Affordable Child Care
for all in King County

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Executive Summary

There are many reasons why governments should pay close attention to the availability of affordable and high-quality child care for their citizens. For our purposes, we have focused on two: first, children who participate in high quality child care benefit from this in the long-term, second, child care provides parents with the opportunity to return to work earlier and to maintain full-time employment. Access to affordable, high quality child care benefits society from both the child development and socioeconomic perspective.

Although the benefits of child care are well-researched, making affordable, high quality child care available enough to meet demand remains a challenge. Recent efforts such as the Seattle Preschool Program have made child care a high priority for policy makers. Our team of Evans School student consultants was charged by King County Council to conduct a needs assessment, identifying the ‘areas’ with the greatest need of affordable, high quality child care in the County. Additionally, we used our findings to highlight potential areas for policy intervention. Due to restrictions in our data and to best serve our client’s interest we have focused on children from 0-4 years of age.

Before analyzing potential shortages in supply and identifying areas of need we also reviewed potential dilemmas between increasing quantity and increasing quality. Policy makers are forced to make tradeoffs - any increase spending on existing facilities risks perpetuating inequities in access, and improving access by increasing supply or lowering prices risks lowering the quality of available programming. To account for this apparent trade-off we recommend to agree on high quality standards with the community from which to roll out overall supply.

Our findings indicate that the average supply of non-relative licensed child care in King County is 172.42 slots per 1,000 children. Yet, 76% of all parents in King County report to have at least some sort of regular child care arrangement. We conclude that many families do not have access to a regular child care arrangement or rely on unlicensed or relative child care. Furthermore this supply is not distributed evenly across the County. While there are areas with an above-average supply, there are also areas in King County with a comparatively low supply - and a significant proportion of King County’s children live in these low supply areas (such as Federal Way and Kent and their immediate environments).

Even areas with a high supply of child care do not necessarily guarantee that this supply is affordable to everyone. It is apparent that tuition fees and other equity concerns play a large role when trying to improve the access to affordable, high quality child care. For instance, the price of child care to families is predicted to rise faster than incomes. This also raises concern about equity and affordability of child care to everyone.

Two main cost drivers for child care in King County contribute to high child care prices - labor and occupancy. Labor makes up 60-85% of all costs to child care centers depending on the age range served. Occupancy costs make up 11-20% of all costs to child care centers depending on the age range served. This is particularly relevant because labor and occupancy costs in

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1 By area we refer to geographic areas as well as to other factors such as income-level, race or language.
Washington State are 18% and 17% more than national averages. Child care costs are predicted to grow faster than inflation and will take up a larger percentage of families income over time.
Introduction

Research Question
Councilmember Jeanne Kohl-Welles and her staff worked with our team to formulate a guiding question for our investigation: *Where are the greatest areas of need for affordable child care in King County?* The “areas” or aspects of need we evaluated are geographic area, income-level, race, and language. The focus of this project are families with children of ages 0-4. While some of our findings may be applicable to other age groups, this is the group we think is best to analyze given our data and resource restraints.

Context and scope of this project
Our team was charged with conducting a needs assessment for affordable and high quality child care in King County. In close cooperation with our client we have agreed that this project is a bird’s eye-view project, which means that our priority is to provide research for evidence-based policy-making. Rather than making specific policy recommendations, or diving in deep on one issue, we provide a summary of relevant research and high-level findings to enable our client to pursue evidence-based policies and future research. We have provided a list of relevant definitions in Appendix 1 of this report.

Structure
We begin with a brief literature review, which covers research on the overall effects of child care for children and parents, the history of child care in the US and previous legislative efforts, an international comparison, and present-day discrepancies of access among groups. We present our findings in four primary sections:

1. Our findings on the level of demand for child care in King County;
2. A discussion about the quality of and quality-assurance efforts for child care in King County;
3. An analysis of the available supply of child care in King County;
4. A discussion of the primary cost drivers of child care in King County as well as affordability; and
5. The equity implications of our findings.

Preview
Our findings indicate that geographic areas in the county with the lowest population density tend to have the lowest per capita capacity to provide child care, and most areas with only an average or below-average per capita supply of child care are outside of Seattle and Bellevue. Our findings also indicate that labor and rent are the two primary factors contributing to the costs of child care in King County, and that both are significantly more expensive in King County than elsewhere in the state and the country. Finally, our findings indicate that areas with lower median household incomes tend to have lower a supply of child care.
Literature Review

Why does affordable child care matter?
Studies have shown that affordable child care that is accessible to all is important for a number of reasons, introduced here and discussed below. First, the economic benefits to the children themselves and the local economy as a whole are overwhelmingly positive when high quality child care is provided. Second, children that have had high quality child care have better short term and long term academic outcomes. Children also benefit socially and emotionally in the short term. Third, high quality child care is an important equity issue for families and particularly for women. Taken together, affordable child care produces positive economic, social, and equitable benefits.

Economic benefits to families
The economic benefits that stem from affordable, quality child care are well documented. Many families are unable to keep one parent home to care for the child because they simply cannot afford to lose an income. Women who take 4-12 months off after childbirth are 15% less likely to get a promotion, and any significant absence from work can be a permanent stain on a worker’s resume. Around one third of families that have a working mother use paid child care. More than half of families with a mother who works full-time and have children under 5 years old use paid child care. ² Lastly, a review of literature that measures work outside of the workplace was not included due to time constraints. A review of literature that focuses on work outside the workplace such as household chores is also out of scope of this study.

Better child outcomes
Children do better socially, academically, and emotionally when they have access to high quality child care. Children with access to high quality early childhood have been shown to have a better developed vocabulary, which has been tied to increased high school graduation rates and better long-term health and educational outcomes. However, most children do not have access to high quality programs because of the high fees associated with high quality care. ³ Additionally, low-income parents find it hard to assess the quality of child care programs. ⁴

Gender equity
Child care is an important equity issue; for families, but particularly for women. The gender pay gap, the difference between what men earn versus what women earn, is an important part of a discussion about equity. While women have been slowly closing the gender pay gap, a new pay

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gap has opened: the family pay gap. This pay gap is the difference in pay of women with children and women without children. Alarming, this gap has been growing. Research has indicated that the family pay gap may be due to the lack of policies in the U.S. that target families.

**History of child care in the United States**

There are a variety of reasons why governments should get involved in child care. Historically the rise of the child care industry in the US is closely tied to the increase of women’s participation in the labor force. The first holistic federal investment in child care was made in 1933 under the New Deal Act. The focus of the reform, which included the Aid to Dependent Children (ADC) that preceded the Aid to Families with Dependent Children (AFDC) - was primarily to counteract the rise of unemployment by offering jobs to unemployed teachers, nurses and other related professions. These policies were not renewed after the end of the Great Depression.

With the beginning of World War II the debate about expanding child care centered on the role of mothers: while some politicians argued that mothers were doing something very ‘patriotic’ by staying home and taking care of children, more and more women chose to work in war-related jobs which, too, was considered as patriotic by many. Women’s contribution to these industries was crucial to the success in the war, but it created a strong need for nonrelative child care facilities. Thus, the Lanham Act of 1942-46 provided support for extensive public child care in 43 states.

After the war ended many of these child care centers closed because they lacked funding because the Lanham Act was not renewed. The narrative around mothers shifted towards a post-war belief that women again belonged at home. During that era Congress introduced the opportunity for low - to moderate - income families to claim a small child care tax deduction. This policy accounted for additional costs families encountered when bearing costs for child care.

Fundamental improvements to the availability of public nonrelative child care were not introduced until the 1960s with the War on Poverty. In 1962 and 1965 legislation passed that introduced child care funding for programs such as Head Start, a program that provides child care and other related services to low-income families and still exists today. The aim of this legislation was to reduce the number of families relying on ‘welfare’ (such as AFDC) by linking public assistance to other policies that encouraged people to take on jobs outside of their home, such as child care support. Efforts by feminists to make child care a universal public benefit regardless of income failed in 1971.

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After the failure of universal support legislation, federal child care policy efforts in the next decades focused on targeting only low-income families directly, while offering indirect support for middle- to high-income families (e.g. through the tax code). Most recent policy efforts of the 1980s and 1990s focused on tying child care support to work incentives. Thus, many current programs are tied to a work mandate for parents.

**International context and comparison**

Policies and overall spending on child care differ from country to country, with many national governments making more investment in this issue than the US. In a 2016, the public funds used by the US to fund child care and pre-primary (infant care) is less than 0.5% of the GDP. This is below the average of 0.7% for all other economically advanced countries, represented as members of the Organisation for Economic Co-operation and Development (OECD), and the fourth lowest total spending among all participants of the study. Leading countries in terms of spending as a percentage of their GDP are Iceland, Sweden, Denmark, France, Norway, Bulgaria and Finland. Each of these countries spent more than 1% of their GDP on child care and pre-primary care. Three countries in the study spent less on child care than the US (in relation to their respective GDPs): Turkey, Latvia and Croatia.

Another study by the OECD reported that the participation rates for children under three years of age (ca. 30%) as well as for children aged 3-5 (ca. 65%) in the US are below the OECD average (which are 35% and 85%, respectively). Furthermore, both the gross fees as well as the net costs (gross fees are fees before applying public assistance and net costs are fees after public assistance) of child care in the US are considered ‘high cost’ in comparison to other OECD countries. This finding implies that equity issues around financial accessibility faced in the US are unique compared to peer nations. The US is also the only OECD member country that offers no national government-paid maternal, paternal or parental leave.

We conclude that many indicators suggest that the US child care system performs weakly when compared to other economically advanced (OECD) countries. Many of the countries with top performances in the studies (such as the Scandinavian countries) spend significantly more money on child care and grant more rights to parents to take time off work without penalty. It is noteworthy that a lot of these policies need to be addressed on the federal level. The goal of our report is to provide research to inform the selection and adoption of evidence-based child care policies in King County. We are convinced that innovative progress can be achieved on the county level. But a truly fundamental change in the availability and accessibility of affordable child care might require collaboration of different levels of government.

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9 OECD (2016): *Who uses childcare?*, available at: [https://www.oecd.org/els/family/Who_uses_childcare-Backgrounder_inequalities_formal_ECEC.pdf](https://www.oecd.org/els/family/Who_uses_childcare-Backgrounder_inequalities_formal_ECEC.pdf) [last access 27 May 2018]


11 OECD Social Policy Division (2017): *Key characteristics of parental leave system*, available at: [https://www.oecd.org/els/soc/PF2_1_Parental_leave_systems.pdf](https://www.oecd.org/els/soc/PF2_1_Parental_leave_systems.pdf) [last access 27 May 2018]
Variation in child care arrangements by racial identity

The most widespread type of child care in the US is child care provided by a relative (relative care). According to the Census Bureau,\(^\text{12}\) 61.3% of children with regular child care arrangements are being taken care of by their mothers, fathers, siblings, grandparents, or other relatives. Yet, more than one third of all children in the age group relevant to this project (0-4) do not have regular child care arrangements. Families with employed mothers are more likely to use either organized care facilities or other non-relative care arrangements. Yet among all employed mothers, relative care remains a strong factor in child care arrangements. Assuming that families with employed mothers would prefer the option of having non-relative care this raises concerns about the accessibility and affordability of high quality child care.

Among low-income families (with an income of less than $1,500 per month) child care is usually the highest monthly expense at an average of $938 (49.5% of their total income).\(^\text{13}\) Among all children, black children are least likely to be in parental care (17.4%)\(^\text{14}\) and most likely to be in either home care by a relative (35%) or in center-based care (30.7%). Hispanic children are most likely to be in parental care (29.4%) or home care by a relative (36.2%), and least likely to be in a center-based care (14.4%).

Asian children are about equally likely to be in either parental care (26.9%), home care by a relative (25.3%) or in a center-based care (26.1%). Yet, along with their white peers (16.2%) Asian children are the most likely to receive in home care by a non-relative such as a nanny (15.4%).

Legislative and policy efforts to date

Generally speaking, legislative and policy efforts directed at child care approach the issue in one of two ways - either by making it easier for parents to take time off to care for their own children or by subsidizing the costs associated with licensed nonrelative care.

As of 2016, only 12% of US private sector employees have access to paid family leave.\(^\text{15}\) This means that a vast majority of American workers must rely on the unpaid leave, which is guaranteed to qualifying workers. The Family Medical Leave Act (FMLA) is a federal law that provides certain employees with up to 12 weeks of unpaid, job-protected leave per year and requires that the employee's employer-provided health benefits are maintained by the employer during this time. The Act lists the following allowable reasons for an eligible employee to take unpaid leave: the birth and/or care of a newborn child, placement of an adopted child or foster child with the family, to care for an immediate family member with a serious health condition, or


\(^{13}\) Glynn, S. (2012): Child Care - Families Need More Help To Care For Their Children, Center for American Progress, available at: https://cdn.americanprogress.org/wp-content/uploads/2012/10/ChildCareFactsheet.pdf [last access 27 May 2018]


to take medical leave when the employee is unable to work due to a serious health condition. Eligibility depends on how long the employee has been with their current employer (at least 12 months for at least 1,250 hours) and the size of the employer (at least 50 employees within 75 miles). 16

Many parents cannot afford to take unpaid leave, particularly in King County where the cost of living is high and continues to outpace other areas in the country. The Washington state legislature has taken concrete steps to address this problem which disproportionately affects low- and moderate-income workers and families. Starting on January 1, 2020, Washington will be the fifth state in the nation to offer paid family and medical leave benefits to workers and employers. The law provides eligible workers up to 12 weeks of paid family and medical leave annually for bonding after the birth or placement of a child under the age of 18, a family member's serious health condition, or certain military assignments. Employees are eligible after working 820 hours during a qualifying period, and benefits depend on the employee's average weekly wage. The maximum benefit is $1,000 per week not less than $100 per week. This program will be funded by premiums paid by employees and employers, and is to be administered by the Employment Security Department. 17

Even with the upcoming changes to paid family leave coverage, which will primarily serve the parents of newborn babies and infants, many King County residents will be unable to take significant time off work for child care. For these families, there are subsidies available to help with the costs of child care:

- The Working Connections Child Care Subsidy Program is a federal program administered by the state Department of Social and Health Services that helps eligible families pay for child care. The program uses a sliding income scale and applies to families with incomes up to 200% of the Federal Poverty Line. Families are required to pay a copay based on their income level in relation to the Federal Poverty Line.
- The Early Childhood Education and Assistance Program (ECEAP) is a child care program funded by Washington State. ECEAP covers children aged 3-5 from families below 110% of the Federal Poverty Line. Children from household with an income above 110% of the FPL can still be considered if the children have environmental or developmental factors. Up to 10% of children in ECEAP can be from families above 110% of FPL. The program offers different schedules such as part-time, full-time and extended day care but its funding level leaves many eligible families without access.
- The Head Start program is federally funded. Like ECEAP it serves families with children aged 3-5. It offers child care to families at or below 130% of the FPL with preference given to those below 100% of FPL.
- Early Head Start is a federally funded program serving children aged 0-3.
- Low-income King County residents who live in Seattle may be eligible for The City of Seattle's Department of Education and Early Learning’s Child Care Assistance Program. To qualify for enrollment, parents must live within Seattle city limits, be employed or enrolled in education or job training, have a child under 13 years of age, currently use


provider contracted with the City of Seattle, not be eligible for any other child care subsidy program, and meet the program’s income guidelines and child support requirements. For a family of two, gross monthly income cannot exceed $4,059; for a family of three, gross monthly income cannot exceed $5,106; for a family of four, gross monthly income cannot exceed $6,150.

Child Care Demand in King County

Our team determined that the most important facets of demand for affordable child care would be best examined empirically, so two statistical analyses – one descriptive, one comparative – were designed and performed. The descriptive analysis focused on attempting to identify characteristics of families and parents who would stand to benefit from a universalized effort to provide child care in King County. The comparative aspect of design was meant to assess how King County’s demographic attributes stacked up against Washington state as well as the nation at large. Together, these analyses were intended to help shed light on a single research question: *Who in King County stands to benefit from an increase in access to affordable child care?*

Methodology

The data source for analysis was the Annual Social and Economic Supplement (ASEC) of the U.S. Census Bureau’s Current Population Survey (CPS), because it yielded one of the highest samples size of families in King County and contained variables most relevant to our research question. Our final sample contained individual and household level data for 561 families with children under age 5 from across the years 2013 to 2017. Multiple years of data were utilized with the contention that the larger sample size provided by looking at those surveys collectively would give greater statistical power to any findings and allow for more insightful analysis of trends than might have been possible in any individual year. The characteristics of interest in this study were self-reported age, racial and ethnic identity, marital status, poverty status, government assistance receipt, cost expenditure of child care (expanded definition of this will be discussed later), cost burden of child care, and residential location within King County. To compare subgroups of families within King County to their statewide and national counterparts, descriptive statistics were generated in the software platform STATA using a multi-staged clustered sampling scheme designed to stratify the sample of families by different sub-characteristics while still applying the appropriate survey sample weights.

Key Findings

The biggest takeaways from our statistical analyses exposed the great extent to which King County stands out in its demographic and economic diversity. Compared to the state of Washington as a whole, King County has a much more varied ethnic and racial makeup. It also has a greater proportion of families with children under age five living below 150% of the Federal Poverty Level than its counterparts elsewhere in both the state *and* the nation. There is also a significant percentage of families whose financial situation was indicative of difficulty

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providing basic needs to their young children; 10% of families with children under age five in King County were recipients of the Women Infant and Children (WIC) benefits program.

Child Care Quality

What does quality child care look like?
Early Achievers is the Washington State Department of Early Learning's quality rating and improvement system for early learning. Providers are ranked at levels 1-5 after being evaluated on a scale of 1-100. On the 100 point scale, 60 potential points are allotted for 'Learning Environment and Interactions', 9 potential points are available for 'Child Outcomes', 10 potential points are available for 'Family Engagement and Partnerships', 11 potential points are available for 'Curriculum and Staff Supports', and 10 potential points are available for 'Professional Development and Training'.

Why does quality matter?
Child care is important for two reasons: (1) it enables parents to keep their jobs and thus, contributes to the economic progress of families; and (2) quality child care and early education can also improve the long-term well-being of the children.

There are many long-term studies about the effects of early learning and preschool. Generally, these studies show that the effects are positive in both the short term and long term. Children do better socially, academically, and emotionally when they have access to quality child care and early education. One study showed that early childhood programs increase learning skills, which improves learning in school and eventually benefits the local economy. The study argues that participants in the programs will most likely stay in the area. This gives businesses better local talent and attracts jobs and new business, although these benefits are long in the future. Additionally, the study also showed long term economic benefits to the child, but was inconclusive about the long-term health benefits from attending preschool.

These studies also indicate that the long-term benefits do not apply to every program, only high quality ones. Therefore, the quality issue is so important to the success of child care. If King County wants to improve affordable child care it should make sure that the child care supplied meets appropriate quality standards in order for its investment to reap the benefits defined above. Education scholar Robert Pianta and colleagues suggest certain elements crucial to high-

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quality child care: well-designed curricula, well-trained staff and a strong learning environment for children, including classrooms catered to the needs of children in that age group.  

These findings lead us to conclude that quality child care matters because only high-quality facilities can ensure that tax money is used effectively to yield the best outcomes for both parents and children.

**How has Washington defined quality childcare?**

The Early Achievers program is the Washington State Department of Early Learning's quality rating and improvement system for early learning. This program defines quality along the following dimensions:

- Learning Environments and Interactions
- Child Outcomes
- Family Engagement and Partnerships
- Curriculum and Staff Supports
- Professional Development and Training

In order to be able to accept state child care subsidies, centers must participate in Early Achievers, but any licensed center-based program may participate. In order to participate in Early Achievers, centers must have a non-expiring license that is not suspended, revoked, or on probationary status. Providers are ranked at levels 1-5 after being evaluated on a scale of 1-100. On the 100 point scale, 60 potential points are allotted for 'Learning Environment and Interactions', 9 potential points are available for 'Child Outcomes', 10 potential points are available for 'Family Engagement and Partnerships', 11 potential points are available for 'Curriculum and Staff Supports', and 10 potential points are available for 'Professional Development and Training'. In 2017, 1,251 center-based programs participated in Early Achievers.

**How does quality relate to this report?**

Very often policy decision-makers find themselves in a dilemma: Should they use available funding to increase the quality of child care for those fortunate enough to have access? Or, should they use the funding to expand coverage so that the child care system can serve more families? There are arguments on both sides. Indeed, improving quality and quantity are not

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dichotomous choices. There might be room for a compromise by assuring quality standards, at the same time as the county is expanding the coverage.

The City of Seattle encountered this choice recently when designing the Seattle Preschool Program (Proposition 1B passed by Seattle voters with 67% approval rating in 2014). Proposition 1B aimed at increasing the coverage of affordable child care, while also guaranteed high quality standards. However, the program only collaborates with preschools that meet predefined quality criteria. These criteria include a required level of education for teachers (Bachelor or higher), small groups, a well-designed curriculum as well as a student-teacher ratio. That way, the program guarantees expanded coverage while guaranteeing a high quality. As analysts we recommend a similar approach of defining quality standards that preschools have to meet as a condition for expanding the coverage.

Finally, we acknowledge that this report is written with the assumption that institutional child care is the standard. Due to time and resource constraints, we were unable to study ‘family, friend, and neighbor care’ (sometimes called ‘Kinship Care’) in King County with the breadth and depth that we desired. We did conduct extensive reviews of the current research on Kinship Care at the national level, focusing on the quality of Kinship Care as well as the differences between licensed and unlicensed care. It is important to note that these national-level data points could reflect a situation very different from the situation in King County, however we contend that they are relevant to discussion nonetheless.

In general, even licensed family, friend and neighbor care has a larger variation of quality than center-based care - for example, according to the National Center on Early Childhood Quality Assurance, less than 20% of teachers in Kinship Care have Bachelor’s degree or higher. Given that almost 50% of all King County residents have a Bachelor’s degree or higher than the US average, it is very likely that the average qualification level of Kinship Caregivers is higher than the US average. The level of caregiver education could be higher in King County, yet the point remains that King County has only limited opportunities to guarantee the quality of Kinship Care.

The limitation of our scope should not be taken as an indication that professional child care is always superior to child care provided by family members, friends, or neighbors. It is merely easier to measure and fund at the county level. Furthermore, subsidizing professionally provided child care allows the county to maintain a higher control of the quality offered.

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Supply of Child Care in King County

*What do we mean by supply?*

Child care comes in many forms. In their most recent study of child care arrangements published in Spring 2011, the U.S. Census Bureau reported that 61.3% of all households with children younger than 5 years old have regular child care arrangements. In King County, 76% of parents of children between 6 months and 5 years of age report that they had at least some regular child care arrangement.

Child care can either be licensed or unlicensed. The Washington State Department of Early Learning issues licenses to child care providers. These licenses require all child care facilities to meet licensing requirements. But child care facilities do not have to have a license to operate. Licensing has benefits for facilities because being licenses guarantees parents that this facility meets the certain criteria. But facilities may choose to not license because they do not meet the criteria yet or do not want to go through the bureaucratic procedure.

This report investigates the supply of licensed nonrelative care facilities in King County. By focusing on licensed facilities only, we were able to acquire more precise data. There is no data available to us that would help us determine the number and quality of unlicensed facilities. Some unlicensed providers might also offer services of the same quality, but - similar to our analysis about Kinship Care - parents cannot have the same certainty as with licensed providers. Additionally, we are convinced that focusing on licensed facilities allows King County to retain a higher level of control of the quality of child care as the quality is pre-defined by the licensing standards. Nonrelative care includes organized care facilities such as day care centers, nurseries, or Head Start schools as well as other nonrelative care that is provided in either the child’s or the provider’s home. Family Child Care Providers and Group Home Daycares provide this type of care.

For our research we divided licensed nonrelative child care into two subcategories as it is common in the field:

- Child Development Centers
- Family Child Care Providers & Group Home Daycares

Child Development Centers are large facilities are designed to accommodate young children. Family Child Care Providers & Group Home Daycares are typically smaller, often more decentralized facilities than the centers. Very often they are run by people in their own home.

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34 An extensive list of quality criteria can be found in the official licensing guidebook, available at: https://del.wa.gov/sites/default/files/imported/publications/licensing/docs/ChildCareCenterLicensingGuide.pdf [last access 27 May 2018]
They, too, are licensed to take care of a certain number of children based on the features they can offer.

According to our data, there are 672 licensed Pre-School & Child Development Centers and 1256 licensed Family Child Care Providers & Group Home Daycares in King County.

**Methodology**

Our research is confined by the availability of quality data on child care supply in King County. Our analysis uses data from the Washington State Department of Early Learning. Capacity refers to the number of slots an agency is licensed to offer. We acknowledge that capacity will be overestimated because not all facilities take care of the full number of children and infants they are licensed for at all times.

The data from the Washington State Department of Early learning was made available on the website of ChildcareCenter.us. This is the nation’s largest directory for child care services. They maintain an extensive database of all licensed non-relative care in King County sorted by ZIP code. The data is subdivided into the two categories introduced above.

We summarized the data by ZIP code in an Excel Spreadsheet, included with this report. For every ZIP code in King County (98001-98199) we identified the number of providers as well as the total capacity for each type of care in the ZIP code. We used this information to cluster ZIP codes based on geographic location. Some ZIP codes were clustered around the 39 towns and cities in King County. ZIP codes in mostly rural areas often cover larger geographies. Thus, we did not cluster them together because clustering would have made these areas too big to be meaningful for our purposes.

In total, there are 41 area clusters in our data set. For each ZIP code cluster we identified the estimated number of children living in it using the data from the 2016 American Community Survey (ACS) conducted by the U.S. Census Bureau. The ACS offers data about the estimated number of children in each ZIP code that are younger than fifteen years of age. We had to enlarge the age group to determine different levels of supply because there is no data on the estimated supply of child care slots offered for children between 0-4 years specifically. This methodology still gives us the most accurate description of places with high and low supply of child care relative to the number of children possible. It also allowed us to use the best data on licensed non-relative care available for King County to identify areas in which per capita supply is weaker than the average. However, given the restraints of the data we advise King County to commission a follow-up study to make the data on how much licensed capacity is dedicated to which age group publicly available.

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35 The exact data was taken from this website in February 2018: [https://childcarecenter.us/county/king_wa](https://childcarecenter.us/county/king_wa)
36 The data was taken from in May 2018: [https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml)
**Overall findings**

Overall the ACS estimates the number of children younger than 5 years of age in King County to be 127,998 and the number of children younger than 15 years of age to be 368,018. There is a total of 1,928 licensed facilities in King County. These facilities have a total licensed capacity of 63,453. However, there is no research that determine how much of this capacity is used to provide child care for children under 5 years. We recommend that the Council commission a study to determine the actual number of child care slots for this specific age group to allow a more narrow analysis.

The King County average is 172.42 slots per 1,000 children under 15 years. Thus, theoretically King County has enough child care capacity to offer child care to about twenty percent of all children in the county. Also, the supply is not evenly distributed. Based on the average we defined areas with high and low supply. Please note that these are relative categories, based on the county average and not a recommendation of what high supply would look like ideally. The overall supply these categories are:

- Low: A capacity of less than 50 slots per 1,000 children
- Below average: A capacity of 50-140 slots per 1,000 children
- Average: A capacity of 141-200 slots per 1,000 children
- Above average: A capacity of 201-270 slots per 1,000 children
- High: A capacity of more than 270 slots per 1,000 children

While the number of preschools and child development centers is only 672 (roughly 35% of all facilities) they account for 80% of the child care supply (capacity of 51,052). Family Child Care Providers and Group Home Daycares account for 65% of all facilities, but only supply 20% of the total capacity (12,401). Yet, the latter play a crucial role in the child care supply of some areas in King County in which there are just a few or no larger child care facilities.

**Geographic variations**

The analysis of the data has shown that there are geographical differences in the supply of child care across King County. The map below summarizes our findings.
The map illustrates the trends of the data. Supply of licensed, nonrelative child care is comparatively strong in the northwestern part of the County (especially in Seattle and Bellevue). But we want to point out that Seattle and Bellevue are areas with a lot of jobs. A lot of people commute to these cities for work and some of them might prefer having child care close to their workplace. Also, Seattle already has some policy programs in place to address the shortages of child care supply (e.g. the Seattle Preschool Program).

The southern and eastern parts have a lower supply of licensed nonrelative child care. Thus, any policies stimulating supply can be most effective in these areas. Furthermore, the map indicates that there are no ‘islands’ with high supply in southern and eastern King County. By ‘islands’ we refer to areas with a comparatively high supply of child care that mitigate the shortage of supply in circumjacent clusters. But we acknowledge that our data does not indicate whether or not there are potential child care ‘islands’ in neighbor counties.

**Areas with low supply**

Currently, there are four areas in King County that have a licensed nonrelative child care supply with a capacity lower than 50 slots per 1,000 children (compared to the county average of 172.42 slots per 1,000 children). Area 27 (Name: Ravensdale) and Area 38 (Snoqualmie Pass) have no licensed child care at all within the area. Area 13 (Fall City) has a child care capacity of 10.77
per 1,000 children. The fourth area with low supply is Area 8 (Carnation and environment) with a capacity of 17.09 per 1,000 children.

Yet, it is noteworthy that all four areas with apparent low capacity have a low population density and a total population of less than 10,000 inhabitants. Furthermore, the absolute number of children younger than 5 years in these areas is rather small. For example, the ACS estimates that there are only 3 children living in Area 38 (Snoqualmie Pass). Given that our analysis does not consider relative and unlicensed care it is very likely that there is no need for a governmental intervention in this sparsely populated area. The table in Appendix 1 summarizes our data for the four areas with the smallest supply of child care per 1,000 inhabitants.

Our team concludes that, while our analysis determines that the four areas named above have the lowest supply by our indicator, they do not require immediate attention by King County. In total we estimate only 766 children younger than 5 years to be living in those areas. This is just a small fraction of the overall population of children in this age group (127,998). Thus, immediate action is not required. While an intervention in low-supply areas can be empowering for the local population, there are other areas where a policy intervention has the potential to impact a larger number of children and families.

Areas with below average and average supply
The most areas we analyzed had either a below average or average supply of licensed nonrelative child care. In total there are 23 ZIP code clusters in the below average category (51-140 slots per 1,000) and 4 clusters in the average category (141-200 slots per 1,000). In total we estimate that 89,112 children younger than 5 years (almost 70% of all children in this age group in the county) live in these areas. These areas require highest priority when addressing the need for affordable child care for all, given the high number of children living in them.

The areas in these categories are very diverse in terms of location, size and total population of children younger than five years old. Most areas with an average to below average supply of child care are outside the two largest cities in King County (Seattle and Bellevue).

The two areas with the large populations of children younger than 5 years with a child care supply that is below-average are Area 14 (Federal Way and surrounding area) and 17 (Kent and surrounding area). These areas are both in southern King County, with estimated below average child care supply ratios of 127.73 slots and 120.12 slots per 1,000 children, respectively. More than 11% of all children younger than 5 years in King County live in these two areas. Hence, they are two of the areas we determined to have the greatest need for additional supply and should be the first target for policy solutions.

The tables in Appendices 2 and 3 summarize our data about the areas we have analyzed to have a below average or average supply of child care.

Areas with above average and high supply
There are currently three areas in King County that have a relatively strong supply of licensed nonrelative child care. The area with by far the strongest supply of such child care in our dataset
is Area 34 (Seattle III - South Seattle) with 316.61 slots in licensed child care per 1,000 children, or almost twice the King County average. However, this does not necessarily mean that there is an oversupply of child care because the total figures are still very small. For Area 34 it is also interesting to point out that this area has a very high supply of child care not just because of child care centers, but also because of the prevalence of smaller Family Child Care and Group Home Daycare providers.

Area 3 (Bellevue) and Area 32 (Seattle I - Central Seattle) currently also have a strong supply of child care. Furthermore, Bellevue - on average - is a high-income area, although we are aware of income disparities in these areas. It is very likely that the child care supply in Area 3 benefits from the general affluence of the city where many families can likely afford licensed care (although there are likely areas within the city where this is not true).

There are also 7 other areas with a supply of child care that is above the countywide average. These areas are areas 19 (Lake City), 15 (Issaquah), 35 (Seattle IV – West Seattle), 23 (Mercer Island), 33 (Seattle II - North Seattle), 28 (Redmond, and 5 (Bothell). It is interesting to notice that all areas with at least an above average supply of child care are urban and have at least 20,000 inhabitants. Furthermore, these areas are considered to be high income areas (although not all neighborhoods in the areas may fit this description). We summarized the ten areas with the strongest supply in the tables in Appendices 4 and 5.

**Limitations of our methodology**

The methodology just described represents what we think is the best approach to identify areas with lesser and greater need given the data available and our team’s time and resource restrictions. Yet, there are also limitations and context to our findings that bear discussion.

The basis of our analysis is data that links child care supply to individual ZIP codes. As we have shown it is possible to cluster ZIP codes around geographical concentrations such as cities or to combine them in any other way possible. Yet, ZIP codes cannot be subdivided. There are some ZIP codes in King County that cover large, but sparsely populated areas. There are also codes that include somewhat economically or socially disparate neighborhoods.

There is the possibility that there is a mismatch within these ZIP codes used for our analysis of supply and needs that challenge some families because the nearest child care facility is still a long drive away from where they live. In sparsely populated areas this will likely not affect as many children.

Our approach fails to account for disparities within neighborhoods in larger cities. To some extent this is an important limitation, but more densely populated neighborhoods have also perhaps more commute access to other areas that might have a better child care supply. Thus, cities have a structural advantage. We conclude that our data is still sufficient to determine which areas have the greatest need and might need immediate attention given that the purpose of our project is to give a general overview.
We chose to use the ZIP code approach because it was the smallest level of data that was available to us. With the final version of this draft our team will also provide an MS Excel spreadsheet to allow for re-clustering.

Also, our data from the ACS treated the group of children younger than 5 years as one group. Yet, these age groups can be subcategorized, too (for example, see subsequent chapters on costs and regulation). Thus, the supply in an area could be above average, but there might still be a lack of supply for certain age groups (e.g., for toddlers younger than 3).  

As mentioned, our analysis takes into account the licensed capacities of child care facilities only, not the numbers actually being served. Thus, our numbers are likely to be an overestimate as some child care facilities might not be filled to full capacity for various reasons. Also, our data on the capacity of child care facilities includes service for all children and not just the target group of this report. It is impossible to determine how much of the overall capacity is actually dedicated for taking care of infants and toddlers.

Furthermore, by issuing licenses the Department of Early Learning seeks to guarantee certain quality standards bound to the issuance of the license. Yet, the quality of licensed child care facilities can still differ. Some child care providers might exceed the standards requested by the DEL while others fall short (perhaps in between inspections).

Finally, a supply of child care that is above average does not guarantee that child care is accessible or affordable for all people. Thus, we have included additional sections about cost and equity in this report to illuminate additional barriers in accessing child care.

**Conclusion regarding supply**

Our team has estimated the supply of licensed nonrelative child care relative to the number of young children across King County geographic areas. We have determined areas with higher and lower supply. Based on our findings we conclude that the supply of child care is lower in areas in King County that are outside of the two major cities Seattle and Bellevue. But more than two-thirds of children in King County that are younger than 5 years do not live inside those two cities and do not benefit from local efforts to offer affordable high quality child care such as the Seattle Preschool Program.

Hence, we recommend areas outside of Seattle and Bellevue with a large population of children younger than 5 such as Federal Way and Kent and their immediate environments as the primary immediate targets to strengthen local supply of child care. The shortage of child care supply seems to be highest in southern and eastern King County. Furthermore to address the shortage of reliable data on the number of child care slots open to children between 0-4 years we recommend to commission a follow-up study that seeks to answer this question.

We also acknowledge that analyzing the distribution of supply is not enough. Even in areas with a higher supply of child care families may experience trouble when trying to access child care

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facilities they can afford. Availability of child care does not mean that the local supply is affordable for families. Hence, our team also investigated affordability as well as broader equity barriers that might hinder families to access child care. Our discussion of those issues follows next.

**Cost and Affordability**

This section of our report is broken down into four parts. Overall, this section will try to answer questions related to the costs to the child care provider in order to better understand the key factors that drive affordability. Additionally, this section will also look at affordability to the consumers of child care, families. Understanding the key factors that drive child care costs may lead to policy recommendations to increase supply. First, we will try to answer which costs to child care providers are the biggest costs. A discussion about the biggest costs to child care providers, which are the operational costs like cost of labor and occupancy costs, will follow. Second, we will examine how the above costs in King County compare to the rest of the U.S., in order to compare affordability. This will be done through a comparison of the Consumer Price Index (CPI) for Seattle versus the CPI for the rest of the U.S. Additionally, the above examination will include a sample simulated budget for each age range served by child care providers in King County. Third, we will discuss how Washington state regulations affect the biggest costs to child care providers. Fourth, we will examine affordability to the consumer by looking at historical child care costs and using that data to project child care costs into 2028. Lastly, a discussion and analysis of the above methods and findings will follow.

**Biggest costs to child care providers**

Our research indicates the biggest costs to child care providers, both nationally and for King County, are labor costs and occupancy costs. Additional costs that child care centers have can include food, cleaning, diapers, toys, insurance, and educational materials. Any other cost not associated with labor or occupancy costs is assumed to be a miscellaneous cost. Together these additional costs are significant. However as the above costs are a group of items and each center consumes different widely varied amounts of each, tracking the miscellaneous costs and coming up with averages was impossible. Instead, it can be assumed that any money not spent on labor or rent in an operating budget is spent on the above miscellaneous costs. These miscellaneous costs are assumed to be 12% of the operating budget. The above number is assumed due to the lack of data and the wide range of goods and services the miscellaneous cost covers.

Child care is a very labor-intensive industry. Labor has been found to be the largest cost to most child care centers. An analysis of research has shown that child care center labor costs will consume 60% - 85% of their operating budget. The large range in the above number is due

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38 General Accounting Office (1990): *What Are the Costs of High-Quality Programs?*, available at: https://www.gao.gov/assets/80/77665.pdf [last access 29 May 2018]

39 ibid
to the age range that different centers serve and the variation in teacher to child ratios required by age.

Occupancy costs include rent or mortgage costs, property tax costs, maintenance, and utilities. For the purposes of this assessment we will make the assumption that the child care center is paying rent. Therefore, other costs that go into occupancy costs such as maintenance or property taxes will not be examined. Rent has been found to be the second biggest cost to child care centers after labor. Figures vary but reports and data have indicated that rent can range from 11-20% of a child care center’s budget.42,43,44

**Costs in King County vs U.S.**

We will compare the our two identified cost-drivers for child care centers in King County to the rest of the US in three ways. First, we will examine and compare Consumer Price Index (CPI) data between the Seattle-Tacoma-Bellevue (S-T-B) area and the U.S. We will compare the CPI data between the Seattle-Tacoma-Bellevue area to show the difference in costs between S-T-B and the U.S. This comparison should provide a baseline as to how fast all prices in the Seattle-Tacoma-Bellevue are growing compared to the US. Second, we will discuss the differences in the costs of wages for child care workers nationally compared to the state of Washington. Data availability limits our comparison to a statewide comparison of child care workers wages. Third, the cost of occupancy in King County will be compared to the national levels. By comparing the relative cost of labor and occupancy to the difference in overall CPI we can see if labor and occupancy costs are above or below the relative costs of other goods and services for Seattle-Tacoma-Bellevue. Together, these comparisons and differences in costs should prove that costs for the main cost-drivers of child care are higher in King County than in the rest of the U.S.

**Consumer Price Index**

CPI compares the price of goods and services and can be used to measure the purchasing power of money over time. CPI can also be used to compare the price of goods and services in one region to the U.S. as a whole. In the context of this report we will look at CPI to determine if the cost drivers for child care are higher in King county than in other places. Higher costs for the costs drivers may help explain a lack of supply of child care.

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41 Child Care Inc. (2001): *Operating Budgets for Child Care Centers*, available at: [http://www.earlychildhoodnyc.org/resourceguide/resources/OperatingBudgets-Child%20Care%20Inc%20publication.pdf](http://www.earlychildhoodnyc.org/resourceguide/resources/OperatingBudgets-Child%20Care%20Inc%20publication.pdf) [last access 29 May 2018]

42 General Accounting Office (1990): *What Are the Costs of High-Quality Programs?*, available at: [https://www.gao.gov/assets/80/77665.pdf](https://www.gao.gov/assets/80/77665.pdf) [last access 29 May 2018]


44 Child Care Inc. (2001): *Operating Budgets for Child Care Centers*, available at: [http://www.earlychildhoodnyc.org/resourceguide/resources/OperatingBudgets-Child%20Care%20Inc%20publication.pdf](http://www.earlychildhoodnyc.org/resourceguide/resources/OperatingBudgets-Child%20Care%20Inc%20publication.pdf) [last access 29 May 2018]
CPI data for King County is not available, therefore we will use the CPI data for the Seattle-Tacoma-Bellevue area instead. Nationally, CPI is 248.991 as of February 2018.\textsuperscript{45} For Seattle-Tacoma-Bellevue CPI is 265.850 as of February 2018.\textsuperscript{46} Thus, to calculate the difference in prices between Seattle-Tacoma-Bellevue and the rest of the US we can use the formula:

$$\frac{\text{2018 S-T-B CPI}}{\text{2018 US CPI}} = 1.067709$$ or S-T-B is 6.77% higher than U.S.

The difference between these numbers shows that based on CPI data, overall prices in the Seattle-Tacoma-Bellevue area are 6.77% more than prices nationally.

**Labor costs**

In Washington state the average yearly income of full time child care workers as of 2017 was $27,800 or $13.37 per hour.\textsuperscript{47} Nationwide the average yearly income for full time child care workers in 2017 was $23,760 or $11.42 hourly.\textsuperscript{48} Therefore, the cost of labor for child care workers in Washington state is 17% higher on average than the cost of labor for child care workers nationwide. Comparing the labor costs to CPI, the cost of labor for child care workers in Washington state is 17%-6.77%, or 10.23 percentage points higher than the price of other goods and services in Seattle-Tacoma-Bellevue.

**Occupancy costs**

The Seattle-Tacoma-Bellevue area has higher occupancy costs vs the occupancy costs in the rest of the U.S. according to CPI data. The CPI of occupancy costs in the Seattle-Tacoma-Bellevue area in February 2018 was 358.355.\textsuperscript{49} The CPI of occupancy costs in the U.S. in February 2018 was 303.653.\textsuperscript{50} Applying the same formula as above, occupancy costs are on average 1.180146 or about 18% higher on average than the national average. Comparing the occupancy costs to CPI, the cost of occupancy in the Seattle-Tacoma-Bellevue area is 18%-6.77%, or 11.23 percentage points higher than the price of other goods and services in Seattle-Tacoma-Bellevue.


\textsuperscript{48} ibid


WA state regulations and cost

As noted above, the biggest costs to child care providers are labor and occupancy. Labor costs are greatly impacted by local regulation. Washington state regulates how many children a child care center can serve in total. Washington state also regulates the staff-to-child ratio a child care center must have. If these regulations are not met, a center can lose its license. A lost license could result in a number of negative outcomes for a child care center, most of which would result in a loss of income or closure. Therefore, these regulations have a large impact on operating costs to child care centers.

A table of the regulations for group size and staff-to-child ratios is below:

<table>
<thead>
<tr>
<th>If the age of the child is:</th>
<th>Then the staff-to-child ratio is:</th>
<th>And the maximum group size is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>One month through 11 months (infant)</td>
<td>1:4</td>
<td>8</td>
</tr>
<tr>
<td>Twelve months through 29 months (toddler)</td>
<td>1:7</td>
<td>14</td>
</tr>
<tr>
<td>30 months through 5 years (preschooler)</td>
<td>1:10</td>
<td>20</td>
</tr>
<tr>
<td>5 years through 12 years (school-age child)</td>
<td>1:15</td>
<td>30</td>
</tr>
</tbody>
</table>

The above regulations are the minimums required by the state. However, other organizations have suggestions about group size and the staff-to-child ratio. The general idea of more staff to children is that it will ensure quality. Below is a table from the National Association for the Education of Young Children (NAEYC) that recommends a stricter staff-to-child ratio and a different maximum group size.

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52 ibid, page 108
NAEYC recommended group size and staff-to-child ratio:

<table>
<thead>
<tr>
<th>Ages of Children</th>
<th>Ratios</th>
<th>Maximum Group Size:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants (birth to 15 months)</td>
<td>1:3, 1:4</td>
<td>6, 8</td>
</tr>
<tr>
<td>Toddlers (12 to 28 months)</td>
<td>1:3, 1:4, 1:5</td>
<td>6, 8 to 12, 10</td>
</tr>
<tr>
<td>2 year-olds (21 to 36 months)</td>
<td>1:4, 1:5, 1:6</td>
<td>8, 10, 12</td>
</tr>
<tr>
<td>2 1/2 and 3 year-olds (30 to 48 months)</td>
<td>1:6, 1:7, 1:8, 1:9</td>
<td>12, 14, 16, 18</td>
</tr>
<tr>
<td>4 year-olds</td>
<td>1:8, 1:9, 1:10</td>
<td>16, 18, 20</td>
</tr>
<tr>
<td>5 year-olds</td>
<td>1:8, 1:9, 1:10</td>
<td>16, 19, 20</td>
</tr>
<tr>
<td>Kindergartners</td>
<td>1:10, 1:11, 1:12</td>
<td>20, 22, 24</td>
</tr>
</tbody>
</table>

In addition to the above ratios, there are other state regulations that affect occupancy costs. Below are some direct quotes from a Washington state licensing guide regarding regulations that affect occupancy costs:

- “You must have: Fifty square feet of useable floor space per infant (includes crib, playpen, infant bed and bassinets)
- Thirty-five square feet of usable floor space for each toddler or older child that is dedicated to the children during child care hours, and
- Fifteen additional square feet must be provided for each toddler using a crib or playpen when cribs are located in the sleeping and play area”

Additionally, there are regulations for outside play areas:

- “You must provide an outdoor program that promotes the child’s coordination, active play, and physical, mental, emotional, and social development based upon their age. The play area must:
  - Contain a minimum of 75 useable square feet per child using the play area at any one time. If the center uses a rotational schedule of outdoor play periods so that

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53 ibid, page 109
54 ibid, page 16
only a portion of the child population uses the play area at one time, you may reduce correspondingly the children’s play area size.”55

The regulations and ratios outlined above have a large impact on the cost of labor for child care centers. These costs are then passed on to the consumers. The above regulations must have a large effect on the cost per child for child care centers. Yet, it is generally agreed that they are an important aspect that ensures quality and safe child care.

**Affordability**

The discussion about costs to child care providers is important to families as the costs to child care providers are eventually passed on to families. As discussed above, costs to child care providers are above average in King county compared to the rest of the U.S. However, it is important to examine the affordability to families. Therefore, using historical data we have projected the cost of child care in King County for the three groups of care: infant care, toddler care, and preschool care.

The projections of the future costs for child care are based on an examination of the historical costs for each type of care in King county. The projections were made by calculating the historical increases in cost per year. Next by finding the average percentage increase for the historical costs for each type of care, we can apply this average and project the future costs. The data used is the median monthly cost of full time child care. The projections start in 2018 and continue for ten years ending in 2028. All the data in the graphs below were taken from the same source.56, 57, 58 The tables with the specific data can also be seen in starting in Appendix 6 and continues to Appendix 10.

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55 ibid, page 16
56 KidsCount (2017): Datacenter: Child Care Provider Rate, available at: https://datacenter.kidscount.org/data/line/5649-child-care-provider-rate?loc=49&loct=5#5/6963/false/573,869,36,868,867,133,38,35,18,17/asc/523,526|/12241 [last access 22 May 2018] website experience server problems on 29 May, but raw data is available in an Excel Spreadsheet we provided with the final report
58 ChildCareAware (2018): Child Care in King County, available at: http://www.childcarenet.org/about-us/data/2018-County%20data%20reports/king [last access 29 May 2018]
Below is a graph that shows the historical cost of infant care for King County:

![Historical Cost of Infant Care in King County](image)

This is compared to a graph projecting the future cost of infant care for King County:

![Projected Cost of Infant Care in King County](image)

Below is a graph that shows the historical cost of toddler care for King County:
This is compared to a graph projecting the future cost of toddler care for King County:

Below is a graph that shows the historical cost of preschool for King County:
This is compared to a graph projecting the future cost of preschool for King County:

The findings, which the above graphs indicate, clearly show a very similar linear pattern. The cost of child care rises over time and continues to rise during both good and bad economies. On average, the cost of any type of child care increases 3.48% a year. This is higher than the annual targeted inflation rate for Seattle, which is predicted to be on average just less than 3% to 2027.\textsuperscript{59} This is also higher than the CPI calculated wage increases of 2.8% for 2017.\textsuperscript{60}

\textsuperscript{59} King County (2018): Seattle CPI-U Forecast, available at: https://www.kingcounty.gov/~/media/business/Forecasting/images/1_icons/Mar2018_seacpiu_pic.ashx?la=en [last access 29 May 2018]

Methodology
The above methodology is critically limited in important ways. Some of the data is not King County specific. The data for labor is based on figures for the entire state of Washington. The data based on labor could be artificially inflated, but the inflation may not be child care worker specific which might contaminate the data. Additionally, in other areas like CPI, data is based on only Seattle-Tacoma-Bellevue. These were unavoidable due to the lack of data from more targeted sources like child care centers. Additionally, the way labor and occupational costs have been calculated leaves out taxes, benefits, or insurance. A better methodology would have been to obtain direct figures from child care centers. However, time and resource restrictions prevented this from being a reasonable option. In regards to affordability, the projection used was only a linear projection. A more advanced statistical technique could have been used. However, given the time restrictions, and that the data seemed to indicate a relatively simple line, linear projection seemed reasonable. In regards to the historical data used in the projection, it would increase the validity of the projection if we had access to data that started before 2002; but, that data was not freely available. Lastly, comparing the price of child care in King county to either the rest of the state, or to the entire U.S. would be ideal. Yet, time and data limitations have made that impossible.

Conclusion Regarding Cost and Affordability
The analysis above shows that the major cost drivers of child care provider costs in King County are significantly higher than these cost components nationwide. Labor and rent are both significantly more expensive in King County and Washington state than they are nationally. Additionally, these costs are growing faster in King County and Washington state than they are nationally.

For families, the historical and projected trends of child care costs clearly show an upward rise. On average, the projected cost of child care is growing almost 0.5 percentage points more than projected inflation. Additionally, the cost of child care is growing faster than wages are currently growing. Thus, without intervention child care costs will grow faster than inflation and will take up a larger percentage of families’ income over time. The rising cost of child care to families presents potential equity concerns.

Equity Implications for Child Care

Demand
We applied various working hypotheses against findings from our descriptive and comparative analyses of demand to aid interpretation of them. One hypothesis was that one demand-side driver of inaccessibility of child care was household or family composition. We might expect to see the data bear this out in many different ways, such as a high proportion of single-parent or single-earner households. In fact, this turns out not to be the case - King County has proportionally more families headed by married couples, or in dual-earner households. Further, the share of total child care expenses borne by parents themselves (as opposed to the government) is significantly higher for parents under 25 years old than for parents over age 25, holding all other factors constant. A discrepancy also exists between parents living inside and
outside the central cities (as defined explicitly by the U.S. Census Bureau) in King County. For those living outside a central city such as Seattle, Bellevue, or Renton, the average monthly cost expenditure for child care is significantly likely to be approximately $300 more expensive.

**Supply**

In order to understand the equity implications our supply findings, we’ve compared geographic areas with below-average supply to areas with average supply across a number of categories. These categories include median household income, average male and female salaries, race/ethnicity, language, poverty rate (and the largest demographic living in poverty), citizenship, employment industries, median age, and income inequality (among others). For reference, we’ve also included the same statistics (as available) for areas with above-average supply and high supply. These statistics came from the 2016 American Communities Survey (ACS) and the ACS’ Public Use Microdata Sample. Unfortunately, this data is broken down by city and neighborhood, not by zip code, so it is not a perfect comparison to our supply data.

The average median household income in 2016 was $77,322 for areas with below-average child care supply, and was $106,966 in areas with an average child care supply. At nearly $30,000, the difference in median household income across the two categories is significant - meaning that the take workers in areas with an average supply of child care are better equipped to handle the cost of child care than workers in areas with a below-average supply. In this regard, areas where residents have a lower median household income tend to be more under-supplied.

In order to better understand the income differentials across areas with varying levels of supply, we also examined each area’s average salary by gender. Women in areas with a below-average level of supply made, on average, roughly $4,500 less per year than women in areas with an average level of supply. While $4,500 seems like a big gap, the gap in men’s salaries is even higher. Men in areas with a below-average level of supply made, on average over $15,000 less than men in areas with an average level of child care supply. According to our findings, women make less than men in King County across every geographic region. As a result, families are more dependent on male income to be able to afford child care, and families with higher-earning males tended to be located in areas with higher level of supply.

The most prevalent employment industry in a given area also appears to have a significant relationship with an area’s availability of child care. Areas where ‘Professional, Scientific, and Tech Services’ are the most common employment industry tended to have at least an average supply of available child care, and were far more likely to have an above-average supply of child care. Areas where ‘Manufacturing’ and ‘Healthcare & Social Assistance’ were the most common employment industry were more likely to have a below-average supply of childcare. It appears that policy intervention in areas where manufacturing and service jobs are more common, as opposed to areas where tech jobs are more common, is one potential way to address inequities in child care supply.

Areas with a below-average supply of childcare tend to be whiter than areas with an average supply of childcare. We also found that areas with below-average supply tended to have a higher percentage of residents that are citizens. Both of these findings might be explained by the fact that areas with below-average supply tend to be more rural.
Affordability
Anecdotally, everyone knows that child care is expensive - but child care in King County is even less affordable than child care in other parts of the state. Despite having an average household income 22% higher than the state average, Seattle parents pay 31% more for infant care. The high costs associated with child care matter because they have a greater impact on certain populations within King County. For example, in 2015, King County residents who identified as ‘two or more races’ had an average income only 51% of that of white residents. This means that child care is even less affordable for multiracial residents. Additionally, women ages 18-24 are the largest King County demographic living in poverty - which means that women of child-bearing age are among the most likely to be living in poverty and thus unable to afford child care without assistance.

Equity efforts already in place: The Seattle Ordinance
In the city of Seattle, resolution 31478 brought us ‘Preschool for All’. This resolution included both an endorsement for voluntary, high-quality preschool for all three and four-year-old children in the city and a call for further research about preschool enrollment in Seattle. In January 2014, a team of city employees and outside consultants shared their findings; (a) at the time, between 7,800 and 9,000 of Seattle’s 12,280 three and four-year-olds were enrolled in child care or preschool (between 63% and 73%), (b) which meant that between 27% and 37% of all three and four-year-olds were not enrolled in any formal child care or preschool program, and (C) children from families with income levels above the federal poverty level and from neighborhoods with higher median family incomes were more likely to be enrolled in preschool or other formal child care. With these findings, Seattle started a pilot program that has served 850 families so far.

The funding for this program comes from a $58 million levy to close the 'kindergarten readiness gap'. The program is free for children from low-income families and is subsidized on a sliding scale for middle-income families up to 300% of the federal poverty level. The average cost per child is about $12,000 per year. The Seattle Preschool Program aims to make quality preschool affordable for all. This program is measured against three primary goals: (1) access; (2) quality; (3) equity. The program has grown from 280 seats in 15 classrooms in the 2015-2016 school year to 1000 seats in 54 classrooms for the 2017-2018 school year.

Equity efforts already in place: DEL’s Racial Equity Initiative
The state Department of Early Learning (DEL) has committed to a goal of ensuring that ninety percent of children in Washington are ready for kindergarten by 2020, with race and family income no longer being predictors of success. Children of color make up 44 percent of the estimated 446,000 children under 5 years of age, and only 38.6 percent enter school with all of the proficiencies they need to thrive. The purpose of the Racial Equity Initiative is to develop

and implement a comprehensive strategy that strengthens DEL’s capacity to advance racial equity and eliminate disparities in child outcomes.

**Equity efforts already in place: The Early Learning Partnership**

The Department of Early Learning (DEL), the Office of Superintendent of Public Instruction (OSPI), Thrive Washington, the Washington State Department of Health, and the Department of Social and Health Services (DSHS) make up the Washington State Early Learning Partnership. Together, the Partnership developed a 10-year Early Learning Plan, which began in 2010. The initial plan focused heavily on principles of equity - the vision statement claims that their system is ‘culturally appropriate’, equity is listed as one of the guiding principles of the plan, and the introduction emphasizes the school readiness discrepancies for children of color, children living in poverty, and English language learners. The Early Learning Partnership’s ‘Racial Equity Theory of Change’ (RE-TOC) is comprised of four building blocks: (1) increase community voice and influence for those furthest away from opportunity; (2) inform practice with diverse measures and diverse stories; (3) make decisions that genuinely meet the requirements of communities of color; (4) design and implement systems that respond to children’s diverse situations.

**Equity efforts already in place: King County’s Children and Youth Advisory Board**

The Children and Youth Advisory Board (CYAB) prominently displays the following “statement on equity”:

- Equity is an ardent journey toward well-being as defined by the affected
- Equity demands sacrifice and redistribution of power and resources in order to break systems of oppression, heal continuing wounds, and realize justice
- To achieve equity and social justice, we must first root out deeply entrenched systems of racism
- Equity proactively builds strong foundations of agency, is vigilant for unintended consequences, and boldly aspires to be restorative
- Equity is disruptive and uncomfortable and not voluntary
- Equity is fundamental to the community we want to build

**Equity efforts already in place: Best Starts for Kids**

Best Starts for Kids (Best Starts) is a voter-approved King County initiative designed to invest in intervention strategies that benefit early childhood development. The Best Starts for Kids Levy was passed in 2014 under the leadership of Executive Constantine. Best Starts invests an average of $65 million per year into its four main focus areas: (1) invest early; (2) sustain the gain; (3) communities matter; (4) results focused and data driven. For our purposes, the 'invest early' focus area is the most relevant, as it seeks to assist families with children ages 0-5 with resources for home, community, and child care. Best Starts has directed 50% of its investments to this focus area. For this age group, Best Starts invests in various home-based services, community based child support, and child care consultation, as well as programs to educate and support caregivers for these children.
In addition to using its funding to invest in child care and families, Best Starts for Kids also conducts valuable research in this area. In 2017, Best Starts conducted the Best Starts for Kids Health Survey, which is the first ever survey about the well-being, strengths and needs of young children and their families in King County. The survey will continue to be conducted every two years.

To accompany the Best Starts for Kids levy, the County also appointed and confirmed 12 members to the Communities of Opportunity Governance Group - an advisory board for the Best Starts for Kids levy. Members represent several diverse communities in an effort to help connect the levy funding to the needs of the County.

Conclusion

We conclude that King County needs additional policy measures to make child care more affordable and accessible. Overall supply does not match need or demand. Furthermore the supply of child care is unevenly distributed throughout the country. As a Capstone Consultant Team we make the following policy recommendations:

- Commission a follow-up study to make the exact capacity of nonrelative, licensed child care for each age group publicly available.
- Agree on high quality standards that every facility should meet before rolling out supply.
- Make first policy efforts in areas that are currently undersupplied, but have a high number of young children. These areas are likely to be in southern King County (such as Federal Way or Kent) and outside of the big cities (Seattle and Bellevue).
- Direct programming towards parents under the age of 25 and low-income families.

As a group we strongly believe in affordable child care for all in King County. Following up on our policy recommendations will advance King County in their goal to make child care available, affordable and accessible for everyone.
Appendix 1: Definitions

Child Care: A child day care center or a facility providing care for a group of children licensed by the Washington State Department of Early Learning.

Child Development Centers: Large facilities designed to accommodate young children.

Consumer Price Index (CPI): Weighs the average price of a basket of consumer goods and services. It is used to determine the price changes and increases associated with the cost of living.

Family Child Care Providers & Group Home Daycares: Smaller, often more decentralized facilities compared to Child Development Centers. Very often they are run by people in their own home.

Infant Child Care: Child care from birth through eleven months of age.

Preschool Child Care: Child care from thirty months through five years of age and not in kindergarten or elementary school.

Toddler child care: child care from twelve months through twenty-nine months of age.
Appendix 2: Bibliography


ChildCareAware (2018): *Child Care in King County*, available at: http://www.childcarenet.org/about-us/data/2018-County%20data%20reports/king [last access 29 May 2018]


Committee for Economic Development (2018): *Child Care in State Economies*, available at: [https://www.ced.org/childcareimpact](https://www.ced.org/childcareimpact) [last access 29 May 2018]


General Accounting Office (1990): *What Are the Costs of High-Quality Programs?*, available at: [https://www.gao.gov/assets/80/77665.pdf](https://www.gao.gov/assets/80/77665.pdf) [last access 29 May 2018]


King County (2018): Seattle CPI-U Forecast, available at: https://www.kingcounty.gov/~/media/business/Forecasting/images/1_icons/Mar2018_seacpiu_pic.ashx?la=en [last access 29 May 2018]


OECD Social Policy Division (2017): Key characteristics of parental leave system, available at: https://www.oecd.org/els/soc/PF2_1_Parental_leave_systems.pdf [last access 27 May 2018]


## Appendix 3 - Areas in King County with low supply of child care

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Appendix 4 - Areas in King County with below average supply of child care

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Appendix 5 - Areas in King County with average supply of child care

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## Appendix 6 - Areas in King County with above average supply of child care

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## Appendix 7 - Areas in King County with high supply of child care

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### Appendix 8 - Historical and predicted cost of infant care in King County

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### Appendix 9 - Historical and predicted cost of toddler care in King County

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### Appendix 10 - Historical and predicted cost of preschool care in King County

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