Summary of 2019 TVSEP Rural Household Survey

From end of June until beginning of August 2019, TVSEP has carried out its 8th panel wave of the rural household survey in three provinces in Thailand.
Unfortunately, in Vietnam, government permission was not granted on short notice and for undisclosed reasons. Although TVSEP had already undertaken all necessary preparations, the survey could not be implemented. TVSEP is trying its best to implement the survey in spring of 2020.
In Thailand, the survey was conducted from July 3 to August 8, in all three provinces, namely Buri Ram, Ubon Ratchathani and Nakhon Phanom with 2,199 households interviewed, just one case short of the target of 2,200.

Survey preparations

Following the recommendations of the DFG review panel, prior to the 2nd TVSEP project phase (2019 – 2021), TVSEP has undertaken the necessary steps to improve its survey implementation and data management procedures. In 2019, the tablet-based multi-language questionnaire has adopted the latest advances of the World Bank's Survey Solution software. Included now is a large number of plausibility rules and rigorous checks for the logic of answers, with reference across the different sections of the questionnaire. Numerous checks and rules are included to help enumerators to avoid missing answers and to enter implausible values. Moreover, the questionnaire is now using lookup-tables to calculate and compare the entered values to lists of plausible values, and gives the enumerator a real-time feedback in case of a seemingly implausible entry (e.g. for labor inputs). A World Bank consultant, who is a specialist on the programming of tablet-based questionnaires, has advised TVSEP on specific features of questionnaire design and monitoring of survey implementation. The tablet program has undergone several test runs including a thorough field testing in Thailand (and Vietnam) prior to its implementation in the training of survey staff and during the survey.

A second major point of the 2019 survey was the replenishment of the sample to its original size of 2,200 households in 220 villages per country. This was done because the sample experienced an attrition rate of some 15 % since its start in 2007. The representativeness of the sample was checked by comparing the age distributions of households in the sample with those of all households in the "TVSEP villages". Since differences were found to be small and insignificant, it could be concluded, that the TVSEP sample still represents the population in the 220 villages distributed over the three survey provinces. For each village, where the sample was less than the initial 10 households, a ranked random list of households was generated. Then the survey team leaders followed the list and selected households according to respondent availability and willingness to participate.

Training

Training of survey personnel was carried out in several steps. First, a two-days' survey management training took place to prepare the team leaders for their team management tasks. These also included a final check of the survey documents, especially the translations into local language. Thereafter, a one-

day training of sub-team leaders took place with special emphasis on uploading of questionnaires, utilization of handheld GPS devices, guidelines on how to check a questionnaire as well as on how to deal with possible issues and inclusion of newly sampled households in the survey. Thereafter, the training of enumerators took place from June 24 to July 2, 2019. Training contents included a thorough explanation of the questions and their purpose, and especially the use of the tablet. Field practice with respondents outside the sample was undertaken only after enumerators had a good understanding of the tablet questionnaire. In total, three field days with interviews were practiced, whereby the last field days simulated a real-world survey day. Field training was always followed by classroom discussions and clarifications.

Survey organization

The survey was organized in the usual hierarchical structure, where TVSEP Headquarters at Leibniz University Hannover (LUH) had the overall supervision including design and programming of the questionnaire, planning of the training program and developing the survey plan.

At the national level (Thailand), the national team leader (NTL) was responsible for the recruitment of survey staff including provincial team leaders (PTL), provincial accounting assistants (AA), sub-team leaders (STL) and enumerators (ENUM). Two provincial teams with 20 enumerators each were recruited. Each provincial team has a provincial team leader (PTL), an accounting assistant (AA), who takes care of the daily expenditures, and four sub-team leaders (STL), who are in charge of one team with five enumerators. The role of the STL was to check the questionnaires of their enumerators before they were uploaded to the server at LUH. Each enumerator team covered one village (10 households) per day. Usually the teams worked for six days followed by a break day. Hence, every enumerator normally finished 2 questionnaires per day. In addition to the interviews, the enumerators had to deal with queries and comments made by up to 10 data checking assistants (DCAs) at LUH. The DCAs, mostly PhD or Master students, were assigned to the questionnaires of specific enumerators and had to check them according to a set of criteria. Then they had to decide whether to approve or reject the questionnaire. A rejected questionnaire went back to the tablet of the respective enumerator, who had to answer the comments and questions within 24 hours. If after rechecking the questionnaire was found acceptable, it was approved by the DCA and forwarded to headquarter level.

The two provincial teams started the survey simultaneously in the provinces of Ubon Ratchathani and Buri Ram. After completion, they both moved to the third province, Nakhon Phanom, which is the smallest among the three TVSEP provinces. The survey started on July 3 and was completed on August 8, 2019.

Major events during the survey

The survey has taken place in a rather stable environment. There were no major shocks or disasters that could have impaired survey work. There were just the common problems related to the organization, which can occur during surveys. In one case, the replacement of a sub-team leader became necessary and one enumerator, who had fallen sick was replaced with an enumerator who had participated in the training partially. He had received additional training in the field prior to his first interview. The

computer-assisted personal interview (CAPI) technology using the advanced Software "Survey Solutions" provided free of charge by the World Bank has greatly increased both, the accuracy and the efficiency of the interviews. For example, the automatic skipping of questions not applicable to the respondent based on previous answers as well as warnings and error messages in case of inconsistent answers has helped to reduce errors and thus will lessen the time needed for data cleaning.

In addition, the real time monitoring of the enumerators and subsequent feedback was facilitated by processing the para data as well as other parameters of the interviews using self-programmed scripts and applications to process diagnostic tables and charts. This allowed the immediate and easy identification of issues and their punctual resolve.

Further limitations were experienced in the financial management of the survey due to the illness of the TVSEP Research Assistant at the TVSEP Ubon Office during the entire survey period. A replacement for him could be found towards the end of the survey. Meanwhile, provincial accounting assistants took over additional tasks so that financial transfers could all be made in time.

Interview quality

The interview quality could be well documented while the survey was in progress. As shown in Table 1, there was a clear learning effect evident through stabilizing interview time around two hours. Also the variance of interview time is at a reasonable level of magnitude and has stabilized as well. The average number of *answers* has stabilized due to reduction of errors. An interviewer learning effect through getting more experienced at asking questions and using the tablet can be observed from Table 1 as well. Furthermore, the proportion of "rejects" is reasonable with around 50 % of the questionnaires. This proportion was in accordance with our expectations and it showed the usefulness of the DCA work. Note that rejects do not necessarily mean major errors, but may just indicate the need for clarification.

Table 1: Survey monitoring parameters by survey week, TVSEP panel wave, Thailand, 2019

Survey week	Average interview time (minutes)	SD interview time (minutes)	Average number of answers given	SD number of answers	Number of questionnaires uploaded to LUH server	Number of questionnaires rechecked
1	205	73	1,115	270	308	151
2	157	68	1,015	287	461	291
3	123	55	933	250	490	258
4	114	58	895	286	424	200
5	115	45	931	247	444	206
6	112	41	911	217	72	46

Some selected data descriptions

Based on the uncleaned (raw) data, some initial descriptive statistics of the sample data have been generated. These can provide some first indication about the validity of the data collected.

First, in Figure 1 we can see age and gender of the respondents. Clearly, the majority of respondents were female. This is due to the timing of the survey, which corresponds with the planting season of rice in Northeast Thailand. The majority of the respondents were older than 50 years. This is because household heads are generally elderly people and they stay in this position until their death.

Some 15 % of the respondents were over 70 years old, since we did not enforce any upper age limit for household head as the respondent. However, there was a lower limit of 16 years.
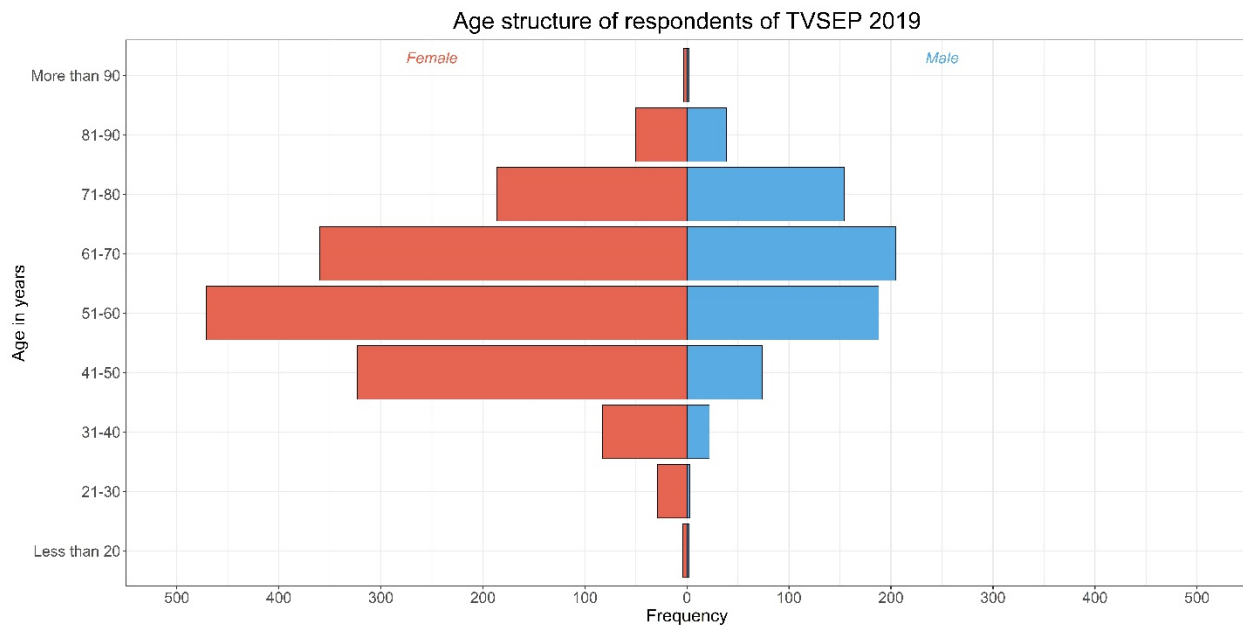

Figure 1: Gender and age of respondents

From Table 2 it can be seen that the majority of the respondents were household heads who - according to the survey procedure - were the first choice for interview. If the household head was not available, as in 39 % of the cases, the respondent was the spouse or the daughter/son, representing the household head. Only in 70 cases (3.2 %), other people including in-laws or other household members acted as interview partner.

The data in Table 2 underline that survey staff has followed the designed survey procedure.

Table 2: Type of respondents, TVSEP panel wave, Thailand 2019

Type of respondent	Frequency	Percentage of all respondents	Average age (yrs.)
Household head	1,257	57.2	63
Spouse of household head	638	29.0	57
Daughter/son of household head	233	10.6	43
Others	70	3.2	52

In Figure 2, we present results of a first calculation of the per capita household income in THB. Calculation of household income was integrated as plausibility check in the tablet using a multiple of the average per capita income of Thailand as a reference point. Income is defined as revenues of all production activities from agriculture and non-agriculture (net of associated variable costs and net wages from wage employment) and public transfer payments of all members of the household (as defined by the household head in the open household definition). Interest payments and receipts from savings as well as depreciation on productive capital items were ignored in this calculation. As shown in Figure 2, about one fourth of the sample has a per capita income between 40,000 and 80,000 THB (equivalent to 3 € and slightly over 6 € per capita and day, using the nominal exchange rate in 2019), which is well above the poverty line and near the Asian middle income threshold. However, there are still between 20 and 25 % of the rural households in the three provinces around or below the poverty line, based on these simplistic calculations. Around 5 % of the households are above 160,000 THB per capita (almost 400 € per month), which could be considered "high income" for the condition of rural households.
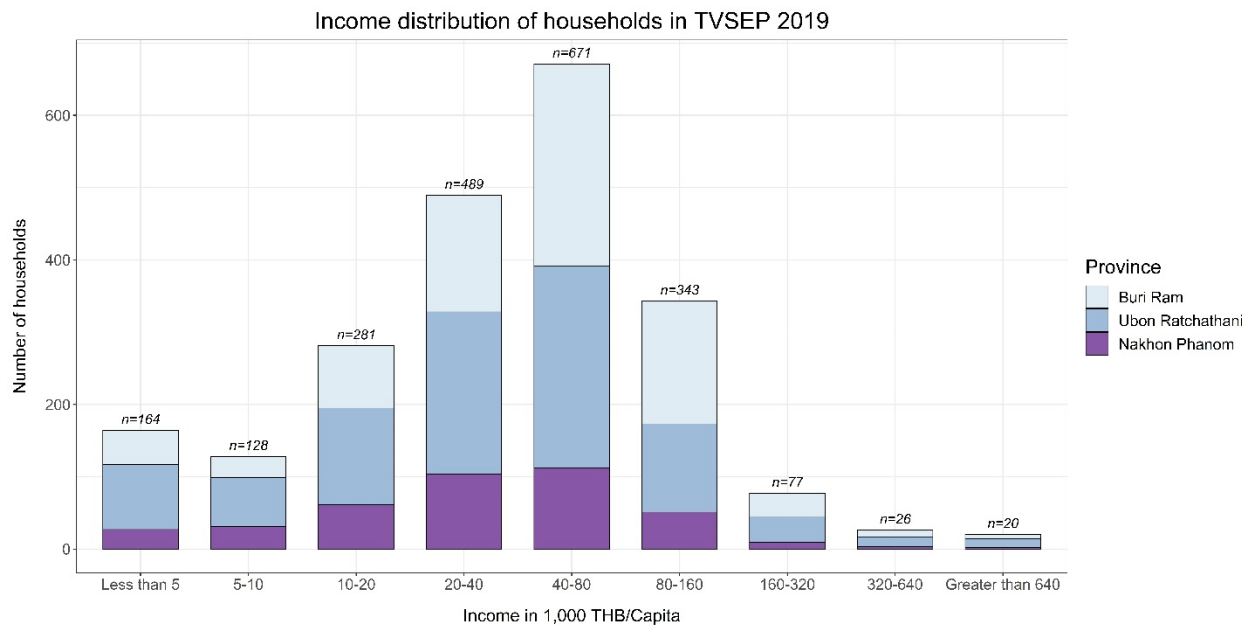
Figure 2: Distribution of annual per capita income (in THB); raw data TVSEP 2019 panel wave

As rural-urban migration is a typical feature of rural households in Thailand, we looked at the number of migrants per household. As shown in Figure 3, in all three provinces most households do have a migrant, whereby the majority has one migrant (Note: we define migrants as persons, who were absent from the rural household for at least 30 days during the reference period). However, in the province of Ubon Ratchathani, almost half of the households do not have a migrant. On the other hand, the smallest and the most northern among the three TVSEP provinces, Nakhon Phanom, has the highest share of migrants. Interestingly, the province Buri Ram exceeds Ubon Ratchathani in absolute terms in the number of households with two or more migrants despite the latter's higher number of sample households. This is plausible as Buri Ram is geographically closest to Bangkok and therefore back and forth migrations is frequent.
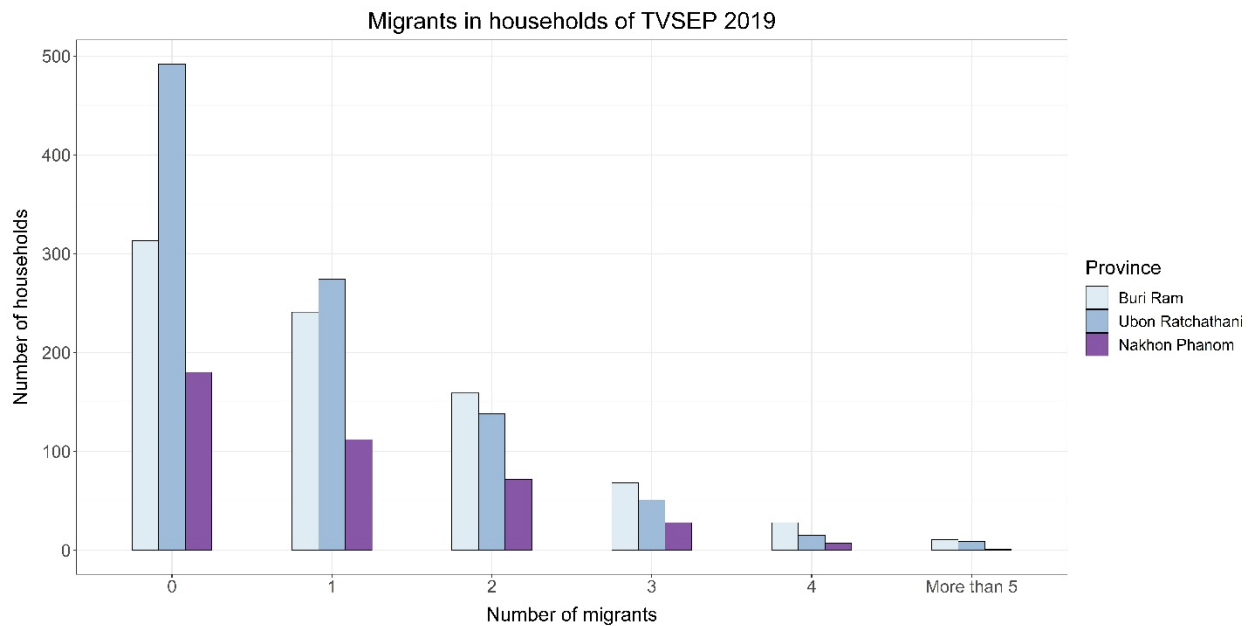
Figure 3: No. of migrants per household, all provinces in Thailand, TVSEP panel wave 2019

Since the impact of migration on rural development has been a major research question, some additional description is indicated in Figure 4. It presents a "level plot" graph, that displays the interaction between income categories and number of migrants per households in terms of frequency of households in each joint category. As can be seen from Figure 4, the pattern between households with and without migrants does not differ much until the 80,000 THB per capita and year difference. Above that threshold, households with one or two migrants dominate those that do not have a migrant. In the high-income categories such differences vanish, perhaps in part due to the low frequencies. The pattern in Figure 4 provides a nice entry point to further research about rural-urban interactions.
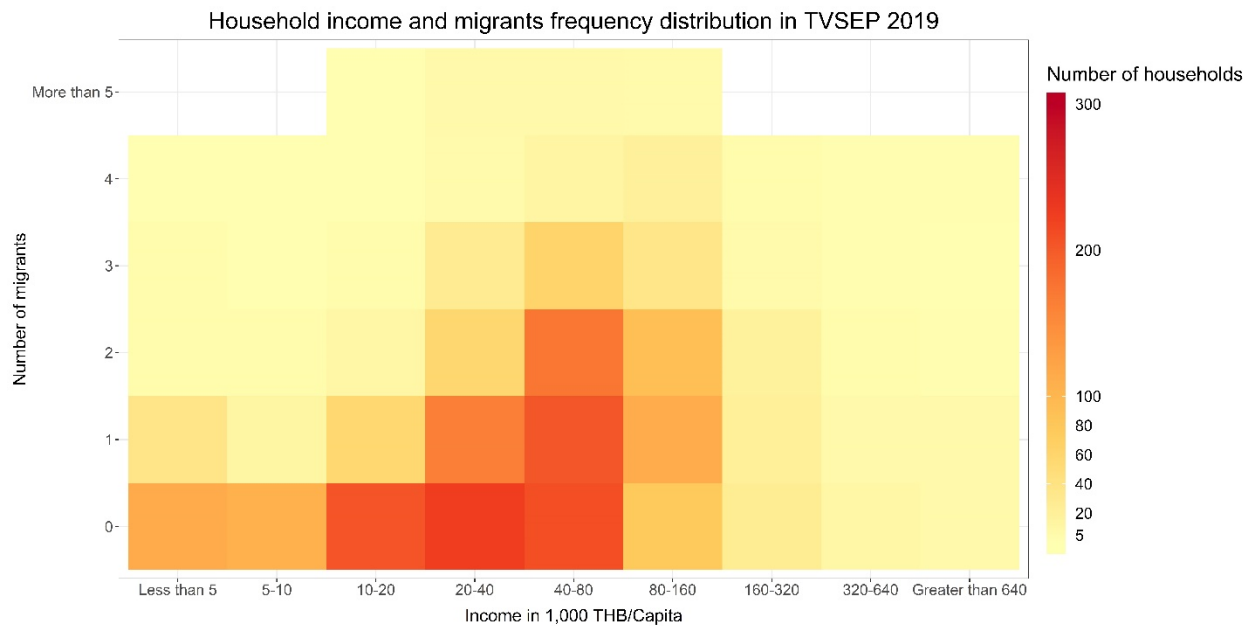
Figure 4: Distribution of per capita household income and No. of migrants

Conclusions

In conclusion, the TVSEP 2019 survey wave in Thailand was a very good and efficient undertaking. From all the survey waves conducted so far, this one was perhaps the best, conditional of course on the results of the data cleaning activities. The TVSEP project management team thanks all survey staff in Thailand, most prominently the National Team Leader Dr. Buraskorn Torut for an excellent job in managing the 8th rural household panel wave. Likewise, our sincere appreciation goes to Mr. Niels Wendt, MA, for an outstanding job in programming the tablet program, managing the data servers and technical infrastructure and the data checking assistants, and to Mr. Klaus Blass, the World Bank consultant for the Survey Solutions program, whose excellent and continuous advice has taken TVSEP to a more professional level.

We are confident that the data from this 2019 wave will be available for external data users soon, anticipating a maximum period of three months.