Each year, the French Annual Industrial Surveys (*Enquêtes Sectorielles Annuelles, ESA*) are carried out on a sample of 150 000 businesses as a part of the Structural Business Statistics estimation process. Their main objective is to measure the businesses turnover breakdwon into their detailed activities. These data are the basis with which the sampled units Nace codes are reevaluated and modified in the French business register, Sirene.

The changes between the Nace codes available in the register and in the sampling frame and reevaluated in the surveys are controlled by subject-matter experts and extrapolated to the whole population in the SBS aggregates throught to the use of composite estimators. Each year, approximately 10 % of the sampled units change Nace codes, a proportion regarded as too high by some of the main users of the SBS aggregates, raising doubts about the quality with which Nace codes are reevaluated in the surveys.

We present here the results of a study exploring the relationships between Nace code stability and response behaviour, defined as the way businesses describe their turnover breakdown. In this study, we focus on the units belonging to the surveys sample at least two following years. We compare units for which the two reevaluated Nace codes differ and those for which they are identical and relate this feature with different elements describing their turnover breakdown each year through the use of classical techniques of data analys such as hierarchical clustering and classification trees.