G²LM|LIC Synthesis Paper No. 11 | November 2019

Gender, Jobs and Poverty

An Agenda for Research and Policy

Oriana Bandiera (LSE and IZA)
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Oriana Bandiera (LSE and IZA)
Celine Zipfel (LSE)

G²LM|LIC
c/o IZA – Institute of Labor Economics
Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-510

Email: glm-review@iza.org

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ABSTRACT

Gender, Jobs and Poverty

An Agenda for Research and Policy

Women are overrepresented among the world's poorest and underrepresented in well-paid jobs. The new G²LM|LIC program aims to investigate the causes of gender disparities in labor markets, assess their implications for equity and efficiency, and guide policy design. The program, a joint venture between the UK Department for International Development (DFID) and the IZA Institute of Labor Economics, launched with an inaugural workshop on June 19, 2019. This report provides a summary of the discussions held on the state of existing evidence and questions for future research.

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Corresponding author:
Oriana Bandiera
Department of Economics
London School of Economics and Political Science
Houghton Street
WC2A 2AE London
United Kingdom
E-mail: o.bandiera@lse.ac.uk

Introduction

"No poverty" tops the list of Sustainable Development Goals, and the only sustainable way out of poverty is through stable, secure jobs. Whilst this is a challenge for men and women alike, the structure of the problem is different because biologically only women can bear children and in most societies, norms put women in charge of the care of these children. The anticipation of this substantial time commitment creates a three-way link between fertility, skill accumulation and employment choices (Figure 1). This calls for specific research on labor and poverty through gender lenses, which is crucial for guiding policy. This is the goal at the core of the G²LM|LIC program.

The main challenge underlying this new research agenda is that the key determinants of women's employment trajectories in low-income countries are all interlinked. In particular, the skills (human capital) that a woman accumulates during her youth play a crucial role in her employment trajectory; but the job opportunities available on the labor market (labor demand) in turn influence how much she invests in her skills. The type and amount of work she can do outside the home is constrained by the number of children she has; but the availability of high-return employment opportunities will also affect the timing of childbearing. Finally, a woman might decide when to start having children and how many to have depending on the skills she can use in the job market; but early onset of motherhood (e.g. teenage pregnancy) could also lead her to forgo her education.

Most of the choices discussed in this report concern the different tasks and activities to which women allocate their time in low-income countries. Within the home, these typically include child-rearing, household chores, and old age support. Here, women's decisions are constrained by external factors. For example, the availability of infrastructure such as indoor plumbing and electricity makes household chores much less time-consuming than if women (or any household members they rely on for help) must walk for miles to fetch water or firewood. Moreover, outside the home, women choose how many hours to work, which sector to work in, whether to work seasonally or on a permanent basis, in formal or informal employment, etc. Aggregate economic factors, such as the number of jobs available in the formal sector, will influence these decisions. In remote rural areas where rain-fed agriculture is universally the principle source of livelihood, for instance, women might have no choice but to divide their time between work inside the home and seasonal agriculture work outside the home.

Much of the research discussed in this report focuses on social norms, also an important influence on women's labor market decisions. For example, customs relating to marriage markets, fertility, the intra-household allocation of labor and inheritance affect every stage of the lifecycle, implying that understanding specific cultural contexts is instrumental for designing effective, evidence-backed policy interventions. Indeed, differing social norms may impair the generalisability of empirical findings. As an example, a vocational training program aimed at improving young women's employment prospects will not have the same impact in settings where women's choices are constrained only by the set of available job opportunities as in regions where, say, local norms dictate that women cannot work outside the home without their husband's permission.

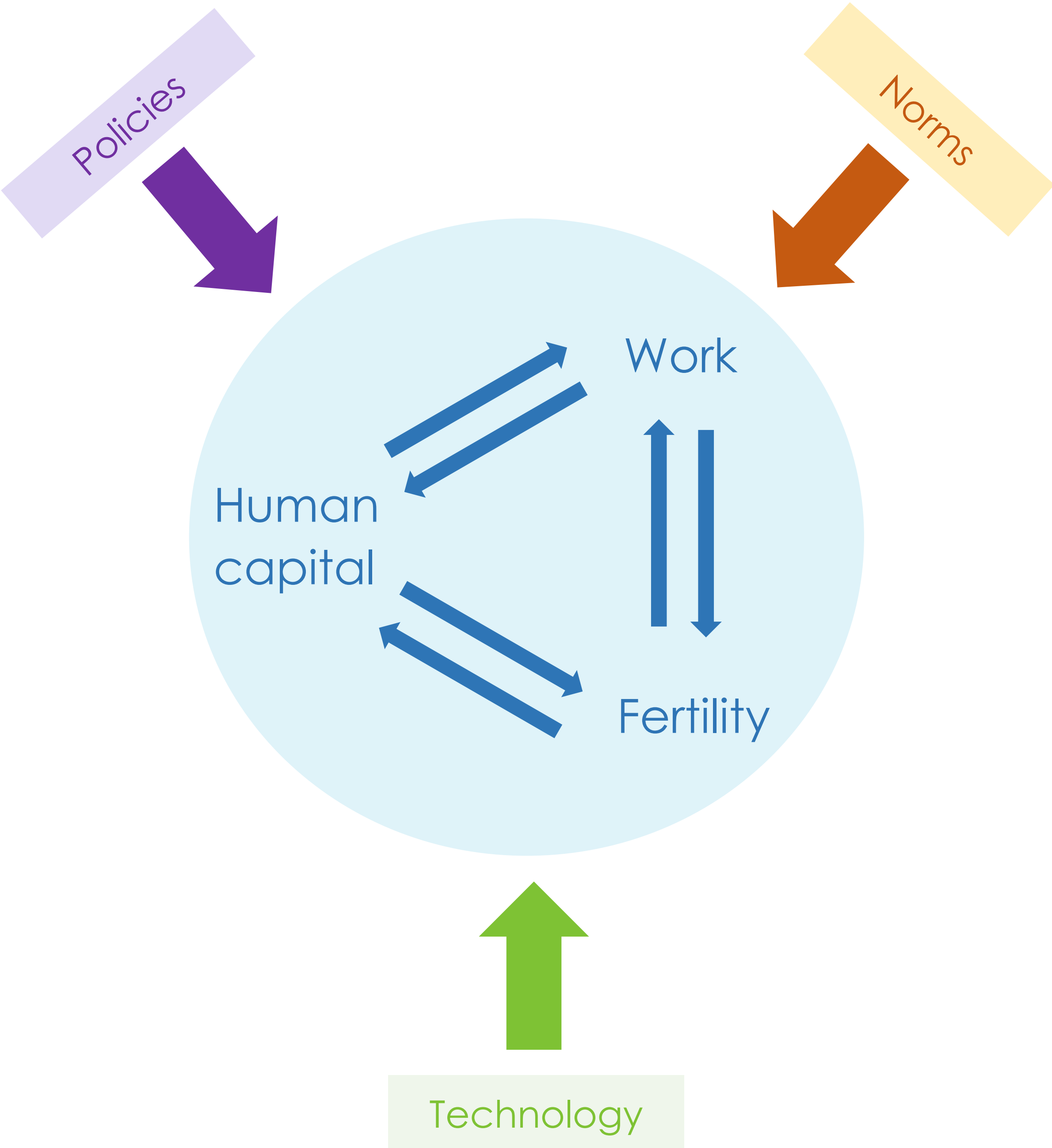


Figure 1. Interlinkages between the main determinants of women's labor market outcomes in low-income countries

At the G²LM|LIC program's launch workshop, the presentations and panel discussions emphasized the role that social norms, technological changes and policies can play in shaping women's labor market decisions. While the workshop and hence this report does not focus on the relationship between these three factors, it is important to keep in mind that they can interplay with each other. For example, training policy could benefit from recent ICT technology; however, the effect will not materialize in the absence of supporting social norms.

The report is divided into three main sections: human capital, work, and fertility – the main determinants of women's labor market outcomes. Within each, we call on the evidence presented and discussed at the G²LM|LIC program's launch workshop. Much of it comes from very recent work, often unpublished or ongoing. We then identify open questions as well as areas where new data is needed on each topic, drawing on key suggestions brought forward by the speakers at the workshop. While these avenues for future work primarily reflect the opinion and research interests of the speakers, they also fit within some of the five core themes of the G²LM|LIC program:

1. Facts and policies: leveraging existing data
2. Fertility and labor markets: participation, migration, occupational choice
3. Barriers to gender parity: social norms, discrimination, violence.
4. The future of work: energy, environmental changes and cities.
5. Policies and welfare: costs and benefits of gender parity.

We conclude with a summary of the launch workshop's two panel discussions. The first focused on bridging policy and research, the ultimate purpose of the program being to generate research that will inform policy-making in low-income countries. The second panel discussed important avenues for future research, providing a first step towards establishing a new research agenda.

HUMAN CAPITAL

The skills that individuals accumulate in youth are a key determinant of the choices available to them when they enter the labor market. In the early stages of the life cycle, parents choose how much to invest in their children's development and education. When girls begin to make their own choices in adolescence, they face a tension between the onset of fertility and the need to pursue further education or vocational training to improve their employment prospects. This section reviews existing evidence on the forces that mould human capital decisions in low-income countries and outlines open questions on the topic.

Early years (pre-schooling)

A large body of research has demonstrated the importance of early childhood (ages 0-5) human capital development for long-term labor market outcomes.[1] While much of the evidence on early life investments comes from high and middle-income settings, a nascent literature evaluates early childhood interventions specifically tailored to the world's poorest settings. Poverty may limit parents' ability to invest in their children's human capital along several dimensions – starting with early life nutrition. Indeed, in Sub-Saharan Africa, 33% of children under the age of five are stunted, and 7% are wasted.[2]

The good news is that policy can fix this easily - if not cheaply. Conditional cash transfers (CCTs) are effective at reducing stunting and improving nutrition,[3] which might be because beneficiaries had been unable rather than unwilling to invest in early childhood development. Evidence also shows that poverty alleviation schemes, such as graduation programs, tend to increase early life investments in children.[4] This highlights the importance of studying the intergenerational effects of interventions that shift households' income streams, as early childhood impacts should also factor into the cost-benefit calculation.

Given the importance of early childhood human capital development, any differential investment in boys and girls at this stage can exacerbate the gender gap in access to economic opportunities later in life. Importantly, recent research suggests that in some low-income countries social norms affect the allocation of resources between children of different genders. For instance, in cultures where a preference for sons prevails, evidence suggests that parents tend to favor their sons over their daughters in terms of early childhood nutrition.[5]

Education

From age 6 onwards, the main investment in children's human capital is education. In some developing countries, the first signs of the gender gap in access to future economic opportunities arise during the primary schooling years. The gender gap in education in low-income countries has been a key focus of development policy and international aid for several decades: closing it completely was one of the UN's Millenium Development Goals (MDG 3A). Nevertheless, some gender disparity in primary education persists in the developing world (Figure 2).

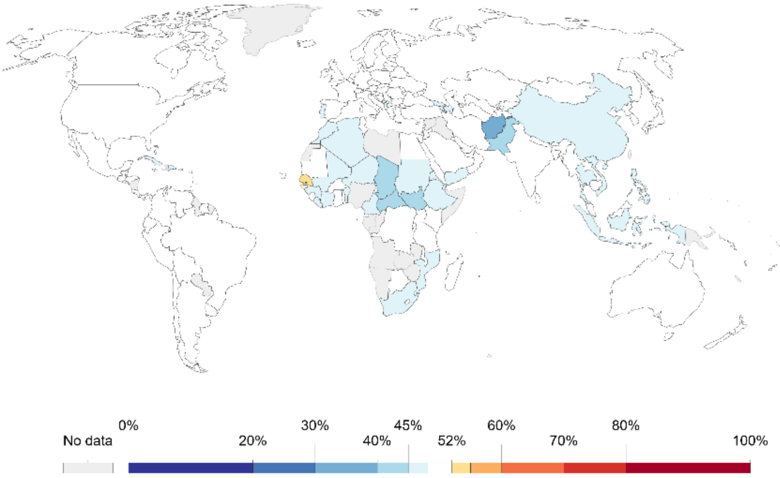


Figure 2. Share of female enrolled primary education students in 2017
[Source: Our World in Data]

Much of the latest research investigating this pattern studies the influence of culture and social norms on parental investments in girls' education. Evidence suggests that customary practices relating to marriage markets[6], children's post-marriage residence[7] and inheritance rules[8] all affect girls' total years of education in countries where such customs are widespread.

Child marriage

Just before the start of adolescence – when individuals start to take a more pro-active stance in shaping their employment trajectory – parental investments in girls' human capital culminate in the decision of whether to partake in the child marriage custom. This practice, which persists in much of the developing world, carries substantial threats for girls' health, as early pregnancies are associated with higher maternal mortality risks. The same holds for career or vocational advancement, as child brides typically interrupt their schooling.[9]

The end of child marriage by 2030 is one of the UN's Sustainable Development Goals. Despite recent progress (especially in South Asia), the road ahead remains long. Recent evidence suggests that, in Sub-Saharan Africa, poor households use marriage payments as a source of consumption smoothing against income shocks, which leads child marriage rates to *increase* in response to droughts in rural communities.[10] The climate emergency – worsening droughts expected throughout Sub-Saharan Africa in the coming decades – may thus make the child marriage custom even more difficult to eradicate. This has important implications for development along many dimensions, including the persistence of poverty, as child marriage is associated with lower human capital investments in the next generation.[11]

Adolescence

Dependence on parents tends to end during adolescence, a time at which girls face a choice that will determine their entire employment trajectory: delay childbearing and undertake human capital investments critical to pursuing some form of career or become dependent on men (either as a wife or via temporary relationships). As Figure 3 shows, the share of young women who were married or in a union before the age of 18 exceeded 50% in 2016 in many low-income countries. Teenage cohabitation or marriage then inevitably brings forward the onset of motherhood.

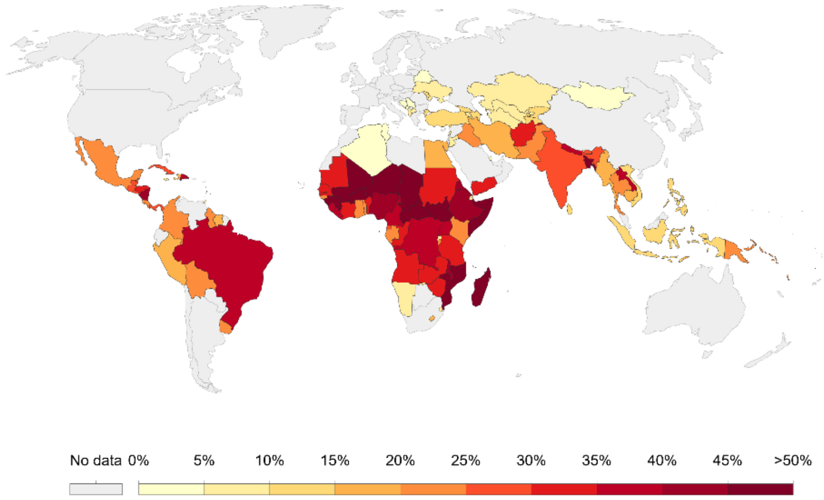


Figure 3. Share of women (aged 20-24) who were married or in a union by age 18 in 2016 *[Source: Our World in Data]*

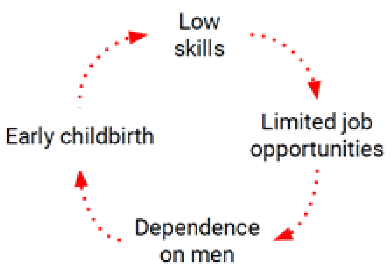


Figure 4. The vicious cycle between low skills and early childbearing for adolescent girls

At this pivotal point of the life cycle, it seems that girls disproportionately abandon formal schooling after completing primary education,[12] thereby setting themselves back in the race for already scarce job opportunities. A vicious cycle between low human capital accumulation and early childbearing could explain this pattern (Figure 4). Low skills lead to limited job opportunities, which may increase the propensity to engage in cohabitation with men and become dependent on them. This, in turn, brings childbearing forward, hindering women from acquiring skills. Thankfully, recent research shows that policy interventions addressing both parts of the problem simultaneously – by coupling life skills training with vocational training – can break this cycle.[13]

Human capital: questions arising

While we know a lot about the importance of early childhood investments for long-term labor market outcomes, future research would help identify the features of early childhood interventions that maximize their benefits in low-income countries.

One open question is whether the gender of the recipient changes the impact of interventions aimed at breaking the intergenerational transmission of poverty (e.g. conditional and unconditional cash transfers, graduation programs, etc.). In their ongoing work on female empowerment and development, Michèle Tertilt and Matthias Doepke re-examine the conventional wisdom that women care more about children than men do, and therefore, that poverty-alleviating policies targeting women should spur development. They develop a model that provides an alternative explanation for why women tend to invest more in children's human capital – namely that, as a result of the gender wage gap, they specialize in time-intensive tasks like child-rearing and household chores, whereas men specialize in tasks that require investing in physical assets like household durables. A key prediction of their model is that the gender of the recipient of a wealth transfer matters for how it will be invested: women will tend to invest more in children's human capital while men will be more likely to save and invest in physical capital.

The authors test this hypothesis with a large conditional transfer program in Mexico (PROGRESA) – of which women were the recipient. Consistent with their model, they find that the education of children improves but savings (and therefore investments in physical assets) decrease. These findings have important implications for growth and development: mandated transfers targeting women may be harmful when physical capital accumulation is the key engine of growth.

To consolidate these results and test their generalizability, we hope to generate more studies that quantify the welfare impacts of targeting women relative to men in poverty-alleviating interventions. More broadly, this field of research needs to investigate the intra-household patterns and dynamics of decision-making about investments in human capital and other assets. Importantly, this will require collecting new data on (i) consumption allocation in the household (beyond the conventional measures of clothing for children/women/men) and (ii) savings and investment in household durables and other physical assets.

To conclude, we note that the aim of this report is to outline the open questions identified by the speakers at the launch workshop. The G²LM | LIC program covers a broader research agenda. Other possible avenues for future research on human capital that would fit with the program's core themes include: the comparison of patterns (across and within countries) of investment in human capital; the role of social norms in these investments; and the impact of different policies that address these social norms, for example, interventions targeting child marriage, gender attitudes, female genital cutting, etc.

FERTILITY

Fertility decisions are a crucial determinant of human capital accumulation, labor force participation and occupational choice. This section outlines the patterns of fertility in low-income countries, and highlights the potential role of culture, social norms, and private information within households in explaining variation in fertility rates across regions.

Over the past fifty years, the developing world has experienced a sharp decline in fertility. The exception to this is Sub-Saharan Africa, where the average woman still gives birth to five children today.[14] Fertility is determined by two factors: preferences (which economists often refer to as "the demand for children"), and the ability to control the timing and spacing of births (i.e. with the availability of contraceptives).

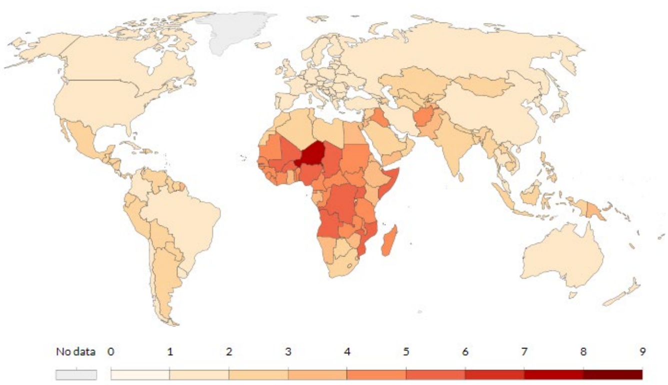


Figure 5. Children born per woman in 2019
[Source: Our World in Data]

A growing literature suggests that culture is responsible for part of the variation in fertility preferences across countries: studies of second-generation US women find that fertility rates in their country of ancestry are a significant determinant of their fertility decisions.[15] Social norms and traditional beliefs also stand in the way of contraceptive use in some countries.[16] Women's labor market decisions may therefore be constrained by a higher number of pregnancies than they would choose in settings where these norms are absent.

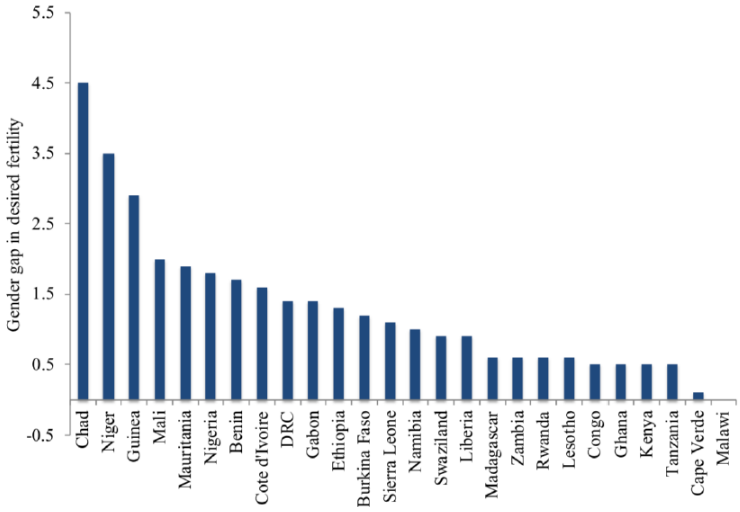


Figure 6. Difference between men's and women's desired number of children in Sub-Saharan Africa
[Source: DHS Comparative Reports, 2010]

One striking empirical fact is that men report a higher ideal number of children than women in almost all Sub-Saharan African countries (Figure 6). According to recent research, explanations for this pattern include miscommunication between husbands and wives about the maternal mortality risks of childbearing. Ongoing work in Zambia shows that providing maternal health information to husbands can reduce fertility, increase the use of oral contraceptives, and increase self-reported marital satisfaction.[17] This suggests that, in some settings, information does not move freely within the household, which causes a misalignment in fertility preferences among couples.

Another cultural practice that could explain part of the gender gap in desired fertility in Sub-Saharan Africa is polygyny – the custom of having multiple wives.[18] The social acceptability of this practice may undermine the fertility transition in the region by inducing co-wives to compete in the number of children they bear, since children are a claim to resources controlled by the husband.[19]

Fertility: questions arising

We still have much to learn about the drivers of fertility decisions in low-income settings. One important avenue for future research that emerged at the launch workshop is the development of new models of the family. Standard theories of the family such as collective household models cannot explain the new wave of empirical findings on fertility in low-income countries. For instance, the gap in husbands' and wives' fertility preferences suggests that, while fertility outcomes are typically the result of a joint choice between mothers and fathers, the two parties making the decision may have different expectations of the costs and benefits from having a child. New economic theory could enhance our understanding of frictions within the family and their implications for fertility outcomes.

Alongside developing new theory, we need to collect new data. Up until now, households have been the most widely used unit of survey in low-income countries.

New data collected using novel survey instruments could complement new models of the family by allowing researchers to study communication and coordination within families empirically.

The role that intergenerational relationships play in fertility decisions is another issue that remains relatively understudied. First, individuals may choose to have more children if they know that they can rely on their parents for help with childcare. Second, children could be a form of retirement plan in the absence of state-provided pension schemes – in this case, parents might choose to have more children in the hope that at least one of them will support them in their old age. To date, very little research quantifies how such linkages influence fertility in low-income regions. The interplay of these factors with economic development then brings about new questions. Structural change in the economy, which is associated with large urban migration flows, could change the supporting role of children, for example. The question of how fertility decisions and intergenerational family dynamics might respond to an increase in urban migration rates is open for research.

The list of open questions on the topic of fertility in low-income countries expands beyond the suggestions brought forward at the workshop. Another fruitful area for future research, for example, is child labor. In much of the developing world, children help generate income or help with time-consuming household tasks such as fetching water and firewood (in regions without electricity or piped water), which can free up adults' time for more productive activities. This could have important implications for fertility decisions, but the literature on this remains thin.

WORK

Much of the existing body of research on adult women's economic choices focus on how fertility interacts with labor supply decisions. Childbearing may act as a barrier to participation in paid employment, especially in settings where economic opportunities are scarce, childcare services are non-existent and most of the child-rearing falls on women. This section reviews the evidence from developed countries on gender gaps in labor market outcomes, the role that children play in explaining these inequalities, and how social norms influence many labor market decisions.
An extensive literature documents gender gaps in labor force participation, wages, and occupational choice. While there seems to be convergence in the earnings of men and women across levels of development – driven by narrowing gaps in labor

force participation and wages – recent evidence suggests that this convergence has stalled in developed countries – a fact largely attributable to the persistent role of children.[20]

Most of what we know about the relationship between fertility and labor market inequality is about developed countries. Many studies show strong labor market penalties associated with childbearing in high-income settings. Figure 7 shows that the birth of the first child leads to a 20% earnings gap between women and men in Denmark, which persists throughout the rest of their careers.[21] It is important to note that Denmark is one of the most egalitarian countries in the world – we should therefore think of 20% as a lower bound estimate of the "child penalty" in high-income countries. Traditional gender norms may be the underlying explanation for persistent child penalties: other recent work on this topic suggests that we can rule out alternative interpretations such as biological constraints.[22]

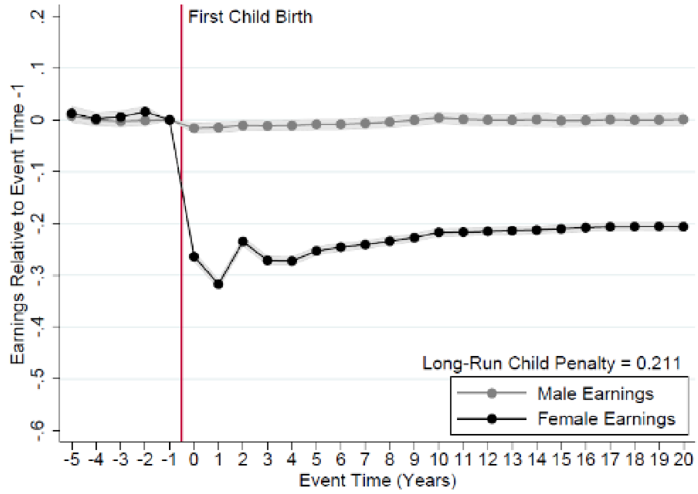


Figure 7. The child penalty on mothers: gender gap in earnings before and after the birth of first child
[Kleven, Landais & Sogaard 2018]

Gender roles have deep historical roots, ranging from traditional agricultural practices[23] to language.[24] A growing body of research suggests that these norms are persistent – typically transmitted by older generations in the family[25] – but malleable.[26] Importantly, recent research stresses the importance of the *perception* of gender norms for labor market outcomes – and how this perception can be wrong.[27] Taken together, this evidence suggests that policy can help alter deep-rooted social norms that have potentially negative consequences for economic growth.

Social norms alone do not determine women's entire work trajectories. Aggregate economic forces – like structural transformation – can shift the status quo in women's participation in the labor market. For instance, recent literature shows that the fact that a large employment share switched away from the manufacturing sector towards the service sector helped close the gender gap in access to economic opportunities in the developed world.[28]

Gender inequality in labor markets has crucial implications for economic efficiency and development. Efficiency is maximized if the most talented do the jobs where the return to talent is largest – selecting mostly from one gender lowers the average talent and worsens the match.[29] On top of the inherent good of improved gender equality, policies encouraging equal access to all sectors of occupation across genders may therefore also provide large net output improvements for low-income countries – although no research has yet quantified this to date due to the paucity of data.

Work: questions arising

The literature covered in this section draws exclusively on evidence from developed countries. This is no coincidence: it reflects a substantial gap in knowledge about the size, causes and consequences of labor market inequalities in low-income countries. A broad research agenda thus lies ahead of us.

The first set of open questions on the topic of gender, jobs, and poverty is whether findings on the constraints that women face in labor markets in developed countries replicate in low-income settings. For instance, we know little about the size of child penalties in the developing world. To this date, there are also very few studies on occupational segregation in low-income countries. Documenting the type of work (outside/inside the home, permanent/seasonal, formal/informal) and sector of occupation chosen by men and women would shed light on the match of skills to occupations – and the role that fertility may play in this – in these countries. This research agenda could guide the design of policies seeking to reduce gender gaps in access to economic opportunities.

Labor demand factors – which, along with social norms, shape the set of suitable employment opportunities available for women in low-income countries – could also be a major determinant of women's fertility and employment choices; but to date, this topic remains relatively under-studied.

We must also return to questions about the intra-household allocation of labor to different tasks. Whilst historical factors might explain gender specialization in work inside versus outside the home today, there is little research on whether this specialization still makes economic sense today. Theoretical and empirical work on this topic could shed light on the potential for improved psychological wellbeing from narrowing the gap in outside/inside the home labor supply between men and women throughout the world.

It is important to note that much of this new research agenda relies on the collection of new data. Accurately quantifying gender inequality in labor markets requires high-quality data on women and men's work inside and outside the home. To study gender inequality in labor markets from a long-run perspective, the G²LM | LIC program will also encourage the collection of data on adult individuals' parental background (e.g. occupation, education, earnings, and fertility of parents). Quantifying the transmission of the determinants of labor market outcomes across generations could add much to our understanding of the persistence of gender inequality and poverty in low-income countries.

Panel Discussion 1: From Research to Policy and Back

The ultimate purpose of encouraging novel, high-quality research on the questions at the heart of the G²LM | LIC program is to inform policy-making in low-income countries. The inaugural workshop included a panel discussion between academics and DFID's Chief Economist to consider the challenges of bridging the gap between policy and theory and propose some key solutions.

There is a gap in the information and communication flow between academics and policymakers. Further, the research and policy world have different standards of proof, time horizons, and incentives. However, the two worlds are also interdependent: research informs policy, and the needs of policymakers inspire new research.

Professor Nava Ashraf (henceforth NA) draws some key lessons from her years of experience working closely with the Zambian Ministry of Health. She finds it most effective to involve policy-makers from the very start – at the stage of defining the research question. Collaborating from the nascent phases of a research project helps identify the right research questions – those that are of interest to policymakers and fill a gap in the scientific literature. Then, she recommends running the research project with the policymakers, as a team, so that any preliminary findings and new questions arising from the research can feed into policy all along the way. When the project reaches completion, an established partnership between the research and policy teams can ensure that any research-backed policy resulting from the project feeds back into future research.

NA illustrates the success of such a collaboration process with the example of her and her co-authors' field experiment on community health workers (CHWs) recruitment in Zambia.[30] This project inspired further research in collaboration with the government, at the latter's request.

Academics and policy-makers may appear to have different agendas, while they often complement each other to reach a common goal. Professor Robin Burgess (henceforth RB) emphasizes that the bridge between research and policy is a two-way feedback loop. Research provides the microanalysis that can then be scaled up at the macro level, while "big picture" policy issues often provide the foundation for studies at the micro-level. RB recommends focusing on "big" questions when looking for a research topic, as the best research projects in development economics are anchored in real-world policy problems.

Taking stock of his career as a researcher in development economics thus far, RB reaches another conclusion about the relationship between research and policy: ideas migrate. As an example, his research with colleague Professor Michael Greenstone on how to get users to pay for electricity in Bihar, India, will soon be migrating to different settings: the governments of Myanmar and Pakistan are now seeking collaboration with them on similar research. The migration of ideas is also reflected in his and co-authors' partnership with the NGO BRAC: the collaboration started with the will to evaluate the impacts of graduation programs as a poverty-alleviation tool, but the team now also works with BRAC on training and adolescent empowerment programs.

However, as Dr. Rachel Glennerster (henceforth RG) points out, feedback between research and policy is not always possible for every single issue. Research is costly and time-consuming, so governments may not always have the resources or time to hire researchers to run a multi-year study to investigate a specific policy problem.

Nonetheless, research on a specific topic can often be transferred to an entirely different sector, suggesting that the lack of directly relevant research is not necessarily a barrier to effective policy design. As an example, RG recalls being introduced to Zambia Ministry of Health officials by NA to discuss takeaways from her research on education policies. Identifying the parallels between different strands of research, and how they fit in with different policy issues, is part of an important intermediation agenda – which, according to RG, remains largely unfulfilled. As the bridge between policy and research grows stronger, so does the need for high quality, thorough intermediation efforts.

Panel Discussion 2: Questions for Future Research

Professor Marianne Bertrand (henceforth MB) and Professor Christopher Pissarides (henceforth CP) closed the **G²LM | LIC** program's inaugural workshop by proposing some key directions for this nascent field of research. They both recommend thinking carefully about the implications of upcoming major disruptions to the world of work when defining new questions on gender inequality in labor markets in developing economies.

There is no doubt that labor markets in low-income countries will experience massive disruptions from technological advances (e.g. automation) and structural change in the coming decades – but the effects of these disruptions on gender disparities in access to economic opportunities are hard to predict. Structural change may shift the employment profiles of some women while excluding others. For example, CP cited the case of China, where men tend to migrate alone from rural to urban areas in search of higher-earning opportunities while their wives stay behind to cultivate the family's land.

It is also unclear whether past transformations undergone by labor markets in developed countries provide a clear guide to the future. In the discussion, MB emphasized that the question of whether trends in labor demand in the developing world in the next 50-100 years will be as beneficial to women as post-WWII trends in the developed world has not yet been answered.

Major changes to the world of work in low-income countries could either widen or narrow the gender gap in labor market outcomes. On one hand, the rise of service-led growth and the expansion of the digital economy hold promise for female occupational choice and mobility. As highlighted by CP, China's experience of digitalization speaks to this. The Alibaba platform has empowered many women in remote areas in China to create businesses through financing and access to markets. Perhaps digital finance services could spur similar opportunities for women in Sub-Saharan African countries (like Kenya, where M-Pesa is widely used).

On the other hand, advances in automation could reduce the overall pool of job opportunities for which male and female workers must compete. As MB pointed out in the panel discussion, the possibility that economic growth might be on a "jobless" trend makes this research agenda even more pressing. In India, IT service companies are already losing ground to automatic cloud-based computing systems while robots have started replacing humans in car manufacturing plants.

The implications of a future of jobless growth for women's progress in gaining equal access to labor market opportunities are unclear. One concern is that this trend could lead to a backlash against women – this could be particularly severe in societies where more liberal gender norms are only newly emerging. How do we prepare governments to defend women's access to equal work opportunities when jobs are scarce?

At this stage, we simply do not know enough about the match between talents, skills, and jobs across men and women in low-income economies to speculate about the future of gender inequality in these countries. Even in advanced economies, on which we have access to a lot of data, gender gaps could go in either direction. CP claims that the jobs created in the age of AI might be more women-friendly than those they will supplant in high-income countries. However, he also acknowledges that the top-level positions that will benefit most from new technologies are predominantly held by men.

With time – and possibly as a result of changes to the structure of the economy – perceptions about the value and prestige of jobs change. Importantly, this could shift norms in a direction that could either attenuate or exacerbate gender segregation in occupations across the skill distribution. As a cautionary tale, CP takes the example of professional chefs. Half a century ago, professional kitchen work was regarded as a low-paying occupation held primarily by women. In recent years, the social standing of the restaurant industry has increased, and the profession has become better paid and more prestigious – and it is now largely dominated by men.

We need to collect and assemble new data to attempt to answer open questions on the future of gender gaps in labor markets in the context of low-income countries. Time-use surveys, for example, would give valuable information about the allocation of tasks within households and the share of men's and women's time spent working inside versus outside the home. As CP emphasized during the panel discussion, many changes in market activity involve re-allocating work from the home to the market. But transitioning to market work may not necessarily improve individuals' wellbeing. According to him, time-use data would be complementary with life satisfaction surveys – these could provide insights on the determinants of men's and women's wellbeing across different types of work and levels of income.

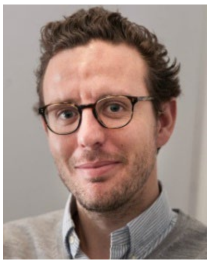
About the authors

Oriana Bandiera is the Sir Anthony Atkinson Professor of Economics and the Director of the Suntory and Toyota Centre for Economics and Related Disciplines (STICERD) at the London School of Economics. She is director of the research program in State Capabilities within the International Growth Centre (IGC) and of the Development Economics Program at the Centre for Economic Policy Research (CEPR), and co-editor of *Microeconomic Insights* and *Economica*. Her research focuses on the ways in which incentives affect people's behaviour, and how far these effects depend on social context or social relationships. Oriana won the IZA Young Labor Economist Award in 2007 and the Yrjö Jahnsson Award in 2019. She is the director of the **G^{2}LM | LIC** program.

Céline Zipfel is a PhD student in Economics at the London School of Economics. Her dissertation research focuses on the intergenerational transmission of socioeconomic conditions in sub-Saharan Africa, with a focus on the role of high fertility in the persistence of poverty.

About the speakers

1. Evidence papers



Camille Landais is Professor of Economics at the London School of Economics and Political Science and director of the CEPR Public Economics Program. He was awarded the "Best French Economist Under 40" prize by *Le Monde* in 2016. His main fields are public finance and labor economics, and his research interests cover topics such as taxation, social insurance, and gender inequality in labor markets. At the workshop, Camille's presentation focused on the role of children in explaining the persistence of gender gaps in earnings, calling on recent evidence from high-income countries.

Imran Rasul is Professor of Economics at University College London, co-director of the Centre for the Microeconomic Analysis of Public Policy at the Institute for Fiscal Studies (IFS), and research co-director of the Entrepreneurship Research Group at the IGC. He is also Managing Editor of the *Journal of the European Economic Association*. His primary research interests are in labor economics, development economics, and the economics of the household. He won the IZA Young Labor Economist Award in 2007 and the Yrjö Jahnsson Award in 2019. Imran's presentation brought together recent evidence on the importance of early childhood investments for human capital development in low-income settings.

Michèle Tertilt is Professor of Economics at the University of Mannheim, an editorial board member of the *Review of Economic Studies*, and Associate Editor of the *Journal of Development Economics*. Her research concentrates on macroeconomics with a special focus on development and intra-family interactions. She is the recipient of the 2017 Yrjö Jahnsson Award. In her talk at the inaugural workshop, Michèle showed that transfers to women do not necessarily promote growth and emphasized the need for new research at the intersection of family and development economics.

Alessandra Voena is Professor of Economics at the University of Chicago and editor of the *Journal of Labor Economics*. Her research examines how social norms and the institutional environment shape the economic decisions of individuals and families. In her presentation, Alessandra discussed recent evidence on the impact of marriage payment customs on girls' education and child marriage, and on how miscommunication between husbands and wives affects fertility decisions in Sub-Saharan Africa.

2. Panel

Nava Ashraf is Professor of Economics and Research Director of the Marshall Institute at the London School of Economics, and co-director of the Psychology and Economics program at STICERD. She is also a Founding Associate of Economic Research on Identity, Norms and Narrative (ERINN). Her research fields are psychology and economics, economics of the family, and development economics.

Robin Burgess is Professor of Economics at the London School of Economics, Founder and Director of the IGC, and Director of the Development Economics Program at CEPR. He has published on a variety of topics – natural disasters, mass media, rural banks, land reform, labor regulation, industrial policy, taxation, poverty and growth.

Rachel Glennester is Chief Economist at the Department for International Development (DFID). She is currently on leave as Executive Director of the Abdul Latif Jameel Poverty Action Lab (J-PAL) and previously served as Scientific Director for J-PAL Africa and co-Chair of J-PAL's Education Program. She also helped establish the organisation Deworm the World, which has helped deworm 23 million children worldwide. Rachel's areas of research include randomized trials of health, education, microcredit, women's empowerment, and governance.

Marianne Bertrand is the Chris P. Dialynas Professor of Economics at the University Of Chicago Booth School Of Business. She is also Co-Director of Chicago Booth's Social Enterprise Initiative, Director of the Poverty Lab at the UChicago Urban Labs, and on the Board of Directors of J-PAL. She is an applied microeconomist whose research covers the fields of labor economics, corporate finance, and development economics. Her awards include the 2004 Elaine Bennett Research Prize and the 2012 Society of Labor Economists' Rosen Prize for Outstanding Contributions to Labor Economics.

Sir Christopher Pissarides is the Regius Professor of Economics at the London School of Economics, a Professor of European Studies at the University of Cyprus and Chairman of the Council of National Economy of the Republic of Cyprus, and the Helmut & Anna Pao Sohmen Professor-at-Large of the Hong Kong University of Science and Technology. Christopher specialises in the economics of labor markets, macroeconomic policy, economic growth and structural change. He received the 2010 Nobel Prize in Economics, jointly with Dale Mortensen of Northwestern University and Peter Diamond of MIT, for his work in the economics of markets with frictions.

[1] For a review of the existing evidence on this topic, see Almond, Douglas, and Janet Currie (2011) "Killing Me Softly: The Fetal Origins Hypothesis", *Journal of Economic Perspectives*, 25 (3): 153-72. [This paper reviews the empirical contributions of different fields of economics on Barker's fetal origins hypothesis, which has important implications for the modeling of human capital development.]

[2] Akombi B.J., K.E. Agho, D. Merom, A.M. Renzaho, and J.J. Hall (2017) "Child malnutrition in sub-Saharan Africa: A meta-analysis of demographic and health surveys (2006-2016)", *PLOS ONE* 12(5): e0177338. [This study provides a meta-analysis of the prevalence of malnutrition indicators (stunting, wasting and underweight) within four sub-regions of sub-Saharan Africa.]

[3] In his talk at the inaugural workshop, Imran Rasul presented findings from his recent paper with Pedro Carneiro (UCL) and Lucy Kraftman (IFS) in northern Nigeria, which evaluates the effects of providing information and unconditional cash transfers to pregnant mothers on children's early life nutrition and health. The authors find that the program reduced stunting of children by 7% and extreme stunting by 14%. The intervention also led to a 25% reduction in incidence of diarrhoea, a 74% increase in the use of de-worming medication, and a 350% increase in completion of vaccinations.

[4] Early findings from an eleven-year follow-up survey of the recipients of BRAC's Ultra-Poor program in Bangladesh – a nationwide program that transfers livestock assets and skills to the poorest women – show that children of the recipients who were aged 0-5 at the time of the intervention were less likely to be stunted or malnourished eleven years later.

[5] Jayachandran, Seema and Rohini Pande (2017), "Why Are Indian Children So Short? The Role of Birth Order and Son Preference," *American Economic Review*, 107(9): 2600–2629; Rossi, Pauline and Lea Rouanet (2015), "Gender Preferences in Africa: A Comparative Analysis of Fertility Choices," *World Development*, 72: 326-345. [Jayachandran and Pande document gender gaps in child stunting in India and Sub-Saharan Africa. They estimate the gender gap to be significantly larger in India and attribute this to eldest son preference – a social norm much more common throughout India. Rossi and Rouanet find that son preference is strong and increasing in North Africa, while in Sub-Saharan Africa, behaviors reveal preference for variety or no preference.]

[6] Ashraf, Nava, Natalie Bau, Nathan Nunn, and Alessandra Voena (2019) "Bride Price and Female Education", forthcoming in the *Journal of Political Economy*. [The authors find that, in Indonesia and Zambia – two countries where the bride price marriage custom is widespread – the amount of bride price received by the parents is increasing in their daughter's education. Among bride price ethnic groups, female educational attainment is thus higher and more responsive to the school construction programs that took place in the two countries.]

[7] Bau, Natalie (2019) "Can Policy Change Culture? Government Pension Plans and Traditional Kinship Practices", mimeo UCLA. [This paper shows that patrilocality and matrilocality traditions incentivise parents to invest in the education of children who traditionally co-reside with them. Consequently, the introduction of state pension schemes, which reduces the practice of these traditions, also reduces educational investment.]

[8] La Ferrara, Eliana, and Annamaria Milazzo (2017) "Customary Norms, Inheritance, and Human Capital: Evidence from a Reform of the Matrilineal System in Ghana," *American Economic Journal: Applied Economics*, 9 (4): 166-85. [This study exploits a policy experiment in Ghana that increased the land that children from matrilineal groups could inherit from their fathers. The authors find that sons of landowners exposed to the reform received 0.9 less years of education, whereas girls' education did not change in the reform, as their inheritance was unaffected.]

[9] UNICEF (2018) "Child Marriage: Latest trends and future prospects".

[10] Corno, Lucia, Nicole Hildebrandt and Alessandra Voena (2019) "Marriage, Weather Shocks and the Direction of Marriage Payments ", mimeo U-Chicago. [The authors' analysis of the marriage behaviour of a sample of 400,000 women reveals that the age of marriage responds to droughts, and that the sign of this response depends on marriage payment customs. In Sub-Saharan Africa – where bride price payments are a source of income for the woman's family –droughts lead to increases in child marriage rates. In India, where instead, the bride's family pays a dowry to the groom's family, child marriage rates go down in response to droughts.]

[11] Chari, A.V., Rachel Heath, Annemie Maertens, Freeha Fatima (2017), "The causal effect of maternal age at marriage on child wellbeing: Evidence from India," *Journal of Development Economics*, 127 (42-55). [The authors find that delayed marriage results in significantly better child health and educational outcomes.]

[12] World Bank Databank (Source: UNESCO Institute for Statistics)

[13] Bandiera, Oriana, Niklas Buehren, Robin Burgess, Markus Goldstein, Selim Gulesci, Imran Rasul and Munshi Sulaiman (forthcoming) "Women's Empowerment in Action: Evidence from a Randomized Control Trial in Africa," *American Economic Journal: Applied Economics*. [The authors find that four years post-intervention, adolescent girls in treated communities are more likely to be self-employed. In addition, teen pregnancy, early entry into marriage or cohabitation and the share of girls reporting sex against their will fall sharply.]

[14] World Bank Databank

[15] Fernández, R., & Fogli, A. (2006) "Fertility: The Role of Culture and Family Experience,"*Journal of the European Economic Association, 4*(2/3), 552-561. [Using the total fertility rate in a woman's country of ancestry as a cultural proxy and her number of siblings to capture direct family experience, the authors find that both variables are significant determinants of fertility.]

[16] Ashraf, Nava, Erica Field, and Jean Lee (2014) "Household Bargaining and Excess Fertility: An Experimental Study in Zambia," *American Economic Review*, 104 (7): 2210-37. [Using an experiment in Zambia that varied whether women were given access to contraceptives alone or with their husbands, this study finds that women given access with their husbands were 19% less likely to seek family planning services, 25% less likely to use concealable contraception, and 27% more likely to give birth. However, women given access to contraception alone report a lower subjective well-being, suggesting a psychosocial cost of making contraceptives more concealable.]

[17] Ashraf, Nava, Erica Field, Alessandra Voena and Roberta Ziparo (2019) "Maternal Mortality Risk and the Gender Gap in Desired Fertility". [In this ongoing work, the authors use an RCT to provide information on the maternal mortality risks of childbearing to husbands, and finds that this decreases the gap in desired fertility between husbands and wives.]

[18] Tertilt, Michèle (2005) "Polygyny, Fertility, and Savings," *Journal of Political Economy*, 113(6): 1341-71. [In this paper, the author builds a quantitative model of polygyny where, in equilibrium, widespread polygyny is only sustainable if population growth is high and men marry women younger than them. Her model calibrations indicate that enforcing monogamy lowers fertility and shrinks the spousal age gap.]

[19] Rossi, Pauline (2019) "Strategic Choices in Polygamous Households: Theory and Evidence from Senegal," *The Review of Economic Studies*, 86(3): 1332–1370. [This study of the fertility choices of co-wives in Senegal suggests that polygamy undermines the fertility transition in Sub-Saharan Africa by incentivizing women to want many children. The author shows that co-wives compete in the number of children they give birth to, because children are the best claim to resources controlled by the husband.]

[20] Kleven, Henrik and Camille Landais (2017) "Gender Inequality and Economic Development: Fertility, Education, and Norms," *Economica* 84: 180-209. [This paper studies the evolution of gender inequality in labor market outcomes (earnings, labor supply, and wage rates) across levels of economic development, assembling data from 248 surveys from 53 countries covering years 1967-2014.]

[21] Kleven, Henrik, Camille Landais and Jakob Sogaard (forthcoming), "Children and Gender Inequality: Evidence from Denmark" *American Economic Journal: Applied Economics.* [Using Danish administrative data, the authors study the impacts of children on gender inequality in the labor market. The arrival of children creates a long-run gender gap in earnings of around 20% driven by hours worked, participation and wage rates.]

[22] Moberg, Ylva (2016) "Does the gender composition in couples matter for the division of labor after childbirth?" IFAU Working paper 2016:8. [Swedish data shows similar child penalties for pregnant and non-pregnant mothers.]

[23] Alesina, Alberto, Paola Giuliano and Nathan Nunn (2013) "On the Origins of Gender Roles: Women and the Plough," *The Quarterly Journal of Economics*, 128(2): 469–530. [Consistent with existing hypotheses, this paper provides empirical evidence that the descendants of societies that traditionally practiced plough agriculture have less equal gender norms, measured using reported gender-role attitudes and female participation in the workplace, politics, and entrepreneurial activities.]

[24] Jakiela, Pamela and Ozier, Owen (2018) "Gendered Language," World Bank Policy Research Working Paper No. 8464. [Drawing on a broad range of historical and linguistic sources, this paper constructs a measure of the proportion of each country's population whose native language is a gender language. Gender languages appear to reduce women's labor force participation and perpetuate support for unequal treatment of women.]

[25] Kleven, Henrik, Camille Landais and Jakob Sogaard (forthcoming) "Children and Gender Inequality: Evidence from Denmark" *American Economic Journal: Applied Economics.* [This paper quantifies the child penalty in earnings in Denmark and shows that child penalties are transmitted through generations, from parents to daughters, suggesting an influence of childhood environment on gender identity.]

[26] Raute, Anna, Uta Schönberg and Barbara Treude (2019) "Like mother, like daughter? Societal Determinants of Maternal Labor Supply – Evidence from the German reunification" [Preliminary findings about post-reunification Germany indicate that a mother's labor supply decisions can change with exposure to a more egalitarian culture in adulthood than the environment in which they grew up.]

[27] Bursztyn, Leonardo, Alessandra González, and David Yanagizawa-Drott (2018) "Misperceived Social Norms: Female Labor Force Participation in Saudi Arabia," mimeo U-Zurich. [This paper provides evidence that most young married men in Saudi Arabia privately support female labor force participation (FLFP) outside of the home, but that they substantially underestimate the level of support for FLFP by other similar men. Correcting these misperceptions increases married men's willingness to let their wives join the labor force.]

[28] Ngai, L. Rachel, and Barbara Petrongolo (2017) "Gender Gaps and the Rise of the Service Economy," *American Economic Journal: Macroeconomics*, 9 (4): 1-44. [The authors show that the US experience from 1968 to 2008 illustrates the importance of structural transformation for FLFP, reallocating labor demand from goods (brawn) to service (brain) industries.]

[29] Hsieh, Chang-Tai, Erik Hurst, Chad Jones and Peter Klenow (forthcoming) "The Allocation of Talent and U.S Economic Growth," *Econometrica*. [This paper quantifies the efficiency cost of occupational segregation across groups: the authors find that the improved allocation of talent can explain between 20% and 40% of US growth between 1960 and 2010.]

[30] Ashraf, Nava, Oriana Bandiera, and Scott S. Lee (2019) "Losing Prosociality in the Quest for Talent? Sorting, Selection, and Productivity in the delivery of Public Services," forthcoming in *American Economic Review*. [This study embeds a field experiment in a nationwide recruitment drive for nurses in Zambia to test whether career benefits attract talent at the expense of prosocial motivation. The marginal applicants in treatment are more talented and equally pro-social. These are hired, and they perform better at every step of the chain: they deliver more services, promote institutional childbirth, and reduce child malnutrition by 25% in the communities they serve.]