7.4.1. Sources of error in MPD

As in other data sources such as census, survey, and administrative data, mobile positioning also present some errors. Although MPD do not have coverage error or sampling error, these data may contain nonresponse error, processing error, adjustment error and measurement error. Nonresponse error is possible to exist in MPD due to missing data. Imputation of missing data is aimed to reduce nonresponse error but it could create another error, and that is an adjustment error.

Measurement error may also exist in MPD. For example, using MPD to measure a specific statistical indicator, but that indicator actually could not be measured using MPD. As a result, the statistics or indicators obtained from MPD may differ from the true or actual data.

It is important to note that like all unstructured data, MPD data has not been collected for the purpose of statistics nor for, in this case, providing information on tourism. Therefore, adjustments need to be made to try to align as closely as possible to the standard tourism definitions and concepts MPD may be very well-suited to measure (an important share of) certain tourism concepts, but it may not be well-suited for measuring certain other (parts of) tourism concepts. When using behavioural data like MPD, there might be differences between the way MPD-based indicators are calculated and what the internationally agreed definitions state. Some questions may arise, such as: “If there are differences with the standard concepts, could these be defined and described? Could some formula be used for assessing the difference?”

For example, the number of border-crossers can be calculated from both MPD and immigration. The method for quantifying roaming subscribers entering Indonesia is quite similar to immigration records – only the first port of entry is taken into consideration to counter double-counting. However, the data sources are not equal for counting tourism, as in most cases, the coverage differs.