Income variability of families on cash assistance in Minnesota

October 2019, Ben Jaques-Leslie

Cash assistance stabilizes total household incomes

The Minnesota Family Investment Program appears to stabilize monthly household incomes of participating families. The analysis below explores the considerable income instability for all new families enrolling in the program from 2013 to 2016, and makes clear that families’ incomes, without the program’s cash grants, vary to a degree that it would be almost impossible for a family to know from one month to the next if they had the income to cover expenses. Overall, 44% of families in the program experience extreme income instability, where in any month they have over a 30% chance to have zero income or twice their average monthly income. Minnesota Family Investment Program grants create a floor of available resources so families are unlikely experience a month with no income. The program provides families a much more stable total household budget.

Income instability in low-income households

Income supplement programs for families experiencing poverty generally focus on increasing the amount of money to which families have access. The consistency and stability of household income is equally important, but less frequently discussed. Research shows that low-income households (those making less than $40,000 per year for a family of four) experience more income instability than other households.\(^1\) A low household income negatively affects children’s social-emotional, cognitive, and academic outcomes, but little is known about the complicating effect of income instability.\(^2\) At the least, unstable incomes make it very challenging to budget for expenses.


As such, this analysis aims to explore the following questions:

- Do families that participate in the Minnesota Family Investment Program also experience income variability?
- How stable are the grants that families receive from the program?
- To what extent does the program act to stabilize the total household budget (cash grants, food support and other income) of families?

**Income and grant stability for Minnesota Family Investment Program families**

In this brief, we investigate the income and grant variability of the 25,908 new Minnesota Family Investment Program households that started participating between 2013 and 2016. Each family's eligibility was tracked for three years, beginning the first month they received a program grant.

The chart above illustrates the large variability of program families’ household income. Each green vertical line represents one family. The green line is the range in which 90% of that family’s income falls. The black lines trace the average income for each family. The chart is broken into three panes: total household budget, income, and program grant. Families see a great deal of fluctuation in income of all

---

3 It may be surprising to see the Minnesota Family Investment Program grant vary as much as it does. Program grants are determined by household size and income, which means that fluctuations in income
types. All families experience some period of zero income as can be seen in the “Income” pane of the chart. However, only very rarely do families experience zero total household budget; that is, no income and zero program grant. The Minnesota Family Investment Program appears to be providing a floor of cash resources for the household.

**Relative variance of income and grants**

Families on the Minnesota Family Investment Program have large income swings. To explore the variability in more detail, relative variance is a useful measure. Relative variance creates a comparative measure of the level of variation. Large numbers indicate greater variability. In this context, a relative variance greater than one means that *there is more than a 30% chance that the family has zero income or twice their average income in a particular month.*

![Relative variance of income and Minnesota Family Investment Program grants](chart)

The chart above shows the distribution of relative variance of income across Minnesota Family Investment Program families. The wide, flat distributions that characterize earned income, child

will be reflected in the size of program grants, creating variability in Minnesota Family Investment Program grants.

---

4 Relative variance, also known as the coefficient of variance, is a measure of absolute variability. Technically, it is the ratio of the standard deviation to the mean.
support, unearned income, and income indicate a great deal of difference between families on the relative variance of that income type. The tight, tall distributions characterized by the total household budget and program grant show that there is little difference in relative variance between families. Also, notice the vertical line, which identifies the average level of relative variance. The average level of relative variance is much higher for earned income, child support, unearned income, and income as compared to the total household budget and program grant.

There are three key ideas to draw from the chart above:

- Families’ income is highly variable. The average relative variance of income is 1.28 and the average relative variances of child support (1.8), earned income (1.55), and unearned income (2.28) are even higher.
- Families experience different levels of variability of income. Some families have extremely unpredictable incomes, others less so.
- The Minnesota Family Investment Program appears to reduce the variability of the total cash entering a household. The relative variance of the total household budget is 0.38; much lower than the relative variance of income. The only difference between the total household budget and income is that the total household budget includes the program grant. We cannot say that in the absence of the program the families’ incomes would be exactly like this, but for these families, the program is taking very unpredictable income and providing families a much more stable total household budget.

**Minnesota Family Investment Program and unpredictable income**

Similar to other research findings about low-income households, families on the Minnesota Family Investment Program have very unstable incomes. Almost all experience periods of zero income. The program appears to establish a floor for the total household budget of families. Furthermore, the program is associated with reduced variability of the total household budget. The program seems to stabilize families’ total household budget by providing a relatively steady source of cash that is large compared to other income.

**Questions**

Contact Ben Jaques-Leslie at benjamin.jaques-leslie@state.mn.us