

Survey results analysis:
JWOC MF Socio-Economic Survey (Jan. 2010)

Prepared for Journeys Within Our Community
By Melbourne Microfinance Initiative
Report dated 18th May 2011

Methods

A variety of statistical methods was used; for quantitative results such as “how many times” were analysed by differences in average and median. For qualitative results such as “what is your house made of”, the total count of differences and changes were analysed instead.

Data

All data used in the analysis was obtained from the spreadsheet “1001 - Jan 10 JWOC MF Questionnaire DATA” provided by JWOC.

Normalization of outliers, such as suspiciously large or small results and missing samples, was conducted in an attempt to more accurately represent the true result. Owing to the small amount and inconsistencies within the data, no statistically significant evaluations were made.

Results

1. [A.1. – A.8.] Food

An increase in the consumption of fish, milk, chicken and beef was observed, alongside a decrease in consumption of egg, vegetables, fruit and pork. This is consistent with the assumption that beef and chicken are superior and favoured sources of protein over eggs and pork, which may be attributed to the increase in income.

Food	Average change per week	%
Fish	0.84	48.4
Milk	0.03	0.8
Eggs	-0.13	-4.2
Vegetables	-0.06	-6.3
Fruit	-0.48	-15.6
Chicken	0.10	2.4
Beef	0.10	2.4
Pork	-0.35	-13.4

2. [A.9. – A.10] Water

Results in spreadsheet were not consistent with accompanying codebook; therefore a meaningful attempt at analysing change was not attempted. However, we can conclude that the majority of borrowers source their water from wells (both hole-wells and bore-wells) in both the dry and wet seasons.

3. [A.11. – A.12.] Lighting and cooking fuel

No borrowers reported a change in lighting method. Around half of the borrowers changed from kerosene to gas or firewood for cooking fuel: 11 of 23 valid samples reported a switch.

4. [A.13.] Childrens’ study

The data show no significant change in the proportion of children who were currently studying (around 67%). Given the relatively short time difference between the two surveys (6 months), we do not see this as an anomaly.

5. [A.14.] Childrens’ study: method of transport

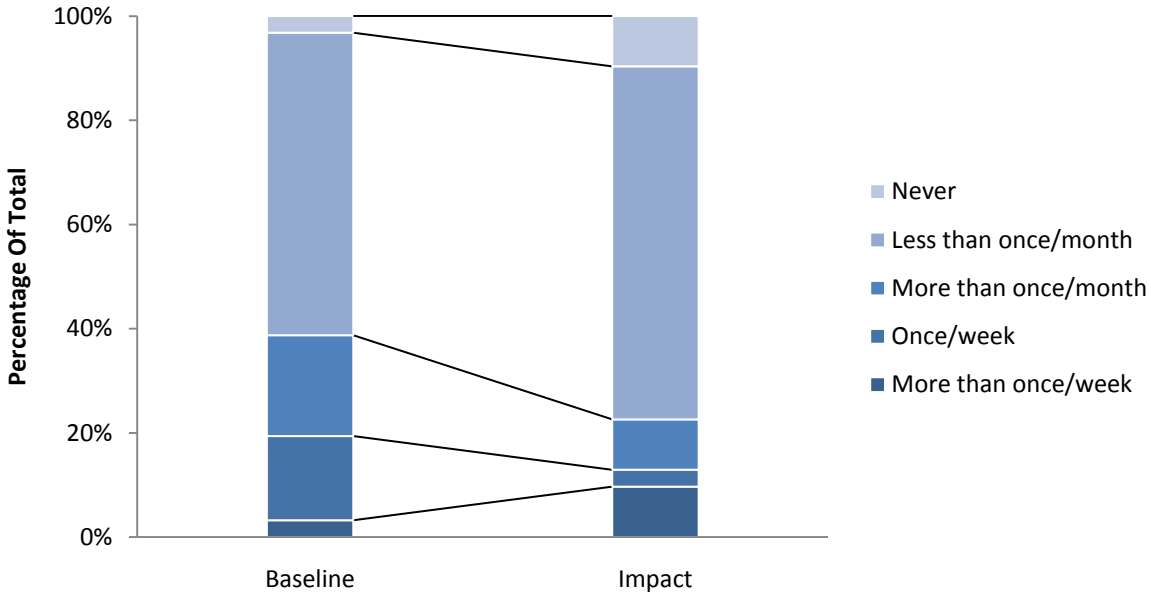
No significant change in method of transporting children to school was observed. The three methods of walking, bicycle, and motorcycle are roughly equally used.

6. [A.15.] Frequency of sickness in household

An improvement was observed in the frequency of sickness: i.e. the frequency of reported sickness was slightly lower after the loan. Notice in the below graph the higher proportion of respondents whose answers are “less than once/month” and “never”. However, an unusual increase in respondents who answered “more than once/week” was observed.

However, the self-reported nature of the survey indicates a large potential for bias, such as the respondent not considering the long-term average and providing a reponse based on recent periods only.

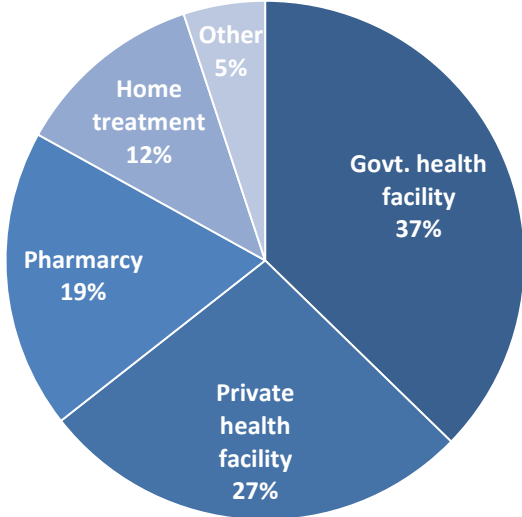
[A.15.] Frequency of sickness



7. [A.16.] Method of treating sickness

Borrowers tend to change between the four main methods (government health facility, private health facility, pharmacy and home treatment) but exhibit no substantial trend or coherent pattern. The chart below outlines borrowers’ preferences in treating sickness.

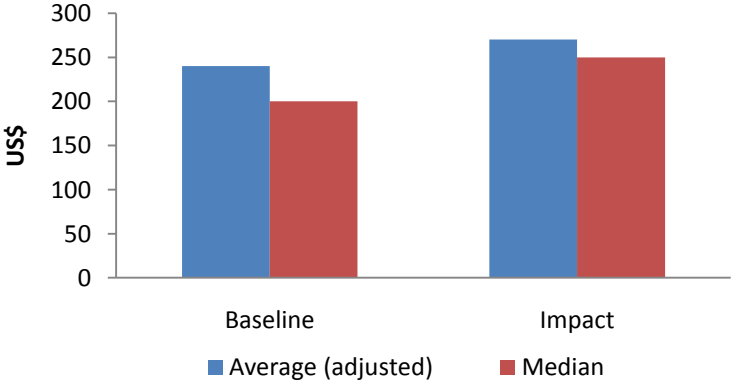
[A.16.] Method of treatment



8. [B.1.] Total income (monthly)

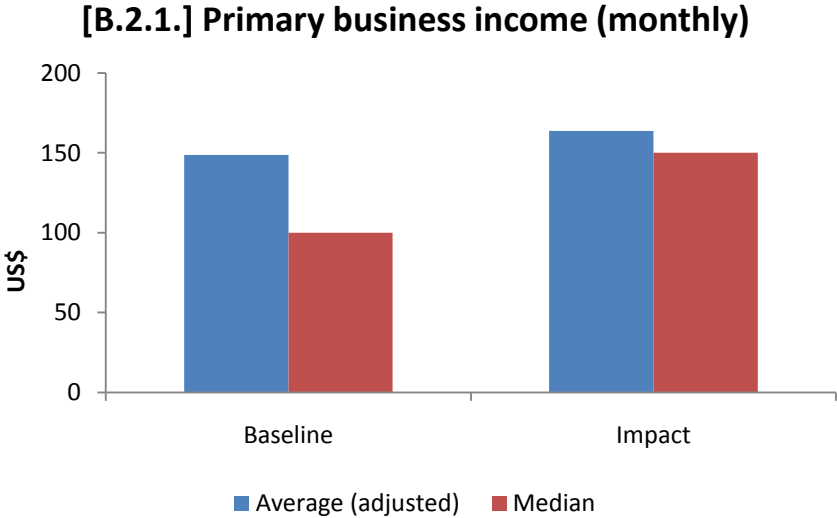
We observe a 25% increase in median income from 200 to 250, and an increase in (adjusted) average income of 13%. However, inconsistencies in the data were preventative in obtaining an accurate result (for example: the sum of total income sources did not add to the reported total in some cases). Extreme outliers and implausible records were removed for the adjusted average, as such anomalous records may have been attributable to non-recurring cash-flows. The nature of the question – “what was your income for the *last month*?” (as opposed to *on average*) -- induces the possibility of outliers in the data.

[B.1.] Total Income (monthly)

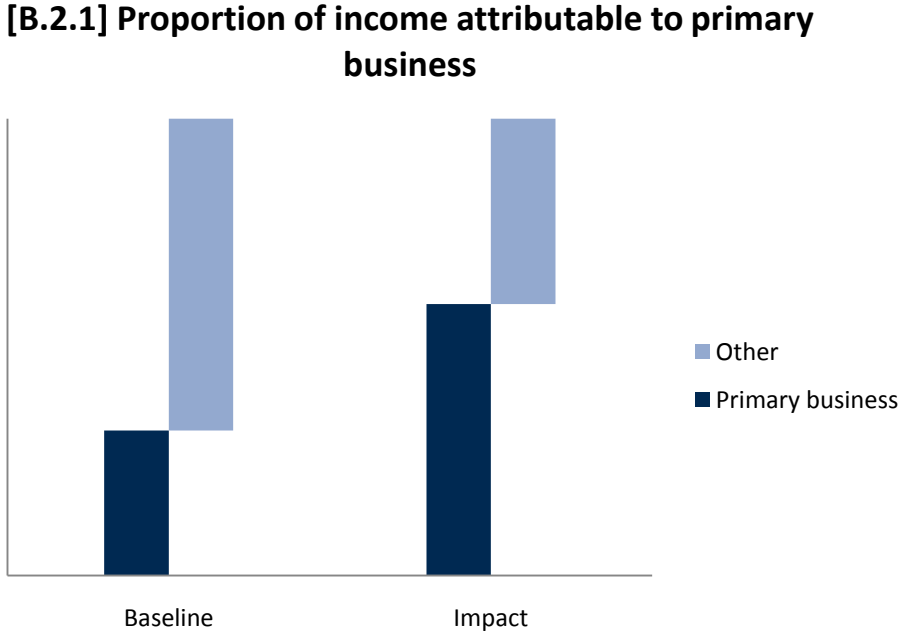


9. [B.2.1.] Primary business income (monthly)

Also, we analyse the change in income from the borrowers' reported primary business. We observe an increase in both average and median income. We may infer that this is due to the microfinance loan provided by JWOC.

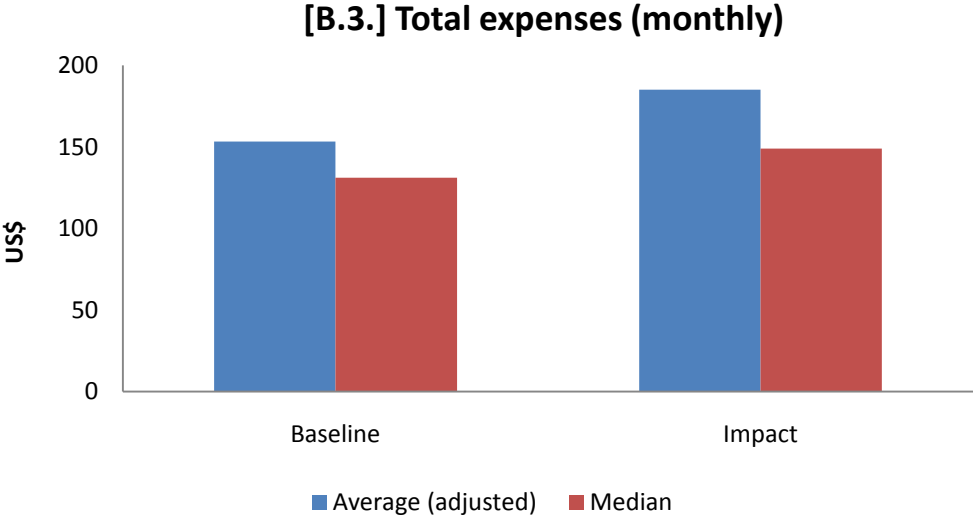


Notably, we also observe an increase in the proportion of total monthly income which is attributable to the borrowers' primary businesses. We can interpret this as a positive change in conjunction with the above result, as this means borrowers are depending more on their microbusiness for their income and therefore achieving greater self-sufficiency.



10. [B.3.] Expenses

There is a 20% increase in median monthly expenses from US\$131 to US\$157, which is consistent with expectations of increased income. The quality of the data was similar to the income data, and was also adjusted accordingly.



11. [B.4.] Freely obtained goods and services

The ‘baseline’ survey indicates the majority of borrowers either obtaining housing materials for free, or obtaining their own crops or fish. In the ‘impact’ survey, we see most borrowers obtaining firewood and growing their own crops.

Although this data aims to reconcile and control for anomalies in the ‘expenses’ section, fishing and growing own crops represents an opportunity cost (i.e. instead of fishing, one could work in those hours and earn money otherwise). Therefore it is improper to classify such activities as truly ‘free’ in an economic sense.

Furthermore, fishing and firewood may be driven by seasonal factors, which prevents a true comparison between the baseline and impact surveys.

12. [C.1.A] Ownership of land

Contrary to expectations, we observe a decrease in ownership (22 to 16) of land, and an increase in tendency to borrow land (7 to 12). Only two borrowers rent out their land.

13. [C.1.B] Ownership of house

26 of the valid data entries indicate that the vast majority of borrowers own their own house. No substantial change was observed after the loan.

14. [C.2. – C.5] House size and materials

The house size data was not considered usable for analysis. Borrowers reported minimal change in their housing materials, which is expected given the short timeframe between the two surveys.

15. [C.6] Ownership of housing and other land

Four borrowers reported an acquisition of housing land after the loan. Two borrowers reported a disposal of housing land after the loan.

Two borrowers reported an acquisition of other land after the loan; however this result (and the above result) does not seem to be attributable to any causative factor.

16. [C.6. - C.7.] Ownership of assets

The table below outlines the net increase in the all borrowers’ ownership in the following assets between the baseline and impact surveys. Some kinds of assets such as fishing baskets, and company specific assets such as pots, pans, stalls were not analysed because not all borrowers engage in businesses which require such assets.

Overall, there is an increase in luxury goods such as phones and CD players, as well as livestock (cattle and chicken). However, there is a minimal decrease in vehicles (bicycles and motorbikes).

Asset	Net change
Television	+1
Phone	+10
CD Player	+6
Fan	+6
Motorbike	-1
Bicycle	-3
Cow	+15
Chicken	+14

17. [C.8.] Borrowing funds in an emergency

Discounting erroneous data, we observe a shift in borrowers’ tendency to borrow from family members to non-family members. This may signal an increase in confidence to repay others and reduce the burden on their own family, but depending on exactly who they are borrowing from this could be a less favourable outcome. For example, borrowing from a ‘loan shark’ would be less favourable than borrowing from JWOC again.

18. [D.1.] Sharing of business and money

With the exception of transport, we see a decrease in borrowers’ tendency to share goods, equipment, business and money with others. This can be seen as a positive change as the borrowers are increasing their independence and self-sufficiency.

[D.1.] Amount of Borrowers Reported Sharing



Conclusions

Although no significance testing was performed, the data suggests a positive impact of microfinance in year of 2010, as we observe multiple indicators that imply a favourable outcome for borrowers following the microfinance loan.

Following this survey, recommendations for future surveys and how it can be restructured to obtain a more robust analysis can be found in the accompanying document “JWOC Microfinance Project Baseline Survey”, which also details the underlying motive in changing the survey elements.

Disclaimer

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