Methodology:

1. **Measures of SME Development**

To measure the impact of SMEs in the countries France, Italy and India we use the database on the share of total employment accounted for by the SMEs and one for total number of SME enterprises in a country. Both were taken in terms of annual growth rate. These are the two most important and relatively easily available data for various countries. Though time series data for India was unavailable and that for Italy and France was highly irregular. The missing data points in the time series were filled with the average over the data available. Another potential problem is that in the data for France, everything except industry is excluded. Additionally, the informal employment and the unorganized sector is unaccounted for in the data due unreliability of the data available. Moreover, data points on employment of France does not include medium sized enterprises as the data was stated as confidential on World Bank database, and the Eurostat database. 2003 data for number of employees and number of SMEs is used for 2002.

**SMEEMP (in %)** is the annual growth rate of share of SME sector in each country of the total labor force of the country. The cutoff level of 250 employees is used for the definition of an SME for France and Italy.

**SMENO (in %)** is the annual growth rate of share of total enterprises in the country contributed by the SME sector.

Data for SMEEMP and SMENO was taken for the time period 2000 to 2018. The SMEEMP data for Italy was averaged over the time period 2010 to 2018 and used for the rest of the time period. Data was collected from the following sources: World Bank Database, Eurostat Structural Business statistics. The data cover the total business economy excluding financial services.

1. **Measures of Economic Development**

To measure SME sectors impact on the economic development. This has been done using the statistic of GNI per capita (for measuring economic growth) and poverty headcount ratio(for measuring economic development) relating to the relative changes in poverty with expanding(or contracting) SME sector in each country.

**Log of GNI per capita** is collected from the world bank database based on US dollars. Aggregates are based on constant 2010 U.S. dollars. GNI per capita specifies the per capita income earned in a particular year.

**Poverty headcount ratio(in %)** at $5.50 a day is the percentage of the population living on less than $5.50 a day at 2011 international prices. The cutoff of $5.50 is taken as standard for both France and Italy.

1. **Regressions**

Finally, to measure the impact of SME sector on economic development we have taken two regressions each for France and Italy which are mentioned as follows:

This is a time series regression.

β0 - is the intercept term of the model

β1 – coefficient measuring the marginal change in log GNI per capita with 1% change in SME sector’s share of total labor force of the country growth rate.

β2 - coefficient measuring the marginal change in log GNI per capita with 1% change in SME sector’s share of total number of enterprises of the country growth rate.

α0 - is the intercept term of the model

α1 – coefficient measuring the marginal change in log GNI per capita with 1% change in SME sector’s share of total labor force of the country growth rate.

α2 - coefficient measuring the marginal change in log GNI per capita with 1% change in SME sector’s share of total number of enterprises of the country growth rate.

Here ε1 and ε2 are the white noise error terms for the respective regressions.

1. **Special case of India**

Due to lack of time series data on India of the above-mentioned SME related datapoints it was unfortunately impossible to run any meaningful regression. Thus, the data available on India is used for descriptive statistics instead of inferential as last time.

Results and Conclusions:

1. **Impact on GNI per capita**

The regressions result for France and Italy were synchronous. The French regression model shows a R-square of 16.83% whereas the Italian one shows 19.24%. This leads us to believe that the regression model or the independent variables used in our model does not do much to change the GNI per capita factor. This might be attributed to the fact that unorganized sector and the informal employment is unaccounted for in the data. Where the share of total enterprises by the SMEs partially explain (at 10% confidence level) the GNI per capita trend, the share of labor force is outright insignificant even at 10% confidence level. Another reason might be attributed to the fact that data available was highly irregular as in, in France medium size enterprises datapoints were mostly confidential and were thus aggregated. In Italy more than 90% of the total SME enterprises were micro and thus did not contributed much to GNI per capita as compared to medium and large enterprises.

1. **Impact on Poverty Headcount ratio**

There was an astonishing result. Italy’s model has negative adjusted R-square and thus shows that the variable defined does not affect the poverty headcount ratio (at 5.50$ per day at 2011 prices) much. Micro-enterprises being the major portion of SMEs in Italy, the unorganized sector (major in micro-enterprises) might have resulted in the inefficiency. However, looking at France, the model explains the poverty headcount ratio over the years to some extent with an R square of 26.85%. Both the independent variables, share of employment and the share of total number of enterprises were explanatory at 10% with the former being significant at 5% also. Again, the exclusion of medium-size enterprises might be a reason of unreliable results of the regression.