Why Children Stay Home? Uncovering Demand-Side Barriers to Early Childhood Education in Manokwari, West Papua

Simon Sili Sabon, National Research and Innovation Agency (BRIN), Indonesia
Yendri Wirda, National Research and Innovation Agency (BRIN), Indonesia
Nur Listiawati, National Research and Innovation Agency (BRIN), Indonesia

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Abstract

This study examines demand-side barriers that limit participation in Early Childhood Education (ECE) in Manokwari Regency, West Papua. Despite the strategic role of ECE in supporting child development, participation rates in this region remain relatively low compared to other provinces in Indonesia. The study employs a qualitative case study approach, with data collected through semi-structured interviews with parents, village heads, ECE teachers, and officials from the local Education Office. Thematic analysis reveals that low participation is shaped by the interaction of geographical, economic, cultural, and governance-related factors. Geographical barriers, including remoteness, limited infrastructure, and the uneven distribution of ECE centres, reduce children's access to services. Economic barriers arise from both direct and indirect costs, further exacerbated by delays in the disbursement of School Operational Assistance (BOS) funds and the inconsistent utilization of Special Autonomy Funds (Otsus), although some villages have used these funds to provide incentives for ECE teachers. Cultural factors also play a significant role, including early marriage practices, grandparent-led caregiving patterns, and local beliefs that restrict children under the age of tree from leaving the house. This study concludes that improving ECE participation in Papua requires community-based and culturally sensitive approaches, supported by integrated fiscal policies. Policy implications include optimizing the use of Otsus funds for ECE operations, strengthening inter-village collaboration, enhancing the capacity of local teachers, and engaging traditional and religious leaders in promoting ECE as a shared community responsibility.

Keywords: early childhood education, Papua, demand-side barriers, cultural factors, parental perceptions

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Introduction

Education is both a fundamental need and a constitutional right of all citizens. Article 28C (1) of the 1945 Constitution of the Republic of Indonesia states that every individual has the right to develop themselves through the fulfilment of their basic needs, including education, and to benefit from advancements in science, technology, arts, and culture. This underscores that education is not merely a necessity but also an inherent individual right. Furthermore, Article 31 of the Constitution affirms that every citizen has the right to education and mandates the government to provide it, allocate at least 20% of the national and regional budgets to the education sector, and require citizens to undertake formal education.

ECE plays a crucial role in laying the foundation for children's development. It serves not only as preparation for entry into primary education but also provides essential stimulation for brain growth and development (Knudsen et al., 2006; Luby et al., 2013). A growing body of research shows that human brain development progresses most rapidly in the early years from birth to 2 years (Gilmore et al., 2018), between the ages of 2–5 children gain comprehension of shape and colour (Lowery et al., 2022), and brain maturation continues in cortical volume, surface area, and thickness which associated with cognitive skills like reading, problem solving, and social-emotional regulation between 5 to and 8 years (Houston et al., 2014). The period between 0–8 years often referred to as the "golden age" as in this period physical, cognitive, emotional, and social growth and integrated (Özmert, 2005). During this phase, the brain is highly responsive to environmental stimulation. Failure to fully utilize this critical period may result in lost developmental potential (Brown & Jernigan, 2012; Mackes et al., 2020). In this case parental roles and family engagement as early intervention can provide proper nutrition for brain and physical development, and enhances literacy, numeracy, and social-emotional development.

Previous studies also indicate that children who participate in ECE tend to achieve higher academic performance in later stages of education (Campbell et al., 2012), thereby increasing their likelihood of attaining better life outcomes. In addition, ECE participation contributes to children's social development, including their ability to behave appropriately, interact effectively, and function positively within school and community environments (Cliffe, 2025; Sylva & Colman, 2018). Moreover, children who attend ECE are found to have a lower risk of engaging in delinquent or criminal behaviour in adulthood (Schweinhart, 2013).

Given these benefits, public awareness—particularly among parents—regarding the importance of early education and stimulation is critical to ensuring that every child has optimal developmental opportunities. ECE has been widely recognized as fundamental to children's future success. However, in practice, public awareness and willingness to enrol children in ECE programs, both in Indonesia generally and in Papua specifically, remain relatively low.

Data from BPS-Statistics Indonesia (2025) show that the Gross Enrolment Rate (GER) for ECE in Indonesia remains far from ideal, reaching only 36.19 percent. The situation is even more concerning in the six provinces of Papua, where none has achieved a GER above the national average. West Papua records the highest participation rate at 25.27 percent, while other provinces fall below this figure. The lowest rate is observed in Highland Papua, where the GER stands at only 3.1 percent. In this context, parental awareness of the importance of ECE and cognitive stimulation becomes increasingly critical to ensure that children receive optimal developmental opportunities. Accordingly, this study aims to explore why children of ECE age in Manokwari remain at home by examining demand-side barriers from the perspective of

parents. The analysis focuses on cultural beliefs, household economic conditions, perceptions of the benefits and quality of ECE, and the role of children within the family. It also considers how the views and influence of village leaders shape community decisions regarding ECE participation.

This study offers a novel contribution, as most previous research has primarily focused on supply-side factors such as infrastructure and the availability of teachers, while studies on parental decision-making in the Papuan context remain limited. By presenting qualitative empirical evidence from Manokwari and highlighting the role of community leadership as a social mediator, this study contributes to a deeper understanding of demand-side barriers to ECE participation. The findings are expected to inform the development of more context-sensitive and inclusive ECE policies and interventions, particularly for remote and economically vulnerable regions.

The Concept of Demand-Side Barriers in Education

In general, access to education is determined not only by the availability of services (supply) but also by barriers on the demand side. Justino (2016) emphasizes that, within education systems, barriers to access arise not only from supply-side constraints—such as the availability of schools and infrastructure—but also from demand-side factors, including poverty, cultural aspects (such as values, norms, and local beliefs), social trauma, and insecurity. These factors reflect the economic, social, and psychological conditions of households that influence parents' decisions to send their children to school (Justino, 2016; UNESCO & UNICEF, 2024).

Deschênes (2007) further explore the relationship between demand-side variables—such as family background and perceptions of the returns to education—and educational participation. Their findings indicate that intergenerational socioeconomic conditions and expectations regarding the benefits of education directly shape parental decisions about children's participation in education. Thus, physical access to schools does not automatically translate into participation; rather, demand-side factors, particularly family-related conditions, play a decisive role.

Demand-Side Barriers to ECE Participation

ECE participation is defined as the level of engagement of young children in educational services prior to primary school (OECD, 2022). In the Indonesian context, ECE participation refers to the extent to which children aged 3–6 is enrolled in and actively attending ECE programs, including both formal institutions (e.g., kindergartens and Islamic kindergartens) and non-formal services such as playgroups and other similar programs. Various barriers, both from the supply and demand sides, contribute to low ECE participation (UNESCO, 2021). This world organization identifies several supply-side factors contributing to low ECE participation. First, limited facilities and infrastructure in many regions—particularly in disadvantaged, frontier, and outermost (3T) areas—result in shortages of classrooms, play equipment, and learning materials, thereby restricting service coverage. Second, there is a lack of qualified educators, as many ECE teachers do not possess adequate formal qualifications or professional training. Third, the distribution of ECE institutions is uneven, with many concentrated in urban or administrative centers, leaving remote areas underserved. Fourth, inadequate funding remains a persistent issue, particularly for private ECE providers facing operational constraints. Fifth, low quality standards and weak monitoring systems contribute to uneven service quality across regions.

In contrast, Copeland et al. (2025) identify five key demand-side barriers to ECE participation. These include: (i) low parental awareness of ECE options and benefits (awareness and perception), (ii) financial constraints (household economic conditions), (iii) concerns about social environments and skepticism toward formal education for very young children (cultural norms), (iv) the role of children within the household, and (v) trust in the quality of ECE services.

Parental Awareness and Perceptions of ECE

Mulia and Kurniati (2023) find that parental perceptions and knowledge regarding the importance of ECE significantly influence decisions to enroll children in ECE programs. Similarly, other studies show that the more positive parents' perceptions of the role and benefits of ECE, the more likely they are to enroll their children (Afni et al., 2025). However, despite a general awareness of the importance of ECE, some parents still perceive ECE as non-essential and merely preparatory for primary school. As a result, they may choose not to enroll their children in ECE programs.

Economic Factors

Kachi et al. (2020) demonstrate that household economic constraints—including both direct and indirect costs—significantly reduce the likelihood of children participating in ECE, particularly among low-income families. Direct costs include enrollment or registration fees, monthly tuition fees, uniforms, and school supplies (e.g., bags, shoes, stationery, and books). The indirect costs, on the other hand, include transportation to and from ECE Centers, lost working time as parents accompany or pick up their children, and additional consumption expenses such as meals, snacks, and hygiene-related needs (OECD, 2022). These combined financial burdens often discourage families from enrolling their children in ECE programs.

Cultural Factors

Cultural factors constitute an important dimension of demand-side barriers, as local values, norms, and beliefs can shape household decisions regarding children's participation in formal education. In certain contexts, traditional beliefs, language differences, and cultural identity may reduce families' motivation to engage with ECE services (Justino, 2016; UNESCO & UNICEF, 2024). Ghosh and Steinberg (2022) find that parental attitudes toward ECE—including beliefs that young children should be cared for at home by mothers or extended family members—contribute to low participation rates in ECE. In addition, parental skepticism toward formal education for very young children plays a significant role. Purola and Kuusisto (2021) highlight that parental engagement is strongly influenced by their perceptions of the relevance of ECE; skepticism or doubt tends to reduce participation.

The Role of Children in the Household

The allocation of caregiving responsibilities within the household—such as older siblings caring for younger ones or children contributing to domestic work—can significantly limit children's participation in ECE. UNICEF (2024) reports that children, particularly girls, often spend considerable time on caregiving and household tasks, reducing their opportunities to attend ECE programs. This finding is consistent with studies by (Bhatnagar et al., 2025; Purohit & Khanna, 2025) which found that child labor often competes with child opportunities and

abilities to education, especially those with disadvantaged household. These facts limited children access to ECE.

Trust in Service Quality

Parental trust in the quality of ECE services is a key factor in increasing participation. Fadilah et al. (2025) emphasized improving service quality of ECE strengthen parental trust and increase the likelihood that children will be enrolled and retained in such programs. On the other hand, Kearney et al. (2023) further highlights that negative school environments, including intimidation and bullying, are associated with lower attendance rates. Parental concerns about children's safety—such as fears of bullying—may lead to school avoidance behaviors, ultimately contributing to lower participation in formal education services, including ECE.

Methodology

This study employs a qualitative case study design to explore demand-side barriers that influence parents' decisions not to enroll their children in ECE institutions. A qualitative approach was chosen to obtain an in-depth and contextualized understanding of the lived experiences and considerations of parents and community actors regarding ECE participation. Data were collected through semi-structured interviews.

The study participants consisted of two parents whose children of ECE age were not enrolled in any ECE institution, two village heads, four heads of ECE Centers, and one head of the ECE division at the Manokwari District Education Office. Informants were selected using purposive sampling to ensure a diversity of perspectives spanning household, community, and institutional levels.

The research instrument consisted of an interview guide focusing on perceptions of the benefits of ECE, economic and cultural considerations, and barriers to accessing ECE services. All interviews were transcribed and analyzed using a thematic approach (Braun & Clarke, 2006). Data triangulation was conducted by comparing findings from parents, ECE providers, and government officials to enhance the validity of the results. The analysis was directed toward identifying key themes related to socioeconomic constraints, culturally embedded caregiving practices, and geographical challenges that shape parental decision-making regarding children's participation in ECE.

Results and Discussion

Overview of ECE Accessibility in Manokwari Regency

Interviews with officials from the Manokwari District Education Office provide an overview of the accessibility of ECE services in the region. While ECE institutions are present in most districts, their distribution remains uneven and is largely concentrated in urban areas. In mountainous districts such as Warmare, Masni, and Tanah Rubuh, the number of ECE centers is still very limited, and some are no longer operational due to teacher shortages or a low number of enrolled children.

Officials noted that the ratio of ECE institutions to villages remains low: *"*Not every village has an ECE center. Some must merge with neighboring villages because the number of children

is small." In addition, several centers have ceased operations because teachers have relocated or have not received honoraria for extended periods. Limited transportation access further exacerbates the situation. As one official explained, "Some ECE centers can only be reached by river, so when the water level rises, teachers cannot access them."

These conditions have direct implications for inequalities in access to ECE services. For families in remote areas, distance and geographical constraints are key reasons why children do not participate in ECE. As noted by an official, "If the center is far and the road is difficult, parents will choose to keep their children at home." Thus, barriers to access are not solely a matter of physical distance but also reflect limitations in human resources, infrastructure, and institutional capacity at the village level. This overview underscores that, before examining demand-side barriers, the availability of services must first be understood.

Geographical Barriers and Accessibility

Geographical constraints emerge as one of the most significant barriers to ECE participation in Manokwari. Several villages, such as Indonbey and Udapi Ilir, are located far from educational service centers, with poor road conditions and limited transportation options. One village official explained, "There have been proposals to establish an ECE center, but it has not been realized due to limited central government funding and the small number of children. Perhaps collaboration with neighboring villages will be considered."

This statement highlights that geographical challenges are closely intertwined with administrative and demographic constraints. These findings reinforce previous studies (Fayanto et al., 2023; UNESCO, 2015), which identify geographical remoteness as a major barrier to access to early childhood services. Furthermore, representatives from the Education Office emphasized that the distribution of ECE institutions remains uneven, and efforts to establish new centers are often constrained by technical requirements and funding limitations from the central government. This indicates that geographical barriers extend beyond physical distance, reflecting broader governance gaps between centrally designed policies and local implementation capacity.

Direct and Indirect Cost Constraints

Interviews with parents indicate that household economic limitations constitute a primary barrier to accessing ECE. One mother explained, "When I suggest sending the child to school, the grandmother asks who will take care of the child, since we have to go to the garden." This statement reflects the presence of indirect costs—specifically the loss of time and labor, as parents must accompany and pick up their children.

From an institutional perspective, the Education Office noted that most ECE centers in Manokwari continue to operate on a self-help basis, relying heavily on BOS funds, which are often disbursed late. As one official stated, "Many ECE centers suspend their activities because BOS funds have not yet been disbursed, and parents are unable to pay fees." As a result, institutions struggle to cover operational costs or provide financial relief to low-income families.

However, interviews with village officials reveal local initiatives to utilize Otsus funds to support ECE. Several villages allocate a portion of these funds to provide incentives for non-formal ECE teachers. One village official explained, "We use a small portion of the Otsus funds

to provide transportation allowances or incentives for ECE teachers, so they remain motivated to come."

Although relatively modest in scale, these initiatives demonstrate a growing awareness among local governments that the sustainability of ECE services depends on providing incentives to grassroots educators. Nevertheless, the Education Office noted that the use of Otsus funds for ECE remains unsystematic, with each village implementing different approaches. In most cases, these initiatives are ad hoc rather than part of an integrated village development plan aligned with regional education policies.

This situation suggests that financial barriers to ECE are not solely the result of fiscal constraints but also stem from fragmented governance across different levels of administration. The allocation of BOS, Otsus, and Village Funds remains insufficiently integrated within a coherent and consistent ECE financing framework. Consequently, fiscal support mechanisms that should be complementary instead operate in isolation and fail to ensure the sustainability of ECE services. The combination of household economic burdens, delays in BOS disbursement, and the suboptimal utilization of Otsus funds reinforces demand-side barriers to ECE participation.

Knowledge and Perceptions of the Benefits of ECE

Most parents in rural communities still perceive ECE primarily as a place for children to play rather than as an essential form of education. One village official explained, "Most people wait until kindergarten age, then send their children directly to kindergarten. Before that, they just let them play." This perspective reflects a low perceived return to ECE—namely, the extent to which parents believe that schooling at an early age is beneficial.

The Education Office further noted that the low quality of ECE services also shapes community perceptions. Many ECE teachers in the region are not formally certified and have not received adequate pedagogical training, which reduces public trust in the value of ECE. This aligns with findings by Boyd and Newman (2019) and Heckman et al. (2010), who suggest that perceptions of the long-term benefits of education are strongly influenced by the quality of services received. Thus, the low demand for ECE in Manokwari is driven not only by limited parental awareness but also by inadequate service quality on the supply side.

Cultural Preferences in Childcare Practices

Local cultural values in West Papua remain a central consideration in family decisions regarding ECE. Interview findings indicate that childcare practices in Manokwari are strongly shaped by traditional social structures, intergenerational relationships, and local spiritual beliefs. Several informants reported that early marriage remains relatively common, particularly in rural communities. In some cases, young girls are married due to social obligations or family debts. Such marriages often end in early divorce, with children subsequently being raised by their grandparents. However, these grandparents are typically still engaged in subsistence work, such as farming, leaving them with limited time to support children's schooling. As noted by the Education Office, "Many children are raised by elderly caregivers, so there is no one to take them to school, especially when the biological parents are separated."

In addition, there exists a customary belief that children under the age of three should not be taken outside the home, due to fears that they may fall ill or be affected by supernatural forces (locally referred to as *suanggi*). Within this belief system, if a young child becomes ill after being taken outside, grandparents or extended family members may strongly reprimand the parents for violating these norms. One informant stated, "If a young child is taken outside, they might get sick. Grandparents can get angry and say that *suanggi* has sent harmful winds." As a result, in households with both ECE-aged children and infants under tree years old, mothers are often unable to take older children to ECE centers due to family restrictions on leaving the house with a baby. Consequently, decisions not to enroll children in ECE are not solely based on rational economic considerations but also reflect adherence to social norms and family structures that prioritize child safety within a spiritual and communal framework.

This phenomenon highlights that cultural barriers to ECE participation in Papua extend beyond perceptions of formal education to encompass belief systems and power relations within extended families. Local customs and spiritual values create a strong "ecology of caregiving," in which decisions about child-rearing are not made solely by nuclear parents but are influenced by the moral authority of grandparents and the broader community. Nevertheless, adaptive efforts have begun to emerge in several villages. The Education Office has reported initiatives such as church-based ECE programs and extended family-based approaches, in which ECE teachers visit children's homes to conduct short learning and play sessions—particularly for families constrained by cultural restrictions on taking children outside the home. Such approaches demonstrate the potential for integrating local cultural values with ECE goals, in line with the concept of context-sensitive early education (Bonney et al., 2026). Thus, cultural factors in West Papua should be understood not only as barriers but also as opportunities to design ECE models that respect the social and spiritual context of local communities without undermining the cultural values that underpin their way of life.

The Role of Community and Village Government

Interviews with village officials reveal that support for ECE at the community level remains limited. Most villages do not yet have routine mechanisms for collecting data on early childhood populations, and the establishment of ECE services often depends on individual initiatives or non-formal institutions. As one village official noted, "Ideally, the community could help the village collect data, but so far the number of ECE-aged children recorded is still very small."

The Education Office confirmed that coordination between the district office and village governments remains weak, particularly in terms of data collection and program planning for ECE. This condition reflects a governance gap at the local level, where policies exist but are not effectively connected to implementation capacity on the ground. Bruns et al. (2011) emphasize the importance of local leadership in strengthening participation in basic education. In the context of Manokwari, the roles of village heads, teachers, and religious leaders are crucial in building social legitimacy for ECE services.

Synthesis and Policy Implications

A synthesis of cross-level interviews—encompassing parents, village heads, ECE providers, and officials from the Education Office—reveals that barriers to ECE participation in Manokwari Regency are multidimensional and mutually reinforcing. Geographical, economic, cultural, and governance-related factors do not operate independently; rather, they interact to

create a cycle of persistently low demand for ECE. From a structural perspective, geographical remoteness, limited infrastructure, and the uneven distribution of ECE institutions reduce children's access to services. Economically, the burden of both direct and indirect costs borne by households is not adequately offset by existing public financing mechanisms. Although BOS funds and, to some extent, Otsus funds have been utilized to support ECE teachers, their allocation remains inconsistent and insufficiently systematized. Meanwhile, cultural factors—including early marriage practices, grandparent-led caregiving, and customary restrictions on the mobility of young children—further reinforce social constraints that hinder ECE participation.

These findings underscore the need for an ecosystem-based policy approach to ECE in West Papua—one that integrates social, cultural, and institutional dimensions. ECE should not be viewed merely as a formal education service, but as part of a broader community-based social network rooted in local values. Accordingly, effective policy interventions must be cross-sectoral, linking education, regional fiscal policy, village governance, and religious institutions. By conceptualizing ECE as a social ecosystem embedded within local customs and spiritual life, strategies to increase participation in ECE in West Papua should prioritize community-based collaboration and the sustainable use of local resources. Such an approach provides a foundation for developing affirmative policies that not only expand the number of ECE institutions but also strengthen the social legitimacy of ECE within Papuan cultural contexts.

Conclusion

This study reveals that low participation in ECE in Manokwari Regency is the result of a complex interaction among geographical, economic, cultural, and governance-related factors. Access to ECE services remains limited, particularly in mountainous and remote village areas, where distance, transportation, and the availability of teachers pose significant challenges. Economic barriers are also substantial, encompassing both direct and indirect costs borne by households. In addition, local cultural values and spiritual beliefs continue to shape household decision-making. Practices such as early marriage, grandparent-led caregiving, and customary restrictions on children under the age of tree leaving the home create a complex social system that often constrains children's participation in ECE.

From a governance perspective, delays in the disbursement of BOS funds and the suboptimal utilization of Otsus funds present additional challenges to the sustainability of ECE institutions. Nevertheless, local initiatives have emerged, including the use of Otsus funds to provide incentives for ECE teachers, partnerships with churches, and the implementation of integrated ECE models such as *one-roof ECE programs*. These efforts reflect the emergence of adaptive, context-based policy directions.

Therefore, increasing ECE participation in West Papua requires not only expanding the number of institutions but also strengthening social networks, improving coordination across levels of government, and harmonizing fiscal support with local cultural values. Based on these findings, several policy recommendations are proposed:

1. Adopting Socio-Cultural Approaches in Promoting ECE: Traditional leaders, religious figures, and grandparents should be actively involved in raising community awareness about the importance of ECE. Communication strategies should emphasize that ECE complements, rather than replaces, family caregiving roles.

2. Integrating the Use of Otsus Funds for ECE: Regional governments should establish formal guidelines to ensure that Otsus funds are systematically allocated to support ECE operations, teacher incentives, and community-based educational activities.
3. Strengthening Village-Based ECE and Inter-Village Collaboration: Village-level or inter-village ECE models should be promoted, particularly in sparsely populated areas, with supervision from the Education Office to ensure service continuity despite limited student numbers.
4. Optimizing Village Funds for Non-Formal ECE: Technical regulations should be developed to enable Village Funds to support non-formal ECE, including improving learning facilities and providing locally relevant educational play materials.
5. Enhancing the Capacity and Professionalism of Local ECE Teachers: Regular training programs for community-based ECE teachers should be implemented, alongside simplified certification systems recognized within national education data systems, to improve service quality and public trust.
6. Strengthening Early Childhood Data Systems and Cross-Level Coordination: An integrated data system between the Education Office and village governments should be developed to support evidence-based and efficient ECE planning.
7. Affirmative Support for Remote and Mountainous Areas: Additional support should be provided in the form of transportation allowances for teachers, logistical subsidies, and flexible accreditation mechanisms for ECE institutions in hard-to-reach areas.

Through these strategies, ECE policy in West Papua can become more context-sensitive, equitable, and sustainable. The integration of fiscal support mechanisms (BOS funds and Otsus funds), community participation, and respect for local cultural values will form a critical foundation for improving human capital development in Papua from early childhood.

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Contact email: simo003@brin.go.id