

WORKING PAPER 1

Global evidence on the impact of centre-based quality childcare on maternal employment and early childhood development outcomes

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TABLE OF CONTENTS

	Acknowledgements	5
	List of abbreviations	6
	Abstract	7
1	Introduction: Defining the problem	8
2	What is quality centre-based childcare: Nurturing care for early childhood development	17
3	Methodology	20
4	Childcare support: Enabling factors for FLFP and improved ECD outcomes	23
5	Impact of childcare and FLFP: Key evidence – global	26
6	Impact of childcare and ECD: Key evidence – global	29
7	Discussion	32
	Annexures	34
	Bibliography	36

LIST OF TABLES AND FIGURES

Table 1:	Structural variables and process variables	21
Table 2:	Maternity support and benefits provision in India and economies whose childcare models are explored in detail	24
Figure 1:	Top barriers for entry into labour force by country	9
Figure 2:	Women's and men's perception about women entering the labour force and unpaid work	10
Figure 3:	Labour force participation rate, female (% of female population ages 15+)	11
Figure 4:	Ministries offering social protection programmes for women and children across the lifecycle	13
Figure 5:	Essential ECD interventions	17
Figure 6:	Nurturing care and social context	18
Figure 7:	Pathways by which centre-based childcare programmes might affect child nutritional status, health and development outcomes as well as maternal employment and time	19
Figure 8:	Mother's labour market participation and enrolment rates of children under the age of three in formal childcare, 2014	25
Figure 9:	Evidence map indicating studies capturing the impact of childcare on maternal employment	26
Figure 10:	Evidence map indicating studies capturing the impact of childcare on ECD outcomes	29
Figure 11:	Effect of duration of attending childcare and starting age on proficiency in academic performance at age 15, among children in OCED countries	31
Figure 12:	Percentage spend of GDP, on childcare for children (zero-six years), across countries	31
Figure 13:	Association of pre-school enrolment and the schooling gap for 73 LMICs	32

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LIST OF ABBREVIATIONS

AWC	Anganwadi Centre
BMGF	Bill & Melinda Gates Foundation
CECED	Centre for Early Childhood Education and Development
CMAM	Community Management of Acute Malnutrition
ECD	Early Childhood Development
ECCE	Early Childhood Care and Education
FLFP	Female Labour Force Participation
GDP	Gross Domestic Product
ICDS	Integrated Child Development Services
IFMR LEAD	Institute for Financial Management and Research Leveraging Evidence for Access and Development
ILO	International Labor Organization
ISST	Institute of Social Studies Trust
IWWAGE	Initiative for What Works to Advance Women and Girls in the Economy
LMIC	Low- and Middle-Income Country
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
NGO	Non-Governmental Organisation
NOSOSCO	Nordic Social Statistical Committee
NSS	National Sample Survey
OECD	Organisation for Economic Co-operation and Development
PISA	Program for International Student Assessment
WASH	Water, Sanitation and Hygiene

ABSTRACT

India has low Female Labour Force Participation (FLFP) and this has ramifications on women's economic empowerment and India's Gross Domestic Product (GDP). The issue is compounded by time-poverty endured by women, masking the burden of unpaid work, a part of which is unpaid care for the children and the elderly. Often, social protection and child development programmes in India, and globally, target a certain population in isolation, ignoring unintended consequences – for example, child nutrition programmes often prescribe interventions without taking into account the demands these impose on a woman's time. At a household level, this translates into exacerbating time poverty for women and deprives children of direct care in early childhood. At the state level, this results in disjointed or siloed social protection policies and diluted programmes for women's empowerment and child development.

“Centre-based Quality Childcare: A Case for Public Investment for Improved Maternal Employment and Early Childhood Development” is a three-part series of papers. The series is a commentary that emphasises the inter-connectedness of labour, women's empowerment, and child development policies and programmes. It elaborates on this inter-connectedness's criticality in planning and implementation to actualise the additive effects (positive feedback loops) and alleviate exposure to risk factors and unintended consequences (negative feedback loops), especially at the critical points in the life cycle of a woman (childhood to adulthood).

More specifically, this first paper in the series maps the pathway on how accessible, affordable and quality centre-based childcare can support women by reducing and redistributing the unpaid care work, thereby alleviating time poverty to a certain extent and improving the quality of care for children. It brings together evidence of how public provision of centre-based childcare has had positive impact on the two outcomes of interest – maternal employment as well as various aspects of early childhood development for children under six years of age.

INTRODUCTION: DEFINING THE PROBLEM

In India, high economic growth since the mid-2000s has brought significant change to the lives of Indian women, and yet Female Labour Force Participation (FLFP) has stagnated at 24-25 per cent, with the latest labour surveys suggesting a decline since 2005.¹ Increasing FLFP by 10 percentage points could add US\$700 billion to India's Gross Domestic Product (GDP) by 2025. An equal participation of women can increase India's GDP by 16-17 per cent, and also benefit children,² households and communities.³

However, throughout the lifetime of a woman, there are multiple pitfalls, barriers or risk factors that decrease the chances of her participating in the labour force. Moreover, FLFP rates only provide a partial analysis of women's work, especially in India. Indian women are more likely to be engaged in vulnerable and underpaid work; more often, they are susceptible to unpaid work, and unpaid care work.⁴ More specifically, on the female labour demand side in India, factors such as firm-based gender biases resulting in lower or restricted employment opportunities (industry-specific work hours, shifts), lower education (skill or training)⁵ – as compared to male workers⁶ – often *reinforced* by social norms, cause women to stay away from employment. The few women who receive the requisite education or skillsets find themselves with lower bargaining powers in the wage negotiating process in the market.⁷ On the supply side, the propensity for doing unpaid work is contingent upon the high cost of entering the paid formal workforce; women's role as caregivers and household managers, especially after marriage, is reinforced by families and often internalised by the women.^{8,9}

This cost encompasses a combination of demand-supply side factors such as: i. availability of formal paid employment; ii. gendered barriers to access the labour market (work hours, distance travelled, perception of the community about working women and role as a caregiver); and iii. availability of affordable and quality childcare support.¹⁰ This paper will largely focus on points ii and iii.

¹ Fletcher, E.K., Pande, R. and Moore, C.T. (2017). Women and Work in India: Descriptive Evidence and a Review of Potential Policies.

² See section on evidence on centre-based childcare and impact on ECD outcomes.

³ Woetzel, J., Madgavkar, A., Gupta, R., Manyika, J., Ellingrud, K., Gupta, S. and Krishnan, M. (2015). The Power of Parity: Advancing Women's Equality in India, McKinsey.

⁴ Macroeconomic Impacts of Gender Inequality and Informality in India; Women & Unpaid Care Work: Understanding the Indian Situation (2018). UNDP.

⁵ Ibid.

⁶ World Development Indicators (2013). Retrieved from <http://data.worldbank.org/data-catalog/worlddevelopment-indicators>.

⁷ Trade Union Membership Statistics (2011). ILO Department of Statistics.

⁸ Rustagi, P. (2010). Changing Patterns of Labour Force Participation and Employment of Women in India. *The Indian Journal of Labor Economics*.

⁹ Sudarshan, R.M. (2014). Enabling Women's Work, ILO.

¹⁰ Female labour force participation in developing countries. Women Empowerment and Economic Development. *Journal of Economic Literature*, Vol. 50 (4): pp. 1051-079 Sher Verick International Labour Organization, India, and IZA, Germany.

The gendered nature of entering the labour force, globally and in India

Women's and men's perception about women participating in paid and unpaid work

The International Labor Organization (ILO) and Gallup (2017) conducted a household survey across 142 countries to ask men and women what they thought were the top challenges faced by the women in paid jobs¹¹ (see Annexure 1: Survey overview and the questions asked). Most Low- and Middle-Income Countries (LMICs) countries in Latin America, Africa and Asia, and especially India (Figure 1), reported having to maintain family/work balance without much support as a major barrier for them to enter the labour force.

Figure 1: Top barriers for entry into labour force by country



Source: ILO Gallup report, Towards a better future for women and work: Voices of women and men.

Moreover, in India, as per the National Sample Survey (NSS) data, 2011-12, more than 30 per cent of women engaged primarily in domestic activities – and counted outside the labour force – stated that they would like to work and thus constitute a potential addition to the labour force or latent labour supply.¹² However, the process of job search itself is gendered and poses a risk factor in discouraging women from entering the workforce. Despite their stated willingness to work, women report searching for jobs with less intensity than men.¹³ According to NSS data, 2011-12, 33.3 per cent of women report not seeking a job when they were unemployed compared to just 18 per cent of men¹⁴ which might be due to the community's perception of working women, constricted mobility of women, lack of access to paid jobs, and

¹¹ The ILO and Gallup survey asked women and men in 142 countries whether they preferred women to work paid jobs, care for their families and homes or do both (sample 149,000)

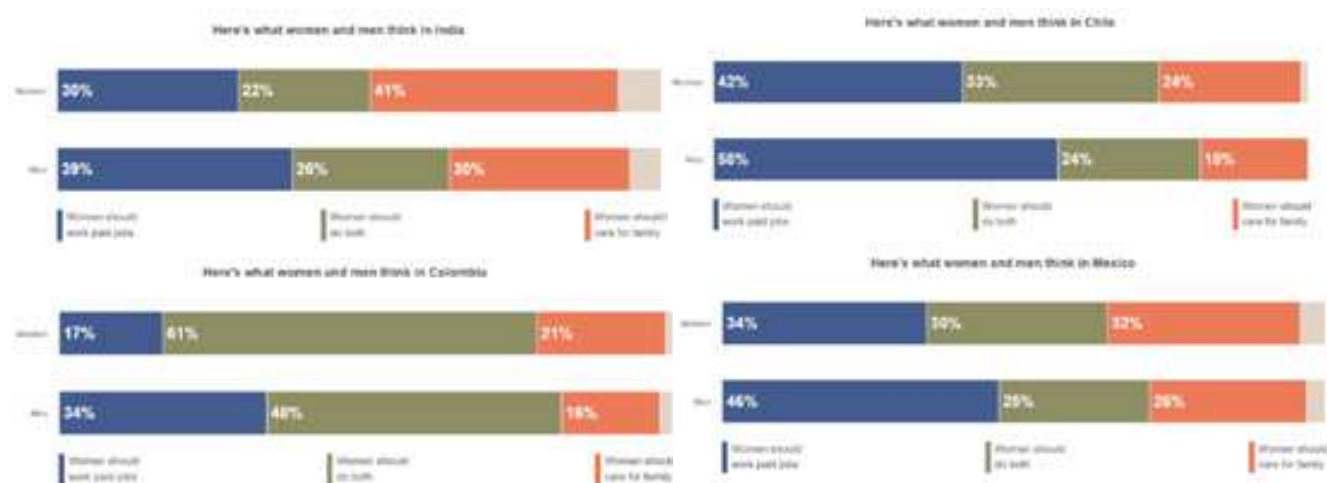
¹² Fletcher, E.K., Pande, R. and Moore, C.T. (2017). Women and Work in India: Descriptive Evidence and a Review of Potential Policies.

¹³ Ibid.

¹⁴ Ibid.

cost trade-offs due to being the caregiver. Social norms in India dictate that women should get married early, bear a child at the earliest post her marriage, and care for the family.^{15,16} This social conditioning influences the perception of both men and women about entering paid jobs, whether to be a caregiver or do both, as is reflected in Figure 2, where 41 per cent of Indian women think they should only care for the family.

Figure 2: Women and men's perception about women entering the labour force and unpaid work



Source: Women at Work Trends 2016 Report.

This is surprisingly much higher when compared to the 30 per cent of Indian men who think that women should stay at home. Also, these percentages are significantly higher when compared to some of the Latin American countries which have similar cultural practices, similar barriers for women entering the labour force (Figure 1) and also similar FLFP between the 1990s-early 2000s (Figure 3).

In the context of FLFP, most Latin American countries – specifically Chile, Colombia and Mexico – report domestic and care-related activities as the main barriers for non-participation in the labour force.¹⁷ In the 1990s, Chile, Colombia and Mexico had similar FLFP rates as those in India (Figure 3) and yet, all three countries have seen an increase of 19, 29 and 11 percentage points, respectively, in the past 17 years, whereas India has seen a decline of 8 percentage points.¹⁸

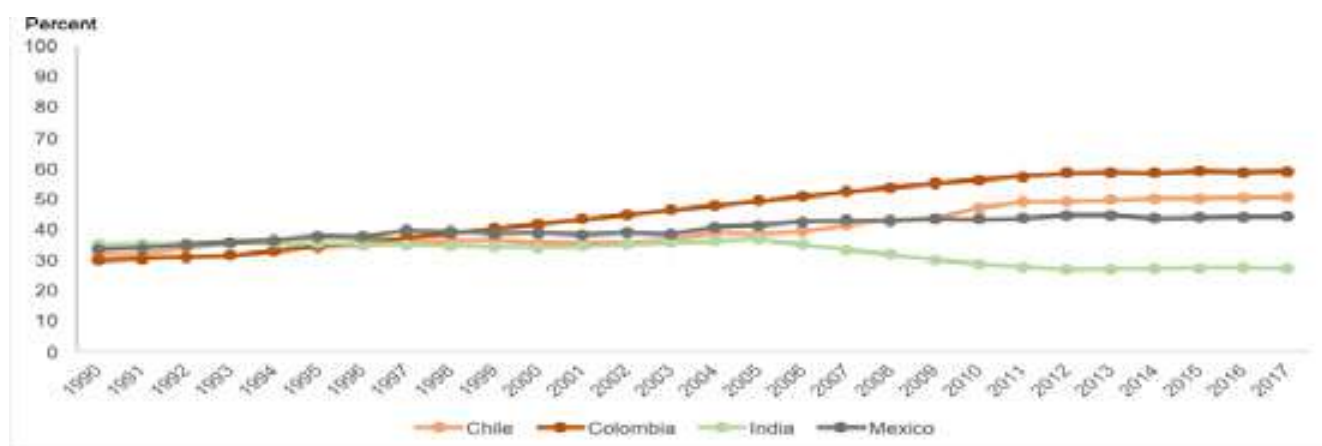
¹⁵ Rustagi, P. (2010). Changing Patterns of Labour Force Participation and Employment of Women in India. *The Indian Journal of Labour Economics*.

¹⁶ Sudarshan, R.M. (2014), *Enabling Women's Work*, ILO.

¹⁷ Trabajo decente e igualdad de género. (2013). *Políticas para mejorar el acceso y la calidad del empleo de las mujeres en América Latina y el Caribe Informe Regional*, Santiago, Chile.

¹⁸ The U-shaped hypothesis could be used as an argument that the two countries are in different phases of development; hence these three countries are ahead of the curve but, even then, it would be useful to understand how these countries moved forward on this upward trajectory.

Figure 3: Labour force participation rate, female (% of female population ages 15+)



Source: Modelled ILO estimate.

Women's role as a primary caregiver in India reinforces the inequity in employment

Women function as primary caregivers to their children. Often, the opportunity to work or attend to the child creates a double bind. As mentioned earlier, mothers with young children decide to work by looking at the trade-offs in childcare cost (explicitly, the actual fee and, implicitly, ease of access, hours of operation and quality, acceptability as per social norms) and their potential earnings.¹⁹ In 2009 -10, 38.4 per cent of rural and 19.6 per cent of urban women in the reproductive age bracket (15 to 49 years) participated in the labour force. In the prime reproductive age (20-29 years), 34.2 per cent of rural and 17.8 per cent of urban women were in the workforce. Peak participation was achieved by rural women: 49 per cent (aged 35-49 years) and urban women 27 per cent (aged 35-39 years).²⁰ An analysis of the NSS data, 1983-2011, indicates an increasing negative association between the presence of young children in the household and women's employment.²¹ It is also important to highlight that, often, women coming from low-income backgrounds do not have a choice to opt out of the labour force and resort to unpaid work or underpaid work. In fact, unpaid care work is a reality for women across the board and it manifests itself in the form of time-poverty.

Social protection and child development policies often reinforce the role of the woman as the primary caregiver, unintentionally reinforcing inequity in employment

The cumulative effect of these issues is reflected in the welfare policies and programmes for women and children at the state level. Often, social protection and child development programmes

¹⁹ Vuri, D (2016), "Do childcare policies increase maternal employment?". Maternity support policies' effectiveness in each country, regarding the maternal labour supply, depends on the availability, costs, and quality of childcare, and the pre-existing levels of labour force participation. IZA, World of Labour.

²⁰ Lingam, L. and Kanchi, A. Women's Work, Maternity and Public Policy In India, Study commissioned by the Ministry of Labour & Employment, Government of India and the International Labor Organization, New Delhi.

²¹ Bordia Das, M. and Zumbyte, I. (2017) Women's Employment, Child Care and Household Structure in Urban India.

in India, and globally, target a certain population in isolation, ignoring unintended consequences – for example, child nutrition programmes often prescribe interventions without taking into account the demands these impose on a woman's time.

Box 1: An example of the unintended consequence of ignoring unpaid care work in child development policies and programmes

Literature focused on gender has looked at the issue of women's unpaid care work as well as time-use study and explored the various barriers that exist for women. It has highlighted that there should be some action to address the issue of childcare. However, the literature focused on Early Childhood Development (ECD) (including health and nutrition) is largely centred on curriculum, explored modalities of home-based, centre-based care, and captured the science behind ECD programmes, mostly with the objective of studying the impact on children. A review of major ECD and social protection policies was undertaken in 144 LMICs. The findings indicate that only a small number of care-sensitive policies – 23 of 149 social protection policies and 40 of 263 policies on ECD – recognised the breadwinning role of women and took into account the gender-based division of unpaid care responsibilities at home (of these 40, 15 were from Latin America and 13 from Sub-Saharan Africa).²² Nearly all child development programmes have reinforced the role of women as the primary caregiver which, in addition to regular family duties, may lead to unintended consequences such as challenging women's participation in the labour force.²³

Furthermore, even when the state recognises its role in supporting families to ensure overall well-being of the women and children, welfare policies do not always offer seamless and integrated continuity in providing support, especially at critical junctures where women are vulnerable, possibly have lower autonomy, and are susceptible to being further marginalised (Figure 4). This makes women susceptible to losing out benefits, garnered at one stage of life, before entering the other stages of their lives.



²² Chopra, D., Kelbert, A.W. and Iyer, P. (July 2013). Institute of Development Studies, A Feminist Political Economy Analysis of Public Policies Related to Care: A Thematic Review.

²³ Some programmes, however, have integrated the reduction of women's unpaid care into their mandate and try to promote women's economic empowerment and children's welfare at the same time. For examples, see Annexure 2.

Figure 4: Ministries offering social protection programmes for women and children across the lifecycle

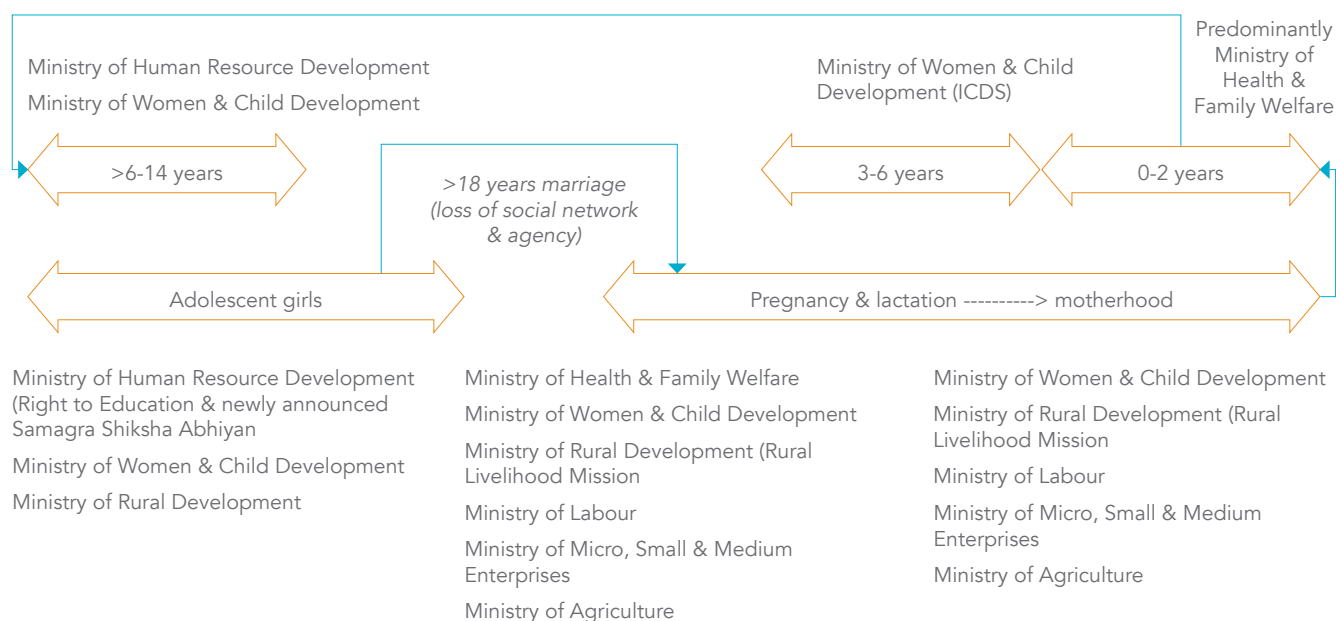


Figure 4 (not an exhaustive list, prepared for indicative purposes) highlights the various ministries with schemes relevant to women, girls and children. The figure captures, in decreasing order of significance, ministries and schemes when seen through a woman's lifecycle approach – an important lens when talking about women's economic empowerment and women's labour force participation. When a child is born, the Ministry of Women and Child Development is extremely relevant to the mother-child dyad. For young children and adolescents, there is a major push by the government to save the girl child, and then to educate the girl child (Right to Education and Beti Bachao, Beti Padhao). This has yielded favourable results: girls are staying in schools longer. However, given the social conditioning, girls are still married off at below 18 years of age. Such social processes affect women's ability to attain relevant skills, join the workforce and also has a health consequence, especially for maternal and child health, given the lack of awareness or agency for family planning.

Evidence from developed countries indicates that the level of maternal education and age and number of children influence the chances of a woman returning to the workplace at a later stage in life,²⁴ and public investments at these critical junctures can make a difference in improving the chances.^{25,26} Even though many schemes are geared to support women in achieving good health and socio-economic equity, often the benefits from one stage of her life are lost or diluted as she enters another. This is true especially during the prime reproductive age, where maximum support is needed by women to reap the benefits gained through training and education.

²⁴ Han, Wen-Jui, Ruhm, C.J., Waldfogel, J. and Washbrook, E. (2008). The timing of mothers' employment after childbirth.

²⁵ Baker, M. and Milligan, K. (2005). How does Job-protected Maternity Leave Affect Mothers' Employment and Infant Health?

²⁶ Ruhm, C.J. (1996). The Economic Consequences of Parental Leave Mandates: Lessons from Europe.

But what about the nurturing care for children, especially young children?

Box 2: Unpaid care work

“Unpaid care work” encompasses three aspects: direct care of persons; housework; and unpaid community work (Esquivel, 2014: 427). The distinction between time spent on the direct care of children and other forms of unpaid care is problematic, both because direct care cannot take place in the absence of ‘indirect’ care activities needed to run a household with children but also because direct childcare is often a secondary activity (i.e., women watch their children while they are also working in the fields or selling in the market).

Source: Razavi, 2007; Antonopoulos, 2008; Budlender, 2007; Zick and Bryant, 1996.

A study conducted by Dewan in four districts in India (Solapur, Thane, Pithoragarh and Hyderabad) found that women spent 8 per cent, 4 per cent, 7 per cent and 9 per cent of their time, respectively, on the care of children, the elderly and the challenged in a week.²⁷ A published study by the Organisation for Economic Co-operation and Development (OECD) across countries, found that, in India, men devote 36 minutes to unpaid work responsibilities, of which 36 per cent goes into housework with the remaining time spent on shopping, care for household members; the maximum time going towards travel-related or household activities. Indian women, on the other hand, spend 360 minutes on unpaid care activities in a day. The portions of time spent on housework (house management, cleaning, cooking and washing, etc.) reaches 85 per cent while time spent on care of children, the elderly and the ill is only about 15 per cent.^{28,29**}

This is important to note, as one of the arguments against equal participation in labour force is that women as primary caregivers should care for children, especially young children (also see Box 3 on page 16). This deprives the young children, especially from marginalised backgrounds, from direct care or nurturing care for ECD (as per the Deboboa, 2014 framework, in some places also referred to as Early Childhood Care and Education (ECCE). In the absence of direct care, children lose out on achieving optimum early childhood potential as well (for more details, see Chapter 2).

^{**} Note: Given the constraint in methodology of time-use data collection, it is hard to ascertain if the time is spent on childcare and elderly care, direct or indirect care. The study done by Dewan captures the exclusive time spent on care of the sick, elderly and children.

²⁷ Dewan, R. (2017). Invisible work & Invisible women, Table V.C.5, pp. 144.

²⁸ Ferrant, G, Pesando, LM, Nowacka, K (December 2014), OECD, Unpaid Care Work: The missing link in the analysis of gender gaps in labour outcomes.

²⁹ Please note, the general issue with the time use data is that it does not account for care being a constant activity, i.e., women tend to their kids while doing other household activities such as cooking, etc. This overlap is often ignored and hence the issue.

Unpaid work not only takes away from women's economic empowerment because of its invisible nature but also adversely affects their health and well-being. It also increases the risk factors that their child is exposed to in early developmental stages. Moreover, the NSS data, six rounds, 1983-2011, also indicate that for women living in a household that has teenage children and women over 50 years of age is positively associated with women's employment.³⁰ This often comes at the cost of the older sibling's education – often the sister – a compromise on her education to care for the younger child. Such situations arise due to an absence of affordable, accessible and quality childcare. In many OECD countries, data indicate a very strong correlation between the enrolment rates of children less than three years of age in centre-based childcare and countries that have high maternal employment rates, especially mothers with young children (for more details see Chapter 4). The provision of quality centre-based childcare can help mothers achieve a satisfactory work-life balance³¹ without compromising an older child's education and also provide the nurturing care that can help their children achieve better development potential.



³⁰ Bordia Das, M. and Zumbyte, I. (2017) Women's Employment, Child Care and Household Structure in Urban India.

³¹ Vuri, D. (2016). Do childcare policies increase maternal employment? IZA world of Labour.

Box 3: Examples of overlaps of informal labour and unpaid care work from the field study**³²

Example 1: Routine or time-use in a 24-hour format – rural

Bahnu Ben Rajesh Bai, Khanpur village, rural Gujarat (one of the grandmothers interviewed, along with her daughter-in-law who use the SEWA childcare centre) – two sons and one daughter.

Bahnu Ben wakes up at 5 am, gets ready for the day, prepares breakfast for the family, feeds them and, by 8 am, leaves her house to go to the farm to get feed for cattle. By 10 am, she returns and cooks lunch till 11 am. Then she leaves for work on someone else's farm till 1.30 pm. The days she doesn't go to collect cattle feed, she works on others farms, and then sometimes takes up Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) employment. Post 1.30 pm she returns home, serves lunch to her family and finishes up by 2-2.30 pm. She rests for an hour and then goes to work on the fields again from 3 to 6 pm. She gets INR 150 (US\$1.5) per day for working on the fields. She returns after 6 pm, prepares dinner till 8 pm; by 9.30 pm she finishes cleaning, eats dinner and then around 10-10.30 pm sleeps. Her daughter-in-law also works, and has a similar routine; they take turns to drop Bahnu Ben's grandchildren at the day-care centre. When she was younger, her son too attended the same day-care centre.

Example 2: Routine or time-use in a 24-hour format – urban

Shalu, a street sweeper in urban Delhi, uses the mobile creche childcare centre. She has four children – an 11-year-old son, a physically-challenged six-year-old daughter, a three-and-a-half-year-old son (who also keeps poor health as he was born with low birth weight, respiratory problems and is extremely weak), and a one-and-a-half-year-old daughter. In addition to this, she also takes care of her deceased brother-in-law's three children. Shalu's husband works as a domestic worker.

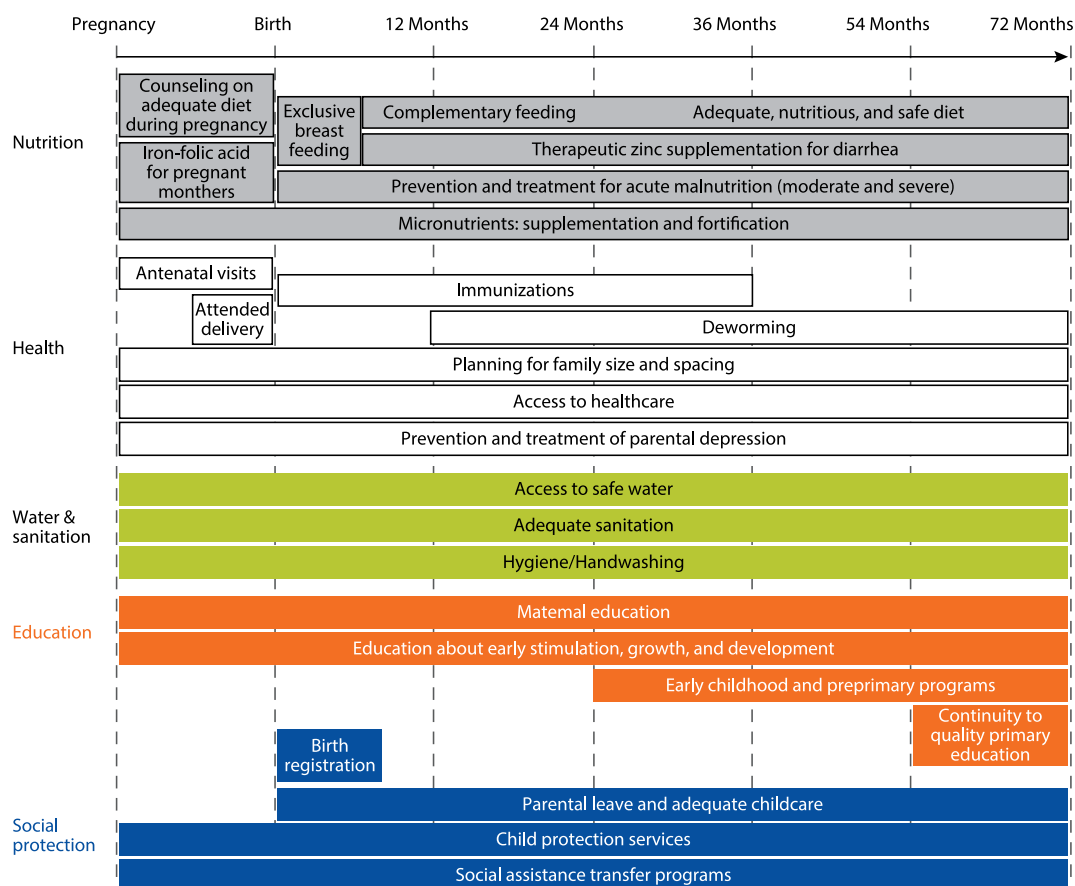
Shalu wakes up at 7.30 am, prepares food for all. She spends extra time in the care of her physically-challenged daughter. Her two older children go to a government-run school. After dropping them off, she cleans the house. By 9.30 am, she leaves her youngest daughter at the centre and goes for work. She returns at 2.30 pm, prepares lunch and does household chores after eating. Between 2-30-3.30 pm, she picks up her two children from primary school, and then her daughter from the day-care centre around 4-4.40 pm. By 5-6 pm, she provides snacks to the children. Between 6-8 pm, she cooks dinner, does laundry and cleans the house. Her husband returns later in the evening by 10 pm, but does not help with the household work at all. She sleeps by 11 pm or midnight after clearing up everything.

³² Please see the Methodology section in this paper. A qualitative study was done by interviewing 15 caregivers, mothers and grandmothers to collect information on their 24-hour time-use and understand their motivation for centre-based childcare. These were family caregivers who were already using some form of centre-based childcare.

2

WHAT IS QUALITY CENTRE-BASED CHILDCARE: NURTURING CARE FOR EARLY CHILDHOOD DEVELOPMENT³³

Figure 5: Essential ECD interventions



Source: Denboba et al. 2014.

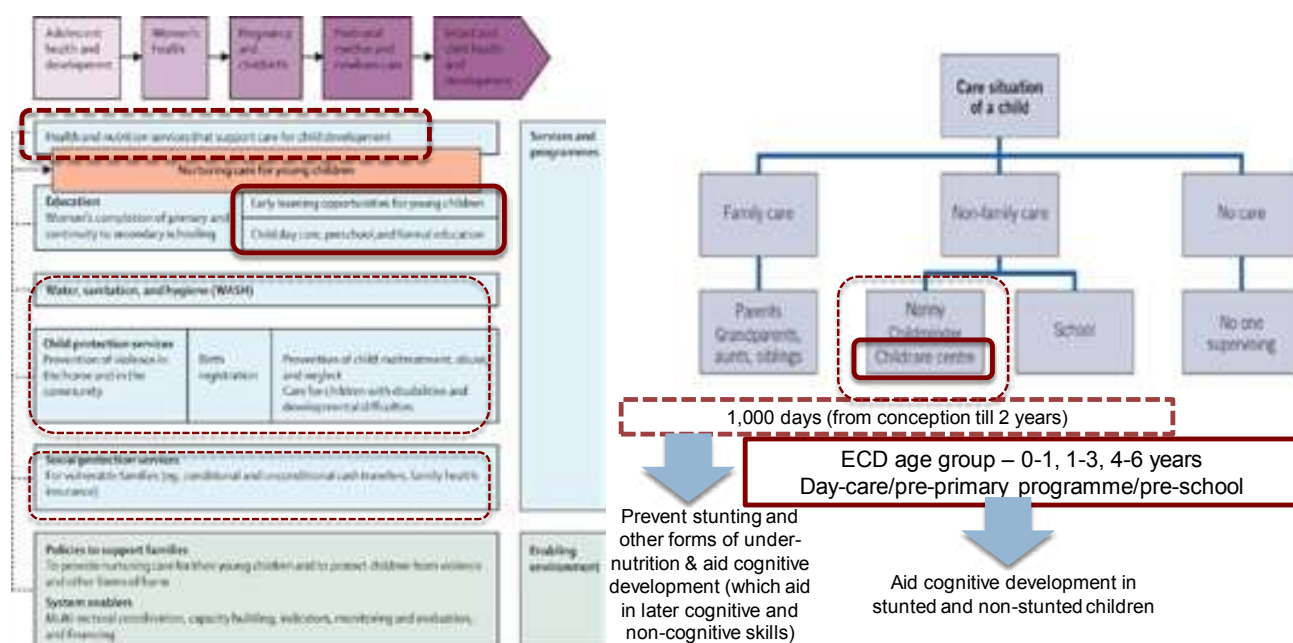
Nurturing care consists of a core set of inter-related components (Figure 5) including: behaviours, attitudes, and knowledge regarding caregiving (health, nutrition and Water, Sanitation and Hygiene (WASH)); psycho-social activities/stimulation (talking, singing and playing); and responsiveness and safety (social protection). In LMICs, a majority of children are more likely to encounter a greater number of risk factors (with high levels of co-occurrence among the risk factors) and fewer promotive influences for development. Poor sanitation, severe childhood diarrhoea, iron deficiency anaemia, orphan status, substandard housing, domestic violence, harsh physical punishment, and maternal depression are risk factors that occur at a higher rate in LMICs.³⁴ These are compounded by exposure to conflicts and population displacements. Stunting is irreversible but, given the

³³ Alderman, H. and Fernald, L. (2017). Early childhood development coming of age: science through the life course, *Lancet*, January issue, The Nexus Between Nutrition and Early Childhood Development.

³⁴ Black, M.M., Walker, S.P., Fernald, L.C.H., Andersen, C.T., DiGirolamo, A.M., Lu, C., McCoy, D.C., Fink, G., Shawar, Y.R., Shiffman, J., Devercelli, A.E., Wodon, Q.T., Vargas-Barón, E. and Grantham-McGregor, S. Advancing Early Childhood Development: from Science to Scale for the Lancet Early Childhood Development Series Steering Committee.

findings from the Jamaica study as well as longitudinal studies in India,^{35,36} nurturing care can help the children catch up with the non-stunted children in terms of earning potential and have improved cognitive outcomes.^{37,38} Nurturing care mediates the development of key brain regions and promotes developmental adaptations, even in stunted children,^{39,40} (for more details, see Annexure 3).⁴¹ As a concept, it encompasses a large array of social contexts: family care (provided at home), non-family care (provided at parents' place of work, state or private sector) in the form of centre-based childcare, pre-schools, and the wider community – and in unfortunate circumstances, as discussed in the previous section, no care (Figure 6).

Figure 6: Nurturing care and social context



Source: Denboba, et al, 2014, Workplace Solution, ILO, 2010.

Women working in the informal sector usually have to rely on non-family care; they often leave their children unsupervised, endangering their health and safety (increased risk factors for growth) and unintentionally depriving them of promotive influences of nurturing care. In this paper, the focus would be on public provision of centre-based childcare centres or day-care centres for children (one to six years old). For children of three-six years, these might be referred to as pre-primary programmes or

³⁵ Kaul, D. (2015). Indian Early Childhood Education Impact Study.

³⁶ Singh, R. and Mukherjee, P. (2018). Effect of preschool education on cognitive achievement and subjective wellbeing at age 12: evidence from India.

³⁷ The process of cognitive skill formation is cumulative, differences in initial endowments, early environments and influences occurring later at home and at school can all play a role in shaping these gaps. Results indicate that between 35 and 40 per cent of the gap in cognitive skill between urban and rural eight-year-old children is related to differences in school inputs (years of schooling, school and teacher characteristics) received between the ages of six and eight. This contribution is similar to that of the learning and care environment to which the child was exposed up until the age of five.

³⁸ Castrao, J.F. and Rolleston, C. (2015). Explaining the Urban–Rural Gap in Cognitive Achievement in Peru: The Role of Early Childhood Environments and School Influences.

³⁹ Gertler, P. et al (2014). Labour market returns to an early childhood stimulation intervention in Jamaica.

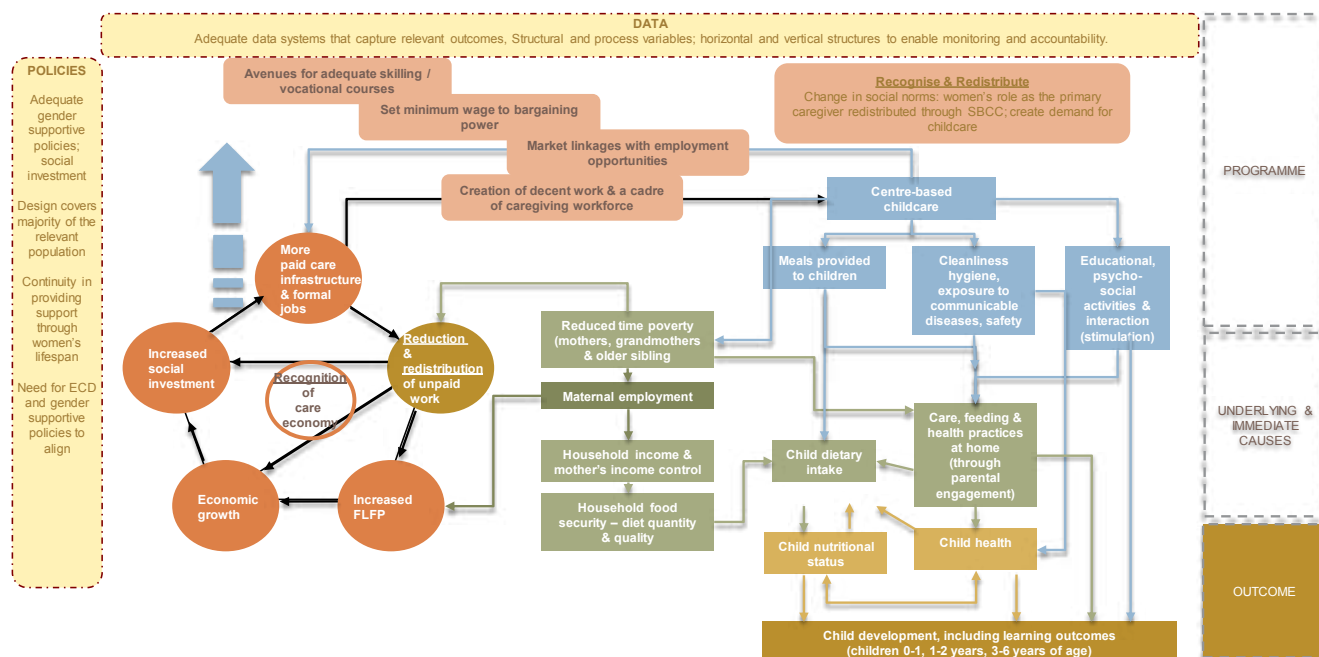
⁴⁰ Singh, R. and Mukherjee, P. (2018). Effect of preschool education on cognitive achievement and subjective wellbeing at age 12: evidence from India.

⁴¹ Alderman, H. and Fernald, L. (2017). The Nexus between Nutrition and Early Childhood Development.

pre-school education. ECD programmes could also be referred to as ECCE for one to six-year olds.

Figure 7 captures the pathways by which centre-based childcare programmes might affect child nutritional status, health and development outcomes as well as maternal employment and time-use. This is the ‘theory of change’, a framework that reinforces a need to think about women’s economic empowerment and child development as synergistic sub-systems, as opposed to as independent silos.

Figure 7: Pathways by which centre-based childcare programmes might affect child nutritional status, health and development outcomes as well as maternal employment and time⁴²



Source: Adapted by the author. The overlap and interconnectedness of the Jensen & Morel et al (2009), Diane Elson’s 3R approach and the impact of day-care programmes on child health, nutrition and development in developing countries: a systematic review, Jef L. Leroy , Paola Gadsden and Maite Guijarro, March 2012.

This framework borrows from Jensen and Morel’s 2009 work on increased FLFP, leading to economic growth. This requires investment in human capital, some of which should inform formation of the care economy to reduce and redistribute unpaid care work.

Figure 7 highlights the overlap and inter-connectedness of the pathways on how centre-based childcare can feed into the reduction and redistribution of unpaid care work but, more directly, impact child development outcomes. This reveals how centre-based care reduces time poverty, thereby opening up time or supporting women in joining the labour force while assisting them to spend ‘quality’ time on direct care of their child and even improving the feeding practices through direct engagement with the childcare worker. It also shows, implicitly, the women’s ability through the pathway of increased household income and control to provide better quality and quantity diet to the children.

⁴² Leroy, J. L., Gadsden, P. and Guijarro, M. (2012). The impact of day-care programmes on child health, nutrition and development in developing countries: a systematic review.

To ensure these sub-systems work well and are dove-tailed, Figure 7 also highlights how the policies and data systems would need to be appropriately designed to inform positive feedback loops to slowly and steadily scale up this system. The boxes in light blue and light orange are some of the main actions that should be undertaken to jumpstart this ecosystem of childcare support to create an enabling environment for maternal employment and ECD outcomes.

3

METHODOLOGY

A review of existing literature on impact of centre-based childcare/ day-care (used interchangeably in the remaining document) on maternal employment was undertaken. In particular, those in various journals of labour-intensive economics and, where possible, those specifically addressing developing economies. Also reviewed was literature on the impact of centre-based childcare and ECD programmes on ECD outcomes for children aged between zero and six years. A shortlist was made of countries where governments introduced some form of centre-based childcare provision in their countries as a social protection measure. Programmes that achieved scale have been evaluated for both outcomes: maternal employment and ECD outcomes. For Indian policies and programmes, current research has been referred to by way of published journals, documents available on government websites and inputs by field experts.

Additionally, the data on utilisation or coverage of childcare programmes or pre-primary programmes (where available) were analysed using the datasets from OECD countries, UNESCO, Eurostat and Nordic Social Statistical Committee (NOSOSCO) to prepare a shortlist of countries. This list was further parsed to arrive at the final set for the following reasons:

- I. High income countries (Nordic countries) were selected first because they originally noticed the growing gender inequity in employment and introduced these childcare programmes. Second, they have been running these programmes over many years (since the 1960s), have improved upon them over a period of time, and have robust systems to deliver services effectively;
- II. In case of LMICs, Chile, Colombia and Mexico were selected. Brazil was excluded from the detailed analysis because, even though it has various different provisions for ECD, the centre-based childcare model has been implemented and evaluated only in Rio de Janeiro. In large part, this paper has included detailed information on models (in high-, middle- and low-income countries and in India) where the primary focus is on public provision of centre-based day-care centres, and where health and nutrition services are provided indirectly or through linkages. It has excluded programmes and models where health and nutrition are the primary focus, for instance, home-based care, Community Management of Acute Malnutrition (CMAM) and immunisation programmes. Also excluded are the

diverse set of programmes in Asia and Africa primarily because most do not capture outcomes for maternal employment and ECD, and are largely focused on health and nutrition in the form of outreach-home visitation programmes;

III. In addition to the literature review, there are also one-on-one in-depth key informant interviews with multiple stakeholders, globally and in India, from Non-Governmental Organisations (NGOs) implementing centre-based childcare models to policy experts, ECD, health and nutrition researchers, and economists; and

Table 1: Structural variables and process variables

	Structural Variables	Process Variables
Health & Safety	<ul style="list-style-type: none"> Public health measures, health and safety procedures, documents 	<ul style="list-style-type: none"> Observed health and safety practices. The caregiver helps the children follow safety rules and explains the rationale behind these rules.
Groups of Children	<ul style="list-style-type: none"> Group size Child-caregiver ratio 	<ul style="list-style-type: none"> Children interact with each other for much of the day. The caregiver helps the children empathize with their peers; she explains children's actions, intentions and feelings to other children. The caregiver interrupts a negative interaction between children and helps them understand the effects of their actions on others.
Caregiver	<ul style="list-style-type: none"> Score: years of education, training in child development, previous experience and professional development Lesson planning Caregiver supervision Salary 	<p>Caregiver Behavior:</p> <ul style="list-style-type: none"> Caregivers are attentive to all children, even while working with an individual child. How the caregiver responds when a child cries; the caregiver does not express annoyance or hostility toward the child. How many times the caregiver uses abrupt movements when feeding a child, complains about his behavior, or has a threatening attitude. Caregivers greet/say goodbye to each child and his parent during arrival and departure times. Caregivers react quickly to solve problems. <p>Child-caregiver interactions:</p> <ul style="list-style-type: none"> Caregiver uses a variety of simple words to communicate with the children. Caregiver talks about many different topics with the children, asks them simple questions, and/or expands on the children's ideas with other words and ideas. Caregiver does not reprimand, criticize or punish the child. Caregiver encourages the children to dance, clap or sing together. Caregiver hugs or kisses the child at least once per day. <p>Curriculum implementation:</p> <ul style="list-style-type: none"> Caregiver is flexible with regard to lesson plans and activities, he selects most classroom activities taking consideration children's preferences. Caregivers introduce concepts of relational correspondence, more-less-the same, or cause and effect during teachable moments. Naptime is optional, and there are activities for children who do not sleep. There is free play for much of the day. Children and caregivers play together with building blocks.
Infrastructure	<ul style="list-style-type: none"> Access to potable water Waste disposal Electricity Telephone service Physical space per child Materials Protected facilities, play areas 	

Source: How is Child Quality Measured? A Toolkit, Feb 2016, Florencia Lopez Boo, Maria Araujo and Romina Tome.

IV. In addition to this, a qualitative field study was conducted at some alternate models in India (rural and urban areas) to interview mothers (15 in all) to understand their time-use activities in a 24-hour period, and rationale behind using childcare centres. There are also one-on-one interviews with the caregivers (12, including supervisors and two Anganwadi workers) in these centres using guidance from the “How is Childcare Quality Measured?” toolkit by Florencia López Boo, María Caridad Araujo and Romina Tomé, the latest literature on assessing quality of childcare. The objective was to collect preliminary information on what the non-monetary incentives are that motivate childcare givers to provide quality care, to highlight the need for research on human resource for childcare.

Challenges of quantifying impact on maternal employment and ECD outcomes

Conventionally, research on gender and ECD (early childhood education, nutrition and health) has assessed impact on outcomes in the respective domains. Hence, this framework is not claiming a linear direct impact of childcare policies and programmes on the outcome of maternal employment and ECD outcomes. Additionally, even though family policies (maternity, paternity and parental leave, tax subsidies and publicly-provided childcare support) are introduced with the goals of gender equity and child development, enabling women to combine careers and motherhood, and altering social norms regarding gender roles, an understanding of their causal impact has thrown up a few key challenges:⁴³

- I. Family legislations are complex and should not be analysed in isolation. If a nation passes a parental/maternity leave law, the effects would be determined in part by the benefit coverage during leave, and then access to affordable childcare services once leave entitlements expire.⁴⁴ In developed economies, sometimes legislation was preceded by economic transformation during the industrial revolution; at other times, women’s movements in the 1960s and 1970s bolstered social and political change resulting in more supportive legislations. A combination of all these factors resulted in these countries seeing an increase in FLFP; hence, attributing the gains that women made solely to the passage of legislation will over-estimate its impact;⁴⁵
- II. While trying to understand the costs, cost-effectiveness or cost trade-offs of the childcare programme or childcare subsidies, it is important to remember that, due to variability in the definition of ECD programmes, especially in the context of a developing country, and in services provided at a centre-based day-care, the costing of the models and services is an area

⁴³ Olivetti, C. and Petrongolo, B. (2017). The Economic Consequences of Family Policies: Lessons from a Century of Legislation in High-Income Countries.

⁴⁴ Ibid.

⁴⁵ Ibid.

that is evolving and at a nascent stage. Most of the evidence on this aspect comes from experiences of the developed countries. Only recently have efforts been made to standardise the approach of costing methods: Save the Children (Centre for Budget and Policy Studies) conducted a study to quantify the costs of childcare models implemented by non-state actors in India and at a global level, a tool is being developed for field testing by Brookings Institute, led by Emily Gustafsson-Wright; and

III. Evidence on centre-based childcare benefits on the two outcomes of interest – impact on ECD outcomes and maternal employment – is a bit scanty, especially since most forms of childcare models (home-based, home visitations, centre-based and combinations of these) are still being evaluated. Hence very few countries' large-scale models have been evaluated to capture the outcome on both. One of the most common findings was that quality of these models was the key contributor on child development outcomes; however, an assured positive impact was always seen on maternal employment rates. A recent study by Harold Alderman and colleagues – Evaluating Integration in the ICDS: Impact Evaluation of an AWC-cum-crèche Pilot in Madhya Pradesh – published in September 2018, is one of the first to capture the impact on both outcomes.

4

CHILDCARE SUPPORT: ENABLING FACTORS FOR FLFP AND IMPROVED ECD OUTCOMES

Maternity leave

As captured later in the section on key findings on the impact of centre-based childcare on child development, there is evidence that external childcare has a positive impact on children between the ages of one and six years. However, the evidence is mixed in the case of the zero to one-year age group, and needs more research. Therefore, to support women during initial motherhood, most countries use of the tool of maternity leave. Many countries have also introduced the concepts of paternity and parental leave to alleviate reinforcement of conventional gender roles.

Access and scope of legislation and policies in the context on maternal employment

A combination of maternity, paternity and parental leave and childcare provisions has together been able to impact full-time employment rates in countries.⁴⁶ Most of the literature indicates that parental leave/maternity leave is good as a supportive

⁴⁶ Geyer, J., Haan, P. and Wrohlich, K. (2015). The effects of family policy on mothers' labour supply: Combining evidence from a structural model and a natural experiment, *Journal of Labour Economics*; Lefebvre, P. and Merrigan, P. (July 2008, more recent paper 2018), *Childcare Policy and the Labour Supply of Mothers with Young Children: A Natural Experiment from Canada*; Tekin, E. (2002) *Childcare Subsidies, Wages, and Employment of Single Mothers*.

Table 2: Maternity support and benefits provision in India and economies whose childcare models are explored in detail

Economy	Are mothers guaranteed an equivalent position after maternity leave?	Do private childcare centres receive non-tax benefits?	Does the government provide childcare services?	Are payments for childcare tax deductible?	Do parents receive non-tax benefits (child allowance) for children under 6 years of age?	Is primary education free and compulsory?	Does the law mandate paid or unpaid maternity leave?	Does the law mandate paid or unpaid paternity leave?	Does the law mandate paid or unpaid parental leave?	What is the length of paid maternity leave? (Days)	What is the length of paid paternity leave?	What is the length of parental leave?*	Who pays maternity leave benefits?
Chile**	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	126	7	84	Government-Employer
Colombia	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	126	10	N/A	Government 100%
Denmark**	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	126	10	224	Government 100%
Finland**	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	147	76	221	Employer & Government
India	No	No	No**	No	No	Yes	Yes	No	No	182	N/A	N/A	Employer 100% *
Mexico	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No	84	5	N/A	Government 100%
Norway^	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	N/A	N/A	343	Government 100%^
Sweden^	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	0	10	480	Government^^

*According to the IDS report, only 1 per cent of women are eligible to this maternity benefit; ** ICDS exists, however, it is not been functioning to its full potential as a childcare centre. Also it is not a right. ^Parental leave - period after the maternity leave for which a woman or man can be on a parental leave with her job protected, disregarding payment conditions.

^^Has parental leave.

Source: Women, Business and the Law Data, 2018, World Bank, OCED database for additional parental and paid leave information.

mechanism for the mother's health and well-being and also nutrition of the child. Recent literature has also looked at the appropriate length of maternity leave: it is found that while a few months of leave is beneficial, extended periods of leave – as in case of the Nordic countries, which have maternity and parental paid leave for about a year – might not have an incremental benefit on a child's development. A lot of the evidence points to weak or zero effects of increasing maternity leave on children's educational or health outcomes in the medium- to long-term though this is when the supportive care is of a high quality.⁴⁷ This might be because the quantity of time that parents spend with their children is not decisive for children's cognitive development or educational attainment but high-quality time matters; the amount of high-quality time is not affected by parental employment in the presence of quality childcare support^{48,49,50} (Figure 7). In fact, an analysis of a high-quality centre-based programme in Germany indicates that mothers who send their child to childcare are 5.5 percentage points more likely to participate in cognitive stimulating activities with their children on a daily basis (reading, singing, painting, or watching picture books,

⁴⁷ Datta Gupta, N. (May 2018). Maternity leave versus early childcare–What are the long-term consequences for children? Aarhus University, Denmark, and IZA, Germany.

⁴⁸ Schildberg-Hörisch, H. (January 2016). Parental employment and children's academic achievement, , University of Bonn, and IZA, Germany.

⁴⁹ Hsin, A., and C. Felfe. (2014). "When does time matter? Maternal employment, children's time with parents, and child development."

⁵⁰ Waldfogel, J. (December 2015). The role of pre-school in reducing inequality (pre-school improves child outcomes, especially for disadvantaged children), Columbia University, USA, and IZA, Germany.

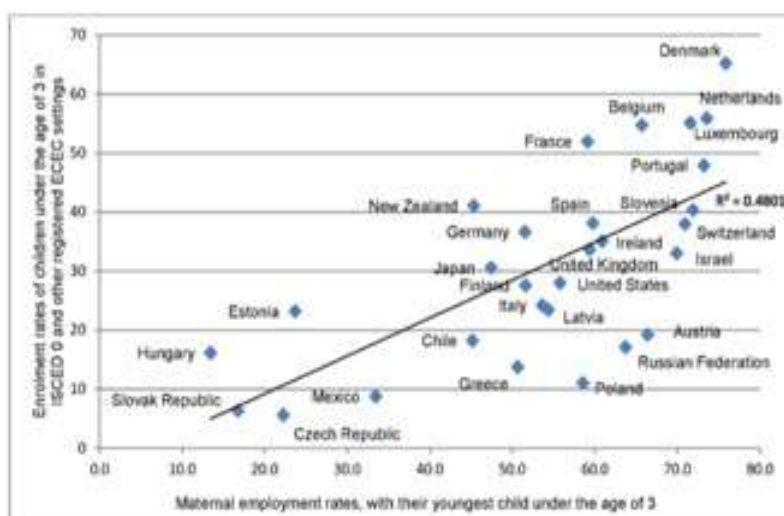
that is, direct care) and 5.4 percentage points less likely to run errands when their children are around (indirect care).⁵¹

On the other hand, in 1998, Christopher Ruhm in his research, the *Economic Consequences of Parental Leave Mandates: Lessons from Europe*, shows that paid maternity leave of about four months after birth leads to a 3 to 4 per cent rise in female employment rates (at a substantial coverage) but longer than nine months leads to a negligible impact on employment but a sizeable negative impact on female wages. More recent literature finds positive effect with up to one year of leave and negative effects afterwards.⁵² In most cases, the strongest evidence from developed countries indicates that policies that make it easier to be a working mother may matter more than the length of leave (beyond a minimum point). However, **policies with the strongest evidence on reducing gender disparities seem to be public investment in early childhood provision.**⁵³

Centre-based childcare

Evaluations of the impact of universal pre-school on maternal employment find higher impacts in countries that had lower initial levels of female employment, use of private childcare, and welfare benefits.⁵⁴ As mentioned previously, in many OECD countries, data indicate a very strong correlation between the enrolment rates of children less than three years of age in centre-based childcare and countries that have high maternal employment rates, especially of mothers with young children. Around one-third of children aged less than three years are enrolled in formal childcare, on average, across OECD countries. Rates vary widely, ranging from less than 10 per cent of children in the Czech Republic and the Slovak Republic to more than 60-70 per cent in the Nordic countries.

Figure 8: Mother's labour market participation and enrolment rates of children under the age of three in formal childcare, 2014



⁵¹ Felfe, C. and Lalive, R. (December 2012). Early Childcare and Child Development: For Whom it Works and Why.

⁵² Olivetti, C. and Petrongolo, B. (December 2017). The Economic Consequences of Family Policies: Lessons from a Century of Legislation in High-Income Countries.

⁵³ Ibid.

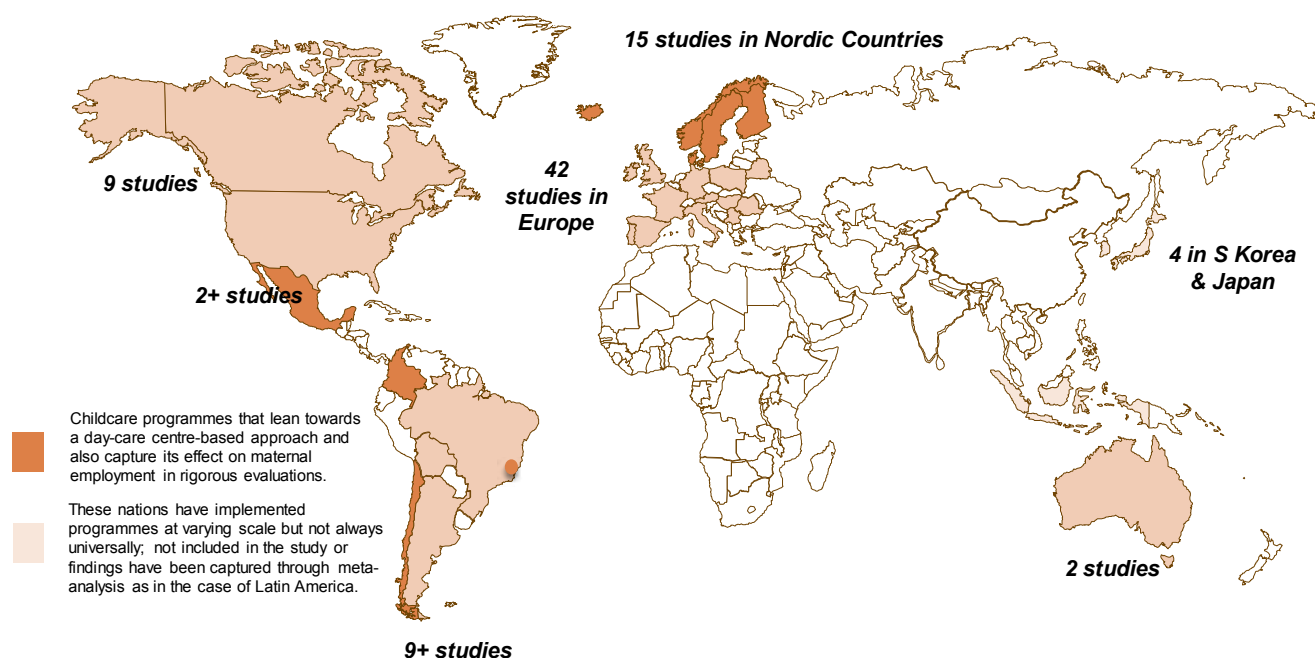
⁵⁴ Cattan, S. (November 2016). Can universal pre-school increase the labour supply of mothers? Institute for Fiscal Studies, UK, and IZA, Germany.

Multiple research papers from European countries highlight that if universal pre-school (three-six years) or day-care (less than three years) is crowding out existing informal or private childcare provisions, then the impact of these programmes on maternal employment would be slightly mitigated. Social norms and preference of childcare modality have a huge role to play in understanding the impact of childcare programmes on maternal employment. **If either of the two is not addressed in programme implementation planning and design, it could have a dampening effect on the potential positive impact of these programmes.** Societal support for these programmes is essential and demand creation efforts could potentially have a major impact. Despite the potential positive or negating effects of crowding out of other forms of care or social norms, provision of accessible, affordable or free and quality childcare has an additive effect on the utilisation of these programmes and eventually on maternal employment rates in the country. There is also evidence with similar findings from the U.S., where the Lanham Act had strong and persistent positive effects on the twin goals of increasing parental employment and enhancing child well-being.⁵⁵

5

IMPACT OF CHILDCARE AND FLFP: KEY EVIDENCE – GLOBAL

Figure 9: Evidence map indicating studies capturing the impact of childcare on maternal employment



Source: Empowerment of Women and Girls, A Feminist Political Economy Analysis of Public Policies Related to Care: A Thematic Review, IDS, July 2013; * (including conditional cash transfers, public works, social transfers, and unconditional cash transfers); Meta-analysis & literature review (details of the studies are available). The # of studies present in the map are the ones included in the meta-analysis. Daniela Vuri, Do childcare policies increase maternal employment?

⁵⁵ Universal Child Care, Maternal Employment, and Children's Long-Run Outcomes: Evidence from the U.S. Lanham Act of 1940, 2013.

As mentioned earlier, a review of social protection and child development policies in LMICs indicates that most policies do not actively think of a mother as an active member of the economy. Very few countries develop policies with the intent of supporting women during motherhood; most of these policies exist in Latin America. This partially explains the absence of evidence from the eastern regions of the world as shown in Figure 9. Hence most of the key findings below are based on a literature review of childcare from economies in Europe and North and South America. Different policies are needed to overcome the constraints women face to access jobs; however, across most programmes in Latin America and the Caribbean, evaluations indicate that childcare emerges as the policy that has the most consistent positive effect on women's engagement in the labour force⁴⁹. Increasing access to childcare improves the stock of human capital (by helping working mothers, or allowing parents to study further) and the flow of human capital (by fostering ECD)⁵⁶ (Figure 7). More specifically, causal impacts are captured in Paper II in this series.

Relevant population: More marginalised the household, greater the impact on maternal employment

Impact on improvement in maternal employment is most concentrated among low-income households or less educated or single mothers. This intuitively makes sense because, often, the most marginalised are forced to work to support family income. Hence, they are also most sensitive to any support that is made available to them. Compared with informal childcare (grandparents, neighbours in low-income communities), formal quality childcare may improve child outcomes such as school readiness and problem solving, especially for low-income mother-children dyads. When children are young, mothers' and fathers' care is the most valuable input. However, when both parents work, formal childcare is the best substitute especially for children in low-income families; it possibly also ensures child protection. Informal childcare seems to contribute less to child development⁵⁷ since a trained formal childcare worker would more actively provide ECD interventions as compared to neighbours and relatives in marginalised regions or communities.^{58,59}

Affordability and price elasticity of childcare

Price responsiveness has mostly been studied in developed countries, so such an analysis is yet to be made for developing countries. For developed nations, there is a consensus that childcare subsidies have positive effects on female employment despite some recent studies showing smaller or insignificant effect

⁵⁶ Mateo Díaz, M. and Rodriguez-Chamussy, L. (October 2016). Childcare Policies: Key for Female Labour Participation.

⁵⁷ Del Doca, D. (2015). Childcare choices and child development.

⁵⁸ Reynolds, S., Fernald, I. and Behram, Jere R. (December 2017). Mothers' labour market choices and child development outcomes in Chile.

⁵⁹ Leroy, J.F., Gadsden, P. and Guijarro, M. (March 2012). The impact of day-care programmes on child health, nutrition and development in developing countries: a systematic review.

sizes.^{60,61,62} Aspects of childcare such as quality and availability are areas that, if researched more, could explain the price sensitivity especially given that quality or flexibility in childcare services may involve trade-offs with the price of care. Even though, in most LMICs, state provisions are free or have a low fee, this would be relevant in the context where the private sector is a significant provider.

Points of caution

Maternal employment during a child's first year – especially the first few months – might be detrimental to a child's cognitive development, although there is mixed evidence for this age group.⁶³ Preferences and social norms may drive childcare choices, not only costs and availability.⁶⁴ Additionally, there is a need to understand that, where the employer is mandated to provide for childcare and actually bears the cost of childcare, the cost is being transferred to the mother in the form of lower wages. Evidence from Chile suggests that employers eventually transfer the cost of childcare to the employees (both men and women) in the form of lower wages.⁶⁵ Difficulties in measuring the lack of qualified people working in childcare and the quality of care may prevent families from using this service.⁶⁶ The emphasis should be on high quality and widespread societal support, as children's non-cognitive outcomes suffer when childcare is of poor quality. Directly borrowing the family policies of high participation countries may not dramatically increase women's employment in countries with very low participation rates.⁶⁷

However, Paper II in this series does capture unique aspects of various different models in developing countries to provide an indication of how various components in the programmes and policies work together to deliver effective services at scale. Contextualising the features, within the realm of feasibility is important.

⁶⁰ Tekin, E. (2002). Childcare Subsidies, Wages, and Employment of Single Mothers.

⁶¹ Felfe, C. Lalive, R. (2012). Early Child Care and Child Development: For Whom it Works and Why.

⁶² Gong, X., Breunig, R. and King, A. (2010). How Responsive is Female Labour Supply to Child Care Costs?

⁶³ Schildberg-Hörisch, H. (January 2016). Parental employment and children's academic achievement, University of Bonn, and IZA, Germany.

⁶⁴ Vuri, D. (2016). Do childcare policies increase maternal employment? IZA world of Labour.

⁶⁵ Villena, M.G., Sanchez, R. and Rojas, E. (2011). Unintended Consequences of Childcare Regulation in Chile: Evidence from a Regression Discontinuity Design.

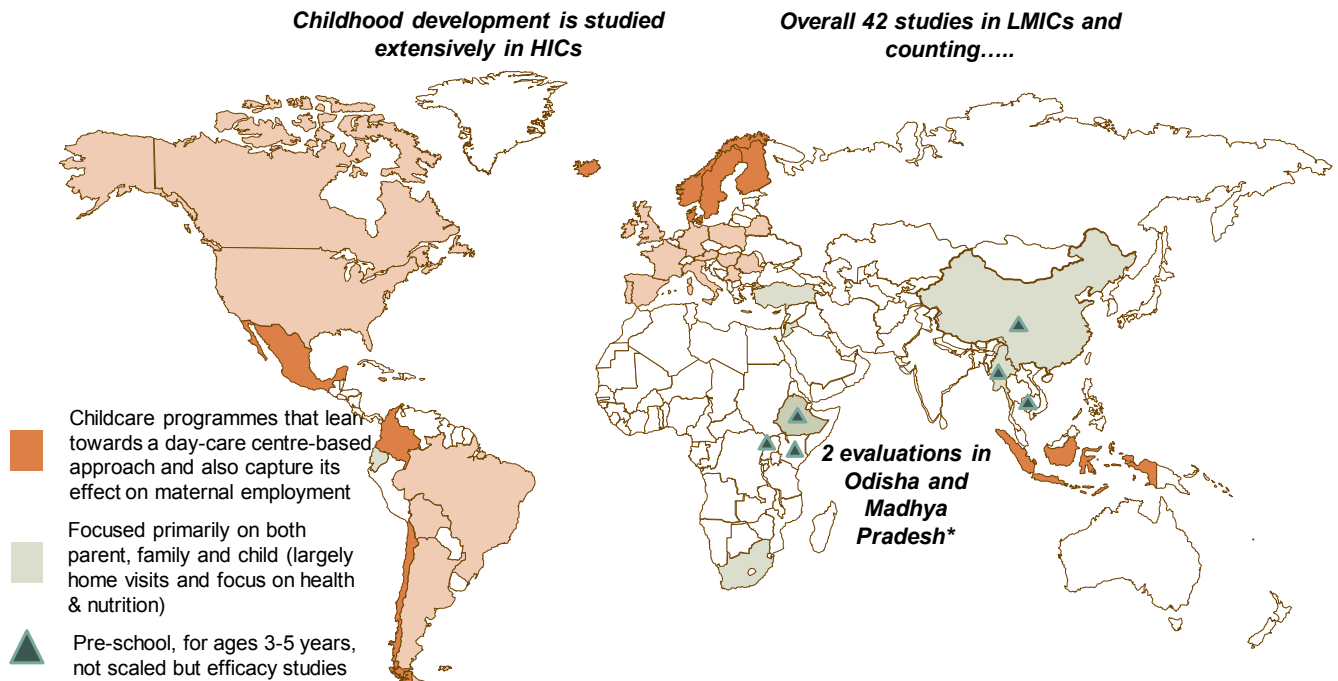
⁶⁶ Do childcare policies increase maternal employment?" (March 2016) IZA, World of Labour.

⁶⁷ Akgunduz, Y.E. and Plantenga, J. (November 2015). Childcare Prices and Maternal Employment: a Meta-analysis.

6

IMPACT OF CHILDCARE AND ECD: KEY EVIDENCE – GLOBAL

Figure 10: Evidence map indicating studies capturing the impact of childcare on ECD outcomes



Source: Compiled by the author using the various studies and secondary research. * The evaluation of the pilot anganwadi centre-cum-creche lead by Harold Alderman is complete and has been published on the World Bank website.

As mentioned above, in most developing countries, child development and social protection are researched and studied for child development outcomes. Historically, the focus has been on nutrition and health; only recently has the conversation involving psycho-social stimulation and ECCE been included in the agenda. Therefore, programmes that focus on centre-based childcare and track outcomes on child development and maternal employment mostly come from the western part of the world. Figure 10 is an evidence map indicating the regions that have studies capturing the impact of childcare on ECD outcomes. Countries highlighted in light green mostly focus on health and nutrition service delivery with some form of pre-school programme (dark green triangles). Countries in light orange have centre-based childcare; however, studies included in this paper, as per the methodology, are the ones highlighted in dark orange.

Childcare support makes it feasible for parents to be employed and quality early intervention programmes (one-six years) and after-school programmes (more than six years) can enhance child development, particularly among children from more disadvantaged backgrounds, as well as a number of other dimensions.⁶⁸ Although older studies from the Canadian province

⁶⁸ Blau, Currie (2014). Pre-school, Day Care, and Afterschool Care: Who's Minding the Kids? NBER Working Paper#10670.

of Quebec showed mixed evidence, recent evidence from developed and developing countries shows more positive results on FLFP and also on child development outcomes, especially on cognitive measures and for families and children from disadvantaged backgrounds.^{69,70} Studies from Colombia, Mexico, Argentina, Uruguay and Chile and the longitudinal study from India (Young Lives data & ASCER, CECED study, 2017) confirm positive associations between pre-school or childcare participation and better outcomes on the composite child development measure, but effects of these facilities are well known to depend on the quality of service at these centres.^{71,72} It is worth mentioning that literature on childcare in the U.S. and Canada indicates that, even though non-working mothers may spend more time with children, child-focused time is similar in quality to that given by working mothers.⁷³ This is why it is possible that formally-trained childcare givers might be more beneficial in terms of positive impact on children's cognitive, language and socio-emotional skills. The professional caregiver actively provides direct care to the child and, additionally, makes sure that the quality of child-parent interaction is optimal through parent engagement.⁷⁴ Moreover, a higher quality formal childcare might be better than the low stimulation atmosphere available to most children in households leaning towards a more nuclear set up in a socio-economically disadvantaged setting.⁷⁵ More specifically, causal impacts on child nutrition, health and cognitive development are captured in Paper II in this series.⁷⁶

Childcare provision and findings on long-term effect on educational outcomes

According to PISA (Program for International Student Assessment) 2015 report, in almost 57 countries, 15-year-olds who had access to ECCE outperformed students who did not, as assessed via tests in mathematics, science and reading. Children who attended early childhood education for at least two years performed, on average, better than others at age 15. Disadvantaged children benefited the most and targeting them generated the highest returns. Some of these countries follow a split system – children from ages zero to three or four attend day-care facilities that have the services designed for that age group, and children (three-four years) have a pre-primary school/day-care services centres.

⁶⁹ Baker, M., Gruber, M. and Milligan, K. (2012). "Universal child care, maternal labour supply, and family well-being." *Journal of Political Economy* 116:4, 709–745.

⁷⁰ Kottelenberg, M.J. and Lehrer, S.F. (2017). Targeted or Universal Coverage? Assessing Heterogeneity in the Effects of Universal Child Care.

⁷¹ The India Early Childhood Education Impact Study, CECED, 2017; Comparison of the Effects of Government and Private Pre-school Education on the Developmental Outcomes of Children: Evidence From Young Lives India & Education Trajectories: From Early Childhood to Early Adulthood in India, 2017,

⁷² Britto, P.R., Lye, S.J., Proulx, K., Yousafzai, A.K., Matthews, S.G., Vaivada, T. and Bhutta, Z.A. (2016). Nurturing care: Promoting early childhood development. *The Lancet*.

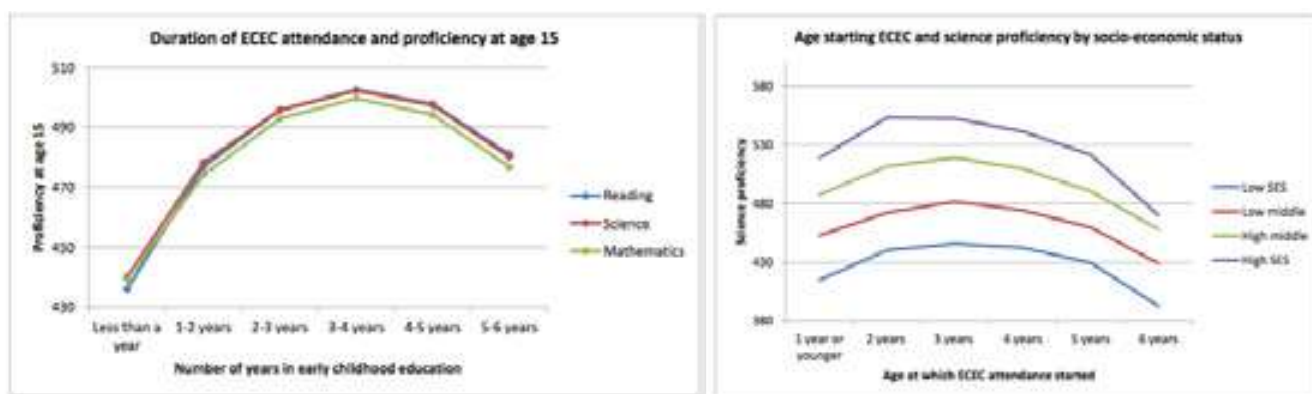
⁷³ Sarah, A., Reynolds, A., Lia, C.H., Fernald, A. and Jere, R. Behrmanb. Mothers' labour market choices and child development outcomes in Chile.

⁷⁴ Schildberg-Hörisch, H. (2016). Parental employment and children's academic achievement (Quality of parental time spent with children is more important than quantity), IZA, World of Labour Economics.

⁷⁵ Naryanan, S. (2008). Employment Guarantee, Women's Work and Childcare, Invisible Women & Invisible Work (19 per cent had their children with them at the worksite; half had left their children at home; 12 per cent had left them at the balwadi or Anganwadi and around 11 per cent had left them in school. Most of the children on site were either left in the shade nearby or kept near the spot where the mother was working).

⁷⁶ LMIC for Colombia, Chile, Mexico, and special mentions of Ecuador, Argentina, Bolivia, Brazil and Uruguay.

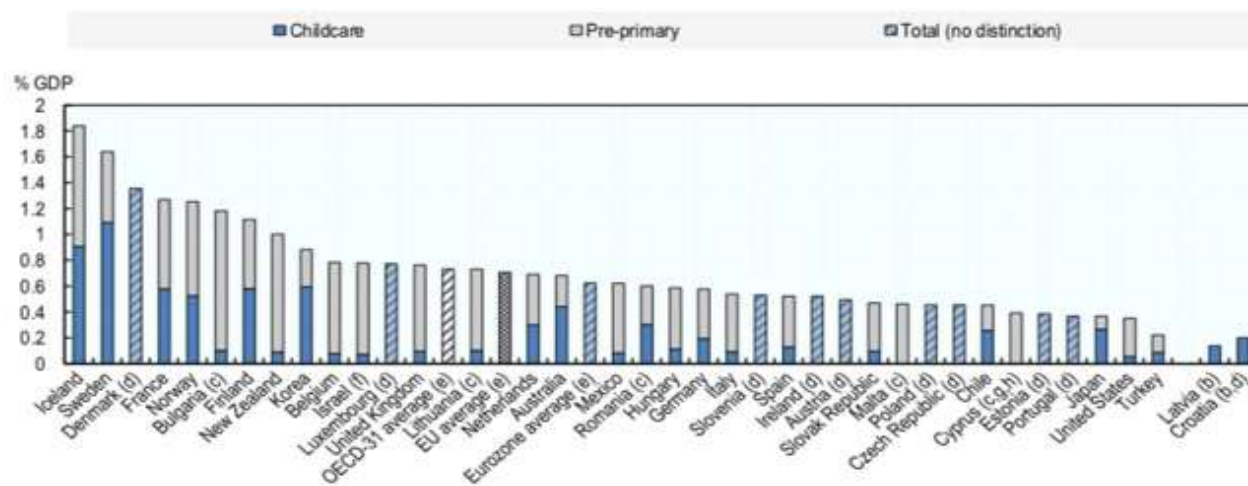
Figure 11: Effect of duration of attending childcare and starting age on proficiency in academic performance at age 15, among children in OCED countries



Source: Starting Strong 2017 - Key OECD Indicators on Early Childhood Education and Care

These countries have a dedicated cadre of trained workers and parental engagement through monthly meetings – key features in their models. Having more contact between teaching staff and parents is strongly associated with children’s later academic success and socio-emotional development. Expenditure on ECCE accounts for an average of 0.8 per cent of GDP across OECD countries, with over 80 per cent coming from public sources. Figure 12 shows the percentage spend of GDP on childcare for children (zero-six years), across OCED countries.

Figure 12: Percentage spend of GDP, on childcare for children (zero-six years), across countries

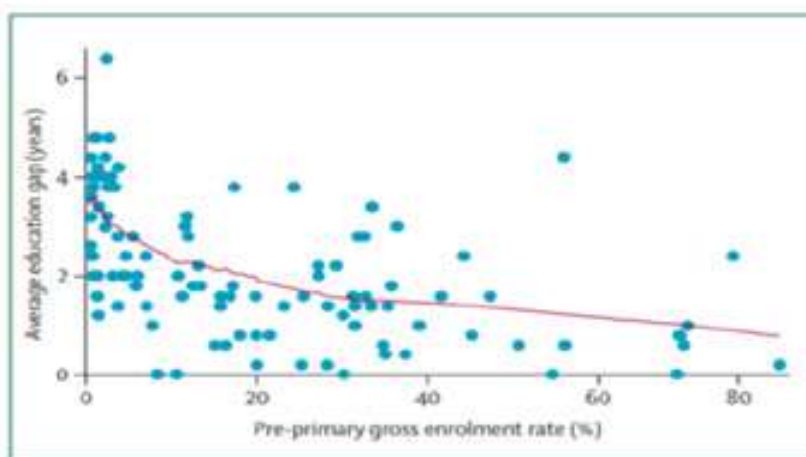


Source: Starting Strong 2017 - Key OECD Indicators on Early Childhood Education and Care

Engle and colleagues⁷⁷ estimated the association between the schooling gap (gap in median years of schooling between the wealthiest quintile and each of the other quintiles) and pre-school enrolment by regressing the gap on the pre-school gross enrolment rate eight to 12 years earlier for each country. In 73 LMICs (India is not included here), it was found that higher the pre-primary gross enrolment rate in the country, smaller the schooling gap is between the highest and lowest wealth quintile children.

⁷⁷ Engle, P.L., Fernald, L.C.H., Alderman, H., Behrman, J., O’Gara, C., Yousafzai, A., Cabral de Mello, M., Hidrobo, M., Ulkuer, N., Ertem, I., Iltus, S. and the Global Child Development Steering Group. Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries.

Figure 13: Association of pre-school enrolment and the schooling gap for 73 LMICs



Source: Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries

A simulation model of the potential long-term economic effects of increasing pre-school enrolment to 25 per cent or 50 per cent in every LMIC showed a benefit-to-cost ratio ranging from 6.4 to 17.6, depending on pre-school enrolment rate and discount rate.⁷⁸

7 DISCUSSION

The global evidence is thus indicative of the fact that quality centre-based childcare not only has a positive impact on maternal employment but could also benefit ECD.

Given that Indian girls are staying in schools longer, some of the demand-side constraints that have conventionally been cited by employers as reasons for not hiring women – lower education and skill set – might be alleviated or addressed in the near future. As a result, potentially, women's participation in the labour force could increase in the next few years. It would be important to ensure that supportive structures are in place to avoid the pitfalls women usually face, and that welfare systems provide continuous support (as discussed in Figure 4), especially at those critical points.⁷⁹ Thus, it would make sense to create an enabling environment for women to join the workforce; **ensuring that their children are getting affordable and quality care could act as a catalyst.**

Additionally, the quality of employment and opportunities for better jobs continue to be unequally distributed between men and women.⁸⁰ Given the gap in trained human resources for childcare and lack of job opportunities for women, this could be a

⁷⁸ Engle, P.L., Fernald, L. C. H., Alderman, H., Behrman, J., O'Gara, C., Yousafzai, A., Cabral de Mello, M., Hidrobo, M., Ulkuer, N., Ertem, I., Iltus, S. and the Global Child Development Steering Group. Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries.

⁷⁹ "Female labour force participation in developing countries." Sher Verick International Labor Organization, India, and IZA, Germany.

⁸⁰ World Bank, 2011a; ILO, 2014.

potential avenue of jobs for women. However, it is also important to be cognizant of the fact that advocating childcare as a sector for women's employment has the risk of reinforcing the gender stereotyping that childcare is women's work or responsibility. This could result in women running the risk of lower bargaining power and suffering on the wage negotiation front. However, there is also the aspect of centre-based childcare giver's trustworthiness and child safety amongst communities, and how this plays out with a male caregiver. With these pros and cons, as this agenda moves forward, there would be a need to have a conversation on building in protection measures for the caregiver's wages, concomitantly exploring the option of parental leave, and developing social awareness programmes that address the gender biases of parenting in India.



ANNEXURES

Annexure 1: Survey overview and the questions asked

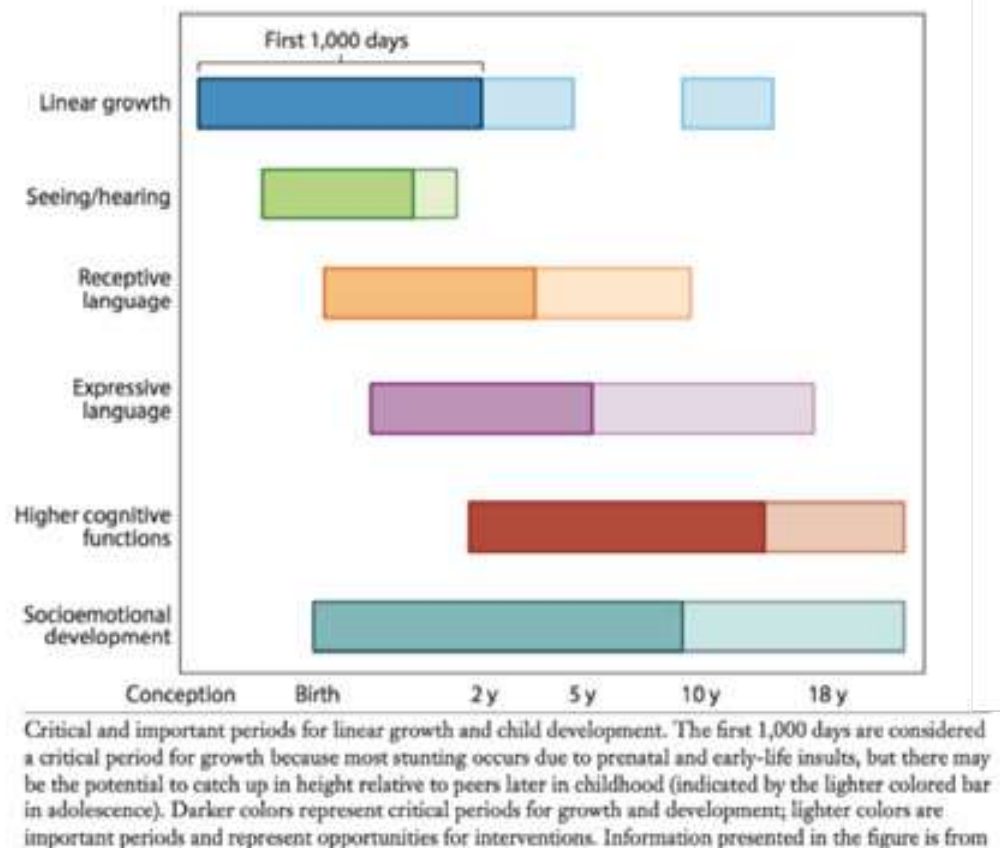
Gallup interviewers asked men and women to name the top challenge facing women who work at paid jobs in their countries and territories in their own words, in one-on-one face-to-face interviews from randomly selected households (Please think about women who work at paid jobs in [country/territory name] today. What do you think is the biggest challenge these women face?). The responses were unprompted, the interviewers coded the responses into one of 10 categories, based on responses from the most common themes that came up during cognitive interviews and survey pre-tests. The 10 categories in which responses were grouped are:

- Balance between work and family or home/no time to spend with family;
- Lack of affordable care for children or relatives;
- Unfair treatment at work/abuse/harassment/discrimination;
- Lack of flexible work hours/appropriate, suitable work hours;
- Lack of good-paying jobs;
- Unequal pay for doing similar work as men (or work of equal value);
- Family members don't approve of women working;
- Lack of transportation/lack of safe transportation;
- People prefer to hire or promote men; and
- Lack of skills, experience or education.

Annexure 2: Some examples of childcare that works from around the world

Some programmes, however, have integrated the reduction of women's unpaid care into their mandate and try to promote women's economic empowerment and children's welfare at the same time. In Albania, the "Gardens of Mothers and Children" is an affordable community-based centre that provides children with pre-school education, offers training to mothers and encourages men to take on more care responsibilities. The centre hosts fathers' gatherings, at which men can get together and discuss child health and development, children's rights, and nutrition. Similarly, in Italy, social cooperatives and enterprises provide social, health and educational services via community centres for children and the elderly, health-care facilities and home care for the elderly. For example, the PAN consortium, which provides services for children, brings together three large consortiums of Italian social enterprises and a bank with the aim of creating and strengthening childcare services that are of high standards and at ethical and sustainable prices. Specialists in the field and a scientific committee that periodically publishes research and trains teachers ensure the quality of services.

Annexure 3: Critical periods and important periods of development for both cognitive development and linear growth from conception through adolescence



Source: The nexus between nutrition and early childhood development, Annual Review of Nutrition, 2017, Harold Alderman and Lia Fernald.

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