Moreover, heterogeneous firms are compared and, also if some outliers are detected using the Wilson (1993) outlier detection methods, the presence of some "strange" financial situations cannot be excluded. For these reasons the levels of inefficiency must to be interpreted with care, and relative comparison are preferred to absolute conclusions.

Inefficiency results are in general stable along the years, but of course this statement is driven by the fact that the frontier change each year. However, from table 2, some large differences emerges over sector, especially during the recent crisis. A larger inefficiency score, for example in Services and Manufacturing in 2009, suggest the coexistence of more heterogeneous firms and it indicate an higher potential efficiency recovery if the best technique will be adopted.

From simple descriptive statistics, based on the median, MNEs seems to perform better, but in this case also more formal non-parametric tests confirms first impressions. Considering the whole sample MNEs are more efficient, and this hypothesis could be accepted for each year. Nevertheless, if separate tests for efficiency differentials are run for each sectors and years, the situation become less clear. In 2009, only in manufacturing and services significant differences remain, according to non-parametric Kruscal-Wallis test. In 2007 significant differences only survive for services, while in 2008 they are significant for Wholesale&Retail, Services and Manifacturing.

However, the interaction between size and efficiency could determine that evidence, given the larger dimension of MNEs affiliates in comparison to domestic owned firms and the differentiated distribution of large firms over sectors.

3.2 Tfp growth: Malmquist results

Table 3 present estimated trends on TFP for the period 2007-2009 without considering the intermediate observation for 2008, with the aim of increasing robustness of results. As expected also TFP is decreasing during the recent crises, with an average reduction of 5% during three years. Geometric means of individually computed Malmquist indexes are reported for each sector, values smaller than 1 represent a situation of TFP contraction. Table 3 reveals a better performances of multinationals, in accordance with many empirical contributions (Globerman *et al.*, 1994 and Girma *et al.*, 2001). Over the period 2007-2009 only the firms operating in the Advance Services sectors are able to increase the level of their global productivity. No significant difference could be observed for the subgroup of multinational firms, but firm's heterogeneity could determine the results. In fact, next section will shed light on this point.

The column 3-4 and 6-7 of table 3 shows the TFP decomposition in Efficiency change and Technical progress, directional results are mixed: in some sectors EFF sustain productivity (Manufacturing and Wholesale&Retail), in other TECH (Services). The average results, using geometric average for all the population, show a positive efficiency recovery over the period, while a deterioration of technical possibilities emerge simultaneously.

Table 3 – TFP and its component, geometric mean by sector, period 2007-2009

Sector	Domestic firms			Multinationals firms		
	ML	EFF	TECH	ML	EFF	TECH
Advanced services	1.027	1.107	0.928	1.021	1.043	0.979
Automotive Manuf.	0.882	1.262	0.700	0.885	1.199	0.738
Manufacturing	0.913	0.895	1.019	0.959	0.954	1.005
Services	0.953	0.797	1.195	0.997	0.854	1.167
Wholesale & retail	0.963	1.132	0.851	0.967	1.066	0.907
Total	0.949	1.013	0.937	0.955	1.020	0.937