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Extensive empirical research have been repeatedly done in the past 20 years to determine the determinants of growth. This does not necessarily mean that theories developed to explain growth are purposeless. However according to Brock and Darlauf (2001) these theories are rather open-ended. Taking for instance, a theory for economic growth based on trade openness, logically it should be consistent with a theory that puts emphasis on geography as a determinant for economic growth, however this is usually not the case. Theories explaining economic growth are usually highly diversified that they become inefficient when one needs to pin-point key growth promoting policies. These paper further discusses this thesis.

Empirically this problem can be perceived as a model uncertainty issue. That is to say that there is no proper guidance to from these theories to help come up with a proper, logical and efficient empirical model. When coming up with a full proof statistical model the area that becomes a challenge is determining the variables to be analyzed in growth linear regressions. Globally the literature for this regression is extensive, this is attributed to the fact that a load of studies have discovered that many variables are associated with economic growth. Over the years about 140 variables have been found to be correlated with the economic growth rate.

A study that analyzed the extreme bounds of economic growth by Levine and Renelt (1992), brought to light a more specific issue. The study concluded by stating that only a handful of variables had a robust correlation to economic growth rate. On comparison a study by Sala-I- Martin where he came up with weight averages of OLS coefficients, he concluded that some variables spanned fairly across the specifications.

A majority of researchers recommended that the effective and reliable approach to this uncertainty of coming up with an accounting model would be using model averaging ,methods to come up with parameter estimates which will formally target the model -specific estimated in a model. using the above approach Sala-I-Martin, Doppelhofer and Miller(2004) decided to use their Bayesian averaging of classical estimates – BACE – to choose the variables to be used as growth regressors in the linear cross-country growth regressions, they attempted to correlate their finding by Martin(1997) using the Bayesian-based model. FLS – Fernandez, Ley and Steel – (2001) used a purely based Bayesian theory. They applied the Bayesian model averaging approach, although with different initial approach but a similar goal. The methodologies used allow the construction of ranked variables in order of their robustness in deterring economic growth. A study by Ley and Steel (2007) has however shown that though the focus was on robustness the results obtained from the 2001 study were fairly sensitive to the use of different prior assumptions.in addition Ciccone and Jarocinski (2005) employed the same method and came to the conclusion that the determinants list from these methodology were impacted to arguably small changes to the global revenue data that were used in the estimations.

This paper majorly focuses on extending Bayesian Model Averaging (BMA) methodology, applying it to a panel data framework. Panel data is advantageous when it comes to use in empirical growth regressions, hence the use in typical global regressions. To begin, a limitation for the dynamics in reliable generalizations in cross country growth regressions are the number of countries that are available, the methodology tackles this problem through the use within country variation that multiplies the number of observations. Alternatively the use of panel-data methodologies provides a solutions to the inconsistent empirical estimates which comes up due to other country specific effects. These effects are mostly not correlated to the other regressors. This issue leads to the misinterpretation of the dynamic structure in the backend, another factor that could because this is the mistreatment of endogenous as exogenous. Dating back to the seminal work of Islam (1995), there have been various studies like Caselli, Esquivel and Lefort (1996) that have incorporated panel-data models together with country specific factors in their study analysis in empirical growth regressions.

In this study, to be able to tackle the issue of omitted variable bias, and the endogeneity issue, a maximum likelihood estimator is used. An MLE is able to utilize the within variation over time and the cross- country within variation.

To resolve the issues stated in the above literature review. This paper uses the novel approach. This is the Bayesian averaging of maximum likelihood estimates (BAMLE). BAMLE methodology is easier to use, attributed to the fact that it only the elicitation of one hyper-parameter, the expected modal size. In addition, the effect caused by different prior assumptions about the modal size is minimized with the employment of prior structure. BAMLE is similar to the BACE approach by SDM, but adding the use of maximum likelihood estimator in our methodology makes it more flexible, also it can be applicable to a broader range instances. A good example is the spherical disturbances assumptions where BACE can be seen as a case of BAMLE.

In contrast, empirical results show the sensitivity of the ranking by robustness of the determinants resulting from our approach to use the alternating sources of the global income data, is significantly smaller that illustrated in our literature review. The cause of this is the count of potential regressors included in our data is similarly smaller than the size considered by the studies in our literature review. This leads to the conclusion that the sensitivity of out outcomes to variation from our source - international income data – according to Ciccone and Jarocinski (2005) is there when we are factoring in the country-specific effects. Alternatively, from the outcomes, we can conclude that the number of regressors and sensitivity are directly proportional. To ensure robustness in the study, it’s suggested that the candidate-set of variables should not have inclusion of multiple proxies to achieve the same theoretical impact.