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7 February 2018

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February 2018

Abstract

This paper examines the behaviour of disaggregated transitory and potential output over the economic cycle in South Africa. Aggregate output and output of the economic sectors and industries were decomposed into their transitory and potential components. These components were then examined for comovement. The results of the transitory component generally show a moderate to strong positive comovement between aggregate output and output of all the economic sectors and majority of the industries. The results of the potential component have generally show a weak positive comovement between aggregate output and output of majority of economic sectors and the economic industries. A generally weak comovement between aggregate output and output of general government services and community, social and personal services highlights a more laissez faire approach to economic management. Contrary to the investment literature, there does not seem to be a definite distinction between the companies industry categories, such as the defensive, cyclical and sensitive industries.

JEL Classification: C11, C52, D20, E32
Keywords: Disaggregated output, Commovement, Economic cycle

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Introduction

Studying the economic cycle is a long tradition in macroeconomics. A notable contribution on the subject include Burns and Mitchell (1946), while recent contributions include Kydland and Prescott (1990), Romer (1993) as well as Stock and Watson (1999), among others. The prominent areas of interest in this literature include the dating of the cyclic fluctuations in economic time series as well as the isolation of the cyclic fluctuations in economic time series. The former area of interest has given rise to the literature on phases of the economic cycle while the latter has generated interest in the literature on components of the economic cycle. The two strands of literature address the importance of the different shocks to economy economic fluctuations and, in particular, their effect on the phases and components of the economic cycle. These shocks include demand side and supply side policies, price and labour market rigidities as well as investor and consumer sentiments. The literature is of particular interest to policy makers, business community and the wider public in that it promotes a better understanding of the economic cycle and promotes appropriate economic policy formulation as well as investmentment and consumption decisions in the economy.

Calibrating the economic fluctuations necessitates an understanding of how different industries behave relative to the economic cycle. The economic cycle, also referred to as the business cycle, defines the fluctuations of the economy between periods of expansion and contraction. Romer (1993) proposes that the economic cycle typically has four phases that comprise the expansion, peak, contraction and trough phases. The complete economic cycle is the period of time that contains a single expansion and contraction in sequence. The economic cycle fluctuations underscore the economic activities in the economy as argue Diebold and Rudebusch (1970) given that different industries respond differently to economic fluctuations. As a result, the comovement of contemporaneous fluctuations of different industries over the economic cycle may be because they are partially driven by common shocks in the form of decisions on economic policy, investment and consumption. The investment literature distinguishes between types of companies, categorised into defensive, cyclical and sensitive industries, based on how they respond relative to overall economic fluctuations as observeEuropean Central Bank (ECB). (2012) and Conover et al. (2008). Morgan Stanley Capital International (MSCI). (2014), Beber et al. (2011) and Corden (1980) argue that the companies in cyclical industries are procyclical are acyclical, those in defensive industries while those in sensitive industries are sensitive to changes in economic variables that include inflation, interest rates and the exchange rate and hence they fall between the defensive and cyclical industries.

A typical phenomenon in economic variables is that they exhibit identifiable patterns or fluctuations at different periodicities overtime over and above the phases of the economic cycle. These economic fluctuations are termed the components of the economic cycle. Nelson and Plosser (1982), Kydland and Prescott (1990) and King and Rebelo (1993) suggest that the economy behaves differently depending on the length of time it takes to react to the endogenous and exogenous shocks. The short term in goods and services markets is the period of time that is characterised by a sticky price and wages as well as capital immobility. These conditions are referred to as the nominal rigidities in macroeconomics literature and are discussed in detail in European Central Bank (ECB). (2012), Christiano et al. (2005) and King et al. (1987). The nominal rigidities are assumed to be nonexistent in the long term. The short term economic fluctuations are usually caused by idiosyncratic shocks and manifest due to changes in demand side economic policies such as monetary, financial and fiscal policies, consumer and business sentiments as well as labour market flexibility. The long term economic fluctuations are usually caused by systematic shocks and manifest due to the changes in supply side policies that affect enterprise investment, innovation, privatisation, deregulation and removal of restrictions and multilateral agreements. The permanent shocks that emanate from technological advancement and changes in the structure of global economy are also important to fluctuations in the economic cycle. Corden (1980), Hall et al. (1986) and Campbell and Mankiw (1987) present a detailed discussion on microeconomic and macroeconomic policy interaction over the business cycle.

This paper examines the behaviour of transitory and potential components of disaggregated output over the economic cycle in South Africa. The paper decomposes aggregate output as well as sectoral and industry level output into their transitory and potential components. The components of the economic sectors and industries are then examined for their comovement with those of the aggregate output. The aim is to uncover the similarities in fluctuations of output at sectoral and industry level relative to that of aggregate output. Consequently, the study will identify how the fluctuations in aggregate output compare to those of output of the economic sectors and industries over different time horizons. As argue Corden (1980), Hall et al. (1986) and Cowling and Tomlinson (2011), this is important because policy formulation as well as investment and consumption decision making at macroeconomic level could have undesired results at microeconomic level. This is particularly the case for

the economic sectors and industries whose fluctuations do not match those of the aggregate economy overtime. As a result, the study will uncover the economic sectors and industries whose fluctuations are procyclical as opposed to those that are countercyclical to the fluctuations of the aggregate economy. Consequently, the study will promote coherent economy, sectoral and industry level policy formulation as well as investment and consumption decision making.

The study is organised as follows. Next is data discussion and the specification of the empirical model. This is followed by presentation of the empirical results and the discussion of policy implications. Last is the conclusion.

Data

The study uses data from Statistics South Africa that span the period 1994 to 2015. The data comprises aggregate output as well as output of the 3 economic sectors and the 10 economic industries. The data is organised according to Statistics South Africa's Standard Industrial Classification (SIC) of all economic activities of 2012. Aggregate output as well as real output of the 3 economic sectors and the 10 economic industries is measured using real value added which is the value of goods or services produced in a specific time period, for instance, a year. Real value added is equal to the value of output less the value of intermediate consumption hence it measures of the contribution to GDP by aggregate level as well as sector and industry levels.

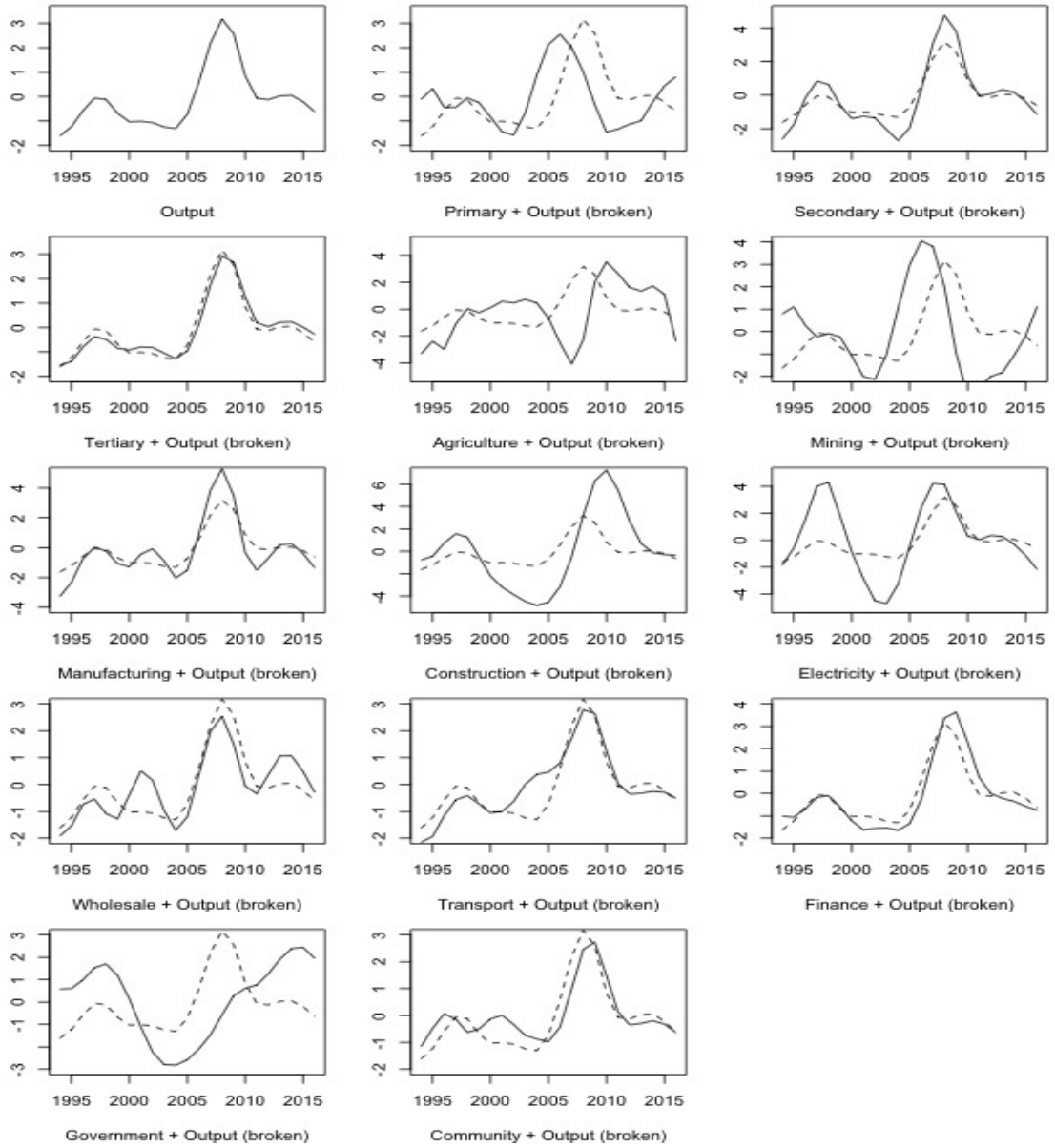
The 3 economic sectors are the primary sector, secondary sector and tertiary sector. The 10 economic industries are agriculture, forestry and fishing and mining and quarrying which constitute the Primary sector. Manufacturing, electricity, gas and water as well as construction which form the secondary sector. Wholesale, trade, catering and accommodation, transport, storage and communication as well as finance, real estate and business services which represent the tertiary sector. General government services as well as community, social and personal services are excluded from sectoral classification.

Majority of the literature identify 2 periodidicities of the economic cycle. However, it is not abnormal to identify more periodicities, for instance, Baxter (1994) identifies 3 components that comprise low frequency, or trend component, medium frequency, or business cycle component and high frequency, or irregular component. In this paper, 4 periodicities of the economic cycle are identified as discused below. Aggregate output and output of the economic sectors and industries is decomposed into the 4 periodicities using the Hodrick and Prescott (1997) filter. Kaiser and Maravall (2012) argue that there has been a convergence towards what could be called Hodrick and Prescott (1997) filter among applied business cycle analysts. Baxter and King (1999), Ravn and Uhlig (2002) and Christiano and Fitzgerald (2003) acknowledge the necessity of prior corrections to the data to avoid the distortions during filtering hence the end point corrections are made to the underlying data series.

Aggregate output and output of the economic sectors and industries are first decomposed into the short term components and the long term components. However, these components still contain the volatile component and the permanent component. Therefore, the short term components are further decomposed to isolate the volatile components while the long term components are further decomposed to isolate the permanent components. In this manner, the duration of the volatile components is calibrated as a period of less than 2 years, the transitory components is 5 years on average, the potential component is 10 years on average, while the duration of the permanent component is a period of more than 10 years. These periodicities are identified by calculating the number of years each component data series takes to complete a full cycle and are almost identical to those that are identified by the Business Cycle Dating Committee at the National Bureau of Economic Research (NBER).

The graphs of the transitory economic cycle components are depicted in Figure 1. The transitory economic cycle component of aggregate output increased between 1994 and 1997. It then decreased from 1998 and reached a low in late 2003. It subsequently accelerated sharply reaching an all time high in late 2008 where it fell abruptly to 2012. The steady growth in the cycle between 2011 and 2014 was followed by the steady decrease to the end of the sample. The secondary and tertiary economic sectors tend to move closely with aggregate output while the opposite is true for the primary sector. Most economic industries tend to move closely with the output saving agriculture, forestry and fishing as well as general government services.

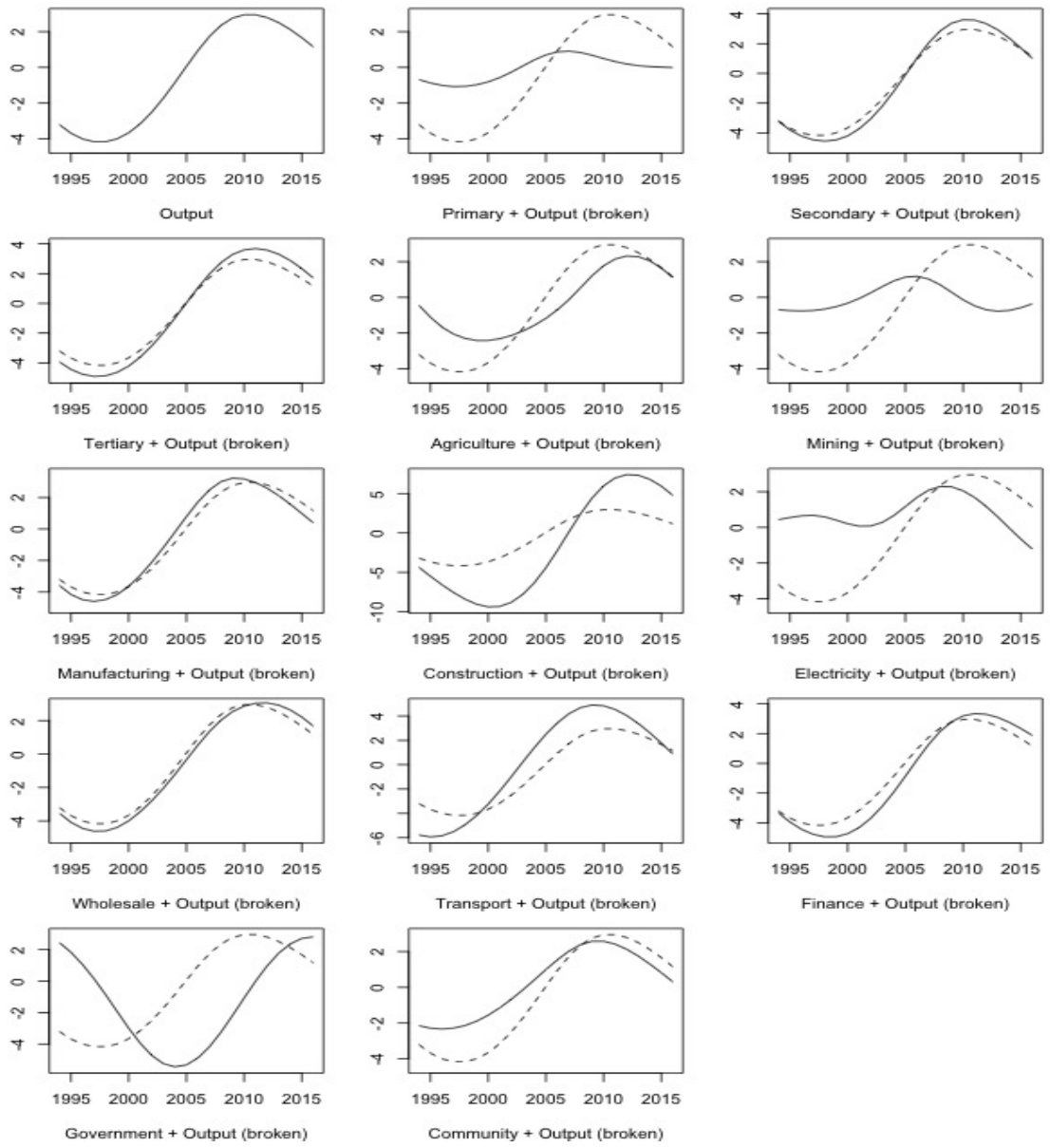
Figure 1: Graphs of the transitory business cycle component



Notes: Own calculations with data from Statistics South Africa. The transitory business cycle component is measured as percentage deviation and is derived by isolating the volatile component from the short term component

The graphs of the transitory business cycle component are depicted in Figure 2. The potential economic cycle component decreased from 1994 and and reached a low in 1998. It then increased steadily from 1999 reaching a high in 2008 where it decreased steadily to the end of the sample. As with the graphs of the transitory business cycle component, the secondary and tertiary economic sectors tend to move closely with aggregate output while the opposite is true for the primary sector. Most economic industries tend to move closely with the output saving mining and quarrying, electricity, gas and water as well as general government services.

Figure 2: Graphs of the potential business cycle component



Notes: Own calculations with data from Statistics South Africa. The potential business cycle component is measured as percentage deviation and is derived by isolating the permanent component from the long term component

Methodology

The transitory and potential behaviour of disaggregated output over the economic cycle is analysed using Bayesian Model Averaging (BMA). This method was proposed by Leamer (1978), introduced by Bartels (1997) and is described in detail in Hoeting et al. (1999). Bayesian Model Averaging (BMA) emphasises the importance when selecting relevant variables in high dimensional data where the information may usually be scatters through a large number of potential explanatory variables. The method accounts for the model uncertainty inherent in variable selection and overcomes the omitted variable bias by averaging over the best models providing an optimal way to capture the underlying relationships in the data. Thus Bayesian Model Averaging (BMA) efficiently minimises the estimated parameters towards the stylised representation of the data leading to sound inference.

The empirical model for Bayesian Model Averaging (BMA) is specified following Zeugner and Feldkircher (2015). Given a vector of the dependent variable y_t, which contains the transitory and potential components of output, and a matrix of explanatory variables X_t, which contains the transitory and potential components of disaggregated output, Bayesian Model Averaging (BMA) model is specified as follows

$$y_t = \alpha_{\gamma t} + X_{\gamma t}\beta_{\gamma t} + \epsilon_t \quad , \quad \epsilon_t \sim N\left(0, \sigma^2\right) \tag{1}$$

where $\alpha_{\gamma t}$ is a constant, $\beta_{\gamma t}$ are coefficients, ϵ_t is the error term with mean 0 and variance σ^2. Bayesian Model Averaging (BMA) estimates all possible combinations of X_{γ_t} and constructs their weighted average to circumvent the variable selection problem. Thus if $X_{\gamma t}$ contains K variables, 2^K variable combinations are estimated and hence 2^K models.

The model weights for Bayesian Model Averaging (BMA) are derived from posterior model probabilities from Bayes theorem as follows

$$p\left(M_\gamma \mid y, X\right) = \frac{p\left(y \mid M_\gamma, X\right) p\left(M_\gamma\right)}{p\left(y \mid X\right)} = \frac{\left(y \mid M_\gamma, X\right) p\left(M_\gamma\right)}{\sum_{\gamma=1}^{2^K} p\left(y \mid M_s, X\right) p\left(M_s\right)} \tag{2}$$

where $p\left(M_\gamma \mid y, X\right)$ is the posterior model probability. $p\left(y \mid M_\gamma, X\right)$ is the marginal likelihood of the model. $p\left(M_\gamma\right)$ is prior model probability which has to be elicited by the researcher and should reflect prior beliefs on the model parameters and the model space. $p\left(y \mid X\right)$ is the constant integrated likelihood over all models. The Posterior Model Probability (PMP) assuming M_γ is the true model is

$$p\left(y \mid X\right) p\left(\beta_\gamma \mid y, X\right) = \sum_{\gamma=1}^{2^K} p\left(\beta_\gamma \mid M_\gamma, y, X\right) p\left(M_\gamma \mid y, X\right) \tag{3}$$

where β_γ are parameters. The unconditional coefficients are

$$E\left(\beta_\gamma \mid y, X\right) = \sum_{\gamma=1}^{2^K} p\left(\beta_\gamma \mid M_\gamma, y, X\right) p\left(M_\gamma \mid y, X\right) \tag{4}$$

where the Prior Model Probability (PMP) has to be proposed based on prior knowledge or believe. According to Varian (2014), Bayesian Model Averaging (BMA) is able to analyse high dimensional data, revealing interdependence among the variables and hence it leads to a new way of understanding their relationships. Thus Bayesian Model Averaging (BMA) offers a systematic method for analysing specification and parameter uncertainty as well as robustness of the results to alternative model specifications in high dimensional data.

Results

Bayesian Model Averaging (BMA) necessitates the specification of the model priors, the Markov Chain Monte Carlo (MCMC) resampling algorithm as well as the number of draws and burnins. Model prior is the priors on the model parameters, the mass on model size and g prior. The number of draws refers to the iterations that the MCMC sampler runs. Burnins are the number of iterations to be discarded at the beginning of the MCMC sampler to minimise the effect of initial values on the posterior inference. MCMC is the type of Markov chain Monte Carlo sampler to be used. The following pre estimation model statistics were chosen for all estimations. The number of draws and burnins for the MCMC sampler were set to 1 000 000 and 100 000, respectively. The MCMC sampler is birthdeath while the hyper parameter on Zellner (1986) g prior, which is the hyper parameter that determines the degree of prior uncertainty, is BRIC. The details on setting up the Bayesian Model Averaging (BMA) estimation are available in Zeugner and Feldkircher (2015).

The model statistics of the comovement between the transitory economic cycle components of aggregate output and output of the economic sectors and economic industries are presented in Table 1. The model space is 8.000 and 1024.000 given the 3 economic sectors and 10 economic industries, respectively, respectively. The mean number of regressors, which shows the average number of regressors with relatively high probability of inclusion in the estimated models, is 2.900 for the economic sectors model and 5.329 for the economic industries model. Thus the models of the economic sectors and the economic industries predict about 2 and 5 explanatory variables on average, respectively, with high probability of inclusion in the estimated models. PMP Correlation shows that the degree of convergence between the prior and the posterior model probabilities is reasonably high for all the estimated models at 1.000 for the model of the economic sectors and 1.000 for the model of the economic industries. The Shrinkage factor, which is a goodness of fit indicator, is at 0.958 for the economic sectors model and 0.990 for the economic industries model. These show an almost perfect goodness of fit for both models.

Table 1: Model statistics of the transitory business cycle component

	Economic sectors	**Economic industries**
Model space	8.000000	1024.000
Mean regressors	2.909900	5.328800
PMP correlation	1.000000	0.999700
Shrinkage factor	0.958300	0.990100

Notes: Own calculations with data from Statistics South Africa. Model space is the size of variable combinations of the models. Mean Regressors shows the covariates with relatively high probability of inclusion in estimated models. PMP Correlation shows the degree of convergence between the prior and posterior model probabilities and Shrinkage Factor is the goodness of fit indicator.

The results of the comovement between the transitory business cycle component of aggregate output and output of the economic sectors and economic industries are presented in Table 2. The top panel presents the results of the economic sectors while the bottom panel presents the results of the economic industries. The results of the economic sectors show a strong positive correlation of aggregate output and output of the secondary and tertiary sectors, while it shows a weak positive correlation of aggregate output and output of the primary sector and aggregate output. The posterior inclusion probabilities show that the primary, secondary and tertiary sectors are included in over 90 percent of the models that

explain aggregate output. The posterior mean shows that a 1 percent increase in the transitory component of primary, secondary and tertiary sectors is associated with 0.133, 0.281 and 0.531 percent increase in aggregate output, respectively. The conditional position signs of all the main sectors are all 1.000, which show a 100 percent certainty of a positive relationship between aggregate output and output of the primary, secondary and tertiary sectors.

The results of the economic industries show a strong correlation of aggregate output and output of the manufacturing, transport, storage and communication as well as finance, real estate and business services sectors with aggregate output. Aggregate output show a weak correlation with output of Mining and quarrying as well as general government services while agriculture, forestry and fishing show virtually no correlation with aggregate output. The posterior inclusion probabilities show that mining and quarrying, manufacturing, wholesale, retail trade and accommodation as well as finance, real estate and business services industries are included in over 70 percent of models that explain aggregate output. The opposite is true general government services and community, social and personal services which are included in only about 30 percent of the models that explain aggregate output.

Table 2: Model results of the transitory business cycle component

Economic sectors	**Corr.Coef**	**Post.Inc.Prob**	**Post.Mean**	**Con.Pos.Sign**
Primary	0.272941	0.949834	0.133282	1.000000
Secondary	0.973593	0.970248	0.280961	1.000000
Tertiary	0.977752	0.989714	0.531355	1.000000
Economic industries	**Corr.Coef**	**Post.Inc.Prob**	**Post.Mean**	**Con.Pos.Sign**
Agriculture	-0.015786	0.492615	0.020723	0.676857
Mining	0.228654	0.739346	0.093783	1.000000
Manufacturing	0.931622	0.661032	0.185343	0.999991
Construction	0.594637	0.503337	0.040920	0.772155
Electricity	0.691808	0.558648	0.036152	0.937730
Wholesale	0.820575	0.703269	0.170245	0.999989
Transport	0.879496	0.603666	0.125681	0.992057
Finance	0.935567	0.745828	0.288176	1.000000
Government	0.052605	0.156589	0.000421	0.566291
Community	0.883629	0.155750	-0.004840	0.407801

Notes: Own calculations with data from Statistics South Africa. Corr.Coef is the correlation coefficient and the associated p value, Post.Inc.Prob is the posterior inclusion probability, Post.Mean is the posterior mean and the associated posterior standard deviation and Con.Pos.Sign is the probability of positive coefficient.

The posterior mean shows that about a percentage point increase in the transitory component of finance, real estate and business services and manufacturing as well as wholesale, retail trade and accommodation lead to 0.28, 0.19 and 0.17 percent increase in the transitory component of aggregate output while a similar increase in general government services and community, social and personal services is associated with virtually no increase in aggregate output. The conditional position signs show a strong probability of a positive relationship between economic industries and aggregate output, while general government services as well as agriculture, forestry and fishing are weakly correlated with real output. Community and personal services show a weak negative relationship with aggregate output.

The model statistics of the comovement between the potential business cycle component of aggregate output and output of the economic sectors and economic industries are presented in Table 3. The model space is 8.000 and 1024.000 given the 3 economic sectors and 10

economic industries, respectively. The mean number of regressors, which shows the average number of regressors with relatively high probability of inclusion in the estimated models, is 1.436 for model of the economic sectors and 2.347 for the model of the economic industries. Thus the models of the economic sectors and the models of the economic industries predict about 1 and 2 variables on average, respectively, with high probability of inclusion in the estimated models. PMP Correlation shows that the degree of convergence between the prior and the posterior model probabilities is reasonably high for all the estimated models at 1.000 for the models of the economic sectors and 1.000 for the models of the economic industries. The Shrinkage factor, which is a goodness of fit indicator, is 0.958 for the economic sectors model and 0.990 for the economic industries model. These show an almost perfect goodness of fit for both models.

Table 3: Model statistics of the potential business cycle component

	Economic sectors	**Economic industries**
Modelspace	8.000000	1024.000
Mean Regressors	1.436100	2.347000
PMP Correlation	1.000000	0.999800
Shrinkage Factor	0.958300	0.990100

Notes: Own calculations with data from Statistics South Africa. Model space is the variable combinations of the models. Mean Regressors shows the covariates with relatively high probability of inclusion in estimated models. PMP Correlation shows the degree of convergence between the prior and posterior model probabilities and Shrinkage Factor is the goodness of fit indicator.

The results of the comovement between the potential business cycle component of aggregate output and output of the economic sectors and economic industries are presented in Table 4. As above, the top panel presents the results of the economic sectors while the bottom panel presents the results of the economic industries. The results of the economic sectors show a strong positive correlation of aggregate output and output of the secondary and tertiary sectors, while it shows a moderately strong positive correlation of aggregate output and output of the primary sector. The posterior inclusion probabilities show that the primary, secondary and tertiary sectors are included in about 24 percent, 45 percent and 73 percent of the models that explain aggregate output. The posterior mean shows that a 1 percent increase in transitory component of primary, secondary and tertiary sectors is associated with 0.052, 0.276 and 0.526 percent increase in aggregate output, respectively. The conditional position signs of all the main sectors are all 1.000, which show a 100 percent certainty of a positive relationship of the primary, secondary and tertiary sectors with aggregate output.

The results of the economic industries show a strong correlation of aggregate output and output of most of the industries with aggregate output. This is particularly the case with the manufacturing, transport, storage and communication as well as finance, real estate and business services industries. Aggregate output and output of Mining and quarrying show a weak correlation while aggregate output and output of general government services show virtually no correlation. The posterior inclusion probabilities are generally low and show that only finance, real estate and business services industry are included in over 50 percent of models that explain aggregate output. Agriculture, forestry and fishing and mining and quarrying are included in less about 10 percent of the models that explain aggregate output.

The posterior mean shows that a percentage point increase in the transitory component of finance, real estate and business services, manufacturing as well as wholesale, retail trade

and accommodation lead to 0.42, 0.18 and 0.17 percent increase in the transitory component of aggregate output. A similar increase in Agriculture, forestry and fishing, construction, electricity, gas and water as well as general government services is associated with virtually no increase in aggregate output. The conditional position signs show a strong probability of a positive relationship between aggregate output and output of most economic industries, while the opposite is true for Agriculture, forestry and fishing as well as construction. aggregate output and output of general government services show a relatively strong negative relationship.

Table 4: Model results of the potential business cycle component

Economic sectors	**Corr.Coef**	**Post.Inc.Prob**	**Post.Mean**	**Con.Pos.Sign**
Primary	0.848833	0.245413	0.052158	1.000000
Secondary	0.997679	0.459337	0.276078	1.000000
Tertiary	0.999155	0.731306	0.526017	1.000000
Economic industries	**Corr.Coef**	**Post.Inc.Prob**	**Post.Mean**	**Con.Pos.Sign**
Agriculture	0.892463	0.072392	0.004913	0.564869
Mining	0.243962	0.080459	0.009791	0.678383
Manufacturing	0.985792	0.344458	0.176076	0.998035
Construction	0.916374	0.214763	0.008148	0.612075
Electricity	0.414224	0.124913	0.016345	0.769928
Wholesale	0.995910	0.259539	0.167985	0.971214
Transport	0.951896	0.198678	0.042639	0.940416
Finance	0.988872	0.599542	0.424639	0.995030
Government	0.094256	0.269600	-0.026341	0.197834
Community	0.971507	0.182689	0.086003	0.940013

Notes: Own calculations with data from Statistics South Africa. Corr.Coef is the Pearson correlation coefficient, Post.Inc.Prob is the posterior inclusion probability, Post.Mean is the posterior mean and the associated posterior standard deviation and Con.Pos.Sign is the probability of positive coefficient.

In summary, the results of the transitory components generally show a moderate to strong positive comovement between aggregate output and output of all the economic sectors as well as majority of the industries. This implies that output fluctuations of these industries are mainly driven by the demand side shocks. The results of the potential component have generally shown a weak positive comovement between aggregate output and output of majority of economic sectors and the economic industries saving a moderate positive comovement of output of the tertiary sector, in particular, finance, real estate and business services. This implies that the supply side shocks have little impact on output fluctuations of these industries except the fluctuations in finance, real estate and business services industry.

A generally weak comovement between aggregate output and output of general government services as well as community, social and personal services highlights a more laissez faire approach to economic management. Contrary to the investment literature, there does not seem to be a clear distinction between fluctuations of the different industry categories, such as the defensive, cyclical and sensitive industries, saving finance, real estate and business services as well as community, social and personal services industries. Consequently, the study has enhanced the understanding of how different industries behave relative to the economic cycle. The importance of this is to promote coherent sectoral and industry level policy formulation as well as investment and consumption decision making in the economy.

Conclusion

This paper examined the behaviour of disaggregated transitory and potential output over the economic cycle in South Africa. Aggregate output and output of the economic sectors and economic industries were decomposed into their transitory and potential components. These components were then examined for comovement. The results of the transitory components show a strong positive comovement of aggregate output and output of all the economic sectors. They further show somewhat strong positive comovement between aggregate output and output of mining and quarrying, wholesale, retail trade and accommodation and finance, real estate and business services industries while the opposite is true for general government services and community, social and personal services.

The results of the potential components show a somewhat strong positive comovement of aggregate output and output of the tertiary sector while that of the primary and secondary sectors is weak. They further show a moderate positive comovement of aggregate output and output of the finance, real estate and business services industry while the comovement with the rest of the industries is weak. A generally weak comovement between aggregate output and output of general government services as well as community, social and personal services highlights a more laissez faire approach to economic management. Contrary to the investment literature, there does not seem to be a clear distinction between between the different industry categories, such as the defensive, cyclical and sensitive industries.

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