On some challenges in the analysis of gender issues: CGE and econometric perspectives for policy analysis

Escot, L., Latorre, M.C. and Fernández-Cornejo, J.A.

(Universidad Complutense de Madrid, Spain)

Introduction

We should always "reaffirm faith in fundamental human rights, in the dignity and worth of the human person, (in) the equal rights of men and women (…) and (…) promote social progress and better standards of life and freedom (United Nations, Our Common Agenda, 2021, OCA, henceforth, p. 12). Policies and actions should aim at making a difference in people's lives.

Our Common Agenda report reminds us that we have "the blueprint for a better world" (OCA, p. 18), namely: "the Charter of the United Nations, the Universal Declaration of Human Rights and other international human rights instruments, the 2030 Agenda and the Sustainable Development Goals (SDG), the Paris Agreement on climate change and other key instruments. These are just some of the many resolutions and international instruments that have been painstakingly developed over 75 years and that constitute a crucial heritage. We can and must build on them and redouble our efforts to implement them" (OCA, p. 18).

However, as the report states, many of these objectives constitute the "what" (… and) it is high time for Member States, together with other relevant stakeholders, to devise strategies for achieving them (the "how"), through enhanced multilateral governance of global commons and global public goods" (OCA, p. 18). In fact, "The 2030 Agenda for Sustainable Development and the Sustainable Development Goals are at the core of Our Common Agenda. The 2030 Agenda is a plan of action for people, planet, prosperity and peace, that seeks to realize the human rights of all and to achieve gender equality" (OCA, p. 18). The latter is the center of our study, for which we propose tools and data for their analysis, together with reflections to inform the "how" to achieve them. The effort is more urgent now, because "The pandemic-induced poverty surge will also widen the gender poverty gap, meaning more women will be pushed into extreme poverty than men" (OCA, p.12). In addition, the pandemic has caused "Growing poverty, and massive loss of jobs and income" (OCA, p.15).

The compromise to assure equal rights of men and women is a multifaceted and complex one. In this paper we offer reflections relying heavily on an economic perspective. We are aware that we are focusing on a particular dimension but hope to make useful contributions to this challenge. We propose a 3-stept methodology for our analysis: 1) Explain how gender gaps are measured and present several indicators on inequality and discrimination against women; 2) Show the different ways that exist to identify the main factors that explain these gaps in order to propose gender policies; 3) Evaluate the success that different real policies have had in reducing the gender gaps.

The rest of the paper is organized following this 3-step methodology. The next section is devoted to the analysis of gender gaps and other discrimination and inequality indicators. Section 2 discuss the main factors identified in the literature to explain these gaps. Section 3 analyses the success of gender policies. Our main conclusions close the paper.

Section 1. Measuring Gender Gaps

The starting and necessary step on any gender equality research agenda should be to quantify gender discrimination against women. Finding evidence of discrimination, i.e. differences in treatment because of the fact of being a woman, is not always easy and immediate. There are several techniques that attempt to quantify gender discrimination, e.g., wage discrimination using Oaxaca-Blinder decomposition approach, or filed experiments to detect hiring discrimination against woman (Lippens et al. 2021). Given the difficulties in developing these studies on quantifying direct discrimination, most studies and indicators focus on finding differences in results and participation between men and women (gender gaps) in different social spheres. These differences are the result of direct and indirect discriminations, even if they are not directly observable. These indicators or gender gaps indexes serve as evidence to quantify situations of inequality against women, providing an empirical measure of the overall size and extent of the problem of gender inequalities.

Those gender gap indexes should be easily interpretable, a clear methodology and must be implemented in the same way, with homogeneous data, in as many as possible different regions-countries to make international comparations. These indicators must also have a continuity in time to evaluate the evolution and achievement of gender equality objectives.

Table 1. Composition of International based Gender Gap Indexes

World Economic Forum		Equal Measures 2030
Global Gender Gap Index		**SDG Gender Index**
Dimensions	*Indicators*	*Dimensions (asociated to gender gap in SDGs)*
Economic	Labour-force participation rate	SDG1 **Poverty**
Participation and	Wage equality for similar work	SDG2 **Nutrition**
Opportuniy	Estimated earned income	SDG3 **Health**
	Legislators, senior officials and managers	SDG4 **Education**
	Professional and technical workers	SDG5 **Gender Equality**
Educational	Literacy rate	SDG6 **Water**
Attainment	Enrolment in primary education	SDG7 **Clean Energy**
	Enrolment in secondary education	SDG8 **Work**
	Enrolment in tertiary education	SDG9 **Innovation**
Health and	Sex ratio at birth	SDG10 **Inequalities**
Survival	Healthy life expectancy	SDG11 **Sustainable cities**
Political	Women in parliament	SDG13 **Climates**
Empowerment	Women in ministerial positions	SDG16 **Justicie**
	Years with female/male head of state	SDG17 **Partnerships**
4 indicators		*56 key indicators about 14 of the 17 SDG*
146 countries		*144 countries coverage*
Year 2022 - World Economic Forum. Global Gender Gap Report		*2022 - Equal Measures 2030 (EM2030) SDG Gender Index*
http://reports.weforum.org/globalgender-gap-report-2022		*https://www.equalmeasures2030.org/who-we-are/*

Table 1. cont..

UNDP (United Nations Development Programme)

Gender Inequality Index (GII)

Dimensions	*Indicators*
Reproductive Health	Maternal motarlity ratio
	Adolescent birth rate
Empowerment	Female and male population with at least secondary education
	Female and male shares of Parlamentary seats
Labour Market	Female and male labour force participation ratios

10 key indicators

195 countries coverage

2021 - Human Develpment Reports (UNDP) Gender Composite I.

https://hdr.undp.org/data-center/composite-indices

The OECD Development Centre

Social Institutions and Gender Index (SIGI)

Dimensions	*Indicators*
Discrimination in the family	Child marriage
	Household responsabilities
	Divorce
	Inheritance
Restricted physical integrity	Violence against women
	Female genital mutilation
	Missing women
	Reproductive autonomy
Restricted access to productive and financial resources	Secure acces to land assets
	Secure acces to non-land assets
	Secure access to formal financial services
	Workplace rights
Restricted civil liberties	Citizenship rights
	Political voice
	Freedon of movement
	Acces to justice

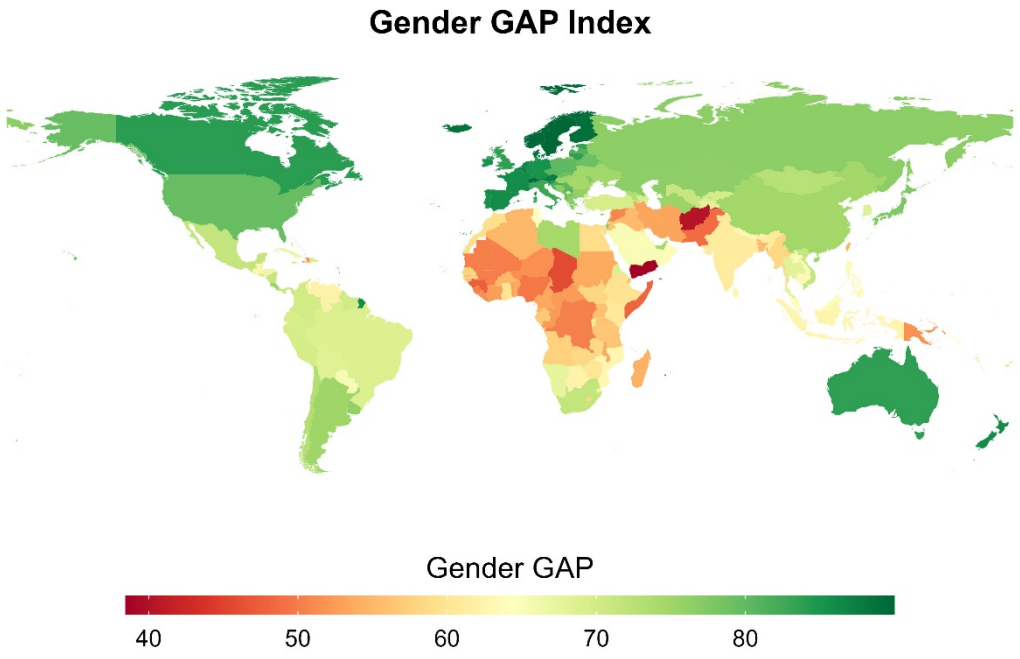
27 variables combined into 16 indicators and 4 dimensions

180 countries coverage

2019 - Global Report for the fourth edition of the SIGI.

https://www.genderindex.org/

Figure 1. Global mean international Gender Gap Index Choropleth map



Note: Mean Gender GAP Index from World Economic Forum-Equal Measures 2030-OECD-UNPD expresed as Female/Male Ratio, with a range from 0 (for very high discrimiantion) to 100 (for gender equality)

Table 2 *Global mean international Gender Gap Index*

Good		Fair		Poor		Very Poor	
Sweden	89.9	United States	79.4	Grenada	69.8	Ghana	59.9
Norway	89.7	Montenegro	79.2	Peru	69.7	Ethiopia	59.8
Switzerland	89.4	Belarus	79.1	Kyrgyzstan	69.6	Morocco	59.2
Finland	89.1	Slovakia	79.1	Turkey	69.5	Maldives	58.9
Denmark	88.8	Albania	79.0	Ecuador	69.5	Egypt	58.9
Iceland	88.7	Republic of Korea	78.9	St Vinc.-Grenad	69.3	Zambia	58.5
Austria	87.5	Macedonia	78.2	Dominican Rep	69.2	Lesotho	58.3
Andorra	87.2	Malta	77.9	El Salvador	69.2	Myanmar	58.3
Belgium	87.0	Israel	77.7	Azerbaijan	69.0	South Sudan	58.1
Liechtenstein	86.7	Japan	77.6	Brazil	69.0	Palestine	58.1
Netherlands	86.6	Moldova	77.3	Eritrea	68.9	Senegal	58.0
Luxembourg	86.2	Antigua Barbuda	77.3	Fiji	68.8	Saint Kitts-Nevis	57.8
New Zealand	86.0	Cyprus	77.3	Bolivia	68.4	Vanuatu	57.6
Spain	85.9	Greece	76.7	Rep of Korea	68.3	Angola	57.6
France	85.9	Bosnia-Herzegov	76.6	Mauritius	68.3	Gabon	56.8
Ireland	85.4	Russia	76.6	Thailand	68.1	Jordan	56.4
Portugal	85.3	Kazakhstan	76.3	Rwanda	68.0	Tanzania	56.4
Germany	85.2	Uruguay	76.0	Saint Lucia	67.9	Marshall Islands	56.3
Slovenia	84.5	Bulgaria	75.9	Tajikistan	67.9	Uganda	55.8
Canada	84.1	Costa Rica	75.6	Kosovo	67.9	Comoros	55.8
Australia	83.8	Turkmenistan	75.3	Seychelles	67.8	Lebanon	55.8
Lithuania	83.8	Barbados	75.1	Namibia	67.5	Guinea-Bissau	55.5
United Kingdom	83.6	Argentina	75.1	S Tomas-Principe	67.2	Djibouti	55.4
Estonia	83.4	Hungary	75.0	Cuba	66.9	Bangladesh	55.3
San Marino	83.4	Ukraine	74.8	Belize	66.6	Iraq	55.2
Italy	82.7	China	74.7	Honduras	66.5	Burkina Faso	55.2
Croatia	81.5	Romania	74.5	Brunei Darussalam	65.8	Taiwan	55.1
Singapore	81.4	U. Arab Emirates	74.4	Timor-Leste	65.4	Algeria	55.0
Latvia	81.2	Libya	74.3	Paraguay	65.3	Equat. Guinea	54.5
Hong Kong	81.1	Armenia	73.7	Qatar	65.2	Madagascar	54.4
Czech Republic	80.5	Georgia	73.4	Lao PDR	65.1	Kiribati	54.1
Serbia	80.4	Bahamas	73.3	Saudi Arabia	65.1	Benin	53.7
Poland	80.1	Chile	73.0	Malaysia	64.6	Sudan	53.7
		Palau	72.9	Solomon Islands	64.5	Malawi	53.6
		Mongolia	72.7	Tunisia	64.2	Cameroon	53.5
		South Africa	71.6	Samoa	63.6	Iran	53.3
		Panama	71.5	Oman	63.5	Monaco	53.1
		Trinidad-Tobago	71.5	Cambodia	63.5	Togo	52.9
		Mexico	71.4	Philippines	63.4	Cote d'Ivoire	52.7
		Cape Verde	71.4	Nepal	63.0	Cent African Rep	52.6
		Nicaragua	71.3	Mozambique	63.0	Rep of Congo	52.4
		Vietnam	71.3	Sri Lanka	62.8	The Gambia	51.8
		Uzbekistan	71.1	Guatemala	62.7	P New Guinea	51.8
		Dominica	71.1	Indonesia	62.6	Nauru	51.6
		Jamaica	70.7	Botswana	62.3	Liberia	51.6
		Guyana	70.2	Venezuela	62.1	Niger	51.5
		Colombia	70.1	Bhutan	61.7	Haiti	51.0
		Suriname	70.0	Swaziland	61.4	Syria	50.8
				India	61.1	D Rep. Congo	50.3
				Bahrain	61.1	Sierra Leone	50.2
				Kenya	60.8	Mauritania	50.1
				Burundi	60.3	Mali	50.1
				Zimbabwe	60.2	Nigeria	49.6
				Kuwait	60.1	Pakistan	48.7
						Somalia	48.1
						Guinea	47.6
						Tonga	47.4
						Micronesia	45.9
						Chad	45.7
						Afghanistan	40.3
						Yemen	38.5

Source:
Global Gender Gap Index (World Economic Forum)
SDG Gender Index (EquaEqual Measures 2030)
Social Institutions and Gender Index (The OECD Development Centre)
Gender Inequality Index (United Nations Development Programme)

Gender inequality is a multifaced problem that requires analyzing gender differences against women in different areas of society in which women has been traditionally object of discrimination. In this sense, gender indicators should reflect in a comprehensive manner the differences in participation and inequalities in different social spheres or dimensions, such a labor participation and occupational segregation, income and poverty, education, health, civil liberties laws and social norms, political empowerment, family and co-responsibility, culture, or violence against women.

Fortunately, prestigious international institutions make publicly available well-constructed gender indicators that accurately and reliably reflect the situations of inequality suffered by women in a country level. These indicators include, for example, *the Global Gender Gap Index* (GGGI) published by the *World Economic Forum* (measuring since 2006 the gender gaps in Labor, education-Health and Political empowerment to make evaluation of policies and cross-countries comparations); the *SDG Gender Index* (SDGGI) elaborated by *Equal Measures 2030* (that scores the gender gaps dimension in about 14 of the 17 SDG); The two Human Development Index (HDI) gender composite indicators elaborated by published by the *United Nations Development Programme* (UNDP), the *Gender Development Index* (GDI) (that measures disparities on the Human Development Index -HDI- by gender) and the *Gender Inequality Index* (GII) (that measure gender gaps on reproductive health, empowerment and labor market); the *Social Institution and Gender Index* (SIGI) published by the OECD Development Centre (that measures discrimination against women in family institution, civil liberties, social norms and productive and financial resources); or the *SDGS gender indicators* published in the *Gender Disaggregated Labor Database* by *the World Bank* ; or the *Gender Equality Index* elaborated by the *European Institute for Gender Equality* within the European Union.

These indicators reflect the situation of gender gaps in participation in different areas or dimensions of society and allow us to obtain an overall idea of the direction in which policies should be focused in order to achieve gender equality. The differences between indexes are due to differences in the dimensions and explicit indicators used (Table 1). All these indexes, however, show a high correlation between them. In fact, despite its limitations, we can construct a composite index summarizing the mean gender gap situation for illustrative purposes. We present in *figure 1* such a global composite index calculated as the mean of GGGI, SDGGI, GII and SIGI. The composite index is expressed as a Female/Male ratio, with a range from 0 (a very high gender gap) to 100 (for gender equality). This simple composite index allows a cross-country comparation (table 2), clustering them into good (>80), fair (80-70), poor (70-60) an very poor (<60) in terms of gender equality results

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Section 2. Main factors that explain the gender gaps

Although these indicators reflect the situation of inequality in different dimensions. However, in order to propose well-founded equality and anti-discrimination policies, it is necessary to study the causes of this inequality in greater depth. Thus, a second element in any gender equality research agenda must be to find evidence of the main factors explaining gender gaps or gender inequalities.

Many of these final explanatory factors are to be found in gender's stereotypes and social roles assigned to men and women. In fact, a good part of the scientific studies in this area tries to find evidence of the existence of stereotypes against women, which in many cases are implicit and not visible. That is, in many cases we are not aware that we are applying these

gender stereotypes which are ultimately responsible for the observed inequality against women.

These stereotypes affect many aspects of our lives and may result in discriminatory behavior against women. Among others, and without the intention of being exhaustive, we can highlight: the stereotypes about women being worse in technical or STEM careers (Miller et al. 2018); the stereotypes against women to occupy positions of leadership or management (Koenig et al. 2011); or the lower status we give to women's discourse, contributions or work (Karpowitz & Mendelberg, 2014; Auspurg et al. 2017); or the stereotypes that state that women should devote themselves to care activities because they are better prepared for them by their own nature (Gneezy et al., 2009; Iriberri & Rey-Biel, 2018)

As we have mentioned above, some stereotypes are not visible. Thanks to the Implicit Association Test (IAT) developed by Banaji & Greenwald (2016) it is possible to test for the existence of these implicit stereotypes. For example, Miller, Eagly and Linn (2015), used IAT to show evidence of a lower (implied) science-female association. Fernández Cornejo et al (2019) show evidence of childcare and work-life balance gender biases (childcare is implicitly assigned to mothers, and career and professional work to fathers).

All these contributions that find the factors that explain the existence of discrimination are crucial to serve as a basis and foundation for eliminating the gaps observed in the previous point e.g. with policies or actions aimed to break down explicit and implicit stereotypes.

Section 3. Real world policies and their impact on gender gaps

The third component in the gender equality strategy concerns with the implementation and the measurement of the impact of gender policies, i.e., seeking evidence on whether a given gender policy has been successful in reducing inequality against women. This program impact evaluation is based in the comparation of outcomes (gender gaps) after a gender policy has been implemented with outcomes (gender gaps) of the counterfactual, that is, the situation if such a gender policy had not been implemented. These programs evaluations or outcomes comparations can be performed by using observational data or by using simulation data in a general equilibrium approach. This section presents the main elements of both types of gender programs evaluation.

3.1 Policies' evaluation through econometric methodologies

Observational program evaluations make use of social experiments or quasi experiments. In a social experiment we define to groups of (ideally homogeneous) people or agents, one group treated or affected by policy, and a counterfactual or control group not affected by the policy. Thus, if the two groups are identical, or at least homogeneous, they will only differ in terms of policy treatment. Then, any differences in the outcomes of the treatment group and the control group can be attributed to the effect (or impact) of the policy.

When the groups are not homogeneous then it cannot be guaranteed that the difference in outcome will be caused to differences in policy treatment. Those differences in characteristics that prevent the clear identification of the treatment effect are the confounders. One of the most common causes of groups not being homogeneous is endogeneity or self-selection or non-

random assignment (e.g., when the decision to participate in the program depends on the potential results obtained) This endogeneity problem cause a bias in the estimation of the average treatment effect.

There are different econometric techniques that try to correct for this bias in social experiments and quasi-experiments (Gertler et al. 2016), for example Propensity Score Matching, Difference-in-Differences, Instrumental Variables regressions, regression discontinuity Design or Factorial Survey Experiments. It is beyond the scope of this article to explain the content of each of these tools. Instead, some illustrative examples of gender program evaluation will be shown below.

Thus, we will refer, in first place, to the evaluation of programs to reduce motherhood penalty and to improve coresponsability. Contributions such as Correll et al. 2007 or Belope-Nguema et al (2018) show evidence of a motherhood penalty (which males do not suffer when they become fathers). Mothers sacrifice their professional career in order to take care of their child. Parents, on the other hand, hardly change their dedication to work in order to try to reconcile their work and professional lives.

Lapuerta et al. (2011) and Fernández-Cornejo et al. (2018) show that one of the factors explaining this motherhood penalty in Spain has been the own parental leave system, at least until its current reform. Traditionally, the maternity leaves were of longer duration than paternity leaves. And these differences in the duration of the parental leaves have been inducing companies to discriminate against women. These policies, which were initially created to protect mothers' rights, have in fact set mothers away from work, feeding the idea that childcare is a matter for mothers and not for fathers.

The equalization of paternity and maternity leave in Spain since 2021 has led to greater involvement of fathers in childcare (Dominguez-Folgueras et al. 2022). And there is a significant association between greater involvement of fathers in childcare tasks and lower career costs for mothers (Fernández-Cornejo et al 2016). In the same vein, eliminating the female bias of work-life balance from the employer's perspective (that work-life balance is not just a women's issue) helps reduce gender gaps in the labor market. When companies provide incentives and facilities to men, then men do reconcile, and the gender gaps against women are reduced. (Fernández-Cornejo et al 2020)

There are many other examples of contributions that try to find evidence of a causal impact in different areas or policies. For example, Mateos de Cabo et al. (2019) present evidence of a limited effect of gender quotas programs in Boards of Directors when are implemented as recommendations or incentives without sanctions and penalties (called ‘soft’ quotas). González-Pérez (2020) evaluates a role-model intervention program in Secondary school grade aiming to promote stem carriers in female students. Goldin & Rouse (1997) and more recently Witteman et al (2019) evaluate blind exams, concluding that tribunals and hiring commissions should look at merit and ability, without knowing sex of the candidates, as these blind tests result in greater participation of women in recruitment processes

A final group of contributions consist in social experiments regarding how public policy can influence stereotypes (in the same way mentioned above for the parental leave system). For example, in a subject far away from the economic field, Escot et al (2022) analyzes, by using a factorial survey experiment, the extent to which the legal framework for prostitution can influence the moral judgments individuals make about purchasing sex. They hypothesize that the decriminalization of prostitution (versus the criminalization of purchasing sexual services) increases the acceptability of buying sex.

3.2 Policies' evaluation through general equilibrium models

We now turn to the analysis of gender impacts using other methodological tools, by describing the potential of the so called "general equilibrium models". This models include a rich set of relations in the economy and grasp many feedback effects across the different goods and services sectors. They also include labor and capital markets, together with several economic agents (government, consumers, firms and the foreign sector). The main strength of this technique is that it provides quantitative outcomes on macroeconomic variables (e.g., GDP, employment, wages, rental rate of capital or firms' remuneration, welfare, Consumer Price Index…) and on sectoral variables (production, labor demand, prices…). By doing so, they offer the economy-wide impact of different policies or shocks. Policy Makers and important institutions use this approach because it integrates microeconomic (i.e., across sectors) and macroeconomic results, which is crucial to take decisions.

To see the potential of this technique for the analysis of discrimination, we turn to an African economy in which the role of women has some peculiarities compared to developed economies. As pointed out in the (OCA, p. 28) "92% of African women are in the informal economy. This keeps them outside of social security systems". Besides, women are disproportionately employed in agriculture in developing countries, while their presence is more remarkable in services in developed ones. Additionally, women exhibit a higher involvement in unpaid (but productive and time consuming) domestic and care activities in developed and developing countries (Blau & Kahn, 2000). Moreover, Ñopo, Daza, and Ramos (2011) find that the earnings gaps is higher in Sub-Saharan Africa and South Asia compared with other regions.

The main body of evidence suggests the persistence of a gender wage gap after adjusted for worker characteristics (e.g., Aguayo-Tellez, 2011). However, the causes behind these statistics are complex and multifaceted and a variety of factors other than discrimination may bear to some extent on the different situations of female and male workers (Fernandez, 2007; Ganguli, Hausmann, & Viearengo, 2011). Discrimination exists but a precise estimation of its magnitude is difficult (Blau & Kahn, 2006).

We focus on relevant findings Tanzania which are more broadly analyzed in Latorre (2016; 2015; 2014). The earnings gap in Tanzania before the implementation of the policies analyzed in these papers was 39.77%. This means that in general women's remunerations are 60% lower than men's, which is a very wide gap in international terms, even though we do not take into account workers' characteristics for this calculation. Discrimination implies that some workers that have the same abilities, education, training, motivation, experience, etc. as others are accorded inferior treatment. In the case of Tanzania, Latorre's (2016; 2015; 2014) broadly defined occupations, which are still more accurate than the usual skilled versus unskilled distinction, lack the detail needed for careful assessment of the exact portion of the pay gap due to labor market discrimination. For example, Tanzanian national statistics show that women exhibit lower levels of education than men. This would support the idea of lower productivity (and therefore wages) of women with respect to that of men. Another factor that could (at least partly) explain the earnings gap is the higher involvement of women in the low-paying sector of Agriculture.

Latorre (2016; 2015; 2014) studied the impact of different policies aimed at increasing the number of domestic or foreign firms in business services sectors and changes of dispersed tariffs regimes into a unique common tariff across sectors. Thus, in this case, policies were not directly objected to achieve gender impacts, but the analysis focuses on the effects for gender. To this end, Latorre (2016; 2015; 2014) produces an ambitious three-dimensional (sex–sector–skill) data set for 52 sectors with factors of production distinguished by four skill levels and by sex, which was incorporated in a Computable General Equilibrium (CGE) model. There are four skill

categories for both female and male workers, namely: Unskilled (''Elementary occupations"); Laborers (which comprises five occupations: ''Clerks", ''Services and shop workers", ''Skilled agricultural and fishery workers", ''Craft and related workers" and ''Plant and machine operators and assemblers"); Technicians (''Technicians and associate Professionals") and Professionals (''Professionals").

Latorre (2016; 2015; 2014) finds that a growing number of firms of domestic and foreign firms in business services sectors increases the demand for and the remunerations of all labor categories. However, the rise in remunerations is higher for males than for females. This means that males benefit more, even though women do also benefit. However, there is also a worsening (i.e., an increase) in the gender gap. This is because business services, which are the sectors that expand the most, exhibit higher male than female worker intensity. Males gain relatively more due to the fact that they are employed more intensively in these expanding business services sectors. But note, that focusing merely on the analysis of pure gender difference (i.e., looking only at the gender gap) may be misleading in analyzing whether females and males benefit or not from these policies. Even though female remunerations' increases tend to be of smaller magnitude than those of males, both types of workers are better off.

In the same vein, the gender gap gets slightly better after a different policy scenario called, ''only uniform tariffs" (i.e., a policy considering only the change from a heterogeneous spectrum of tariffs to a uniform one). In this "only uniform tariffs" the remuneration increases for both females and males are smaller than with the previous policy of increases in the number of firms in services. After this policy of "only uniform tariffs", the output expansion of business services is considerable reduced compared to our previous scenario of new entry of firms. By contrast, the production in (the female intensive) Agriculture is higher than after the new entry of firms. As a result, Business services expand considerably less than with the previous policy, while Agriculture experiences a relatively smaller fall in output. Thus, the demand for female workers is higher with this policy of "only uniform tariffs" and females across most categories undergo slightly higher remuneration increases than males. Consequently, a very small improvement in the earnings gap appears. For all female and male workers it would turn from its initial data value of 39.77% to 39.79%. However, it is hard to argue that women would be better off with this policy, since they would experience lower remuneration increases than with the new entry of firms' policy.

In other words, after the uniform tariffs' policy, the rise of both male and female remunerations is substantially lower than with the expansion in the number of firms. Paradoxically, the subsequent reduction in the earnings gap that arises disguises lower remunerations for both men and women compared to the former policies.

Latorre (2016; 2015; 2014) remunerations are experienced by the most skilled female and male workers. The reason is the same one that explains higher male remunerations compared to those of females with this policy. Business services use intensively the most skilled workers and when they expand they increase more strongly skilled labor demand. Therefore, a way of improving (female as well as male) labor conditions in Tanzania is skill upgrading in order to make workers more employable in the salaried jobs of expanding sectors, trying to reduce workers involvement in Agriculture. Otherwise, the earnings gap between males and females would likely widen further (for a similar conclusion see Arndt et al., 2006.) As asserted in OCA (p. 28), "Education (chap. III) and skills development must better support people's capacity to navigate technological, demographic, climate and other transitions throughout their lives."

Developing countries, like industrialized countries, are creating new domestic firms and opening up more to foreign investors in services and becoming more business services oriented.

Additionally, they will naturally turn from agricultural intensive economies into services' intensive economies, as has usually happened when countries develop. Our results illustrate that as this process continues, these sectors demand more educated workers and the relative remunerations of the better trained will increase relative to the unskilled. An important policy conclusion is that it is crucial to invest in the education of females so their human capital increases and their skills are more marketable in business services and other more technologically modern occupations. Otherwise, the earnings gap between males and females would likely widen further.

Conclusions

The eradication of gender gaps requires the consideration of different areas or social dimensions: work, income, poverty, social exclusion, education, health, civil rights, political empowerment, participation in culture, relations within the family, co-responsibility in childcare and reconciliation of professional life, different forms of violence against women, etc..).

The gender equality agenda should, in turn, consider three main subjects. First, the quantification of the gender gaps, trying to find evidence of inequalities and discrimination against women. In this sense, the main international institutions (World Bank, UN, OECD, World Economic forum, etc.…) have made an important effort to build reliable indexes to measure gender gaps. And although there are still many countries with difficulties in compiling accurate data, we can conclude that there is sufficient information to carry out cross-country and cross-time analyses of the situation of women in relation to men.

In a second phase, and once the extent of the gender gap has been measured, it is necessary to delimit the dimensions and specific areas where policy action is required to reduce these gaps. To this end, it is necessary to identify the main factors causing situations of lack of equal opportunities and discrimination against women. In this regard, stereotypes, and social norms, which result in a clear disadvantage against women, are becoming increasingly important.

Finally, once the factors causing gender gaps have been identified, it is necessary to establish specific gender policy objectives (for example, by setting the SDG 5), and to implement policies and programs that seek to mitigate the situations and factors causing inequality. In this sense, it is necessary to evaluate the impact of these programs, which, together with the analysis of the evolution in the global gender gaps indexes, should serve to modify, when necessary, the course of these equality policies.

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