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INITIATIVE FOR WHAT WORKS TO ADVANCE WOMEN AND GIRLS IN THE ECONOMY

IFMR LEAD

WORKING PAPER 3

Social safety net for maternity protection and early childhood development in India

Policy landscape and a detailed system analysis of the Integrated Child Development Services scheme to serve as a platform to aid maternal employment and early childhood development outcomes

Surabhi Chaturvedi

April 2019

About IWWAGE
The Initiative for What Works to Advance Women and Girls in the Economy (IWWAGE) aims to build on existing research, generate new evidence and test solutions on what works to inform and facilitate the agenda of women's economic empowerment.

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LIST OF ABBREVIATIONS

3Rs	Reading, Writing and Arithmetic
APIP	Annual Programme Implementation Plan
AWC	Anganwadi Centre
AWH	Anganwadi Helper
AWS	Anganwadi Services
AWTC	Anganwadi Training Centre
AWW	Anganwadi Worker
BMGF	Bill and & Melinda Gates Foundation
CECED	Centre for Early Childhood Education and Development
BDO	Block Development Officer
CAS	Computer Application Software
CDPO	Child Development Project Officer
CECED	Centre for Early Childhood Education and Development
DAY-NRLM	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission
ECCE	Early Childhood Care and Education
ECD	Early Childhood Development
GDP	Gross Domestic Product
HCB	Hogares Comunitarios de Bienestar
HRC	Human Resource for Childcare
ICDS	Integrated Child Development Services
IFMR LEAD	Institute for Financial Management and Research - Leveraging Evidence for Access and Development
ISST	Institute of Social Studies Trust

IWWAGE	Initiative for What Works to Advance Women and Girls in the Economy
MICS	Multiple Indicator Cluster Surveys
MIS	Management Information System
MLTC	Middle Level Training Centre
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MoHFW	Ministry of Health and Family Welfare
MoHRD	Ministry of Human Resource Development
MoPR	Ministry of Panchayat Raj
MWCD	Ministry of Women and Child Development
NCS	National Crèche Scheme
NFHS	National Family Health Survey
NGO	Non-Government Organisation
NIPCCD	National Institute of Public Cooperation and Child Development
NNM	National Nutrition Mission
NNP	National Nutrition Policy
OECD	Organisation for Economic Co-operation and Development
PMMVY	Pradhan Mantri Matru Vandana Yojana
PISA	Programme for International Student Assessment
PRI	Panchayati Raj Institution
PSE	Pre-School Education
RGNCS	Rajiv Gandhi National Crèche Scheme
RSH	Registro Social de Hogares
RSOC	Rapid Survey of Children
SCERT	State Council of Educational Research and Training
SME	Small and Medium-sized Enterprise
SSP	Samagra Shika Policy
U-DISE	Unified District Information on School Education

ABSTRACT

This paper analyses the Integrated Child Development Services (ICDS) system (its historical evolution and current form) and other policies that are intended to provide maternity support and early childhood development. In light of the learnings from the second paper, this paper attempts a gap analysis of the ICDS system – capacity and design – to reach the intended beneficiary. It highlights the fact that in an effort to provide integrated services, vertical programmes attempt to deliver their interventions using the common platform of ICDS, without accurately assessing the capacity or design of these platforms. Often the layering of additional inputs onto these platforms causes the system to overload, resulting in diminishing returns or exacerbating the negative feedback loops.

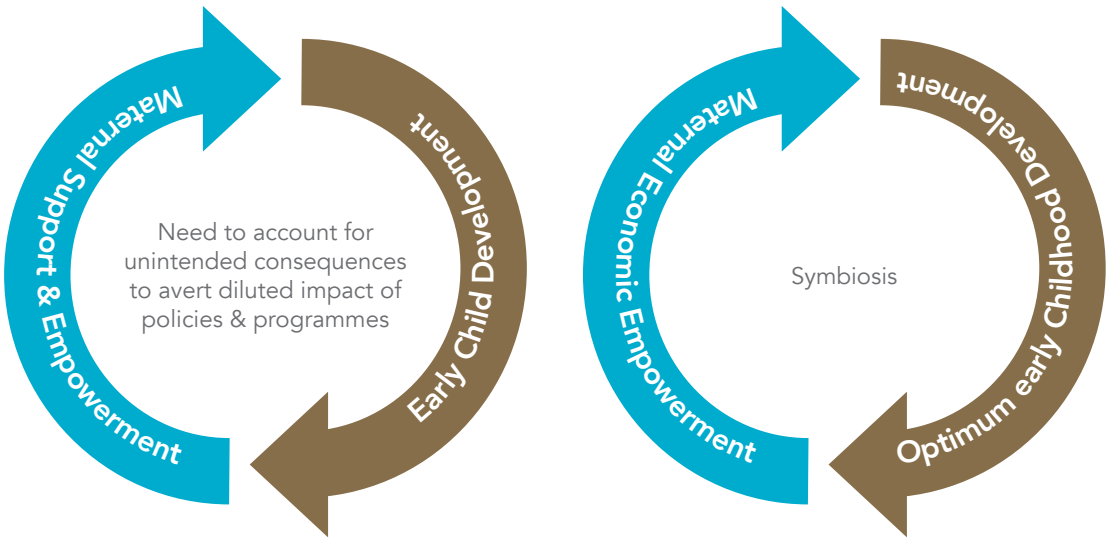
Moreover, human resources for childcare is one of the key features that influences the quality of the childcare centres. This paper includes findings from a qualitative field study on insights on human resources' motivations and non-monetary incentives that influence their performance and productivity. This is accompanied by articulation of potential research questions and some next steps to further the agenda of early childhood development and maternity support.

1
INTRODUCTION: DEFINING THE PROBLEM

The paper titled "Global Evidence on the Impact of Centre-based Quality Childcare on Maternal Employment and Early Childhood Development Outcomes" contributes to an understanding of the interlinkages in unpaid care work, nurturing care and potential of centre-based childcare to be a solution to redistribute unpaid care work and support nurturing care.[1] It is the first paper in the three-part series on "Quality Childcare for Maternal Employment and Early Childhood Development." The second paper in the series focuses on the public provision of centre-based childcare in high-, middle- and low-income countries and the systemic features that aid the effective scale up of these programmes. This is the third paper in the series, and captures the landscape of policies and programmes in India that have been introduced with the objective of supporting working mothers and children in their Early Childhood Development (ECD).

The attempt is to highlight the fact that, though there is an acknowledgement of investment in human capital in the country, by solely focusing on children's development or women's economic empowerment in isolation with each other (Figure 1), the impact on both child development outcomes or women's economic empowerment is diminished.[2] Additionally, simply introducing social protection policies, without a corresponding increase in the capacity of the system to deliver these social protection services, leads to sub-optimal outcomes.

Figure 1: Need to account for general equilibrium effects while designing programmes and policies



Note: The figure shows that policies and programmes for women and children need to be designed, acknowledging general equilibrium effects. There is a need to better understand how the introduction of maternal supportive policies, such as maternity leave, impact on women's employment opportunities, wages, etc., and how introduction of maternity leave, without paternity leave, could further reinforce gender care norms and have unintended consequences. Simultaneously, child health and nutrition policies do not acknowledge the earning role of women, thereby further reinforcing gender inequality.

[1] Chaturvedi, S. (2019). Global evidence on the impact of centre-based quality childcare on maternal employment and early childhood development outcomes. First paper in the Childcare Series, IWWAGE.
[2] Ibid.

This paper provides an analysis to support this hypothesis, reiterates the need for mother-child dyad-centred design of programmes/service delivery, and provides some suggestions that could serve as potential solutions. To this end, the paper:

I. Identifies policies and programmes in India that intend to support mothers in pursuing economic opportunities while providing childcare support. It also provides a snapshot of their status and how these might be falling short in fulfilling their intended purpose;
II. Highlights policies and programmes that intend to support ECD of children from zero to six years, explores whether they acknowledge the unpaid care work burden/time poverty and provides a snapshot of their status; and
III. Since Integrated Child Development Services (ICDS) emerge as the largest scheme that could potentially serve the dual objective of supporting mothers and ECD outcomes,[3] uses the building blocks framework[4] to analyse ICDS. Included in the paper is a discussion about how strengthening or tweaking some of ICDS' design could result in a programme that can optimally support not only children in achieving their potential but also aid maternal employment.

2
SCOPE OF THE POLICIES AND PROGRAMMES ON MATERNITY SUPPORT AND ECD

I. Policies and programmes for childcare[5] from a maternity support perspective

Childcare support is needed to create an enabling environment for women to work; policy and programme tools that aid that process are maternity leave and centre-based childcare or day-care.

Maternity leave

India's Maternity Benefit (Amendment) Act came into effect in April 2017. It extends paid maternity leave from 12 weeks to 26 weeks and also mandates formal sector employers to provide crèche facilities if they employs more than 50 people (irrespective of their gender).

[3] Schemes that explicitly serve to support maternal employment are the National Crèche Scheme, the clause on provision of childcare in MGNREGA, and Factories and Beedi Workers Act. Based on limited or no data for monitoring, evaluation or compliance, these schemes could not be analysed in detail using the building blocks framework. However, the paper has included information available from micro-studies, where possible. The schemes pertaining strictly to health support provided to the mother and child, especially from pregnancy till the child turns two, are not included and are beyond the scope of these papers.
[4] Paper II, Chaturvedi, S. (2019). Public Provision of Centre-based Childcare in High-, Middle- and Low-income Countries: What are the Systemic Features that Aided the Effective Scale Up of these Programmes?
[5] The schemes pertaining strictly to health support provided to the mother and child, especially from pregnancy till the child turns two, are not included and are beyond the scope of these papers.

However, currently, less than 1 per cent of women receive this paid maternity leave (formal sector).[6] A scheme that can be considered to be equivalent of the maternity benefit for the informal sector is the Pradhan Mantri Matru Vandana Yojana (PMMVY), provided by the Ministry of Women and Child Development (MWCD) and delivered through Anganwadi Centres (AWCs). Through this scheme, the government provides INR 5,000 for the first-born child, payable in three instalments. INR 1,000 (part of Janani Suraksha Yojana) is added if the child is born in an institution. The objective is to incentivise ante-natal check-ups, institutional delivery and immunisation of the new-born (the conditionality for three instalments is based on these) as well as mother and child health. Additionally, it implicitly aims to provide partial compensation for wage loss after the delivery of the first living child.

A few large-scale private sector organisations and the government offer a few days of paternity leave as well; however, this is not mandated by law. While the extension of maternity leave is a welcome change, it is worthwhile to look at the concept of parental leave/paternity leave introduced in the Nordic countries, which not only redistributes the care responsibility but offers a choice to the mother and father to utilise the tax-funded parental leave. Given that maternity leave policies in India are in the nascent stages, there is merit in and scope of learning from research from other countries to build in provisions to avert unintended consequences.[7] Unintended consequences could be lowered wages for women, and employers in Small and Medium-sized Enterprises (SMEs) and start-ups hiring more women as informal workers and, in some cases, preferring male workers over female workers to avoid additional costs of maternal support altogether.

To ensure that these laws have a meaningful contribution as a maternity-child support policy, it is important to initiate further conversation and research around introducing instruments such as tax breaks to start-ups and SMEs. This might not only avert unintended consequences but also contribute to encouraging more formal employment contracts for women. Moreover, while determining the benefits of these schemes, it is not just sufficient to track utilisation and length of leave norms. Organisation for Economic Co-operation and Development (OECD) countries also use "payment rates" as a measure to track progress – an indicator that calculates the proportion of previous earnings, replaced by relevant maternity leave payments.[8]

[6] According to the Institute of Development Studies report, only 1 per cent of women are eligible for this Maternity Benefit in India. Chopra, D. (2016). Addressing Unpaid Care for Economic Empowerment of Women and Girls, IDS, 2016, funded by GROW

[7] Paper II, Chaturvedi, S. (2019). Public Provision of Centre-based Childcare in High-, Middle- and Low-income Countries: What are the Systemic Features that Aided the Effective Scale Up of these Programmes? refer to the section "Some unintended consequences."

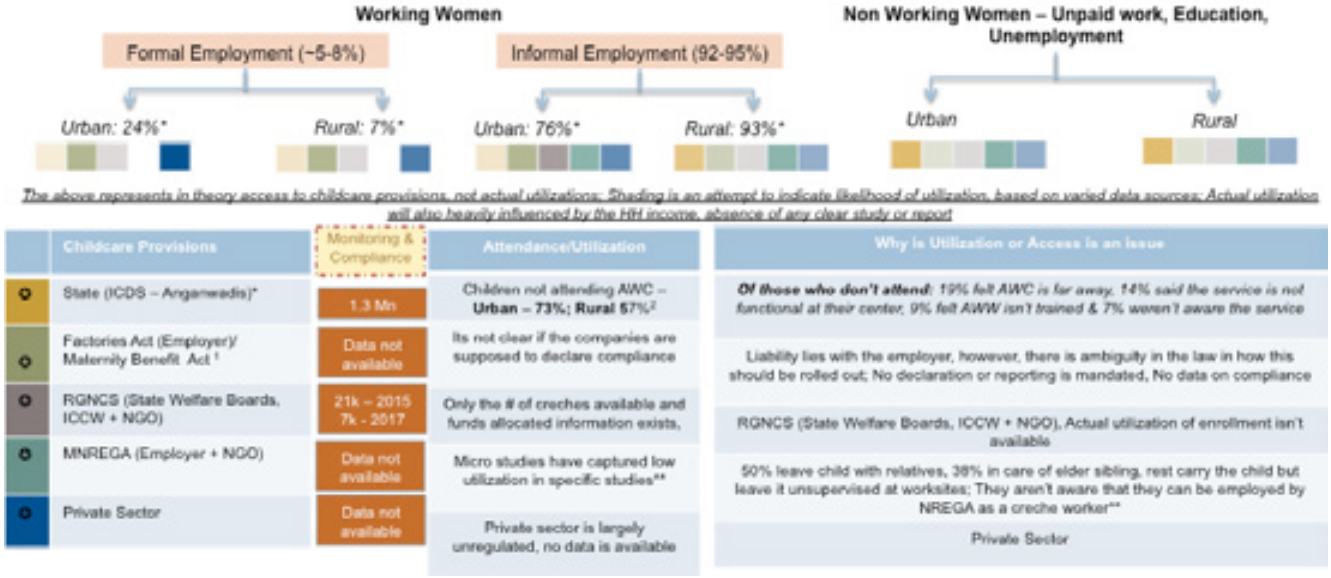
[8] OECD family database, key characteristics of parental leave systems: definitions and methodologies: https://www.oecd.org/els/soc/PF2_1_Parental_leave_systems.pdf

Centre-based childcare

In addition to the maternity leave schemes, the provision of centre-based childcare or some semblance of day-care has existed in India. One of the first schemes to include a clause on this was the Factories Act 1948 (amended in 1987). Other acts that mention childcare are the Beedi and Cigar Workers Act, 1966; the Plantation Labour Act,1951; Mines Act of 1952; the Contract Labour Act, 1970; and the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.

In addition to these, Figure 2 indicates the policies, schemes and provisions that are available to support working women with their caregiving responsibilities: ICDS (even though it was not explicitly established to support working mothers), National Crèche Scheme (NCS, formerly known as the Rajiv Gandhi National Crèche Scheme (RGNCS)), Mahatma Gandhi National Rural Employment

Figure 2: Policies and programmes on centre-based childcare for women: from provision to utilisation – gaps in monitoring and compliance



**Women in MGNREGA: Issues in Childcare, 2017. A study in three blocks of Uttar Pradesh, and four blocks of Rajasthan, RSOC, 2013-14.
✪ Never evaluated externally and formally. Smaller studies assessing the impact on children's nutrition exist for ICDS.
***The childcare proxy here is the PSE component of ICDS.** The Beedi and Cigar Workers Act, 1966; the Plantation Labour Act,1951; Mines Act of 1952; the Contract Labour Act, 1970; and the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 or 1980 include provision for day-care.

Note: The column "childcare provision" indicates policies/schemes that have some provision for childcare, the first column adjacent to this captures the colour code for the service and if it has been evaluated/assessed. The third column captures quantified provision (where available) or reach of the service; the fourth column captures data on utilisation (if available); and the last column explains why these services are utilised or not. Further, the figure shows which of the schemes would be relevant to the women who work in formal or informal sectors and those who are not working and reside in urban and rural India. To indicate the relevance (high or low), colour codes are used, by varying the intensity of the shades.[9] For examples, for a woman working in the informal sector, in an urban area, the Factories Act (khaki green), NCS (grey), MGNREGA (cyan) and private sector might be more realistic options over an ICDS, whereas for an informal worker, in rural area, ICDS might be the most relevant option.

Source: AWC data, WCD Annual report 2016-17, RGNCS - Government of India, MWCD, Lok Sabha un-starred question no.3427 to be answered on December18, 2015, MWCD, National Conference document, July 2018, Invisible Women and Invisible work, March 2017.

[9] This is for indicative-visual representation purposes only, based on the qualitative and quantitative information captured in the columns below.

Guarantee Act (MGNREGA) and initiatives by the private sector. For the scope of this paper, we will largely focus on women working in informal employment and non-working women in rural areas.

ICDS serves as a platform to support women during pregnancy and lactation by providing supplementary nutrition, health and nutrition education, and health services provided by the Ministry of Health and Family Welfare (MoHFW). It also supports out-of-school girls through its scheme for adolescent (11-14-year-old) girls.[10] An analysis of the National Family Health Survey (NFHS) 3 (2005-06) and 4 (2015-16) shows that the maximum increase (34 percentage points) was seen in utilisation of supplementary nutrition services at AWCs and minimum increase in utilisation of Early Childhood and Care Education (ECCE) services[11] (7 percentage points, with low utilisation at 35 per cent as of 2016),[12] indicating that most mothers utilise the supplementary nutrition services of ICDS but, possibly, given that the AWCs are open for only two to four hours,[13] they do not feel that they can leave the child unattended at these centres for too long. Moreover, AWCs usually open around noon, and this timing does not coincide with the working hours of most women.

According to the Rapid Survey of Children (RSOC) 2013-14, and as shown in Figure 2, 73 per cent of children between three to six years of age do not attend the ECCE services provided by AWCs in urban areas and 57 per cent do not attend this service in rural areas across India. The reasons stated by the mothers for not attending are: 19 per cent felt that the AWC was too far away (distance); 14 per cent said that the service was not available at their centre (capacity); 9 per cent felt that the AWC was not equipped to take care of the child (quality, skill-human resource gap); and 7 per cent was not aware that AWCs were supposed to provide this service (demand-awareness-service provision gap).

Apart from ICDS, several industry-specific acts such as the factories act and plantations act exist on childcare. However, since there is no mandatory declaration by the employer as part of compliance with the provision of childcare, there is no way to assess how effective these schemes have been or what the level of implementation is. Similarly, the provision of childcare under MGNREGA or NCS, there is no component that monitors the compliance or quality assurance aspect regularly. There have been a few social audits, but they are few and far between.

[10] Nutrition component – supplementary nutrition (take home rations, hot-cooked meals) and non-nutrition component – iron and folic acid supplementation, health check-ups, counselling on health, nutrition education, life skill education and guidance on accessing public service schemes.
[11] ECCE services are provided where children three to six years of age spend some time at the AWC, proxy for childcare.
[12] Chakrabarti, S., Raghunathan, K., Alderman, H., Menon, P. and Nguyen, P. (2019). India's Integrated Child Development Services programme; equity and extent of coverage in 2006 and 2016.
[13] Also corroborated in the qualitative field study carried out as part of this research paper, detailed in later sections.

According to a study by the Institute of Social Studies Trust (ISST) on MGNREGA's care responsiveness, worksites had no provision for childcare and, even when they did, safety measure for the child were absent. Often pregnant and lactating women were deterred from working at these sites.[14]

The NCS is funded by the government to about 90 per cent (10 per cent being contributed by the Non-Governmental Organisations (NGOs) implementing the service). A study was conducted by the National Institute of Public Cooperation and Child Development (NIPCCD) in 2013-14 to assess the situation of crèches in Andhra Pradesh, Madhya Pradesh, Maharashtra, Uttar Pradesh and West Bengal. The study indicated that none of the centres had adequate infrastructure or educational material for children and about 42 per cent of crèche workers and 70 per cent of the helpers were untrained (even though the scheme guidelines require that the child caregivers have a certification of training).[15] However, the coordination with AWCs to ensure immunisation, growth monitoring and maintenance of health records was done very well. Another study also noted that the crèches set up under the *schemes favoured rural areas, as compared to urban areas.*[16] While this is not an issue in itself, but given that most AWCs are set up in rural areas (>90 per cent), the scheme might have more relevance and better utilisation in the urban areas. However, there are no rigorous evaluations that have studied the impact on mothers' employability or children's development outcomes. There are a few studies that reiterate the potential of the scheme but highlight the glaring gaps in providing quality centre-based childcare. Lately, NCS itself has been shrinking both in terms of service delivery and financing from the national budget. As of 2015, the number of crèches functioning in various states was about 21,000, which further reduced to 5,000 in 2017, with the ability to serve 125,000 children (Figure 2). The scheme has great potential; however, there might be a need to rethink its policy and programme design.

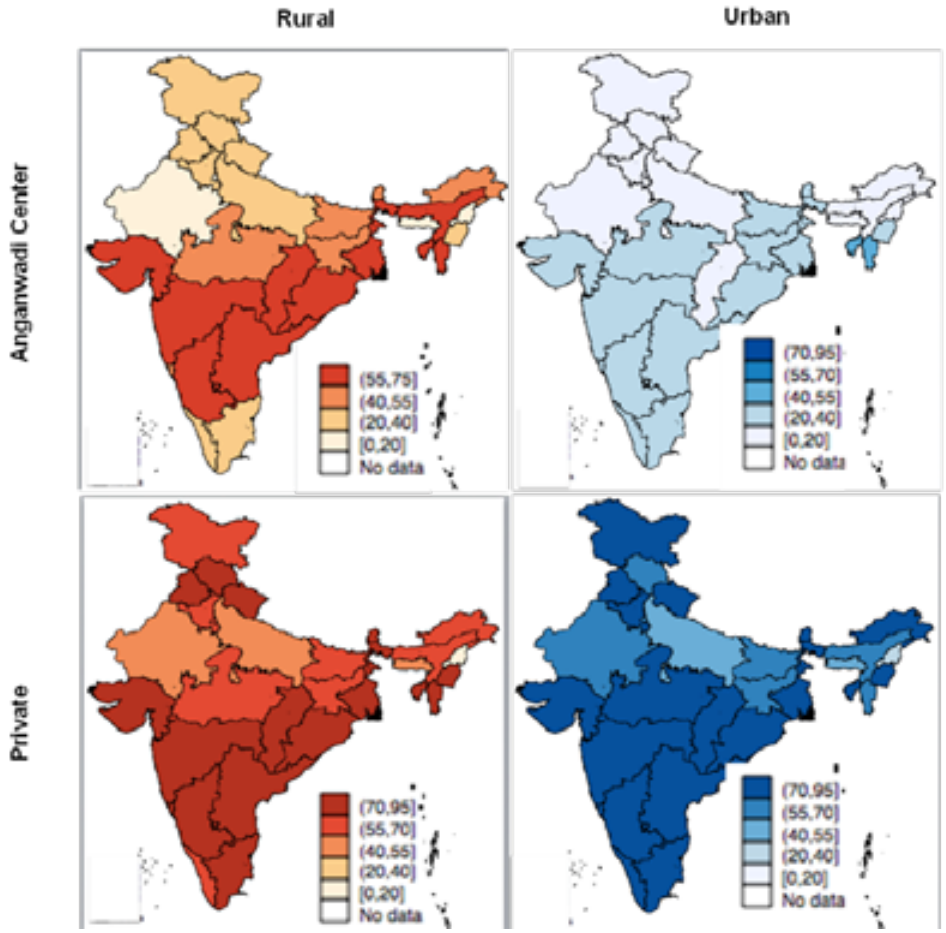
Not much information is available on how the private sector functions in providing ECCE/childcare services. This is an unregulated and highly fragmented industry. Any entity/individual can start a playschool by registering itself as a private limited company.

RSOC 2013-14, possibly, is the only survey that has some information on the private sector's footprint in the Indian states, as shown in Figure 3.

The private sector's pre-primary or ECCE service (three to six years) coverage is high, not only in urban areas but also in rural areas. In urban areas, this might be because of the limited presence of the state-provided AWCs. Very few AWCs exist in urban areas as compared to rural areas and, even in those, service utilisation for Pre-School Education (PSE)/ECCE services is lower than 40 per

[14] Zaidi, M., Chigateri, S. with Chopra, D. (Ed.) (2017) Making Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) more care-responsive, Programmatic Notes. Brighton. IDS.
[15] National Institute of Public Cooperation and Child Development, Research studies, 2012-2013; Rajiv Gandhi National Crèche Scheme for the Children of Working Mothers: An Evaluation.
[16] Performance of RGNCS for children of working mothers, commissioned by the Planning Commission, 2013.

Figure 3: ECCE service coverage by ICDS-private sector for children (3-5 years)



Source: Rapid Survey of Children, 2013-14, MWCD; maps generated using STATA software. The scales show percentage coverage and divisions are comparable for consistency. (For state specific percentages, please refer to Annexure 1.). Please note, it's important to acknowledge that most of the southern states have more urban areas as compared to the north.

cent. However, given the aspirations of many low- and middle-income parents (that their child learns to speak in English) and the general perception that the private sector is more efficient, the private sector has a large presence in rural areas as well. As of 2013-14, of 29 states, rural areas of 17 states and urban areas of 19 states have over 70 per cent coverage of private sector ECCE services (Figure 3). Given the lack of regulation or their highly fragmented nature, there is no way of assessing if they are providing adequate or quality services in supporting a mother in the well-being of her child and in her pursuit of economic opportunities.

II. Policies and programmes on childcare from an ECD perspective

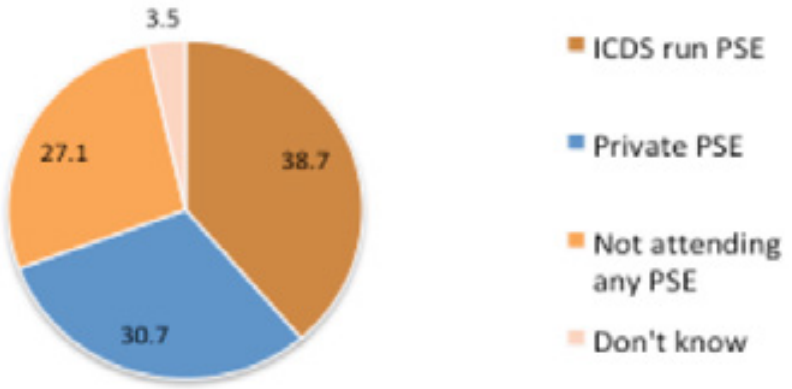
ECD centres or Anganwadis in urban and rural India

In India, for children (zero to six years of age), ICDS is the largest public welfare scheme for their development. This programme was initiated in 1975 on a pilot basis in 35 administrative blocks of the country. Though it was launched in 1975, the scheme did not become fully operational till 2001, when the Supreme Court ordered the government to universalise the scheme. By 2008-09,

the government was able to scale up the scheme substantially, following the guideline to provide one AWC per 800 population. Till date, it is a centrally-sponsored scheme, implemented on a cost-sharing basis with the state and by the state. In addition to services for pregnant and lactating women mentioned in the previous section, ICDS serves as a platform to support children from zero to six years of age through the AWCs. It provides supplementary nutrition, hot-cooked meals – for children zero to six years of age and ECCE for children three to six years of age. In addition, in collaboration with MoHFW, the children also receive immunisation and referral services.

In India, there are about 164-165 million children between the age of zero to six years (65 million in the age group zero to over three years and 99 million in the age group three to six years).[17] As of 2016, according to MWCD, 82 million children (46 million children under the age of three years, 36 million children in the age group three to six years) are registered beneficiaries with the ICDS for a range of services. This implies that approximately 50 per cent of all children under the age of six years[18] in India are not receiving services from ICDS. There might be several reasons for this – a segment of the population never avails of services from ICDS and so may not need it; and ICDS is universal but demand driven. Of the 1.4 million AWCs that are sanctioned across the country, only about 10 per cent exist in urban areas[19,20,21] and possibly the low- and middle-income population in urban areas has no or low access to AWCs; this might be true of the population in tribal and other hard-to-reach areas as well (also see Figure 2, for reasons why mothers do not use the ECCE service at AWCs)

Figure 4: Pre-primary programme utilisation, split by government-private sector provision, 2013-14



[17] Census, 2011.
[18] 46 million children between six months to <three years of age, 36 million children between three to six years of age, MWCD, annual report 2016-17.
[19] Press Information Bureau, Government of India, MWCD, dated August 3, 2018.
[20] Of these, 24 per cent are located in rented buildings, with rentals amounting to INR 1,000 in rural areas, INR 4,000 in urban areas and INR 6,000 in the metropolitan areas.
[21] Given that 27 states have less than a 10 per cent gap in achieving universalization (construction and operationality) of AWCs, operationalisation of AWCs should not be a problem (see Annexure 3, Gap calculated using the formula: one AWC operational/No. of AWCs sanctioned). Please note: the number of AWCs is taken from the administrative data from MWCD annual report. This varies substantially if we use the one AWC per 1,000 population criteria for different states.

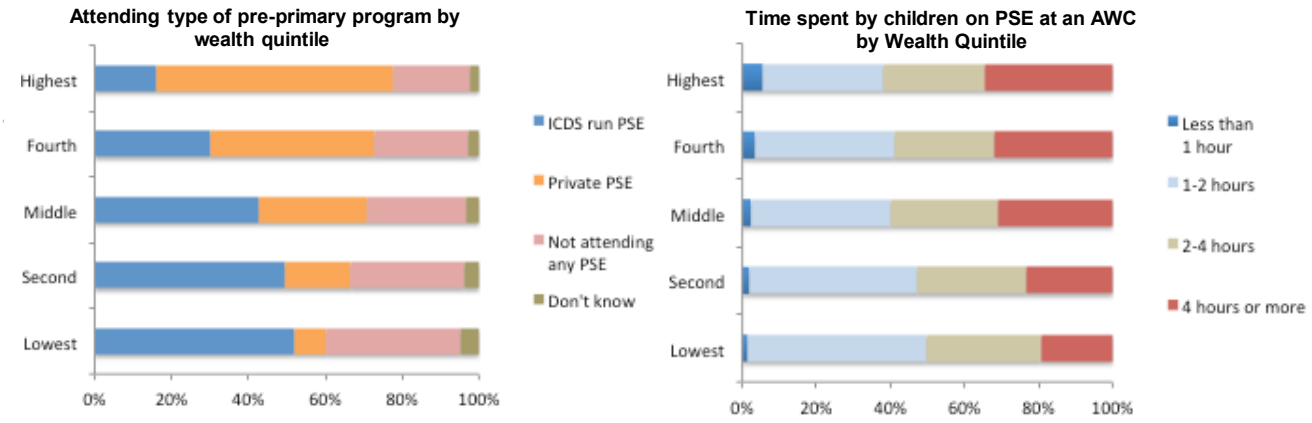
From an age-appropriate service and service provider perspective (Figure 4), of the 99 million children aged three to six years, an estimated 36-38 million attend pre-primary programmes with the ICDS, ~30 million attend private pre-primary programmes and *~30 million children do not receive any kind of pre-primary services.*[22] This implies that these many children might be susceptible to care as a secondary activity and deprived of optimum nurturing care.[23] Similarly, potentially, there might be ~20 million children less than three years of age who are not a part of ICDS.[24] Moreover, 45 million children, six months to over three years of age, who are in the ICDS, became eligible for centre-based care/ECCE service as per the ECCE policy 2013. However, due to various policy and systemic capacity constraints, the vision of Anganwadi-and-crèche centres has not been realised.[25]

Of the children (three to six years of age) who attend pre-primary programmes, a majority belonging to the middle, second lowest and lowest wealth quintiles attend the services provided by ICDS (Figure 5). These children often come from households that have a very low stimulation environment and these services are beneficial to them. However, when they do attend, they do so for only about one to two hours, which compromises the optimum nurturing care that can be provided to the children through these platforms.[26] The nature of PSE/childcare at these centres is more custodial in nature. Additionally, a study conducted across three states of Rajasthan, Assam and Andhra Pradesh, showed that most centres, be it the AWCs or private schools, did not provide for 'activity-based teaching learning' possibly due to the non-availability of learning material as well as a lack of awareness regarding its need.[27] Most centres were observed to be focusing more on either formal education (teaching of the 3Rs – Reading, Writing, Arithmetic) or, on the other extreme, a minimalist curriculum of 'songs and rhymes'. Either way, the children were not given a developmentally appropriate learning environment.[28]

From the ECD point of view, ICDS offers an opportunity that not many countries have to aid health, nutrition, cognitive development and safety for all children, especially those from the low-income families. Even though there has been consistent

[22] As per Census 2011, there are 165 million children under the age of six years in India (65 million children zero-<three years, 99 million children, three to six years, eligible for pre-primary school). Source: Census 2011, RSOC 2013-14, have combined the population, percentages from the RSOC survey. Using this, results in 38 million children three to six years in the ICDS PSE system. However, the annual report for MWCD 2016-17 shows 36 million children aged three to six years are in the system, hence the approximations.
[23] Chaturvedi, S. (2019). Global evidence on the benefits of centre-based quality childcare on maternal employment and early childhood development outcomes, 2019, IWWAGE. First paper in the "Childcare series"; see section on nurturing care for children.
[24] Census 2011 and MCWD annual report 2016-17. As stated above, a percentage of ~20 million children might never use the ICDS services, as they belong to high-income families.
[25] There have been some efforts under the ECCE policy in the form of pilots in Madhya Pradesh, Odisha and Tamil Nadu. However, the impact evaluation from Madhya Pradesh, discussed later, has not been promising, given the skill-human resource gap.
[26] The India Early Childhood Education Impact Study, Policy Brief, 2017, Section - Distribution of time on different activities in preschool programmes.
[27] Quality and Diversity in Early Childhood Education: A view from Andhra Pradesh, Assam and Rajasthan, Impact study 1, 2015.
[28] Ibid.

Figure 5: Per cent distribution of children between 3-6 years who attend pre-primary programmes, 2013-14



Apart from health and supplementary nutrition provision, children between the age of 0 to 2 years don't have any provision for early childhood development

Source: Population, Census 2011, PSE and RGNCS beneficiaries, WCD Annual report, 2016-17. Children attending private sector programmes and not attending, information on wealth quintile from RSOC, 2013-14, MWCD, National Conference document, July 2018.

improvement in the coverage of service provided by the platform, between 2006 and 2016, quality and system capacity (programme design) have emerged as issues in providing support to the mother-child dyad that impact maternal employment rates and ECD outcomes.[29]

However, based on reach across the country, available data and information discussed above, the scheme that emerges as a potential solution in aiding maternal employment and ECD outcomes is ICDS. The NCS could also offer a viable solution. Amongst the service providers,[30] the government and the private sector have the reach in urban-rural areas and emerge as the main entities to provide childcare services.

Private Sector

The private sector has identified the demand for childcare/ pre-primary programmes and it perceives these segments as a market opportunity. Given that over 90 per cent of AWCs are located in rural India and the private sector is heavily present in an unorganised manner in urban areas (and rural areas too), the private sector cannot be dismissed. However, there is the issue of information asymmetry and externality in the childcare market. A common concern with private pre-primary or day-care centres is that, while their intent could be to improve ECD outcomes, they incorporate the 3Rs approach to attract parents to their schools and as a response to demand. It has been established that the 3Rs approach is not appropriate; however, parents perceive it as a value addition. Both parents and the private sector provider may not necessarily know what 'quality care' entails. In the absence of any regulations around safety, pricing and quality standards, the service-user could be adversely impacted – especially users from

[29] Alderman, H. (2018). Evaluating Integration in the ICDS: Impact Evaluation of an AWC-cum-crèche pilot in Madhya Pradesh.
[30] Service provider is different from the vast body of stakeholders that would be needed for this agenda – industries, unions, NGOs, technical experts, etc.

disadvantaged socio-economic backgrounds. Hence, there is a need to actively engage in conversations and research to work out regulations for the childcare market – regulations that are not necessarily punitive but more incentive based.[31] This could also serve as an opportunity to not only mainstream the 'quality and affordability' component of childcare but also further the agenda for "the Care Economy".[32]

National Crèche Scheme

There might be a need to relook at the institutional capacity and design of NCS. Historically, the organisations under the scheme providing the crèche services varied vastly in quality and in their adherence to standards. They favoured a presence in rural areas and were highly fragmented in their presence. It is possible that some excellent management and implementation practices were lost due to lack of rigorous documented evaluations. Taking a cue from the INTEGRA model of Chile, there might be merit in reassessing the policy design of the scheme. INTEGRA is a non-profit entity chaired by the first-lady of Chile. It was institutionalised to set up childcare centres in places where the government did not have childcare centres or were in hard-to-reach areas.[33]

Integrated Child Development Services

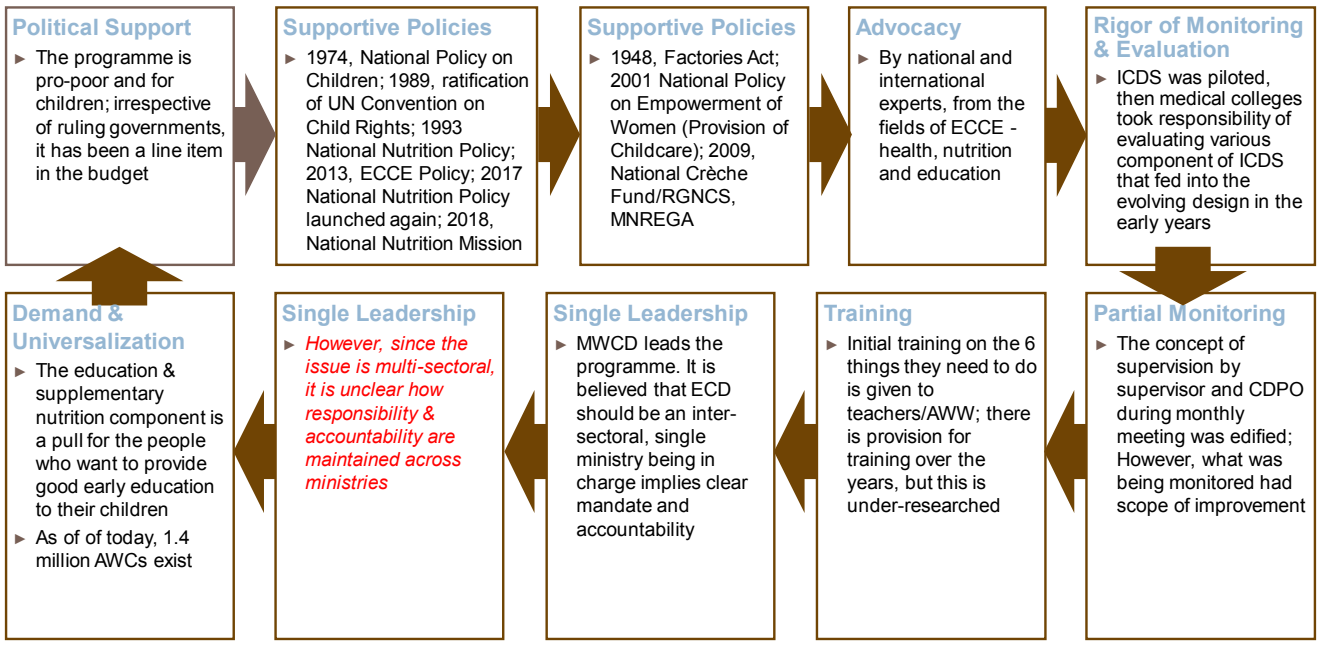
ICDS as a scheme has reach, scale and potential for sustainability. The next section does a deep dive into the ICDS' service provision for children aged zero to six years, using the building blocks framework, and its potential to serve as a childcare framework to aid the mother-child dyad.

3
ICDS: AN ANALYSIS

To understand, in detail, what has worked and not worked in ICDS in delivering on its intended design, it is important to appreciate that ICDS functions under a complex adaptive system framework.[34] What has worked well for this system are the positive feedback loops (Figure 6) – the right policies, information – that were fed back into the system as the programme was being scaled up in its early years. In terms of policies, there are plenty of policies and guidelines that are strongly aligned with the existing evidence. More recently, there has been a shift in acknowledging and realising that child development and maternity support are crucial for human capital growth. Hence political support for the agenda has been building up steadily.

[31] A bill has been introduced in the parliament as of December 2017: The Play Schools (Regulations) Bill 2017.
[32] International Labour Organization, ILO, June 2018.
[33] Paper II, Chaturvedi, S. (2019). Public Provision of Centre-based Childcare in High-, Middle- and Low-income Countries: What are the Systemic Features that Aided the Effective Scale Up of these Programmes?
[34] Please refer to Paper II, Figure 1: Complex adaptive system of childcare, that shows how each of the building blocks interacts in a non-linear manner with each other to generate outputs and outcomes.

Figure 6: ICDS: complex adaptive system – positive feedback loops[35]

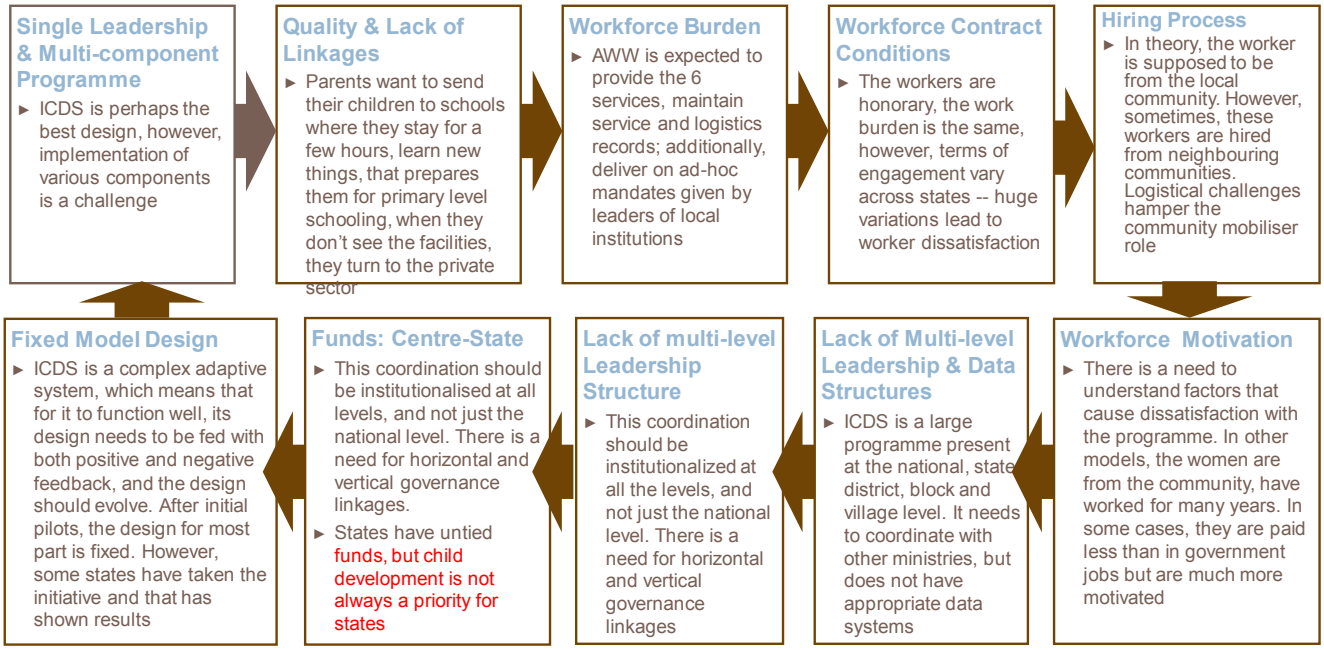


However, some issues have remained unaddressed for years and have been functioning as negative feedback loops; they have been acting as the negating forces, holding back the system. Initially, when ICDS was piloted, the idea was that it would be scaled in stages. The implementing team worked closely with local medical and research institutes to capture these positive feedback loops and make amendments as appropriate. However, due to massive delays over a period of time, universalization was announced by the Supreme Court – a positive action. In an effort to speed up the process, the state focused only on infrastructural components to fulfil the requirements of the AWCs. Focus shifted to construction of the centres and sanctioning the positions of Anganwadi Workers (AWWs), also a positive step. However, the training institutes that were supposed to train these workers, thereby contributing to quality services, were not scaled up at the same speed as the construction and hiring of AWWs or were concentrated in a few parts of the country, which was a negative. These and some other negative feedback loops are captured in more detail in Figure 7.

In some states, recruitment of adequate staff, the supervisor and Child Development Project Officers (CDPOs) lagged way behind AWW hiring. Working with researchers and using evaluations became a secondary activity. Against this background, the following is an analysis of ICDS system's governance and accountability, financing, data systems and human resources.[36]

[35] Scaling up Integrated Early Childhood Development programmes: lessons from four countries, and one-on-one interviews conducted with mothers using alternate modes of childcare, one-on-one interviews conducted with the expert stakeholder's policy timeline mapping from secondary research.
[36] The scope of the programme has been covered extensively between the two previous sections.

Figure 7: ICDS: complex adaptive systems – negative feedback loops – what is faltering?



Source: Scaling up Integrated Early Childhood Development programmes: lessons from four countries, one-on-one interviews conducted with mothers using alternate modes of childcare, one-on-one interviews conducted with the expert stakeholders, policy timeline mapping from secondary research.

Governance and accountability

Policies that directly or indirectly influence childcare

As shown in Figure 6, many evidence-based policies on child development were introduced in 1974, 1989, 1993, 2013, 2017 and 2018. These policies have been influential in having a positive impact on children's development and women's health. More recently, these policies have reiterated the idea that the mother should not be the only caregiver in the family, that this is also a responsibility of the father.

However, at the policy level – because of outcome-based agenda setting, instead of holistic ECD – sometimes these policies end up competing. The ECCE policy was introduced in 2013 and focused on children in the age group of zero to six years; then National Nutrition Policy (NNP) was introduced in 2017 which prioritised 1,000 days – from conception to two years. Both policies intended to use AWCs; ECCE intended to leverage centre-based care while NNP/National Nutrition Mission (NNM) had a strong component of outreach and home-based care.

However, there has not been much conversation around how this new policy impacts the ECCE policy of 2013. More recently, Samagra Shiksha Policy (SSP, April 2018) has been announced under the Ministry of Human Resource and Development (MoHRD), with the intention of providing a pre-primary programme for children between four and six years of age. This is a good move towards prioritisation of the 'quality' aspect of pre-primary programmes and school preparedness. However, even though the policies and guidelines are predominantly evidence based, there are multiple policies announced every few years without accounting for their synergies or their competing effects

on the platform or resources, especially human resources. It is worth reflecting on how all of the policies mentioned here would work and not generate confounding or negative feedback loops.

At the system level, a range of interventions and responsibilities are added under the umbrella of ICDS[37] and SSP[38] but there is no corresponding increase in the capacity of the system, especially on the human resource front. The draft framework of SSP prescribes that the departments of women and child development and human resource development work under the supervision of a nodal agency, the State Council of Educational Research and Training (SCERT). However, the framework fails to address impact on the role of NIPCCD that has been providing technical guidance and training to the ICDS staff. The draft does contain many good practices around wages and career progression, but all of these are for the kindergarten to class 12 human resources – teachers. Even though the AWW is identified as the human resource responsible for dissemination of the pre-primary service, there are no stipulations on her career development or remuneration.[39]

Lastly, and most importantly, at the mother-child dyad level, most of these *policies do not acknowledge the role of mothers as an income contributor* in the family. Though the ECCE policy resolution does acknowledge that, while home-based family care is the best, given India's socio-economic diversity and stratification, a centre-based approach might provide support to the family. SSP too acknowledges the adverse impact of childcare by the older sibling on the older sibling, and how centre-based care might be the potential solution. Moreover, because these policy designs do not account for the unpaid care work burden of women while prescribing interventions for childcare, a mother is unable to fully adopt those practices – thereby compromising on the child's nurturing care and her own well-being. While there are schemes that are being introduced for women's economic empowerment, it is essential to realise that women need social protection at critical junctures in their lives, and motherhood is one such juncture. To actualise the impact of women's economic empowerment schemes, the government needs to accept its role in supporting centre-based childcare that acknowledges the role of women as 'breadwinners'.

Accountability

The responsibility of implementation lies with the state and, within the state, usually with the department of women and child development. There are supervision and monitoring mechanisms at various administrative levels:[40]

[37] The schemes under the ICDS umbrella are Anganwadi Services Scheme, Pradhan Mantri Matru Vandana Yojana, National Crèche Scheme, POSHAN Abhiyan, Scheme for Adolescent Girls, Child Protection Scheme.

[38] Samagra Shiksha encourages colocation of AWCs with a primary school, which is a good practice. As on March 2018, across India, 36 per cent of AWCs are operating out of government buildings, 26 per cent from rented buildings, 37 per cent from community buildings, and 1 per cent in open spaces. Source: AI, ICDS budget policy brief.

[39] The draft framework does include a provision of a recurring grant of up to INR 200,000 for pre-primary programme support, including manpower deployment. However, how much of this goes towards manpower deployment, where would this be deployed is not clear.

[40] https://icds-wcd.nic.in/mon/monitoring%20mechanism-14-2-2011.pdf

I. State (review by minister/secretary-bureaucrat);
II. District (District Collector, along with CDPO);
III. Block (CDPO and Block Development Officer (BDO)); and
IV. Village/AWC (this varies across states – Panchayati Raj Institution (PRI) members, mothers' committees + woman PRI leader; AWC management committees with lady supervisor, village health and sanitation committees).

Vertical governance structures exist within the state at each administrative level. However, even though the women and child development department has synergies with sectors such as education, rural development, PRI and health, *the horizontal structures for coordination across departments are non-existent* and hence accountability on integration is weak or non-existent. Under the current design, the point of culmination of these schemes is often the AWC. Most schemes place the responsibility of convergence on the AWW and, at the village level, on PRIs. While aspiring to have convergence at the point of service makes sense, what ICDS misses is that, along with the responsibility of convergence, there is a need to provide some level of autonomy in decision making, and finances to support this as well.

At the district level, the District Collector or the district committees are accountable for progress of all government-related projects, including women and children's welfare. Given the array of schemes that need to be monitored in a district, women and child welfare programmes are reviewed once a month or once in three months, based on the information reported by the BDO and CDPO. Most financial and operational decisions are made at the district level but the scheme suffers a bottleneck at the block level. BDOs tend to prioritise short-term and tangible programmes such as infrastructure over programmes for human capital. As detailed later under the section on human resources, most of the CDPO positions remain vacant; the CDPO, the BDO's counterpart who is supposed to oversee welfare schemes for women and children and coordinate with the BDO, is not available to take integration forward. Decision-making is top-down, integration is envisioned to be bottom up, with one point of convergence at the AWC. The critical components that can facilitate efficiency of this system are not available, thereby weakening its impact and accountability.

Financing and budget overview

ICDS is a centrally-sponsored scheme, funded from the union budget, and has detailed line items for schemes that support women and children. MWCD's ECCE component is one of the many services under the Anganwadi Services (AWS). SSP is the new scheme that intends to provide a pre-primary programme for children four to six years old. As of 2018-19, SSP has no line item specified for the pre-primary component in the budget. As shown in Figure 8, in 2018-19, a total of INR 17,890 crore has been allocated for AWS.

Figure 8: Financing and budget allocation for maternity leave and childcare

INR Crore	Revised Estimates 2018-19
Anganwadi Services	17,890
National Creche Scheme	30
Pradhan Mantri Matru Vandana Yojana	1,200
National Nutrition Mission	3,061
Child Protection Services	925
Scheme for Adolescent Girls	250
Umbrella ICDS	**23,356**

INR crore	
Total Budget Expenditure	**24,42,213**
GDP at constant market prices	**1,29,85,363**

	Percentage spend of Total Union Budget	Percentage spend as part of the GDP
Maternity leave + centre-based care (pre-primary program)	0.8%	0.1%
Maternal & childcare and nutrition	1.0%	0.2%

Note: Spend on maternity leave + centre-based care involves PMMVY, ECCE for children three to six years of age, and all other services included in the ambit of ICDS such as supplementary nutrition (which forms the largest percentage expenditure of Anganwadi supervisor budget allocation), immunisation, etc. Hence possibly, the childcare component when taken as a proportion of the union budget would be smaller than 0.8 per cent.

Total spend on maternal and child care and nutrition includes all the budget items included in the umbrella ICDS scheme. However, please note, this does not include the spend on child health by MoFHW.

Source: Economic Survey, 2017-18. GDP figure used is for 2017-18; India budget, demand no. 98, India Budget, Expenditure of Government of India.

ICDS is implemented on a cost-sharing basis with the state. As of 2016-17, the cost sharing pattern is 60:40 for ICDS (general) for various components.[41] As of December 2017, cost-sharing for salaries of regular employees has been 25:75.[42] The share of the central government is fixed but some states contribute more than their stipulated share, especially in components such as supplementary nutrition, hot-cooked meals and AWWs' honorarium. Hence, huge variations exist across the states.

Figure 8 also highlights that India spends 0.8 per cent of the union budget and 0.1 per cent of its Gross Domestic Product (GDP) on maternity leave and AWS (the centre-based childcare component is a sub-part of these services). OECD countries, on an average, spend 0.8 per cent of the GDP, and some of the low- and middle-income countries in Latin America spend 0.5 per cent of GDP on childcare (for children less than three years of age) and pre-primary programmes (for children between three and six years). Even when taking into account all the schemes for children under the umbrella of ICDS, India only spends 0.2 per cent of its GDP on maternal and child care, and nutrition programmes. However, given that some states prioritise investment in human capital[43] for women and children, there might be merit in further analysing these numbers at the state level to uncover the state variations.

[41] Annual report 2016-17, MWCD.
[42] Minutes of EPC and administrative approval of revised APIP, 2017-18 for Anganwadi schemes under umbrella ICDS, December 2017.
[43] *Budget exercise:* Since 2012, the centres use the state's Annual Programme Implementation Plans (APIPs) to allocate budgets to the states. APIPs are prepared following a decentralised planning process wherein the blocks prepare a proposal based on the needs of region; this is transferred to the districts, where the relevant stakeholders are consulted. This exercise is done across departments, including ICDS. Depending on state prioritisation of social welfare schemes, a final APIP proposal is prepared and shared with the states.

Data systems and evaluation – quality assurance and compliance

Social protection schemes that can aid maternal employment and improved ECD outcomes are multi-sectoral. As discussed, the governance structures enabling collaboration across departments or ministries are weak or tenuous and can be counter-productive for horizontal coordination, thereby achieving sub-optimal integration. The aspiration is that convergence would take place at the AWC. However, the quality of these integrated services at the AWCs has also emerged as an issue. This may be because integration through a singular platform, running at full capacity, might lead to diminishing returns; therefore, there might be merit in exploring alternate means – platform sharing enabled by data integration across data systems that are currently being developed under ICDS such as Computer Application Software (CAS), health, rural development and SSP's Unified District Information System for Education (U-DISE) and possibly the project management system developed for the policy. If these systems are built to ensure comparability, they might be able to strengthen horizontal coordination mechanisms. Moreover, this can ensure continuity of service along the life cycle of the beneficiary through different departments or platforms. For example, Chile's Registro Social de Hogares (RSH) works across many social welfare sectors such as education, health and social welfare. It integrates data collection and eligibility determination across all social assistance programmes (with data flows in both directions).[44,45] Additionally, beyond ensuring comparability of information systems, it is important to understand which system-related indicators should be tracked to monitor services and measure quality.

Recent findings suggest that it is important to capture a wide range of structural and, more importantly, process indicators to ensure quality service delivery and continuous improvements. Both structural and process indicators provide information on how to improve quality of services (see Annexure 2), and how it influences outcome indicators for child development and maternal employment over a period of time. It might be harder to incorporate some of the process variables in a monitoring system; however, this is where regular survey[46] mechanisms/supervisory systems can be leveraged and strengthened by incorporating the appropriate indicators in the Management Information System (MIS) as well as state or national surveys.[47,48,49,50]

[44] Chile, Department of Foreign Affairs and Trade, case study: Chile 'RSH is a four-part system consisting of (1) a functional data base and its platform; (2) support for the selection of beneficiaries of social benefits created by law; (3) technical assistance to the programmatic supply; and (4) control and monitoring processes.
[45] The eligibility determination allows a beneficiary attending the health services to be reminded that they are missing the services they are entitled to in the education department. However, it is extremely crucial that while such data systems/ software are being developed, there is a corresponding cyber security feature built into them.
[46] Age appropriate population level tools are being developed by the Department of Health Services, UNICEF's Early Childhood Development Index and WHO's Global Scaled for Early Development.
[47] Kariger, P. and Frongillo, E.A., Engle, P., Rebello Britto, P.M., Sywulka, S.M. and Menon, P. (2012). Indicators of Family Care for Development for Use in Multi-country Surveys.
[48] Lopez Boo, F., Araujo, M. and Tome, R. (Feb 2016), How is Child Quality Measured? A toolkit.
[49] Fernald, Lia C. H., Prado, Elizabeth, Kariger, Patricia and Raikes, Abbie. (2017). A Toolkit for Measuring Early Childhood Development in Low- and Middle-Income Countries. World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/29000 License: CC BY 3.0 IGO.
[50] Alderman, H. (September 2018). Evaluating Integration in the ICDS: Impact Evaluation of an AWC-cum-crèche pilot in Madhya Pradesh.

Human resource for childcare

Human Resource for Childcare (HRC) is one of the most essential elements that determines the quality of centre-based childcare provided to children, aids their development and, in turn, wins the trust of the parents to utilise the services. Given HRC's importance and urgency in the complex adaptive system of ICDS, the following is a dedicated sub-section that captures a situation analysis on HRC at AWCs – on the range of responsibilities and reporting structures, a view on the human resource shortage and deficiencies in the system (recruitment delays, time-use and untapped potential of non-monetary incentives) and training regime to equip HRC to deliver on the outcomes of child development and maternal employment.

Within ICDS, the AWW, her helper (AWH), lady supervisor (one per 25 main AWCs) and CDPO (per block/125-150 AWCs), statistical assistant (per project), District Programme Officer (DPO, per district) and a district-level statistical assistance are the main human resources. The AWW and AWH are contracted while others are considered staff under the scheme. The critical human resource, the AWW, is the main caregiver and point of contact for the mother and child, along with her helper.

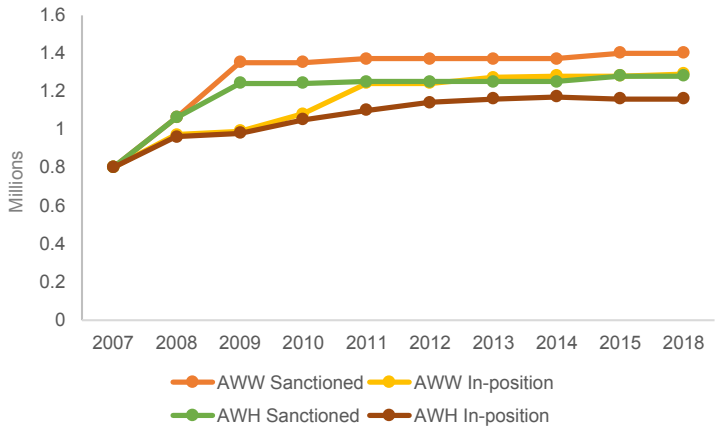
As of 2018, AWWs are paid an honorarium of INR 4,500 per month (cost sharing ratio between centre-state 60:40) and the AWH receives INR 2,250+250 (incentive-based component). Some states provide additional remuneration, over the 40 per cent contribution, and offer some additional benefits such as social security, which adds up to INR 10,000 or more in some states. Currently attempts are on to cover AWWs and their helpers (~2,300,000) under Employee Provident Funds, where contributions will be made both by the central and state governments. In terms of selection criteria, AWWs are selected from the community, are expected to have a minimum of 10 years of education, and have a retirement age of 60 years. Most AWCs function for two to four hours a day; in some states such as Tamil Nadu, they are open for six hours.

i. Job responsibilities and reporting structure: AWWs and AWHs are expected to deliver on all activities covered under the scope of ICDS' umbrella and services delivered my MoHFW, using the AWCs. Going forward, the AWW will be expected to coordinate with MoHRD on pre-primary services under SSP. To this end, she becomes the focal point for convergence but her reporting line is not very clear. Technically, she is supposed to report to the Anganwadi supervisor and CDPO, who are in charge of providing her supportive supervision. However, to fulfil the aspiration of convergence, at the village level she is expected to have a dotted line (partial reporting) with the PRI members; she is also supposed to collaborate with the auxiliary nurse midwife and the accredited social health activist. Going forward, under SSP, it is advised that she has a dotted line with the principal of the school as well. The AWW is also expected to be a part of multiple social welfare committees at the village level, participate in village health, sanitation and nutrition days, various monthly meetings

and other community-related activities, such as elections, campaigns and ad-hoc responsibilities as instructed by the Gram Panchayats. In addition, AWWs are expected to maintain records on all the services that they provide to women and children. The services range from providing early childhood education to children from three to six years at the AWC (prescribed staff: child ratio being 1:25[51]), supplementary nutrition/hot-cooked meals, and take-home rations to pregnant and lactating women, and also conduct home visits for health and nutrition education counselling. The helper is often designated the job of cooking the meals, cleaning and general upkeep of the AWC.

ii. ICDS' staff shortage and deficiency:
Recruitment delays: Given that 36 million children (three to six years of age) are registered in the ICDS system, to use the prescribed staff:child ratio would need 1.4 million caregivers which is the sanctioned number of posts for AWWs and approximately 900,000 sanctioned posts for her helper. However, this staff:child ratio is prescribed for ECCE services only, without accounting for the plethora of other responsibilities added in the job code for the AWW/AWH. This highlights the shortage[52] of HRC at the AWC level. To exacerbate the situation, there have been some delays in the recruitment of sanctioned posts of the AWWs/AWHs, though more recently this situation has improved as shown in Figure 9. With the big push for universalization, there was corresponding urgency to recruit more AWWs/AWHs into the system. Many positions were sanctioned in 2007-09. By 2009, 1.35 million AWW and 1.28 million AWH positions were sanctioned by the Government of India. Many workers were hired in the same period; however, since 2011, there has been a consistent 7-9 per cent gap in sanctioned and in-position AWWs/AWHs.

Figure 9: Recruitment delays compounding AWW/AWH shortages

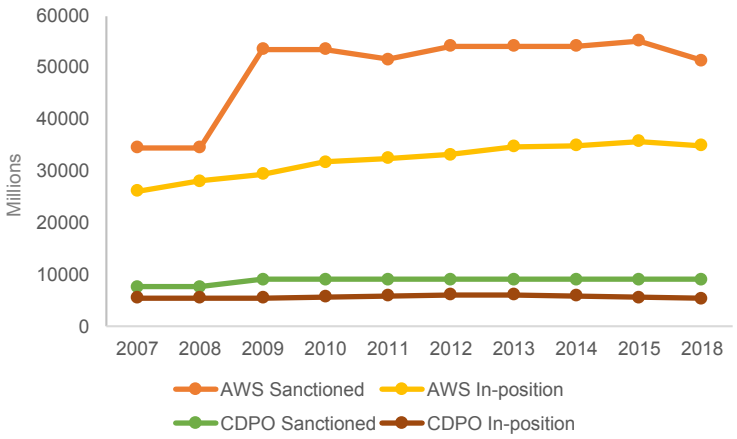


Source: MWCD, yearly ICDS status reports.

[51] ECCE policy, National Crèche Scheme. When compared to the staff:child ratio in high-income or low- and middle-income countries, and including the AWH in the mix, the staff:child ratio of 2:25 for ECCE activities is close to global averages.
[52] Shortage is defined as a situation where a human resource is doing more than what is the usual mandate or work burden.

In addition, there is also a gap between sanctioned and in-position Anganwadi supervisors, CDPOs, and management staff responsible for supportive supervision, procurement and annual programme implementation planning.

Figure 10: Consistent gap in sanctioned and in-position CDPOs/ Anganwadi supervisors



Source: MWCD, yearly ICDS status reports.

As shown in Figure 10, the number of sanctioned positions for CDPOs and Anganwadi supervisors has remained constant since 2007 and 2009, respectively, despite expansion of the programme in terms of services and beneficiaries. Additionally, at the national level, there has been a consistent average gap of 37 per cent in filling the sanctioned positions of the CDPOs and 38 per cent gap for Anganwadi supervisors.[53] Please see Annexure 4, for more shortages in each of the states. More often than not, one CDPO or supervisor is given responsibilities two to three times her usual jurisdiction. These recruitment delays are one of the most crucial factors, having a compounding adverse effect on HRC shortages, that dilute the performance productivity needed to deliver *quality service* at the AWC.

Moreover, there are an additional 45 million children younger than three years who are registered in the system, are eligible for ECCE for their own development[54] and as a support to their mothers in the community, but are not receiving the service. This highlights the *deficiency*[55] of HRC, implying that there is a need to re-look at the sanctioned number of human resource positions itself, to ensure that all eligible beneficiaries receive the services promised to them under the current policies. Policy makers need to recognise the difference between deficiency and staff shortages to deliver on the outcomes and goals of the policies.

Time-use of the Anganwadi functionaries: Time-use data on AWWs, capturing the range of their activities, is scant. Based on the few existing studies,[56] AWWs spend anywhere from

[53] These are national level numbers, and situations might be variable across states
[54] As per the ECCE policy of India 2013.
[55] Deficiency is defined as a situation where a human resource might be performing to its full capacity but cannot respond to the demand, since a bigger workforce is needed to cater to it.
[56] Pandey, D. D. (2008). Time and Work Study of Anganwadi Workers; Khosla, R. and Kau, M. (2008). States of Assam, Uttar Pradesh, Maharashtra and Tamil Nadu, Time Management by Anganwadi Workers of ICDS; Gupta, D. (March 2011). ICDS, Evaluation Report on Integrated Child Development Services, NIPCCD-Time and Work Study.

58-120 minutes per day on primary school education, 27-73 minutes on feeding activities, preparing hot-cooked meals and providing supplementary nutrition, and 89-120 minutes on maintaining various registers in a day. However, most of these studies have limitations as they either focus on time spent on one or two activities, e.g., infant and young child feeding practices and record keeping, or time spent on pre-school activities and cooking hot-cooked meals. They do not focus on time-use for the entire range of services and job mandate of the AWWs. Very few studies account for the travel time from home to the centre, and time for home visits. Some capture data on a monthly basis, while others capture them on a weekly/daily basis; direct comparability is a limitation. In addition, there are state variations, since in some states such as Tamil Nadu where AWCs function for six to seven hours while in most other states they are open for two to four hours. Given the dearth of good information that maps nurturing care activities at a centre-based facility as per time-use by the caregiver during the hours of operation, a field study was undertaken.[60] Table 1 captures this information for some of the non-government centre-based childcare programmes in urban and rural areas in India, and compares it to AWWs' activities for the duration of the AWC's hours of operation.

[57] ICDS (March 2011). Evaluation Report on Integrated Child Development Services.
[58] This might reduce with the introduction of a complex adaptive system and is being assessed as an impact evaluation, led by Lia Fernald from the University of California, Berkeley.
[59] To determine what constitutes nurturing care activities, the services provided at centre-based facilities in high-, low- and middle-income countries (Ref – Paper II in the series) were taken into account. More importantly, the study "The India Early Childhood Education Impact Study" by Dr. Venita Kaul, Aparajita Ray, 2017 was used as reference. Policy brief, Page 6 – "Distribution of time on different activities in pre-school programmes.
[60] Please refer to the "Methodology section" of Global evidence on the benefits of centre-based quality childcare on maternal employment and early childhood development outcomes, 2019, Paper I of this series for details on the field study.

Table 1: Snapshot of all the non-government childcare models present in India and included in this study

	SEWA-Rural 7.30-5 pm	SEWA-Urban- 9-5 pm	Mobile Creche-Slums 8.30-5 pm	Anganwadi Centre 10-12 or 2 pm
7.30 am	The caregivers start the day, unlock the centre, clean and mop the centre			
8-9	Mothers come and drop their children, in case children are not ready, hygiene is emphasised so the caregiver bathes and clothes the child if need be		Mothers drop off children at 8.30 am. The caregivers bathe the children, in case a child has not showered, and provide clean clothes (these clothes are provided by the centre, they change the child back into home clothes in the evening). Children 0-3 years are fed semolina porridge and children 3-5 year get semolina pudding. To suit the ease of eating for children of different age groups.	
9-9.45	Caregiver 1 makes the children recite a secular prayer, and do some exercises. Meanwhile Caregiver 2 is preparing breakfast for children. They also take attendance	Caregiver 1 goes around the slum area to pick up children to get them to the centre; Caregiver 2 cleans and sweeps the centre, and some mothers directly drop the children at the centre. Urban centres have given strict instructions to the mothers to bathe them and make them wear clean clothes before they send them to the centre. Also take attendance		
9.45-10.30	Breakfast of milk, chana and murmura and other local foods is serve, younger children need to be fed	They recite a prayer in the local language, and then do some basic exercises		Most open around 10 am, the AWH spends between 30-70 minutes in distributing supplementary nutrition, or cooking hot cooked meals and AWW spends anywhere between 58-120 minutes on pre-school education. Post this, children are fed
10.30-12	Children are engaged in some age-appropriate activity as prescribed by Anand University by one of the caregivers; The other caregiver cooks lunch and prepares to serve it to all the children	Children are engaged in some age-appropriate activity as prescribed by Anand University by one of the caregivers. The other caregiver cooks lunch and prepares to serve it to all the children	Between 10-12 the supervisor does some record keeping and prepares lunch for the children, while Caregiver 1 for children <3 year old follows the planner and Caregiver 2 does the same for children between 3-5 year old. This is recommended by the headquarters and is based on recommended age-appropriate curriculum	
12-1	Lunch is served, this is designed by the Shaishav Mandali (Sangini's counterpart childcare cooperative) and nutrition specialist at Anand University	At noon, some form of education – counting, poems, etc., – takes place in English. Usually it is recommended that interaction with the children should be in their mother tongue, however, the caregivers said that the parents feel happy when their children say anything in English	Lunch is served, dalia with vegetables, and kichdi with vegetables, on alternate days	Post noon, AWW spends about 90-120 minutes on maintaining records, planning coordination with the accredited social health activists, auxiliary nurse midwifes; some days she uses this time to also plan for organising Village Health and Nutrition Days. AWH cooks, cleans the centre and also assists the AWW in other activities
1-2	Children sleep/nap during this time post lunch. The centre has cradles and plenty of toys for children who don't sleep. Older children sleep on mats	Lunch is served; the supervisor provides a menu for a different nutritious dish for 6 days of the week	The children sleep, those who don't sleep get some toys or library books	Few days a week, AWW goes around the community for home visits
2-3	Free play and interaction among children is also allowed during this time	Children sleep for an hour or two, the children who don't sleep engage with each other; very young children are cared for under close supervision of the caregiver. Children are also given toys like building blocks, etc., to play with or picture books	2-2:30,the children are woken up	AWW is also expected to participate in monthly meetings help health and nutrition committees, or Gram Panchayat; She also acts as part-time enumerator for various surveys like the sample registration survey, so actively keeping a record of all the births and deaths. So even when the centre shuts down post 2-4 hours, she is engaged in a lot of administrative duties-campaigns, immunisations and outreach
3-3.4	Evening snacks, made of local ingredients, are provided to the children (lapsi, pansar)		3 pm onwards another activity, 3.30-4 the caregivers give milk to children (,200 gram in the morning and 100 gram at this time). For younger children, they use a bowl and spoon and not bottles.	
3-5	Caregiver 1 engages with children to do various activities; Caregiver 2 prepares and serves evening snacks, cleans up the centre and then engages with the children for activities like vegetables printing, blow paints, sand art, teaches them to write in sand to develop motor skills; they make them do creative thinking, story telling, in groups, etc. Best story is then made into a booklet. Bal geets and stories are taught to the children	Children wake up around 4, are given snacks made of local ingredients and then between 4-5 pm, mothers start coming to pick up the children.	4- 6 pm if free play, also, during this time, parents start coming to the centre to pick up their children.	
5-6	Caregivers wrap up and leave for home. Do the required book keeping	The caregivers clean the centre, wash the utensils, and update any paperwork and the attendance registers	While parents come to pick up their children, the centre staff sweeps, cleans the centre and does any planning work for the next day	
	In general, they work closely with the AWW to get immunisation and any other health check-ups done. They also connect with the local accredited social health activists, collect information on the government schemes and increase awareness amongst the mothers, to support them. They maintain registers with information on children - attendance, health records, weight , referrals needed. Government primary health centre functionary comes once a month to check the kids. The planning for lectures is done with the help of the supervisor and ,every month, one caregiver goes to attend the district level meetings to engage and learn from their peers. Both caregivers take turns to go every alternate month and, on that one day, one of the mothers volunteers to take their place and help in providing continuity to the centre		The centre has basic medication and first aid kid. However, for anything else, either they take the child to the PHC or send the parents to the primary health centre. For routine health checkup and immunisation, they regularly remind parents and also keep a record of the information, to ensure other children's are safe	

A few key points of differentiation are:

i. Hours of functioning and opening: Given that most mothers needed to step out for their work early, these centres start operations between 7-9 am (depending on the urban or rural context) and operate till 5-6 pm. AWCs, on the other hand, open at 10 am and close by noon or 1 pm, with the AWW spending an additional hour or two on recording keeping and other administrative duties;

ii. Focus on nurturing care activities that lead to quality services: The alternate models focus heavily on a routine involving the right feeding practices, psycho-social stimulation exercises for the children, including nap times, which are important for child development and for working mothers.

Since the hours of functioning of the AWC are limited, the AWW and AWH prioritise a few of these services each day. There have been some benefits. However, to fully realise the potential of the AWC platform to aid ECD, maternal

employment or even redistribution of unpaid care work to achieve economic gender equity, there is a need to alter the current AWC design in terms of hours of work and solve HRC shortage and deficiency;

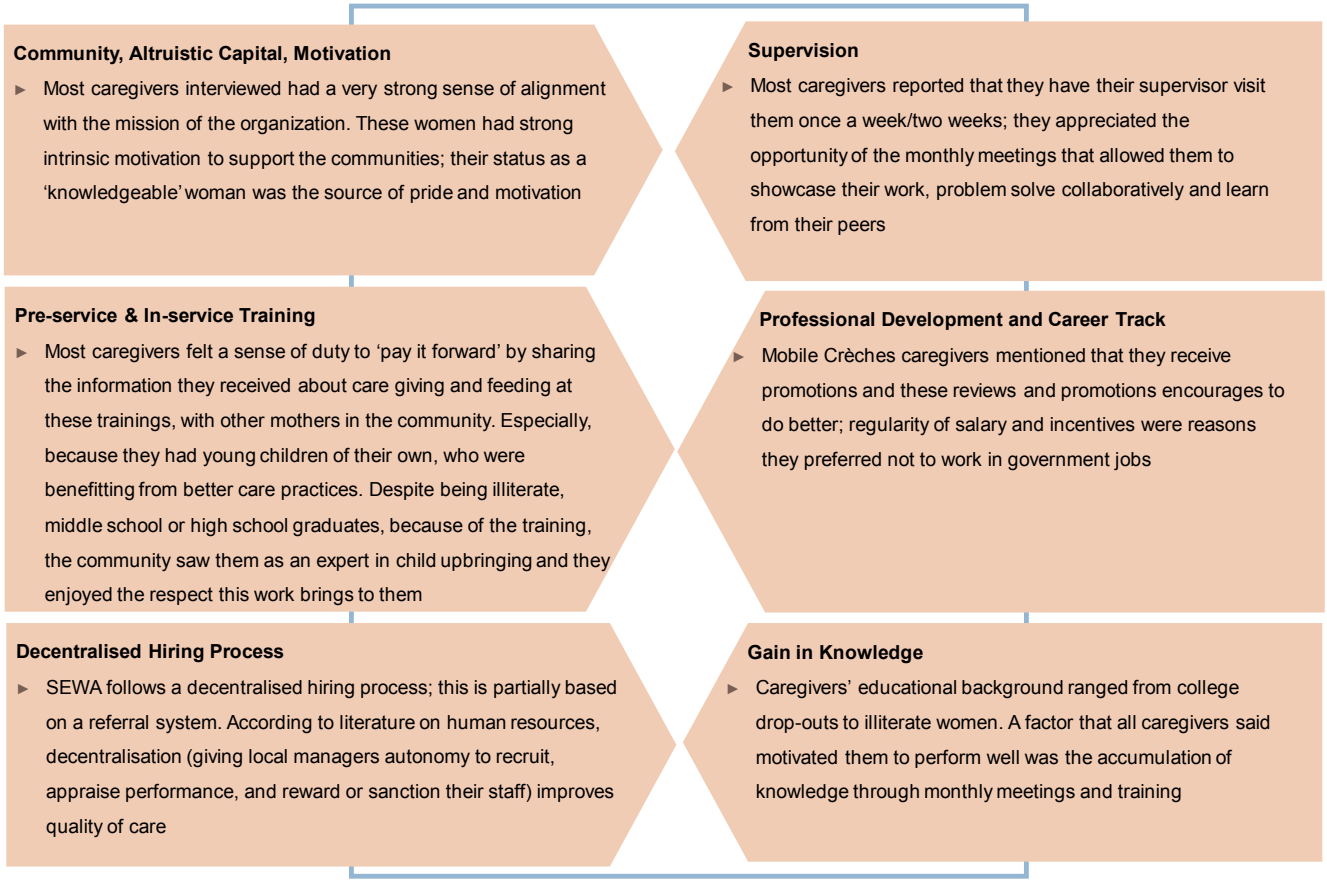
iii. Non-monetary incentives for quality service delivery: While larger structural reforms or remedial measures are planned to address human resource shortages, there is some research on factors that increase performance productivity of the human resources in an organisation and improve the quality of service. Financial incentive is not the only factor that influences performance. Aspects of soft skills and communications, altruistic capital, and other motivation-building factors lead to improved performance and incremental productivity in an organisation. Research on these factors, specifically for ICDS staff, is scant. Therefore, as part of the same field study, one-on-one interviews were conducted with caregivers (12, including supervisors at non-governmental facilities + two AWWs[61]). Figure 11 captures some of the factors that have been instrumental in motivating caregivers to deliver quality nurturing care to the children at these centre-based facilities. Better care has, in turn, increased the propensity of mothers to leave their children at the centre and either engage in employment opportunities or successfully redistribute their unpaid care work burden. The findings from this study on non-monetary incentives match the evidence from research on human resources for health.
A decentralised hiring process and sense of altruistic capital at the recruitment stage is beneficial. Pre-service and in-service training as well as the accumulation of knowledge during the tenure are perceived as a benefit and source of pride. Concomitantly, some form of promotion and career development opportunities are seen as sources of renewed motivation. Further rigorous evidence around these factors would help in better planning and potentially creating more cost-effective training and recruitment strategies for the ICDS workers; and

iv. Training of AWWs: There is a provision of pre-service (26 days) and in-service training (5 working days, once every two years) for AWWs. This is believed to be critical in improving children's early development and learning quality. Evaluations by the National Council of Applied Economic Research indicate that, while a reasonable percentage of AWWs received pre-service training, ongoing in-service training is infrequent. Table 2 shows the different approaches to training conducted by non-government childcare centres studied as part of the field study. AWWs have a pre-service training component that lasts for 26 days. Only one of the non-government centres studied had such an extensive pre-service training component. However, a few main differences that emerged in this comparison are that the month-long training is spread evenly over a span of six months in the non-government model, with an in-class training component

[61] Please refer the methodology section in Paper I, Global evidence on the benefits of centre-based quality childcare on maternal employment and early childhood development outcomes, 2019, IWWAGE series on quality childcare.

and an apprenticeship component. On the other hand, AWWs are expected to undergo this training right at the beginning and find it hard to retain all the information, as a result. Moreover, there is strong emphasis on regularity of in-service training across all other models studied in India, with a strong supervisory support component, and an element of peer-to-peer learning.

Figure 11: Non-monetary incentives for caregivers influencing motivation and quality of service[62,63,64,65]



Source: The qualitative field study, for methodology, please see Paper I, Global Evidence on the Impact of Centre-based Quality Childcare on Maternal Employment and Early Childhood Development Outcomes. The above are some of the findings relevant to motivations and incentives to deliver quality services. Information on quality of the caregivers at these centres was also collected.

[62] Adapted from "How is Childcare Quality Measured – A Toolkit," February 2016, Table 1, Structural and Process Variables on Health and Safety, Groups of Children, Caregiver (Human Resource) and Infrastructure Centres visited, Urban and Rural. SEWA Day-care (three centres), Mobile Crèches urban centre (one centre) and AWC (two centres). Additional reference for line of questioning during the study were used from the human resource for health literature; detailed descriptive information is available in the report.

[63] Ashraf, Nava and Bandiera, Oriana (2017). Altruistic capital. *American Economic Review,* 107 (5). pp. 70-75. ISSN 0002-8282.

[64] Zhou, Q., Stewart, S.M., Wan, A., Sai-cheong Leung, C., Lai, AY., Lam, T.H. and Siu-chee Chan, S. Development and evaluation of a train-the-trainer workshop for Hong Kong community social service agency staff. School of Public Health, the University of Hong Kong, Hong Kong, China; Department of Psychiatry, University of Texas Southwestern, Medical Center at Dallas, Dallas, TX, USA; Information Systems and Technology Branch, Social Welfare Department, Hong Kong, China; School of Nursing, the University of Hong Kong, Hong Kong, China.

[65] Kirkpatrick, Tannenbaum (1993), Kraiger (2002), Holton (1996) on training effectiveness and evaluation models.

Table 2: Training approach for the caregivers at centre-based childcare to support mothers vs. AWC

	SEWA-Rural 7.30-5 pm	SEWA-Urban- 9-5 pm	Mobile Creches-Slums	Anganwadi Centre
Pre-service training	SEWA now has its own training academy; it has developed 10 Montessori modules. All caregivers are trained in Ahmedabad. Training before starting the job is mandatory and a few days are spent on training the caregivers across the 10 modules Post this training, new caregivers are sent for a week to work with the caregivers who have been working at the centres for many years for a hands-on training	Both caregivers receive a 2-day training before starting work. The urban centre caregivers are trained differently as compared to rural centres. These caregivers are given short 2 day training every 4-6 months, of the 10 modules developed by the SEWA academy	The training consists of 70% hands-on training and 30% theoretical training; 12 days of pre-service training and 24 days of training spread over the first 6 months. This is follower by a 3 -month placement in the field where the new worker is highly supervised. Creche worker (0-3), (3-5 years) training is separate. Depending on which age group the caregivers would be working with, they are trained accordingly. There is a separate training for supervisors who continue to work at the centres with other caregivers who report to her. The training spans areas like health, hygiene, nutrition, child safety and early childhood education/stimulation.	There is provision of pre-service (26 days) training of the AWW to improve children's early development and learning quality There have been reports on how there is a backlog on this training and hence AWW started on their jobs, while waiting for their turn to receive the training However, the situation has improved and most AWWs no receive their pre-service training
In-service training and peer learning	Once these 10 modules are complete, refresher training is held every few years; however, there is no fixed format. A supervisor visits the centre as often as possible but, unlike in urban areas, the supervisor oversees up to15-20 centres in the rural areas. However, problem solving and peer learning is encouraged. The platform for this is the monthly meetings; one of the two caregiver travels to Ahmedabad and participates in meetings held for all the childcare cooperative workers.	Caregivers are supported by a supervisor who takes care of about 6 other such centres. She visits them once a week	On a monthly basis, the organisation has ensured that every caregiver and supervisor has some contact with the headquarters, is visible and gets an opportunity to learn. Monthly meetings are held twice a month. The headquarters combine monthly meetings with salary days. Two days are introduced to ensure that at least 1 or 2 caregivers are at the centre, and the centre functioning is not disrupted. These meetings are also used as a platform to instruct or teach them about any new methods of childcare.	There is provision of in-service training (5 working days, once in every two years) of the AWW to improve children's early development and learning quality. Most available reports capture that the follow-up training has not taken place for the majority of the AWWs Given the scenario of Anganwadi supervisor shortage, there is not enough good information available around the actual supervision of the AWW.

Source: Field study and NIPCCD's database.

Due to a lack of training institutes in the vicinity, some AWWs start jobs without this pre-service training as well. In general, to train as an ECCE teacher/caregiver, there are government-approved, private and NGO-based institutions that provide ECCE-specific training.[66] However, NIPCCD, an autonomous organisation under MWCD, is responsible for designing the curriculum ((jointly developed by the Centre for Early Childhood Education and Development - CECED) and planning these training modules for ICDS functionaries. It has four centres in India, where CDPOs and Middle Level Training Centre (MLTC) trainers are trained. Please see Annexure 5, for state specific capacity to train the AWW, AWH, AWS and CDPOs. These MLTC trainers train the supervisors and trainers for Anganwadi Training Centre (AWTC) trainers. At the AWTCs, the trainers for AWTC train the AWWs and AWHs. Over 80 per cent of the AWTCs are run by NGOs. *Tamil Nadu is the only state to trains its CDPOs and supervisors at a training institute at the state level, then have them train the AWWs and AWHs.*[67]

Though the AWW is trained on the ECCE modules, this training is not as intensive as that for health, nutrition and AWC functioning. In the light of this and the human resource shortage, it is not surprising that 46 per cent of the time (of the operational hours of AWCs) that should be spent on age-appropriate interventions is actually spent on doing no activity or on 3Rs.[68] Infrequent in-service training provision and lack of supervision due to human

[66] The study "Preparing teachers for ECCE", 2012, published by Dr. Venita Kaul and Swati Bawa, highlights this. For detailed information, please refer to the study.
[67] Ibid.
[68] Indian Early Childhood Education Impact Study, Quality and Diversity in Early Childhood Education: A view from Andhra Pradesh, Assam and Rajasthan, 2017.

resource shortages serve as negative feedback loops, negating the positive feedback loops in the ICDS system. There is also merit in assessing the impact and replicability of the Tamil Nadu training approach within the ICDS system. Given 'quality' is key in having an impact on ECD, mere monitoring or one-time training is not enough to overcome these negative loops, and there is a need to strengthen the 'in-service' training component for childcare for ECD.

4
DISCUSSION

In light of the many evidence-based policies that have been introduced in the past few years, it is important to highlight a few things: even though the alignment of care on nutrition and child development delivery practices sounds effective, it must be assessed whether it is feasible and beneficial to programmes with respect to cost and impact effectiveness. There are only a limited number of countries that have studied the pathways between maternal employment and ECD and evaluated them. **Evidence for the benefit-cost of integrated nutrition and child development programmes is currently limited.**[69] One of the potential benefits of integrating ECD services, including centre-based care, is the potential for lower costs as a result of synchronised training, monitoring and supervision, and the use of the same personnel. **However, whether there will be a negative or positive impact on the existing personnel and services is unknown.**[70] While there are many synergies in these prioritisations, **it is also important to look at the system's capacity to take on additional inputs.** Given the limited resources, and the ICDS system as described above, it is important to assess if the system is resulting in diminishing marginal returns.

It would be pertinent to acknowledge the burden of unpaid care work and a mother's role as a bread winner while designing ECD policies and programmes. The aim should be convergence, not just by loading interventions on a platform that is at the base of administrative units, but by devising 'lattice' shaped horizontal and vertical coordinating mechanisms that span departments and administrative units, and aim to integrate through data integration and sharing. Since human resources in any system are a key component that influence quality, fixing human resource shortages should be an urgent priority. This should include developing supervisors and CDPOs as a childcare management cadre. Moreover, human resource deficiencies, in light of the multiple policies that aim to deliver through the one platform of AWCs, should be acknowledged. For the AWH, a career track to specialise as a caregiver[71] should be developed and, possibly, a similar career progression track for the AWW to become a primary school teacher.

[69] Hurley, K. M., Yousafzai, A.K. and Lopez-Boo, F. Early Child Development and Nutrition: A Review of the Benefits and Challenges of Implementing Integrated Interventions.
[70] Ibid.
[71] Indian Early Childhood Education Impact Study.

While measures are undertaken to address gaps in the current ICDS system's capacity and design, it would be worth exploring center-based childcare models that are open for seven-eight hours a day in collaboration with the Ministry of Rural Development (MoRD), Ministry of Panchayati Raj (MoPR) and MWCD in rural India. For caregivers, an arrangement, similar to that of Colombia's Hogares Comunitarios de Bienestar (HCB) model could be tested, in collaboration with the Mahila Shakti Kendras and/or the Gram Panchayats. Community-supported programmes have the parents/community invested in them, and there is greater accountability of service providers. There is untapped potential, as convergence with these line ministries has only been explored to a limited extent under MGNREGA for construction of AWCs and Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) and PRIs for health and nutrition messaging (which is largely focused on health interventions). Community support and a decentralised governing body could either leverage the existing AWC infrastructure or identify locations convenient to the community to set up centre-based childcare. This can potentially address issues of workforce, accessibility (distance and timing) and quality to a certain extent as well. Therefore, State Rural Livelihoods Missions and PRIs can play a greater role in making a seven-eight-hour centre-based childcare possible at the community level – especially in rural areas; they could even provide support to the ICDS workers in functioning more efficiently.

Given that there is no evidence of a scaled-up centre-based childcare model that supports ECD outcomes and maternal employment in India, it would make sense to work with state governments that prioritise human development and engage with domestic and international researchers to test and implement some of these alternate ideas. An emergent opportunity in terms of a scheme could be NNM (or SSP, if there is budget earmarked for it), that has a mandate for MoRD, MoPR and MWCD to collaborate and has the funds to actualise the idea. A certain percentage of the mission budget of INR 3,000 crore for the current financial year and INR 9,046 crore for the next three years goes towards testing innovative concepts used to improve nutrition status. The states can use models that resemble the programme in Chile (the under-six day-care model and the after-school model) or Colombia's community mother model or Indonesia's community grant project model funded by the World Bank.[72,73,74]

[72] The Indonesia Early Childhood Education and Development (ECED) Project: Findings and Policy Recommendations, policy brief, Amer Hasan, World Bank, and Haeil Jung, University of Indiana at Bloomington.
[73] Chang, M.C. and Hasan, A. Early Childhood Education and Development in Indonesia, Brookings Evaluation.
[74] Kristjansson, E., Francis, D.K., Liberato, S., Benkhalti Jandu, M., Welch, V., Batal, M., Greenhalgh, T., Rader, T., Noonan, E., Shea, B., Janzen, L., Wells, G.A. and Petticrew, M.A. (2015). Supplementary feeding for children aged three months to five years: does it work to improve their health and well-being? (Cochrane review of supplementary feeding programmes for children three months to five years (including 32 studies across low- and middle-income countries and the three high-income countries) reveals that supplementary food was often redistributed within the family. When feeding was home-delivered, children benefited from only 36 per cent of the energy given in the supplement. However, when the supplementary food was given in centre-based childcare or feeding centres, there was much less leakage; children took in 85 per cent of the energy provided in the supplement. There are a few studies that have captured this information in India as well. **Children from zero-two years, who are registered, do benefit from the services provided for health through the AWC platform but the benefit from supplementary nutrition is diluted.** As per a study in Bihar, children between three to four years benefit from the cooked meals that resulted in higher intakes of calories, protein and iron as a consequence and there was no substitution away from food at home but, for younger children, there was no improvement in terms of calories or nutrients).

Furthermore, due to variability in the definition of ECD programmes – especially in the context of a developing country, and even the variability in services provided at a centre-based childcare – the costing of the models and services is an area that is evolving and at a nascent stage. Most of the evidence in this aspect comes from developed countries and there is a need to research this aspect further in the Indian context. Moreover, there should be an additional push to capture the appropriate ECD outcomes, especially around stimulation, in the national surveys[75] or maybe even participate in international surveys such as the "OECD Starting Strong Teaching and Learning International Survey" or UNICEF's Multiple Indicator Cluster Surveys (MICS).[76] However, as an immediate next step, there is a need to field test tools and instruments most appropriate in the Indian context.

There is a need to rigorously test the association between systemic features of childcare programmes and their impact on children's development and maternal employment, especially corresponding to the cost implications of different models. Questions of how existing social safety systems can be leveraged to provide interventions, how the measurement of quality in large-scale programmes can be sustainably systematised, and how human resources can be improved – not only by introducing skilling programmes but also by paying attention to the influence of monetary and non-monetary incentives on motivation – remain largely unanswered.

Lastly, since social norms and preference to use childcare could have negating effects in utilisation of centre-based childcare, there is need for social messaging and awareness campaigns on how quality centre-based childcare can support mothers and older siblings, while also ensuring benefits to the child. Family care is the best nurturing care a child can get; however, given the realities of life, there is a need to increase awareness around the benefits of quality centre-based childcare, especially in socio-economically disadvantaged settings.

[75] Using World Bank's Social Impact Evaluation Fund (Measuring Child Development: A Toolkit for Doing It Right, December 2017), WHO's Global Scales for Early Development, UNICEF's ECDI and the optional module for gender and ECD being developed by DHS.

[76] India intends to end its boycott of the Programme for International Student Assessment (PISA) from 2019 onwards. This evaluates scholastic performance of 15-year-olds across many different countries. More recently, it has started analysing data and drawing inferences from longitudinal studies on the beneficial impact of centre-based care on the performance of children when they turn 15. It would be useful to account for this while preparing data systems to ensure research and credibility on international levels.

ANNEXURES

Annexure 1: Coverage of ECCE services – ICDS and private sector

Percentage of children aged 3-5 years who were attending ICDS run PSE and any PSE by residence, according to states				
	ICDS		Private PSE	
States	Urban	Rural	Urban	Rural
Andhra Pradesh	27.8	55.4	71.8	91
Arunachal Pradesh	18.9	42.5	71.6	69.6
Assam	17	56.3	64.4	67.7
Bihar	31.4	51.8	56.1	60.3
Chhattisgarh	18.8	65.2	78.8	84
Delhi	9.1	10.7	64.7	63.9
Goa	28.7	48.8	90.2	87.1
Gujarat	36.8	67	83.1	75.7
Haryana	11.4	22.2	71.6	65.8
Himachal Pradesh	12.2	34	68.7	82.7
Jammu & Kashmir	12.5	21	70.7	58
Jharkhand	23	48.3	67.5	59.6
Karnataka	34.5	69.3	80.6	89.8
Kerala	29.4	23.4	80	68.2
Madhya Pradesh	20.1	44.4	71.8	62.8
Maharashtra	23.2	74.3	78.5	88.2
Manipur	25	35.8	87.8	87.9
Meghalaya	4.4	19.9	44.8	42.5
Mizoram	46.1	68.6	63.4	73.5
Nagaland	0.2	1.6	34.6	14.4
Odisha	36.7	68.5	75.4	79.2
Punjab	12	23.9	77.7	72.1
Rajasthan	11.2	16.9	64.5	50.3
Sikkim	22	44.7	82.9	88.7
Tamil Nadu	22.9	38.8	84.8	85.2
Tripura	47.9	74.4	93.4	89.3
Uttar Pradesh	5.6	20.3	51.2	41.7
Uttarakhand	9.9	33.4	78.1	76.5
West Bengal	26.2	62	70.5	73.3

Source: RSOC 2013-14. Some children attend the ICDS, but also the private sector, hence they do not add up to a 100 per cent. For more details, please refer to the Rapid Survey of Children, 2013-14.

Annexure 2: Some examples of structural and process variables

	Structural Variables	Process Variables
Health & Safety	• Public health measures, health and safety procedures, documents	• Observed health and safety practices. • The caregiver helps the children follow safety rules and explains the rationale behind these rules.
Groups of Children	• Group size • Child-caregiver ratio	• 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	• Score: years of education, training in child development, previous experience and professional development • Lesson planning • Caregiver supervision • Salary	**Caregiver Behavior:** • 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. **Child-caregiver interactions:** • 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. **Curriculum implementation:** • 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	• Access to potable water • Waste disposal • Electricity • Telephone service • Physical space per child • Materials • Protected facilities, play areas	

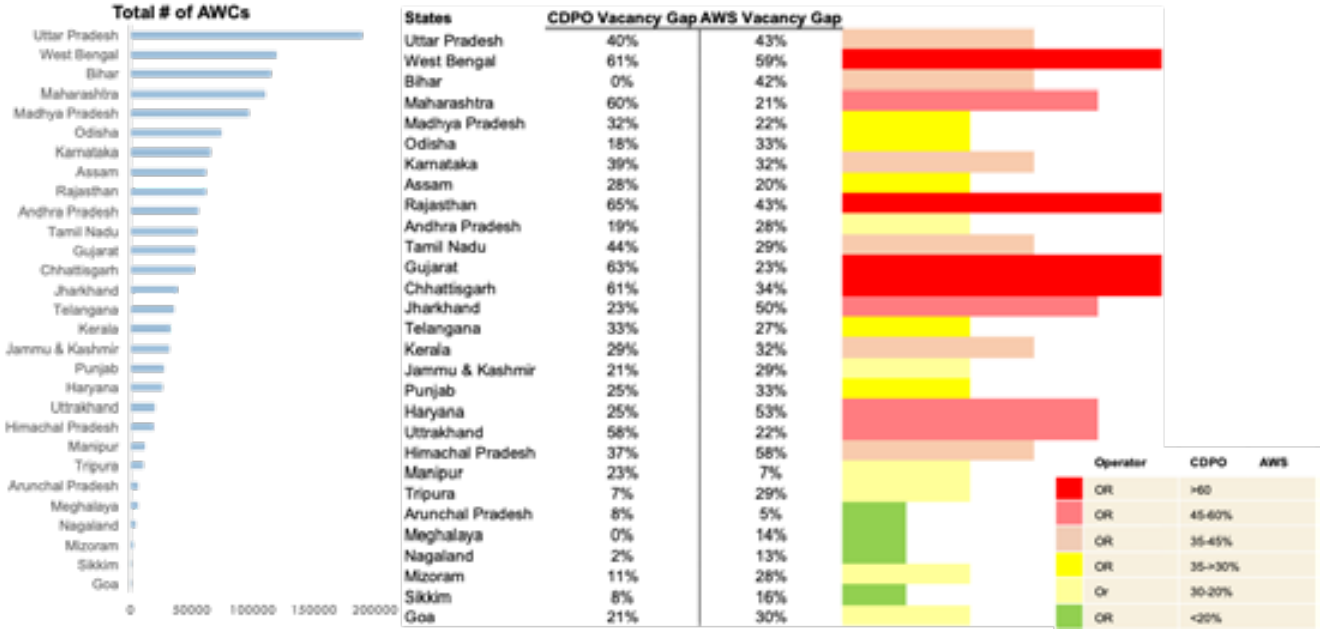
Source: How is Child Quality Measured? A Toolkit, Feb 2016, Florencia Lopez Boo, Maria Araujo and Romina Tome.

Annexure 3: Gaps in universalization of AWCs across the states

Note: Gap calculated using the formula: (one AWC operational/No. of AWCs sanctioned). Please note, the number of AWCs is taken from the administrative data from MWCD annual report 2016-17. This varies substantially if we use the one AWC per 1,000 population criteria for different states.

Source: MWCD.

Annexure 4: State wise Staff Shortages, 2017



States	CDPO Vacancy Gap	AWS Vacancy Gap
Uttar Pradesh	40%	43%
West Bengal	61%	59%
Bihar	0%	42%
Maharashtra	60%	21%
Madhya Pradesh	32%	22%
Odisha	18%	33%
Karnataka	39%	32%
Assam	28%	20%
Rajasthan	65%	43%
Andhra Pradesh	19%	28%
Tamil Nadu	44%	29%
Gujarat	63%	23%
Chhattisgarh	61%	34%
Jharkhand	23%	50%
Telangana	33%	27%
Kerala	29%	32%
Jammu & Kashmir	21%	29%
Punjab	25%	33%
Haryana	25%	53%
Uttrakhand	58%	22%
Himachal Pradesh	37%	58%
Manipur	23%	7%
Tripura	7%	29%
Arunchal Pradesh	8%	5%
Meghalaya	0%	14%
Nagaland	2%	13%
Mizoram	11%	28%
Sikkim	8%	16%
Goa	21%	30%

Source: Shortages calculated based on the data from Ministry of Women and Child Development

Annexure 5: State wise List of Training Institutes – Capacity

	State Training Institute	NIPCCD Regional Centers	MLTCs	AWTCs
	For CDPOs & Trainers of MLTCs	*For CDPOs & Trainers of MLTCs*	*For Supervisors and Trainers of AWTCs*	*For AWW & AWH*
Uttar Pradesh		1	4	66
West Bengal			3	22
Bihar			1	59
Maharashtra			2	33
Madhya Pradesh		1	2	26
Odisha			1	26
Karnataka		1	1	21
Assam		1	1	27
Rajasthan			2	17
Andhra Pradesh			2	63
Tamil Nadu	1		1	None*
Gujarat			1	18
Chhattisgarh			1	15
Jharkhand			0	19
Telangana			0	
Kerala			1	14
Jammu & Kashmir			1	9
Punjab			1	9
Haryana			1	10
Uttrakhand			0	7
Himachal Pradesh			0	5
Manipur			0	4
Tripura			0	5
Arunchal Pradesh			1	5
Meghalaya			1	2
Nagaland			0	1
Mizoram			0	1
Sikkim			0	1
Goa			0	

*Tamil Nadu does not have any AWTC since training is conducted through CDPO/Supervisors.

Source: Shortages calculated based on the data from Ministry of Women and Child Development

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