

Economic Growth Effects of Gauteng Municipal Capital Expenditure

Gauteng Provincial Treasury

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GAUTENG PROVINCE

PROVINCIAL TREASURY
REPUBLIC OF SOUTH AFRICA

Outline

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- Results
- Challenges with data and implementation
- Conclusion

Background

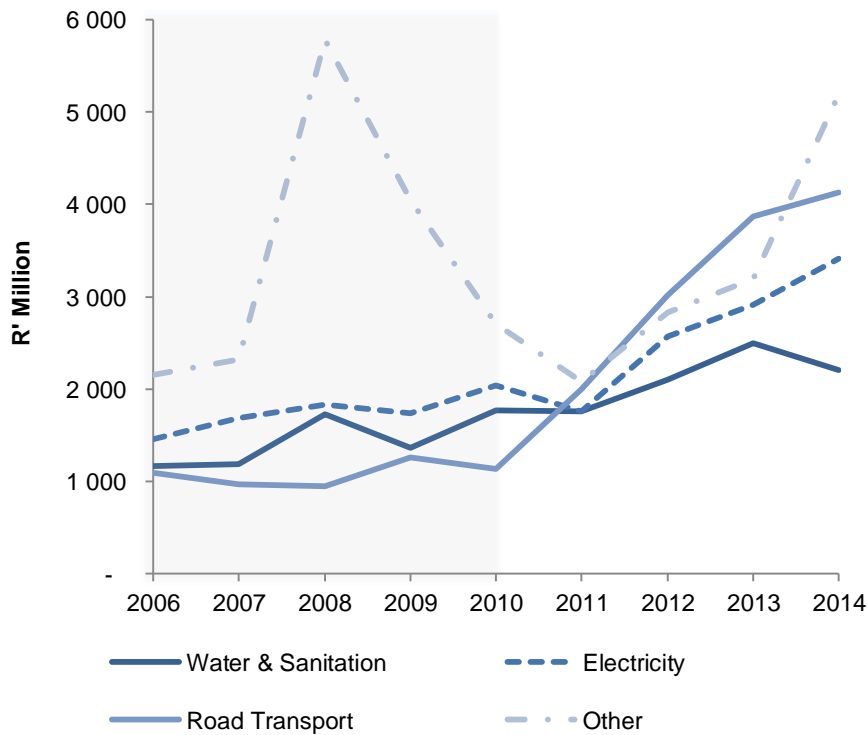
- Much policy emphasis in SA has been placed on a developmental framework that supports increased public expenditure in infrastructure to promote economic and social development (Asgisa, 2006, NGP, 2010, NDP, 2012 and TMR, 2014)
- Given the importance of infrastructure investment for economic growth, municipal capital expenditure has become an important component of public expenditure (Amusa, 2015)
- The emphasis on municipal capital expenditure is very important as this level of government has a mandate and plays a significant role in the development of locals economies
 - The requirement to align increased capital investment with IDPs to promote local economic development and ensure more effective service delivery

Background

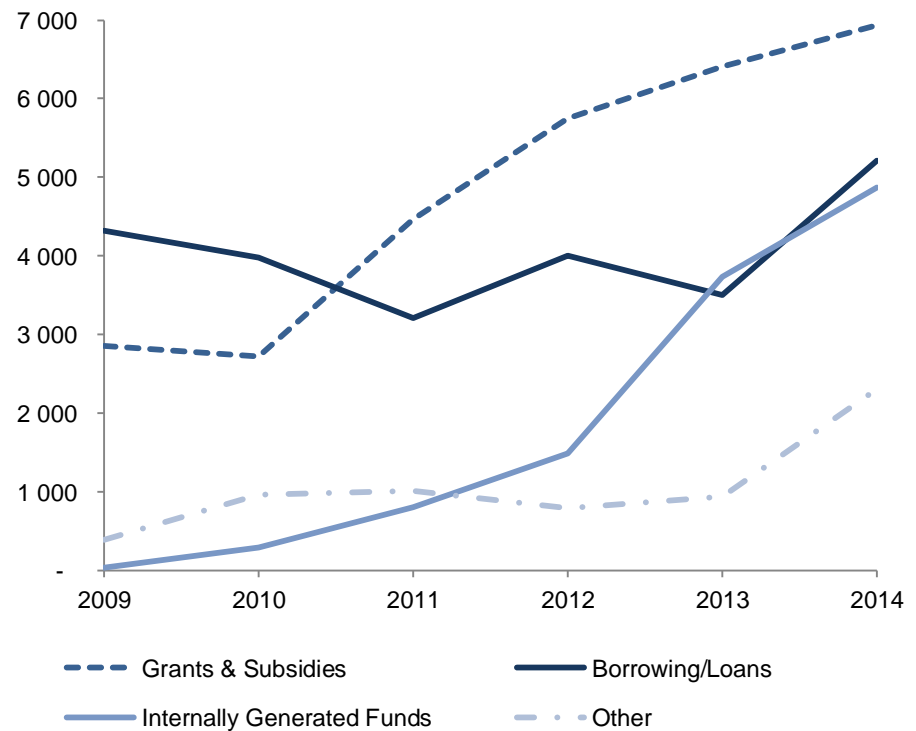
- Capital expenditure is also essential for improving access to basic services – e.g. electricity, water, sanitation
- In Gauteng, significant progress has been made in extending access to these services, however the pace is not keeping up with the increasing population, as highlighted by a greater number of protests (Municipal IQ, 2016)
- The need to assess the effectiveness of municipal capital expenditure in supporting economic growth.

Municipal Capital Expenditure in Gauteng

Capital Expenditure



Funding Sources



Has grown by over R9bn between 2006-14

- Mainly due to 2010 FIFA World Cup spending
- Road transport (i.e. BRT system)

Budgeted vs Actual Capital Expenditure in Gauteng

Municipality	2006-2008	2009-2011	2012-2014
CoJ	87.9%	85.5%	88.7%
CoT	84.6%	85.0%	93.4%
CoE	74.1%	78.5%	79.2%
Sedibeng	37.8%	33.2%	93.9%
West Rand	25.5%	65.7%	93.9%
Lesedi	78.3%	88.9%	98.8%
Midvaal	72.8%	69.5%	66.7%
Emfuleni	34.7%	66.6%	47.3%
Westonaria	81.3%	135.4%	94.1%
Merafong	33.0%	119.2%	71.6%
Randfontein	201.9%	52.4%	55.3%
Mogale City	54.6%	68.8%	83.4%

Numbers have improved but under-spending still a concern

- Highlights possible challenges in ability to compile reliable budgets or to manage implementation of infrastructure programmes

Linkages Between Expenditure on Public Investment and Economic growth

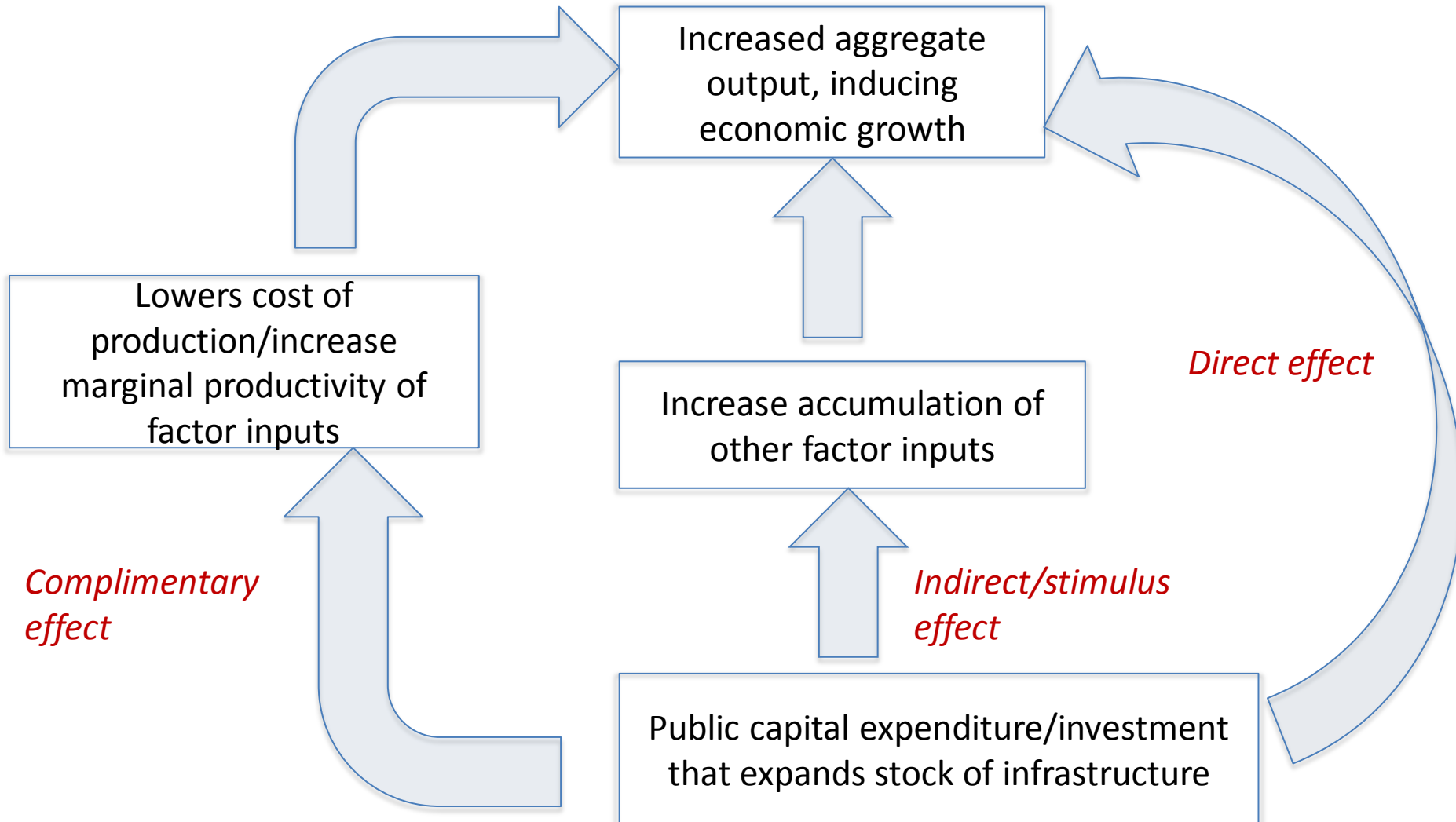
Agreements

- Amusa (2015)
 - Panel of 234 SA municipalities over 10 years
- Sabir, et. al (2015)
 - Panel (pooled data) of 24 cities in Indonesia over 5 years
- Mursinto (2004)
 - Panel (pooled data) of 13 districts of Indonesia over 5 years
- Mello (2002)
 - Panel of 26 Brazilian municipalities over 10 years

Disagreements

- Swaroop, Devarajan and Zou (2001)
 - Panel data of 43 developing countries over 20 years
(increased capital component of public expenditure had a negative effect – when used excessively, productive expenditure could be unproductive)
- Folster and Henrekson's (2000)
 - Cross-country regression analysis of 24 OECD countries over 26 years
(robust negative relationship between government expenditure and growth in rich countries)

Linkages Between Expenditure on Public Investment and Economic growth



About this Study

- Study adopted from Amusa (2015) and Mello (2002)
- **Data Sources**
 - Composite of budgeted and actual capital expenditure annual figures from Gauteng Provincial Treasury and National Treasury
 - IHS Markit (GDP-R data)
- **Modelling Technique**
 - Pooled cross-section data, estimated with fixed effects (Baltagi, 2005) of 10 municipalities in Gauteng over period of 10 years
 - Advantage: among other things, it controls for differences across municipalities (i.e. heterogeneity) (Baltagi, 2005)
 - Three categories of capital expenditure: electricity, water & sanitation, road transport and other; and operating expenditure

About this Study

- **Statistical procedures applied:**
 - Panel unit root tests (Levin, et al.(2002), Breitung (2000), Im, et al. (2003),)
 - Hausman (1978) test in support of fixed effects
- **Three estimated equations:**
 - Baseline which looks at the growth effects of the three categories of capital expenditure
 - Time-effects of increased spending relating to the 2010 FIFA World Cup preparations
 - Classification of expenditure split in two categories, productive (capital expenditure) and unproductive (operating expenditure), Mello (2002) and Moreno-Doson (2008)

What Evidence Suggests in Gauteng Municipalities

- Capital expenditure on road transport was the only category that had a positive effect on Gauteng municipal economic output
 - Contrary to expectations, municipal capital expenditure on water & sanitation, and electricity had a negative and insignificant effect on economic output
- Capturing the increased capital spending relating to the 2010 FIFA World Cup preparation, the results show that expenditure relating to the preparations for the World Cup did not have an immediate positive effect on municipal economic output
- However, after the tournament, the effects were positive and economically significant.

What Evidence Suggests in Gauteng Municipalities

Explanatory variables	Model 1	Model 2	Model 3
Electricity	-0.0084 (-0.2997)	-0.0054*** (-1.9540)	-
Water & Sanitation	-0.0076** (-2.2023)	-0.0058*** (-1.8067)	-
Road Transport	0.0047 -1.4853	0.0067** -2.2889	-
Other Capital Expenditure	0.004 -0.0695	-0.0004 (-0.0664)	-
Productive Expenditure	-	-	0.2865** -3.8489
Unproductive Expenditure	-	-	0.0091 -0.5614
Population	-0.0963 (-1.5786)	-0.2394** (-2.6740)	-0.1894*** (-1.8358)
2009 dummy	-	-0.0404** (-2.7540)	-0.0397*** (-2.6939)
2011 dummy	-	0.0179 -1.2209	0.0097 -0.6352

- Distinguishing between productive and non-productive expenditure, the results show that former has the most significant positive effect on municipal economic growth as compared to the latter
 - In line with Moreno-Doson (2008) who found that productive expenditure is the category of spending that is most relevant for growth

Challenges with Municipal Data and Implementation

- The results indicate some effect of capital expenditure on municipal economic growth, however, the effect was not overwhelming:
 - Inconsistencies in recordkeeping and reporting of municipal capital expenditure data, incomparable data sets between municipalities and discrepancies in expenditure patterns between years
 - Although the national government has implemented capacity building initiatives in municipalities, the results suggest that poor administrative capacity to implement and account for projects is still a challenge
 - In most cases, infrastructure projects often run for a long time, resulting in cost overruns, which leads to excessive spending (GPT, 2016). As highlighted by Devarajan, et. al (2001), when used excessively, productive expenditure can become inefficient and unproductive

Conclusion

- The study shows that municipal capital expenditure does support economic growth in Gauteng to some extent, however, the full impact may be limited by challenges of data and implementation of infrastructure programmes in municipalities
- Still, the importance of municipal infrastructure investment should not be ignored based solely on this evidence
- Capital expenditure is mostly funded through conditional grants with the aim of supporting national policy objectives including the NDP's vision of economic growth spurred through public investment in infrastructure
- As such, consistent reporting, monitoring and recording of capital expenditure data are very important to evaluate the effectiveness of municipal investment in infrastructure

Conclusion

- In order to improve studies of this nature in future, maintaining reliable data and consistent data sets are some of areas in municipal budgets that need to be improved
- It is hoped that the ongoing municipal financial reforms by National Treasury (e.g. mSCOA) will improve the credibility of the municipal financial information, which can be used for future studies of this nature.