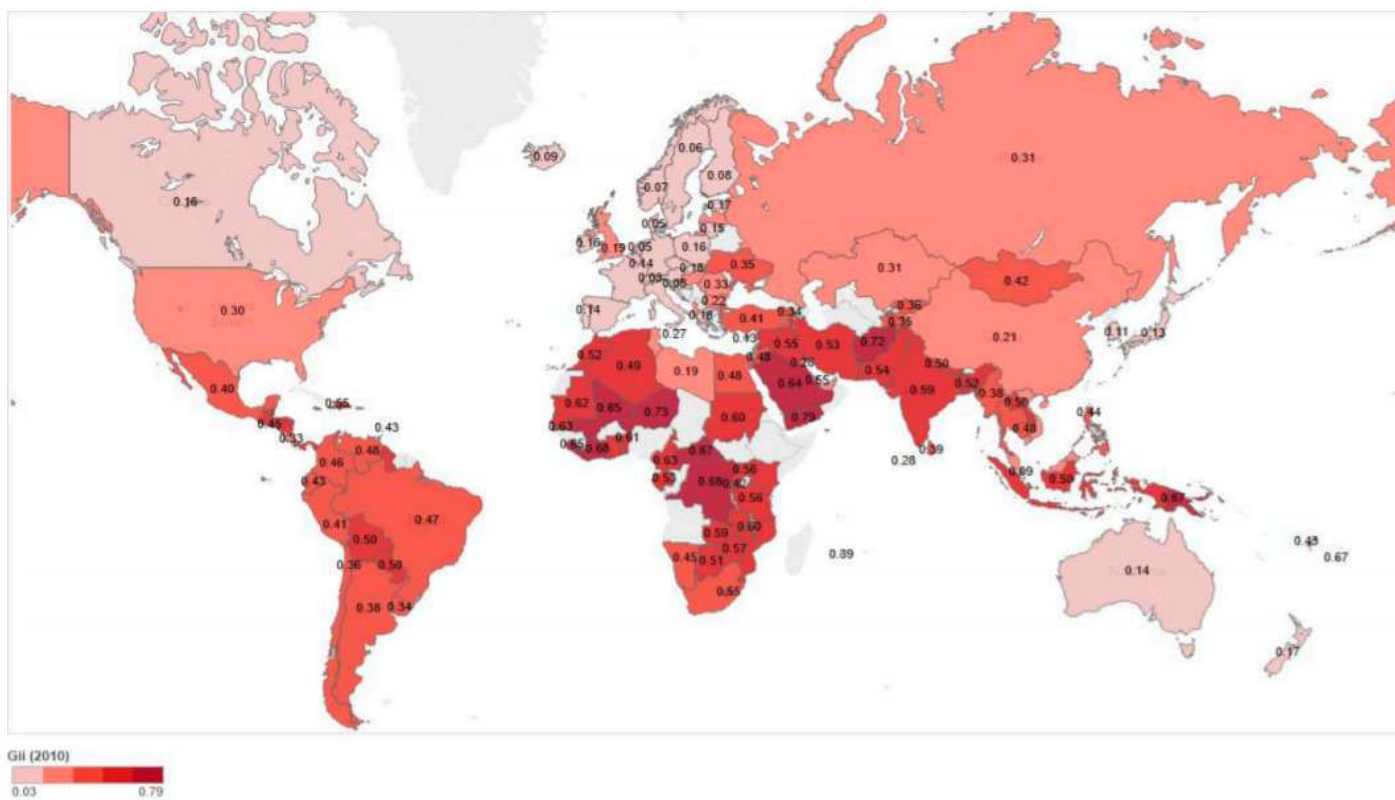
Catalyst for Change: Empowering Women and Tackling Income Inequality

Christian Gonzales, Sonali Jain-Chandra,
Kalpana Kochhar, Monique Newiak, and
Tlek Zeinullayev

October 2015

SDN/15/20

Gender Inequality Index across countries (2010)



Sources: UNDP, Human Development Report; and IMF staff estimates.

Note: Numbers in the map indicate Gender Inequality Index (0 = all equal, 1 = no equality).

Source: <http://www.elibrary.imf.org/fileasset/misc/excerpts/catalyst-for-change.pdf>

Gender inequality strongly associated with income inequality across time and countries of all income groups.

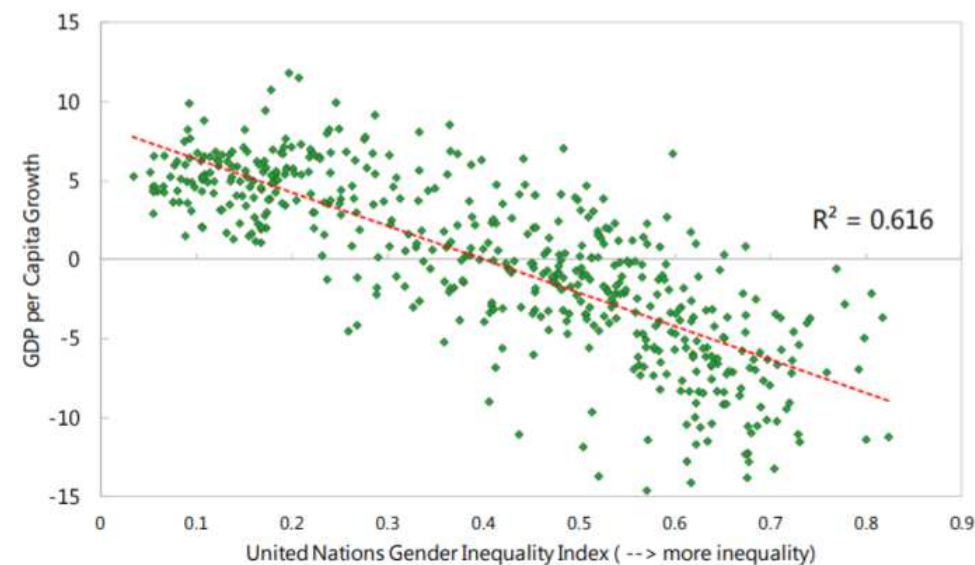
Figure 1. Gender Inequality and GDP per Capita



Sources: UNDP Human Development Report; World Bank, World Development Indicators; and IMF Staff estimates.

Figure 2. Gender Inequality and GDP Growth

Relationship between Gender Inequality and GDP per Capita Growth 1/

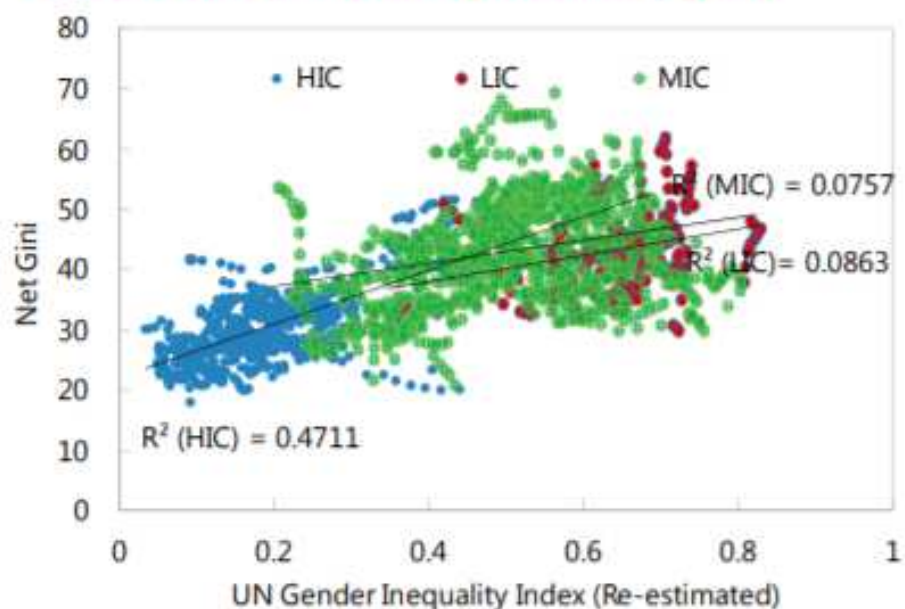


Sources: UNDP Human Development Report; World Bank, World Development Indicators; and IMF Staff estimates.
1/ GDP per capita growth was regressed on initial income to control for convergence.

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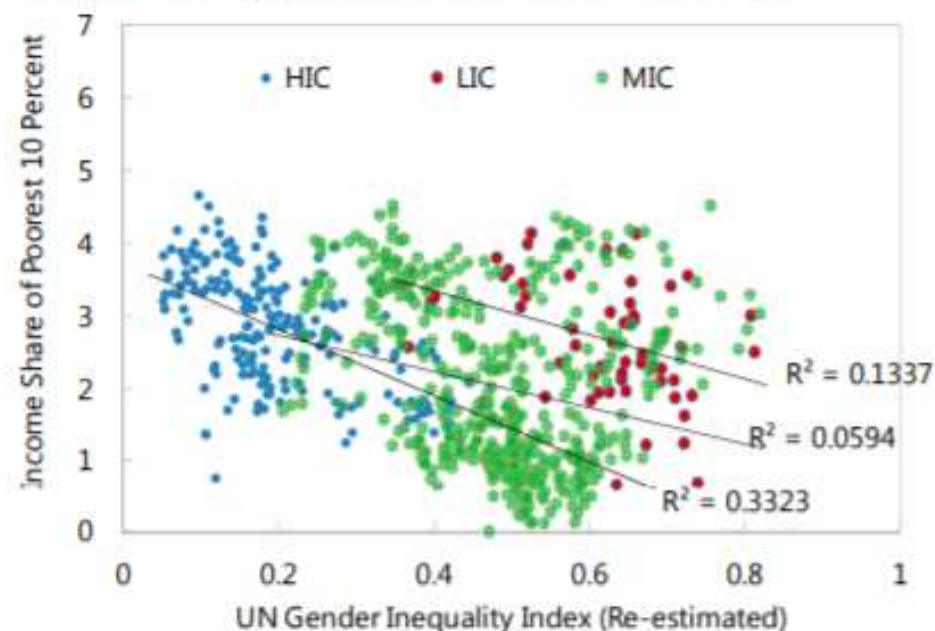
Income Inequality and Gender Inequality



Sources: SWIID; United Nations; and authors estimates.

Note: HIC = High-income countries; LIC = Low-income countries; MIC = Middle-income countries.

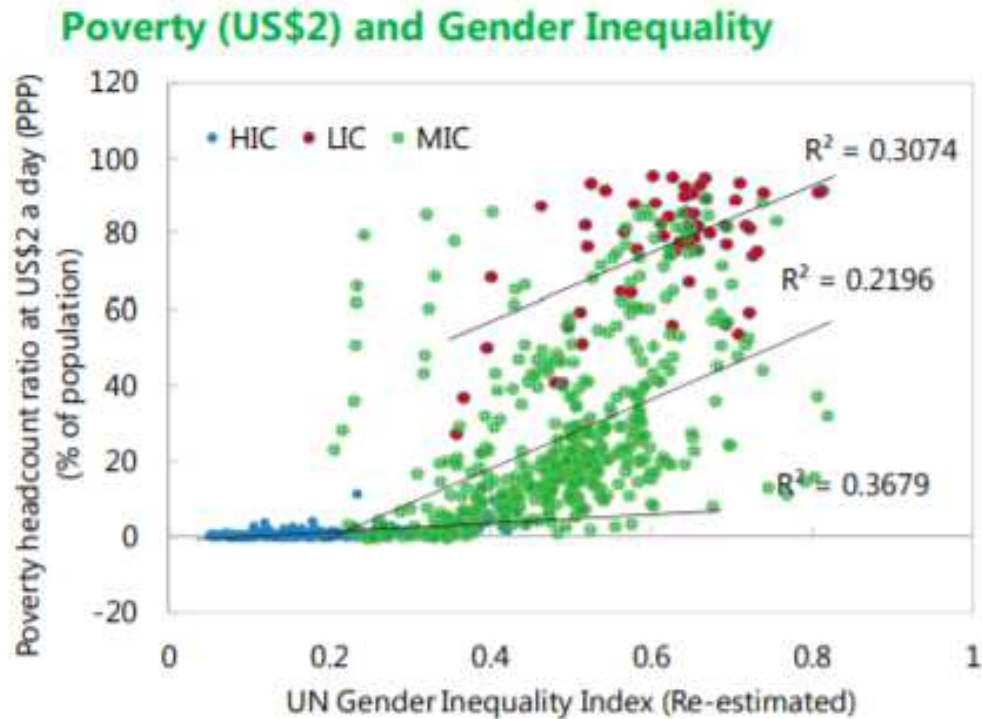
Income Inequality and Gender Inequality



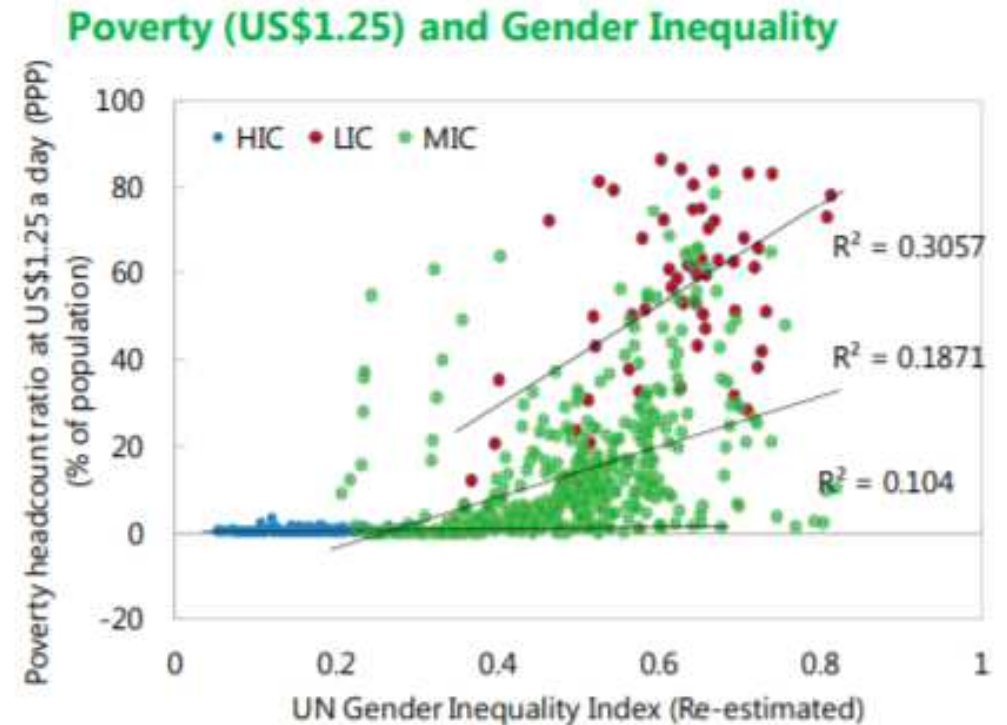
Sources: World Bank, World Development Indicators; United Nations; and authors estimates.

Source: <http://www.elibrary.imf.org/fileasset/misc/excerpts/catalyst-for-change.pdf>

Poverty and gender inequality



Sources: World Bank, World Development Indicators; United Nations; and authors estimates.

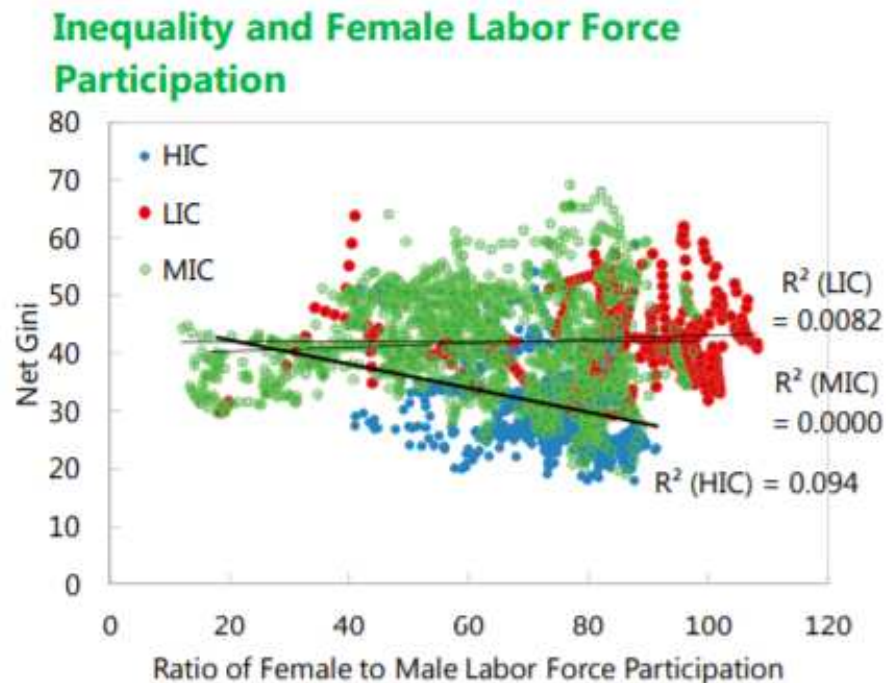


Sources: World Bank, World Development Indicators; United Nations; and authors estimates.

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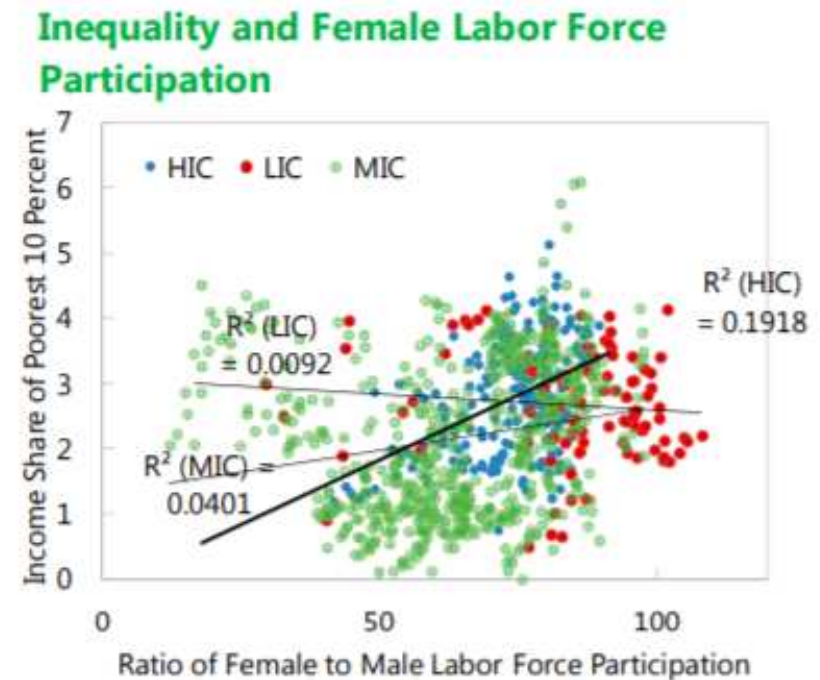
Gender Gaps in Female Labor Force Participation and Income Inequality

Female labor force participation is significantly associated with lower income inequality in advanced markets, and ...



Sources: SWIID; World Bank, World Development Indicators.

... the share of income held by the poorest increases with higher ratios of female to male labor force participation.



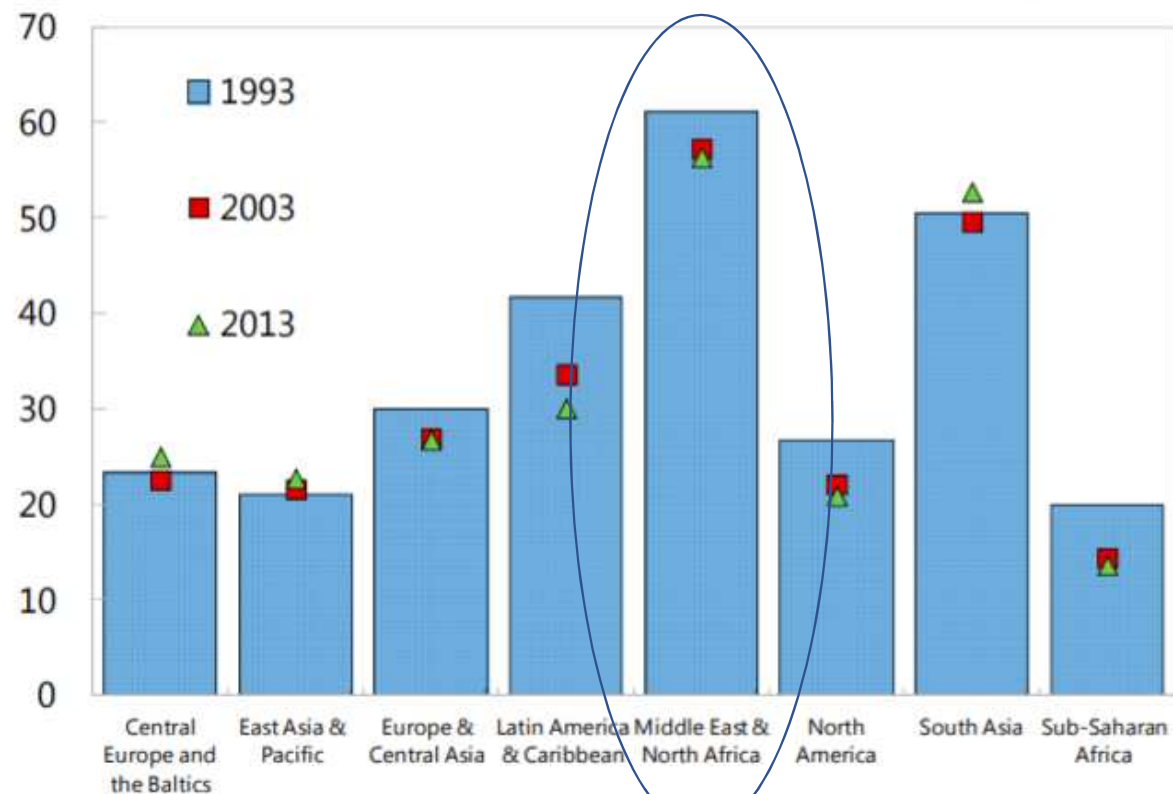
Sources: World Bank, World Development Indicators.

Source: <http://www.elibrary.imf.org/fileasset/misc/excerpts/catalyst-for-change.pdf>

Gender gaps in labor force participation rates have been shrinking but remain high in most regions.


Labor Force Participation Gaps, 1993–2013

(Male minus Female Labor Force Participation Rates, in Percent)



Sources: World Bank, World Development Indicators; 2015, ILO KILM.

Source: <http://www.elibrary.imf.org/fileasset/misc/excerpts/catalyst-for-change.pdf>



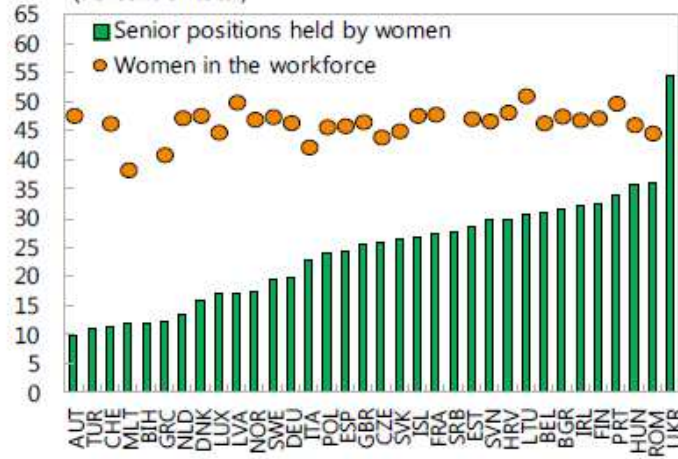
WP/16/50

IMF Working Paper

Gender Diversity in Senior Positions and Firm
Performance: Evidence from Europe

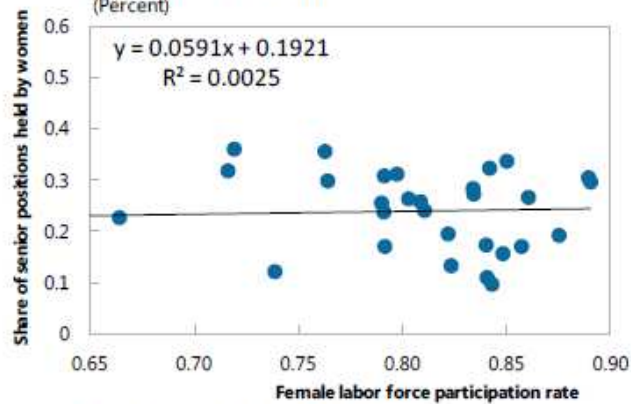
by Lone Christiansen, Huidan Lin, Joana Pereira, Petia Topalova, and Rima Turk

Women in Senior Positions and in the Workforce
(Percent of total)



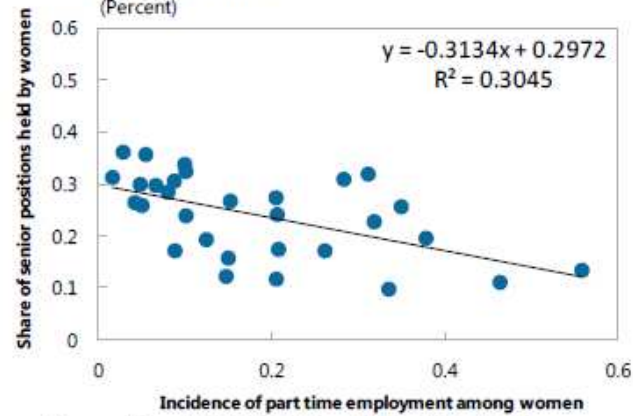
Sources: Eurostat, Orbis, and IMF staff calculations.

Share of Women in Senior Positions and Female Labor Force Participation
(Percent)



Sources: Eurostat, OECD, Orbis, and IMF staff calculations.

Share of Women in Senior Positions and Female Part-Time Employment
(Percent)




Sources: Eurostat, OECD, Orbis, and IMF staff calculations.

The paper presents new evidence on the link between gender diversity in senior positions and firm performance in Europe.

Using a sample of more than 2 million companies across 34 European countries in 2013, it finds a strong positive association between the share of women in senior positions and firms' ROAs.

Substituting one male for one female person in senior management or on the corporate board is associated with between 8 and 13 basis points higher ROAs.



WP/16/140

IMF Working Paper

Gender Equality and Economic Diversification

by Romina Kazandjian, Lisa Kolovich, Kalpana Kochhar, and Monique Newiak

The paper:

- 1. Demonstrates empirical evidence that gender inequality is negatively associated with both output and export diversification in low-income and developing economies.***
- 2. Suggests that both inequality of opportunities and lower female labor force participation are associated with lower economic diversification.***
- 3. Provides evidence on causality and direction of causality.***

Substantial body of literature highlights economic diversification as driver of sustainable growth

Figure 1. Export Product Diversification and Output Growth, 1962-2010

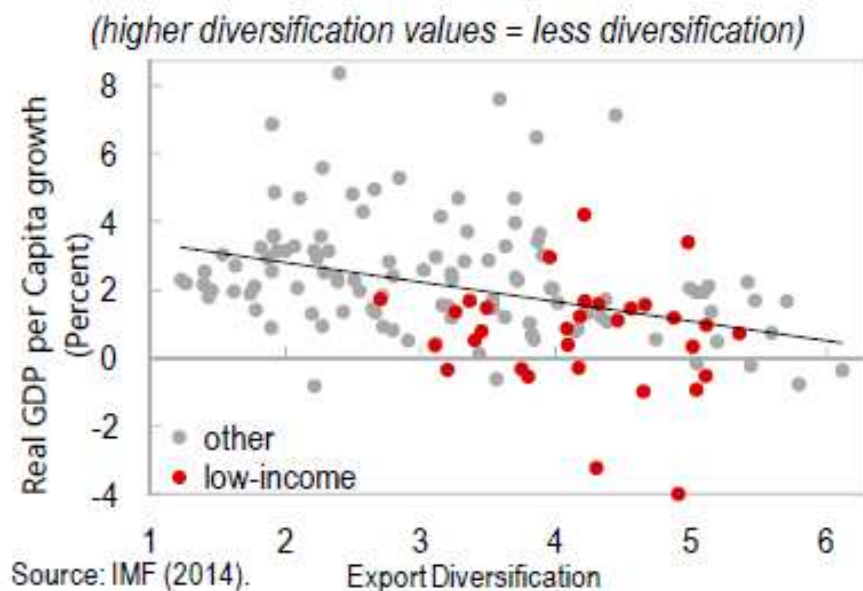
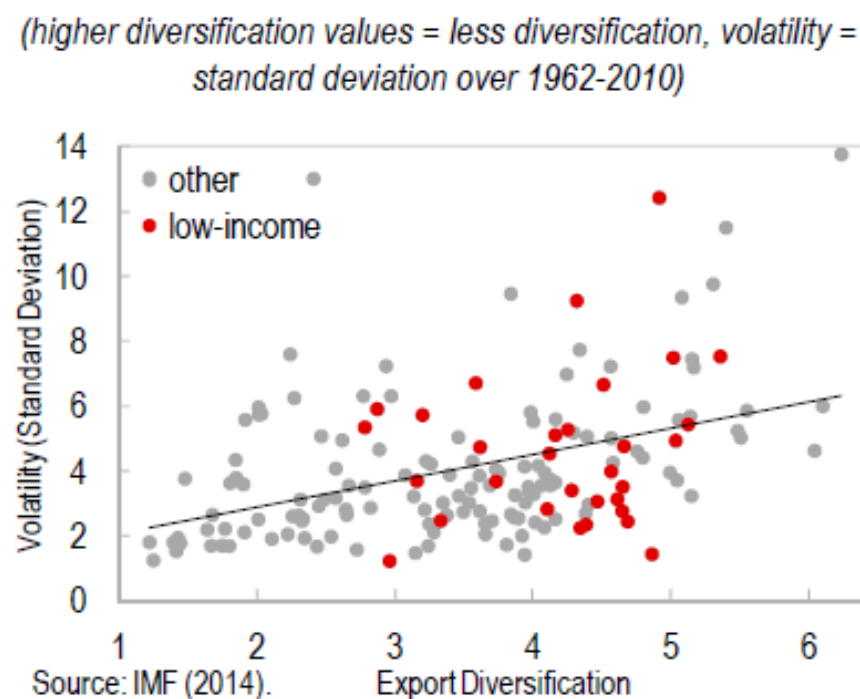


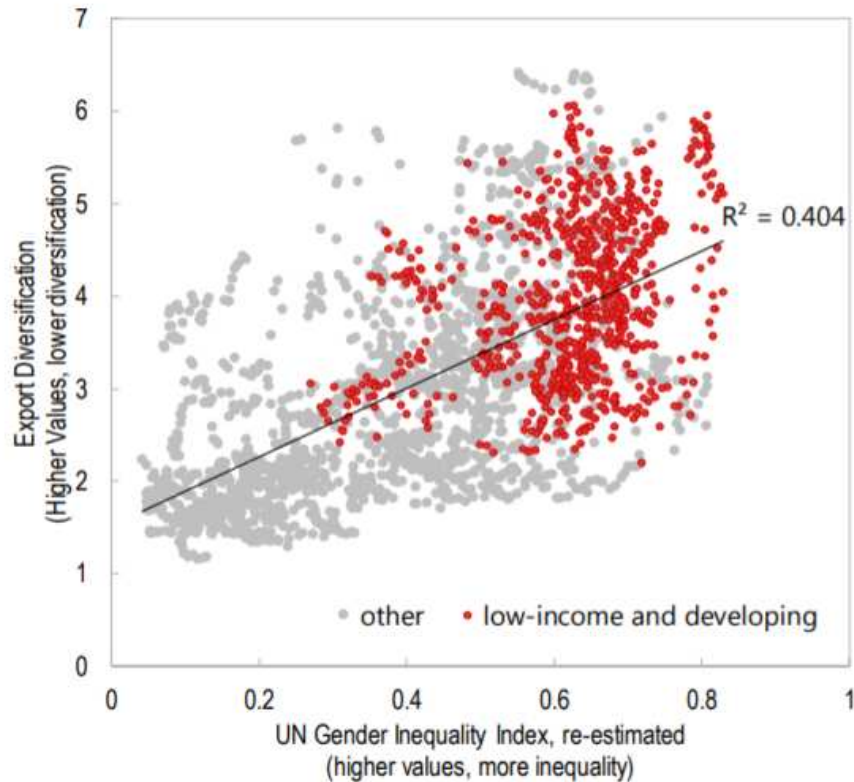
Figure 2. Export Diversification and Output Volatility, 1962-2010



Lower diversification is associated with both lower economic growth and higher volatility.

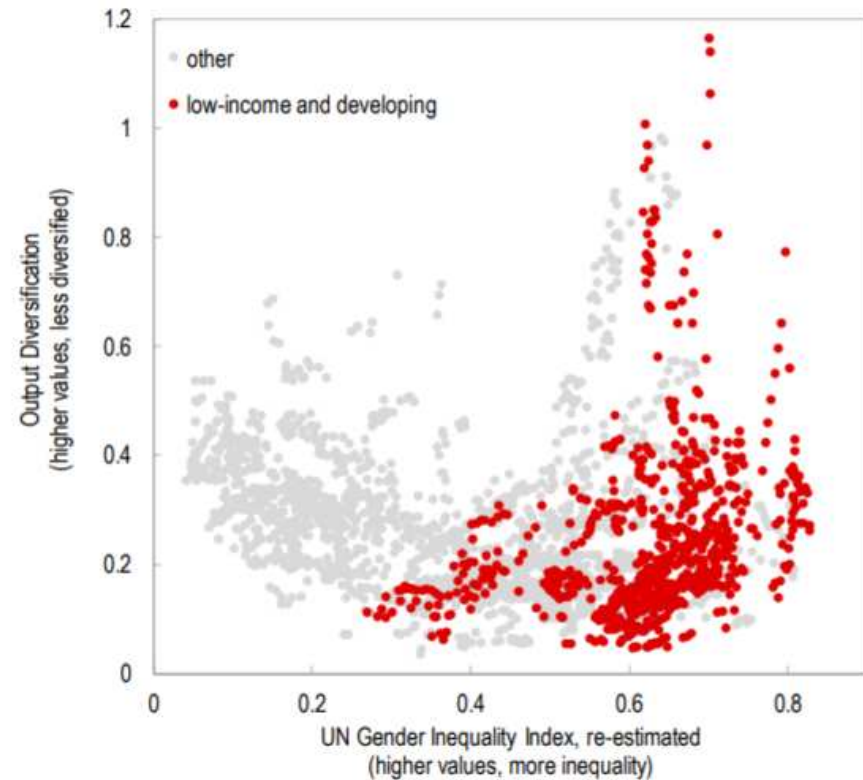
- Diversification strongly associated with level of development, institutional quality, stronger infrastructure, and higher degree of globalization.
- Well-educated workforce matters not only for diversification, but also is strongly associated with export quality upgrading (IMF 2013; IMF 2014b).
- Increasing human capital accumulation fosters economic diversification by promoting the development of skill-intensive industries and new technologies, and by facilitating technological diffusion between firms (Bal-Gunduz and others 2015).
- Primary and secondary education enable countries to imitate frontier technology; tertiary education enables innovation (Aghion and Howitt 2006).
 - ***Gender gaps in opportunity harm diversification directly by constraining the potential pool of human capital.***
 - ***Gender gaps impede the development of new ideas indirectly by decreasing the efficiency of the labor force.***

Figure 3. Export Diversification and Gender Inequality, 1990-2010



Sources: World Bank World Development Indicators, United Nations, IMF (2014), and IMF staff calculations.

Figure 4. Output Diversification and Gender Inequality, 1990-2010



Sources: World Bank World Development Indicators, United Nations, IMF (2014), and IMF staff calculations.

Note:

- export diversification (a combined measure of export product variety and equality in export shares),
- output diversification (a measure of equality in contribution of sectors to real output, including services)

Causality

Gender inequality in outcomes and opportunities may cause lower levels of export and output diversification.

But lower levels of diversification may lead to larger gender inequalities in outcomes and opportunities.

In addition to the fixed effects specifications, to address the endogenous relationship between economic diversification and gender inequality the authors use the instrumental variable generalized method of moments (IV-GMM) technique. This approach isolates the causal effect of the country-specific degree of gender inequality, as measured by the GII, on export and output diversification.

They introduce legal rights for women as instruments into the specifications. It fulfills two criteria for its validity:

- i. Exogeneity: not have a direct impact on export and output diversification (be uncorrelated with the error term of the regression). They argue that gender-based legal restrictions – the mere existence of laws on the books of a country – do not exert a direct impact on export and output diversification, confirmed with the Hansen statistical test. And,
- ii. Relevance: High correlation with gender inequality, the endogenous regressor of interest. Legal rights have been shown to have a direct and strong impact on gender inequality, supported by various strands of the literature.

Results suggest that gender inequality may be indeed a cause of lower economic diversification.

IMF STAFF DISCUSSION NOTE

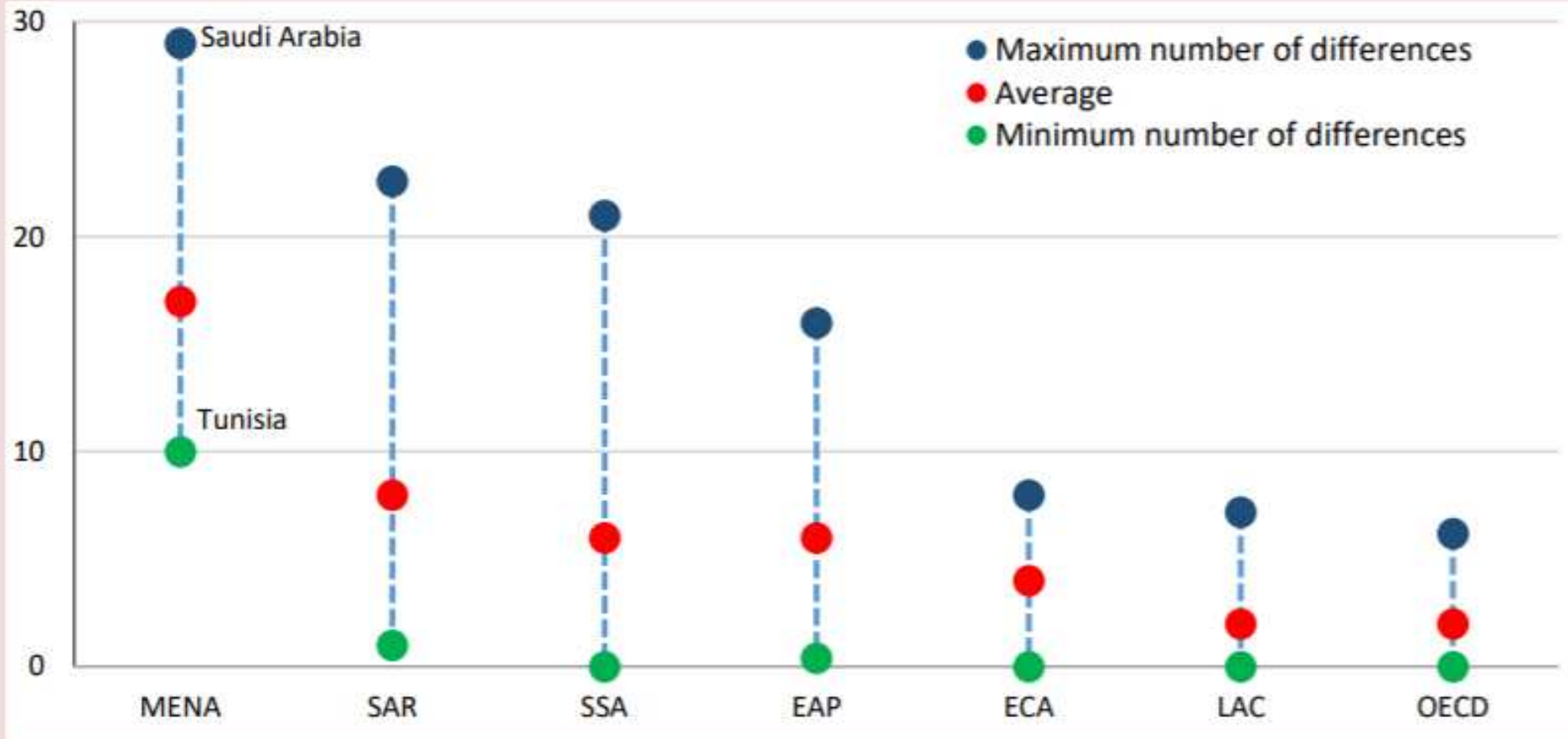
Fair Play: More Equal Laws Boost Female Labor Force Participation

Christian Gonzales, Sonali Jain-Chandra,
Kalpana Kochhar and Monique Newiak

February 2015

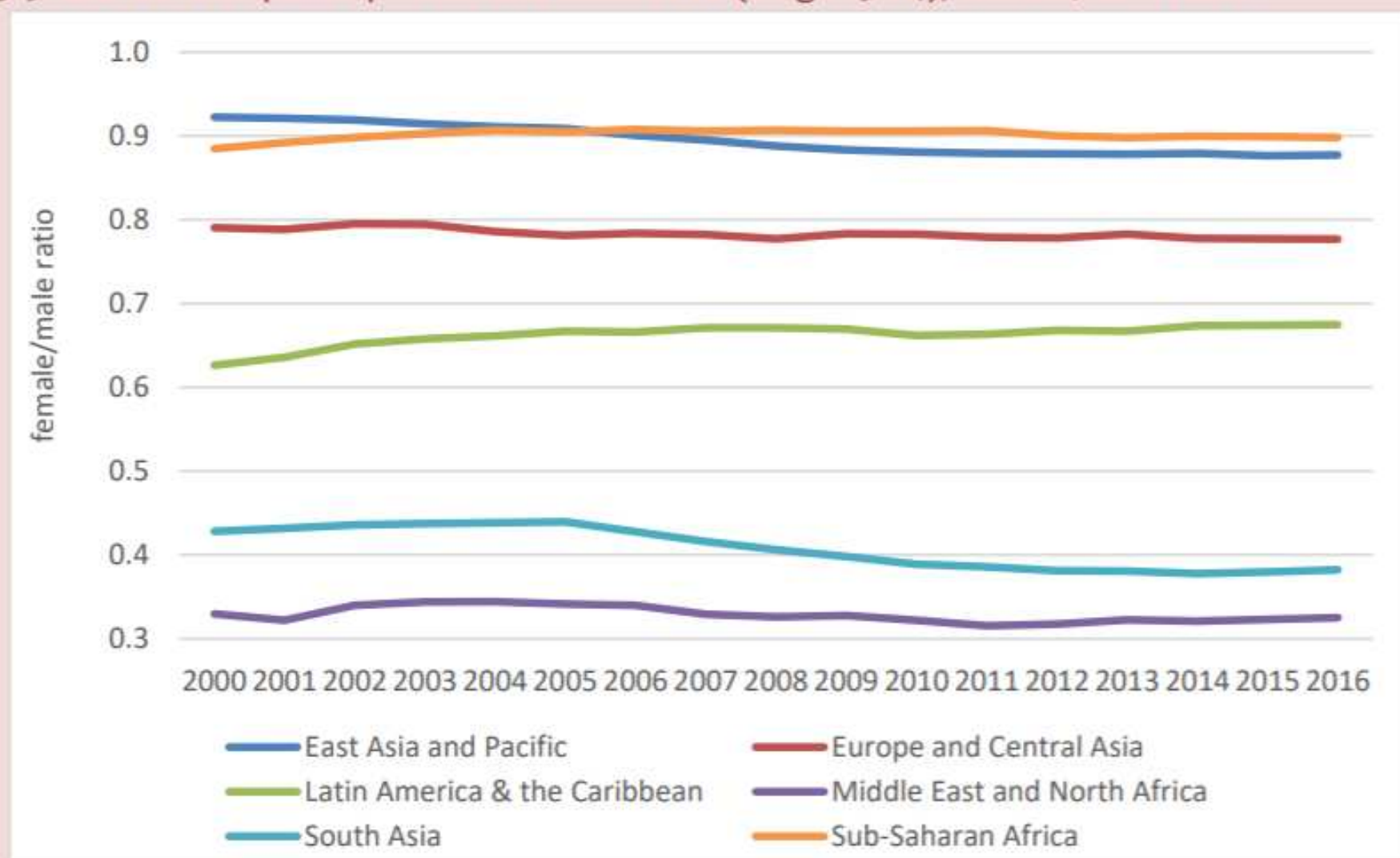
SDN/15/02

Number of Legal Differences



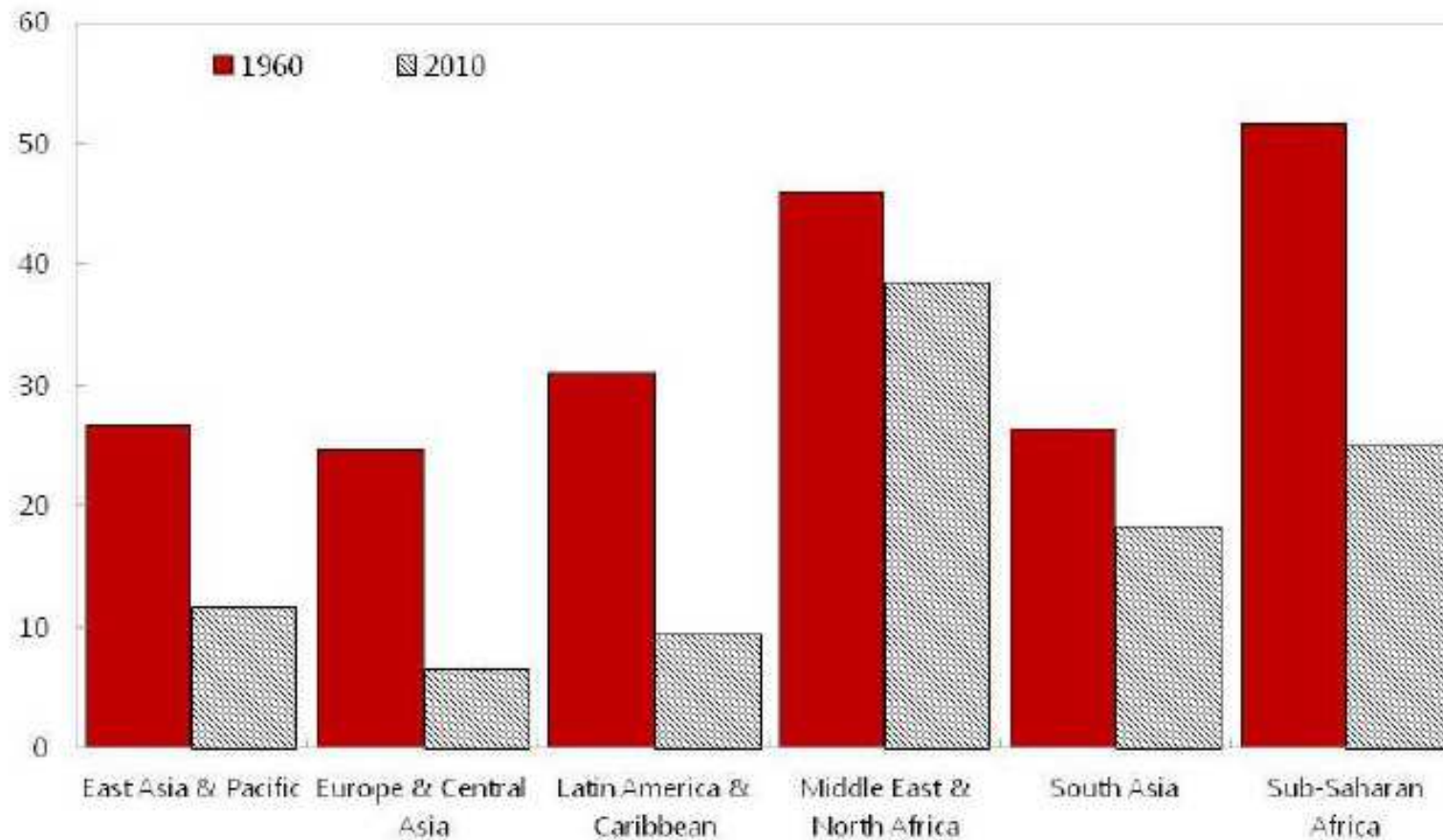
Source: Women, Business and the Law (2016).

Figure 5.5: Labor force participation rate 2000-2016 (% age 15-24), female/male ratio



Source: ILO estimate, WDI (retrieved June 2017).

Figure 1. Evolution of Legal Gender-Based Restriction, 1960 and 2010
(In percent of total observations)



Source: World Bank, Women, Business and the Law Database and IMF staff estimates.

Conclusion

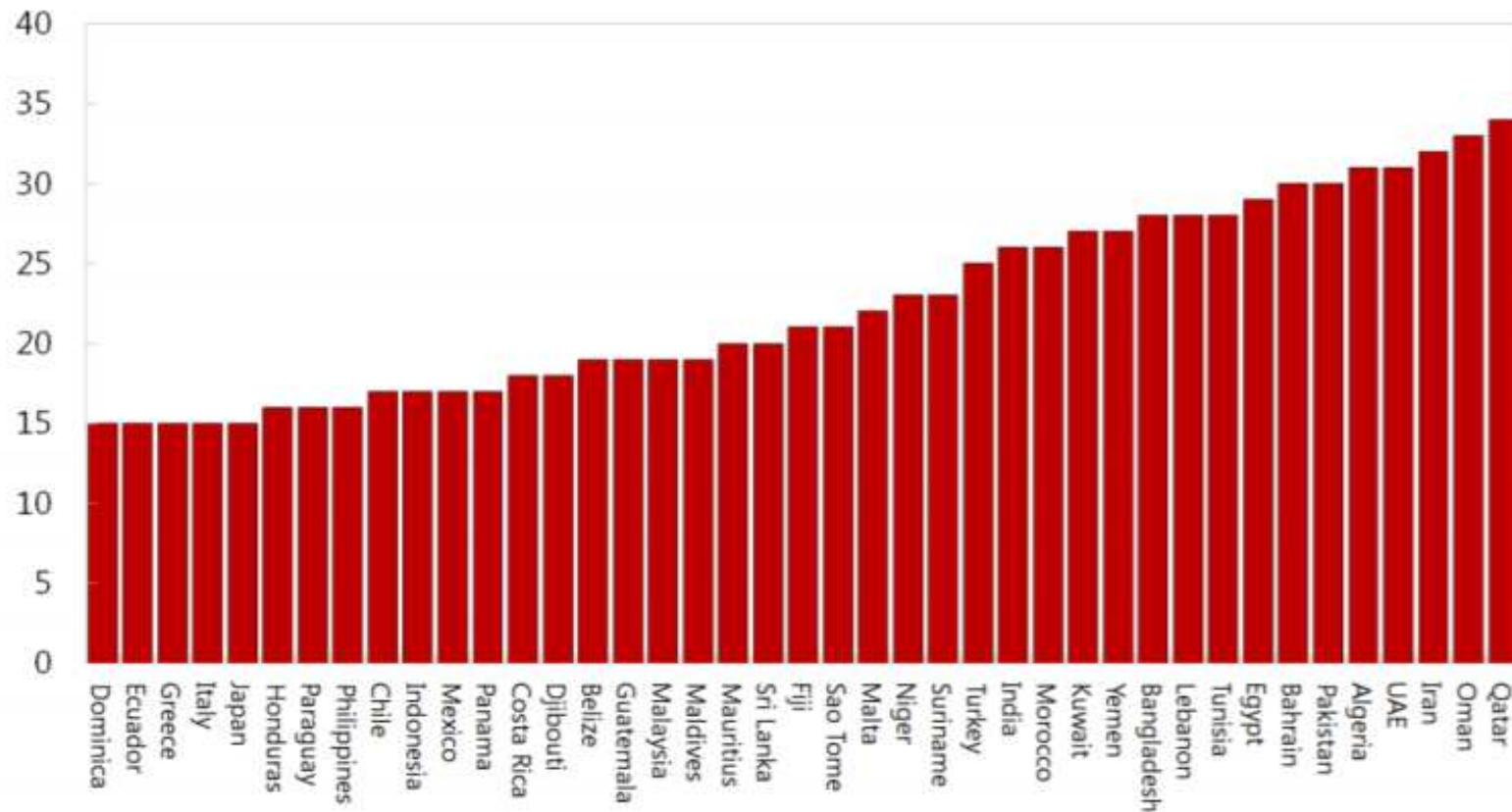
Women's Empowerment “doing It All—Women Boost the Bottom Line for Home, Firm, and Country,” Christine Lagarde, IMF Managing Director (2017)

But, policies matter

Clearly, women's personal preferences and attitudes toward working are important determinants of their decision to join the labor force.

But studies find that policies have an important influence on women's decisions and access to opportunity, even after accounting for individual characteristics, choices, and preferences about working.

Figure 1. GDP Losses due to Economic Gender Gaps in Selected Countries
(Percent of GDP)¹



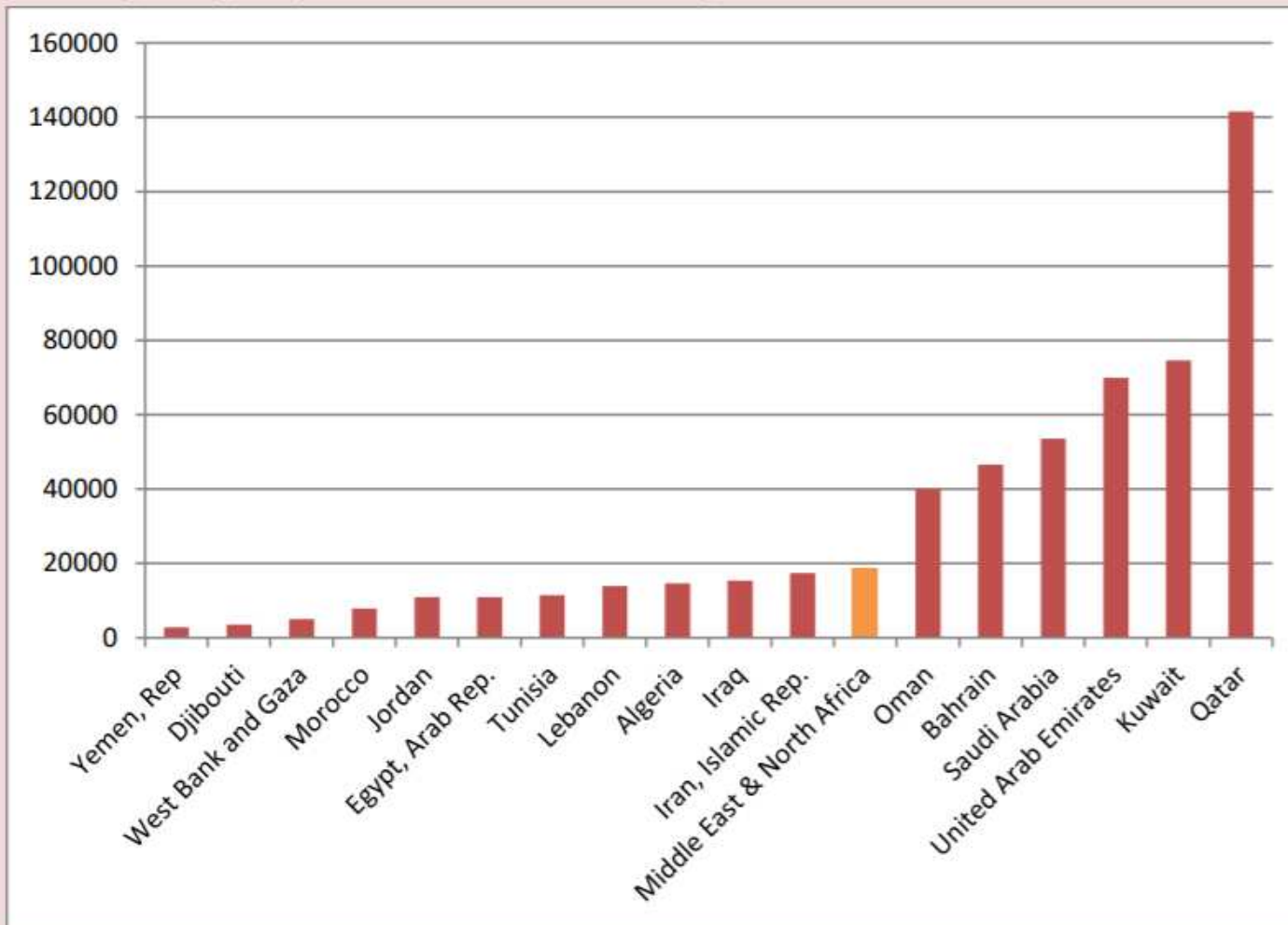
Source: Estimates by Cuberes and Teignier (2014).

¹Losses are estimated for a particular year for each country and can thus be interpreted as a one-off increase in GDP if gender gaps were to be removed.

Source: Fair Play More Equal Laws Boost Female Labor Force Participation (IMF 2015)

Thank you

GDP per capita (Current international, 2015)



Source: WDI (2016).

The positive relationship between more women high on the corporate ladder and Firms' profitability is more pronounced, the study finds, in sectors where women form a larger share of the labor force—highlighting the importance of bridging gender gaps between senior executives and the general workforce.

This positive association is also more evident in knowledge-intensive services and high-tech manufacturing sectors—where diversity, including gender diversity, can help meet the high demand for creativity and innovative capacity.

Using a difference-in-difference strategy, it explore the potential channels underlying this positive correlation.

In line with existing theoretical and empirical studies, it finds a positive association between gender diversity in senior positions and financial performance in two types of sectors:

- (i) sectors that employ significantly more women in the labor force;
and
- (ii) industries with greater demand for the higher creativity and critical thinking that diversity in general may bring, namely high-tech and knowledge intensive sectors.

These findings are robust to various alternative specifications.

Main Messages:

- Increased female representation in senior positions plays an important role in boosting Europe's potential output.
- Higher involvement by women in senior positions improves firm profitability, it may also help support corporate investment and productivity, mitigating the slowdown in potential growth.
- To that end, leveling the playing field through policies to facilitate women's full-time attachment to the labor force (see Christiansen and others, 2016) could help build the pipeline of women for senior corporate positions, with important macroeconomic implications.