RESEARCH PEARLS | FEDU PEARL #24

L-IFT's FEDU Research in Uganda investigated the financial behavior as well as the complex needs and uses of energy in low-income communities. The first financial diaries uncovered the instability of low-income people's earnings and concluded that not only the little money people get but particularly the fluctuations and unpredictability of the income results in financial challenges those people experience.

Income Expenditure Asymmetry

How many biweeklies do FEDU respondents experience a spike or dip in income? How big are these deviations from the average?

According to one method explained in The Financial Diaries: *How American Families Cope in a World of Uncertainty*[1] an income spike or dip is any amount that exceeds the average income that month by more, or less, than 25%. Therefore, if the amount of income exceeds 1.25 x the average (i.e. more than 25% higher than average) for that month, it is defined as an income spike. If the amount of income is below 0.75 x the average (i.e. more than 25% lower than average) that is defined as an income dip.

On average, out of the 13 biweeklies, people had an income spike for 2.17 biweeklies. This translates to almost one month out of six that their income spikes over 25% percent above their average income. Surprisingly, there is not a big difference according to wealth band (PPI score).

On the other hand, our respondents experienced twice more income dips than spikes. For 4.33 biweeklies on average, out of 13, that is for one third of the time, or two out of six months, they had less than 75% of their average biweekly income. There is a clear correlation between the frequency of income dips and PPI scores if 'ultra poor' group are left out of consideration (the 'ultra poor' segment is a very small number of people).

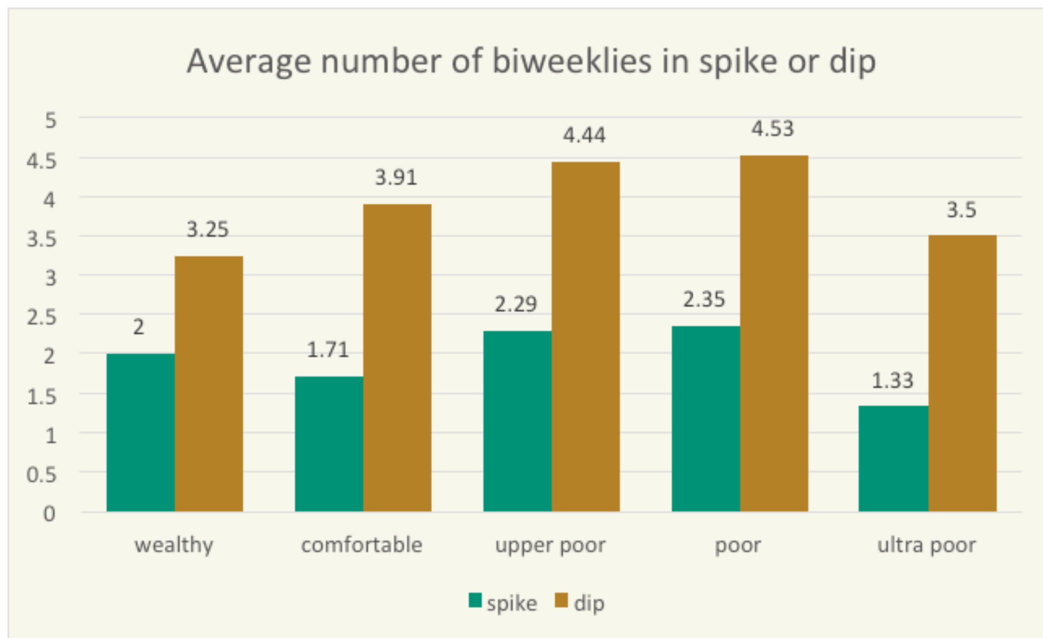


Figure 1: this graph shows the number of biweeklies that respondents experience either an income spike or dip, that is, that their income deviated more than 25% in either direction.

[1] Morduch, J., Schneider, R. (2017). The Financial Diaries: How American Families Cope in a World of Uncertainty.

Amounts

While looking at the number of times that respondents have an income spike or dip, it is also useful to look at the amounts. Across all respondents, the income spikes are quite substantial: on average, it is a 187% increase from their average biweekly income. To demonstrate, the average income in our FEDU sample is $38. A 187% increase would be $109, a huge difference.

The 'ultra poor' group (those with PPI score 1-20) experience the most extreme income spike, with a percentage increase of almost 250%. This group's average income is just $6. A 250% increase would be $15.

The average percentage change in income among those respondents who experience an income dip is 72% lower than the average. With an average income of $38, a 72% decrease would result in $65.36. There is not a noticeable difference when comparing by PPI score. While 'ultra poor' experience a slightly larger dip, the difference is not big.

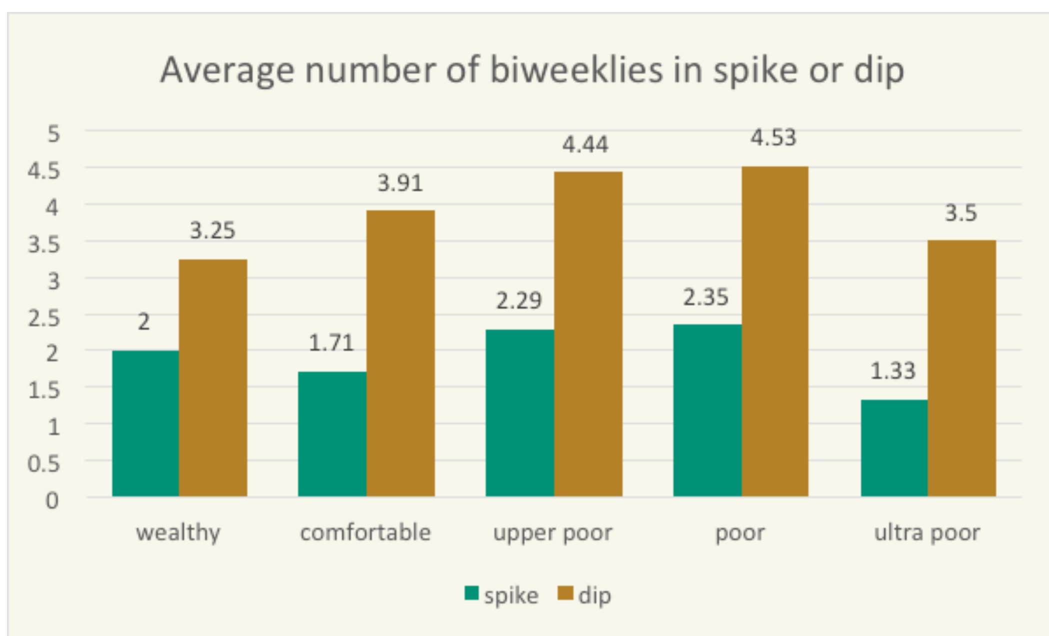


Figure 2: this graph shows the average percentage change when respondents experience either an income spike or dip.

While income spikes are, on average, fewer than income dips, the amounts are much more extreme.

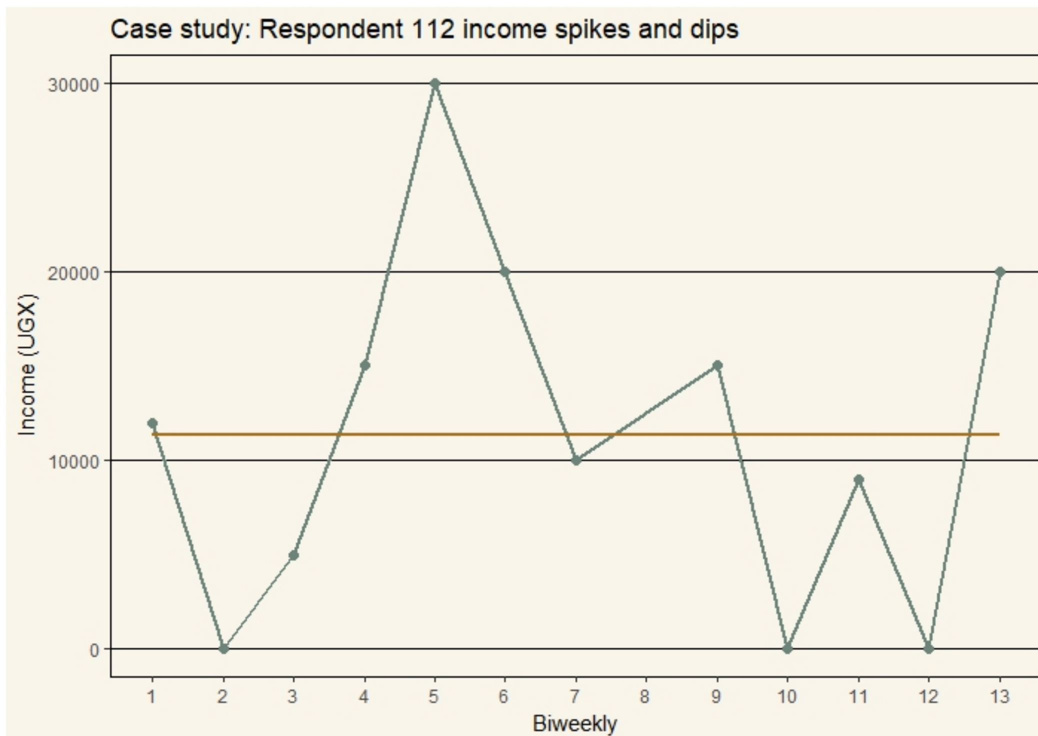
There were no significant differences when comparing other segmentations such as gender or age. Living situation, that is rural or urban, however, shows that respondents living in a rural area experience 4.64 biweekly dips while it is 3.29 for urban. That is almost a 1.5. month difference. The number of spikes experiences are similar, 2.26 and 1.89 biweeklies, respectively.

Case study

Let us look at one respondent individually. This person is a woman living in a rural area. Out of 13 biweeklies, she experiences 5 income spikes and 4 income dips. This respondent earns income from having her own business in biweeklies 3 to 6 (November through December), 9, 11 and 13. In biweeklies 1 and 7, she receives income in the form of gifts (from church, friends or other).

In biweeklies 2, 10 and 12, she earn no income. In biweeklies 1, 7, 9 and 10, she took a loan from her savings club, which, in biweeklies 1 and 9 mostly went to paying school fees. For the rest, this loan could

provide a buffer for the subsequent weeks.



What are the implications for FSPs serving people who are like the FEDU sample?

From the fluctuations studied, we can conclude that people frequently face shortfalls in their income and that poorer people face these shortfalls more often and face more severe shortfalls. This means that poorer segments will more frequently need cash flow smoothing financial services, so they either need to save more to cope with later shortfalls, or they need to access to loans to bridge these shortfalls or a combination of these two cash flow smoothing mechanisms. As has been shown by many other financial diaries studies, poor people face more complex financial management challenges than wealthier. In other data, we have seen that poor people have less access to all the formal financial services (mobile money, MDI/bank accounts) but have equal access to informal savings groups.

Apart from shortfalls, people also have income peaks, which in effect is also a financial challenge. The excess income of the income peaks need to be preserved for later moments of shortfall (which can be done through savings) or the excess income could be used for repaying loans taken to cope with earlier income dips. While the income peaks were less frequent (only occurring one out of six two-week periods) the excess money earned in the peaks were significant portions of the total income and therefore keeping these excess amounts safe or spend it meaningfully is very important for the financial results of the respondent. At this point in time, banks, MDIs and even savings groups are primarily focused on encouraging people to save gradually and save small amounts and formal loans are designed to be paid gradually in relatively small amounts. People who have a sudden income shock often do not know what to do with the excess money and may spend it as they have no place to keep it safe. Banks and MDIs could investigate more how they can assist people with managing these income peaks. What about offering more flexible loan repayment so that they could pay 3 or more installments at one with an income peak? What about promoting lump sum savings that are withdrawn or paid out gradually over a period of time? What about a savings account for utility or mobile phone bills? So people could deposit their income peaks into this account and then draw gradually from the lump sum to pay electricity or airtime?