

# Spatial Development Implication of a University Campus: The Case of Potchefstroom

**Presented by:**

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*This study:*

To quantify the space demand of retail, office and residential real estate created through staff and student spending.

# Some background

- A University is an important component in the urban economy, taking vast areas of city land through **real estate and infrastructure developments** and providing economic benefit for the surrounding community.
- A community that has access to a university is expected to significantly benefit from such an institution as universities are regarded as economic anchors that act as inter alia, a purchaser, employer and **real estate developer** (Hahn, Coonerty & Peaslee, 2003).
- The real estate benefits related to universities that have been highlighted within the literature include the **residential market** (Hahn et al., 2003; Cortes, 2004; Hoover, 2008), the **retail market** (Caffrey & Isaacs, 1971; Hendrick, Henson & Mack, 1990; Garrido-Yserte & Gallo-Rivera, 2010:53) and **finance, business and personal services** (Hendrick, Henson & Mack, 1990).

# Drivers of demand

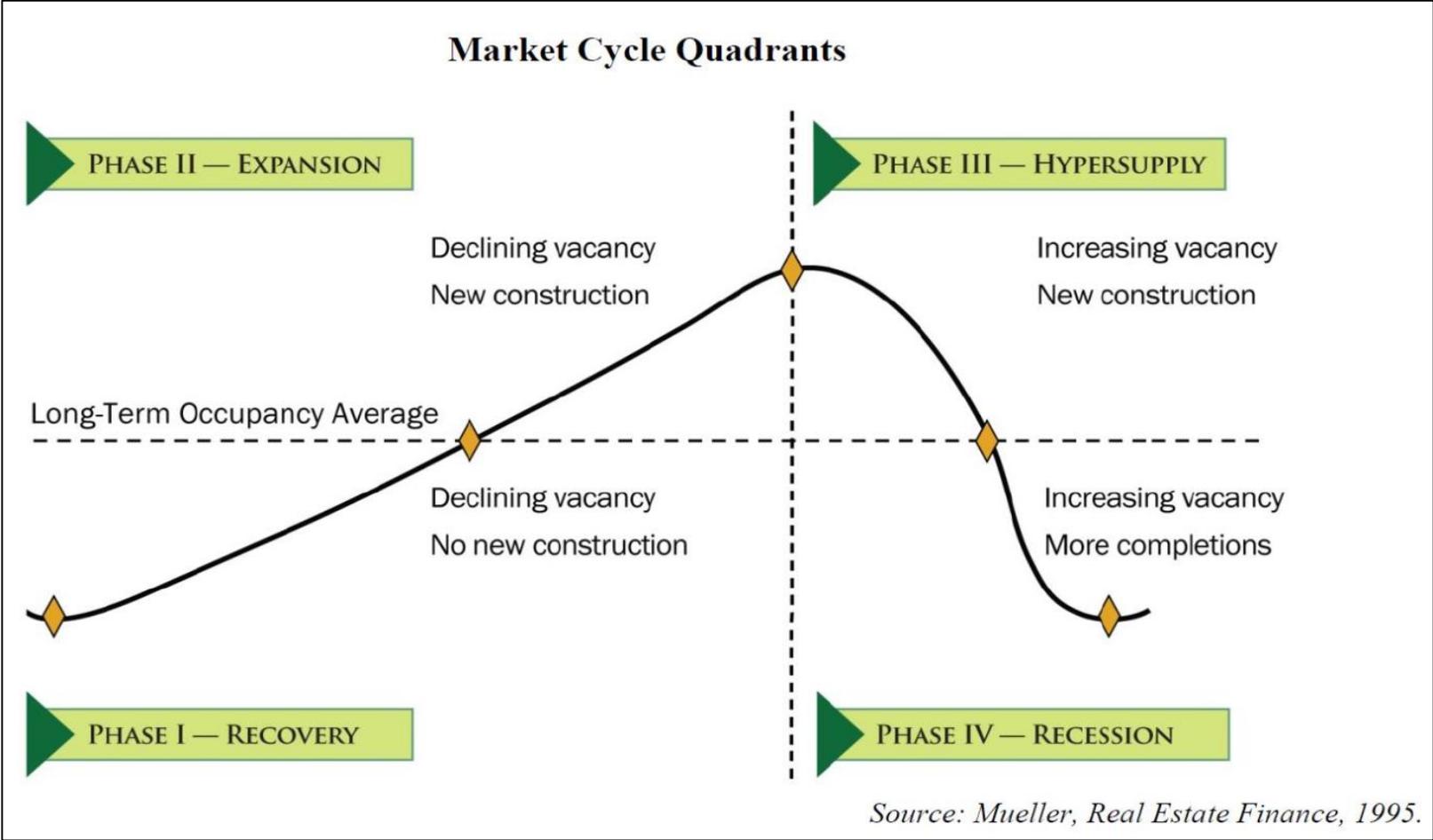
- The **expenditure** from two groups in particular have a significant impact on the local economy, the **staff and students** affiliated with the campus.
- One of the reasons for this positive impact as mentioned by Smith and Bissonnette (1989) is that students, from outside the state/province where the university is situated, which attend the university have a significant positive impact on the local economy through their expenditure patterns.
- In South Africa for example, consumer/household spending as a share of gross domestic product (GDP) is at about **60% in 2015** (World Bank, 2017).
- Staff remuneration, the component from university expenditure that are directly responsible for staff expenditure, for the Potchefstroom campus amounted to R1.06 billion or 61% of campus expenditure in 2015, while student expenditure in 2015 amounted to R1.7 billion.
- The combined value of expenditure for these two groups amount to **R2.76 billion in 2015**, and represent a significant injection in the economy.
- Spending has a direct impact on sectors within the economy and this benefit is allocated to the relevant sector depending on the type of good or service chosen.

# Sector Spending & Real Estate Development

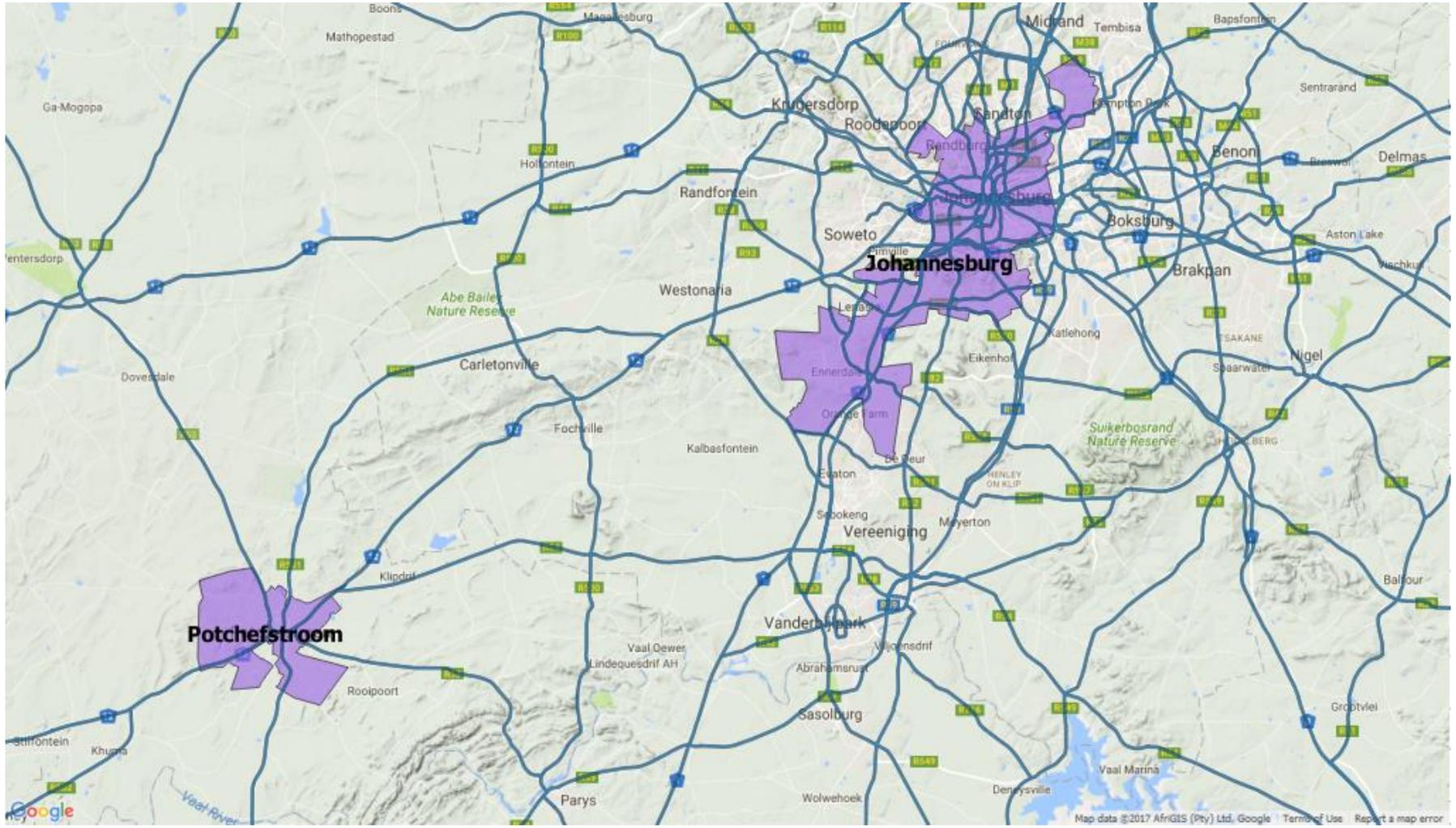
- Spending has a direct impact on sectors within the economy and this benefit is allocated to the relevant sector depending on the type of good or service chosen.
- In-turn, the goods and services purchased by the economic entities demand trading areas or space, usually in the form of real estate.
- As a result there is a causal relationship between sector spending and real estate.



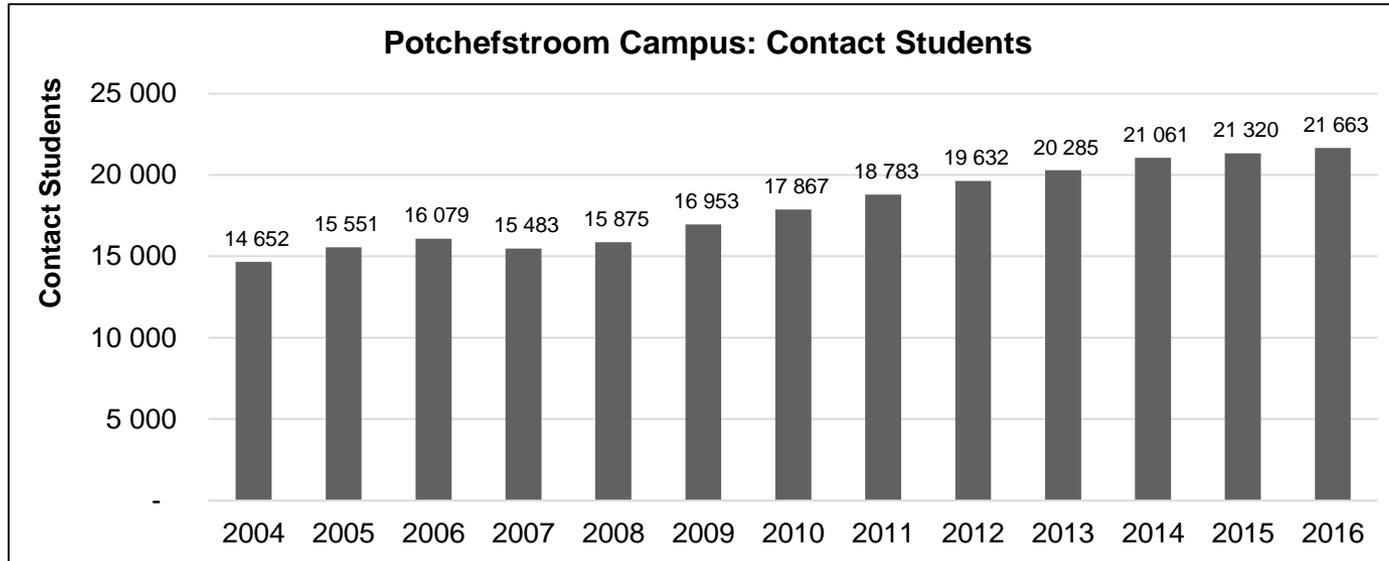
# Sector Spending & Real Estate Development



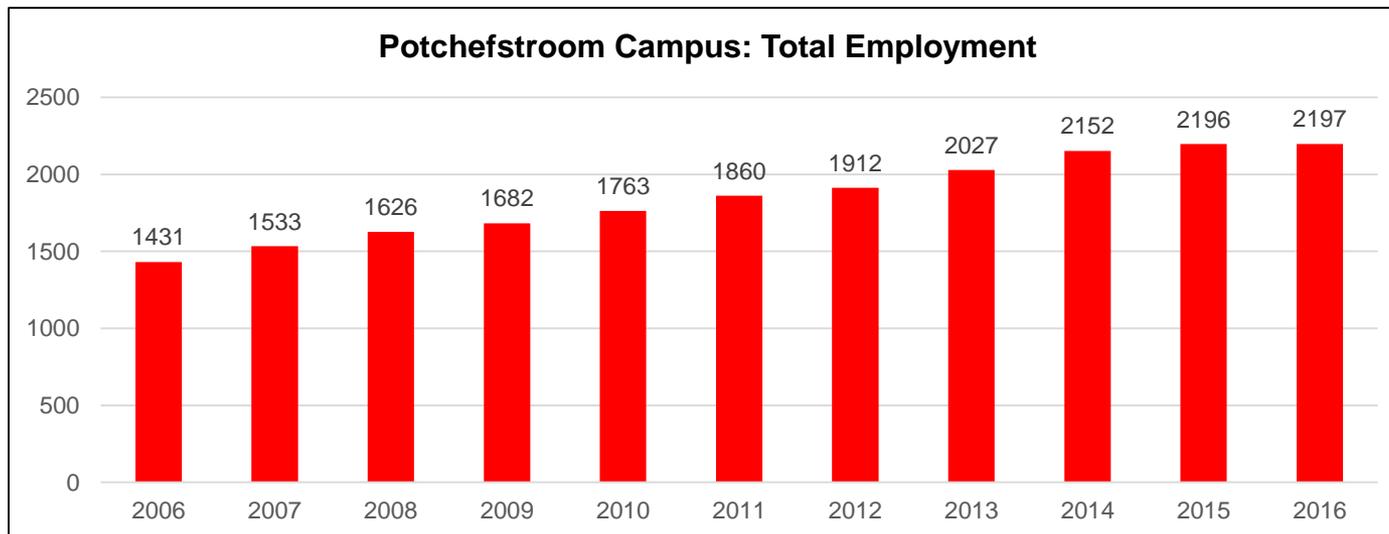
# The Setting: Potchefstroom



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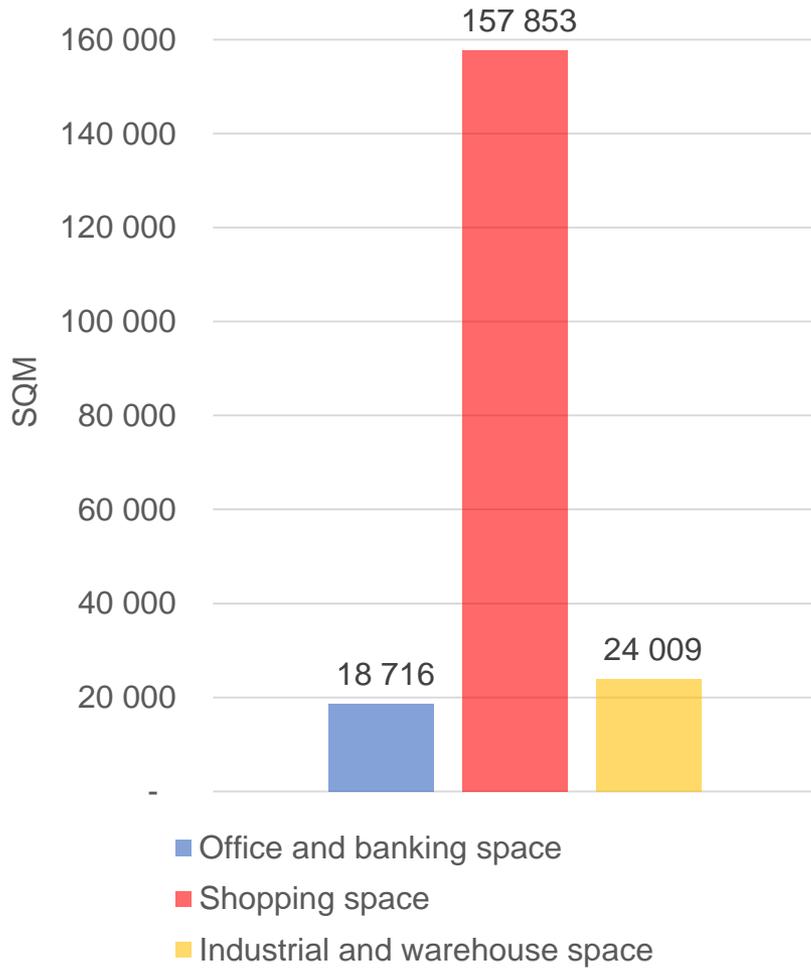
Source: NWU Management Information Report, 2017



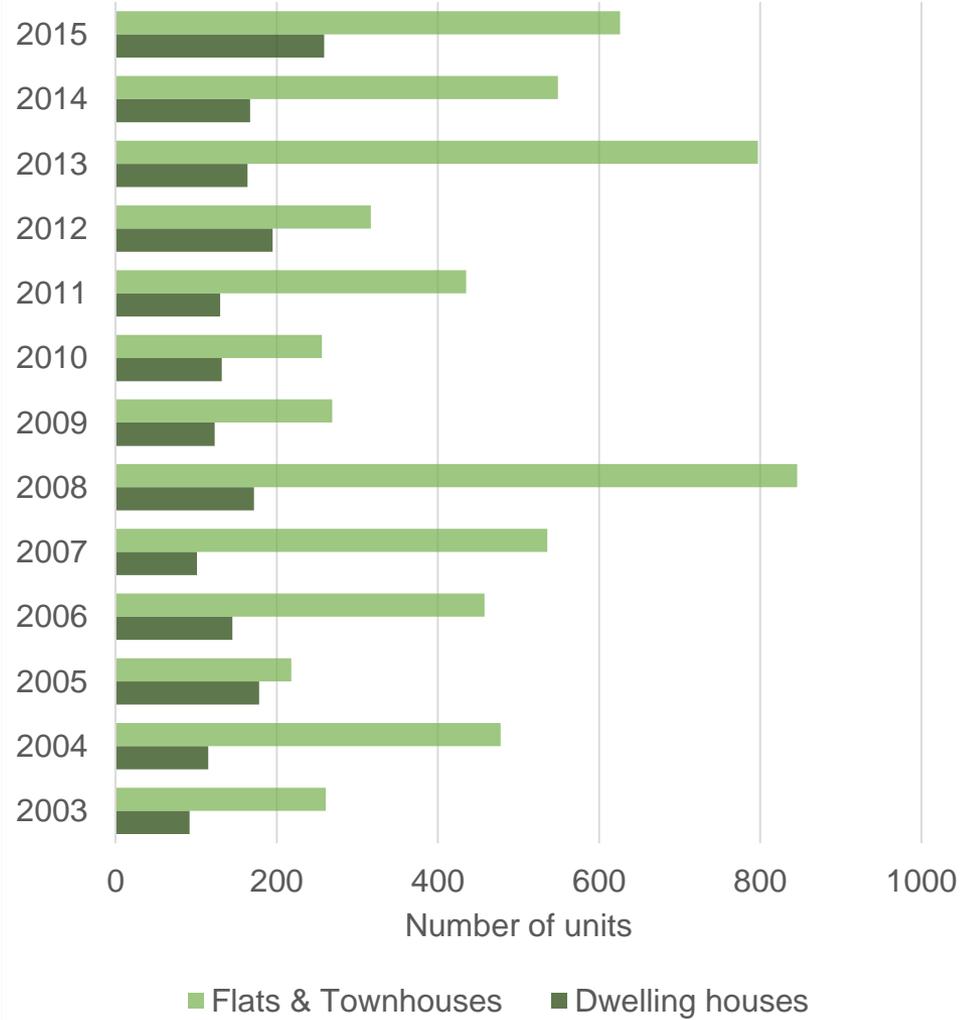
Source: NWU, 2016

# The Setting: Potchefstroom

## Non-residential completions, 2003 - 2015



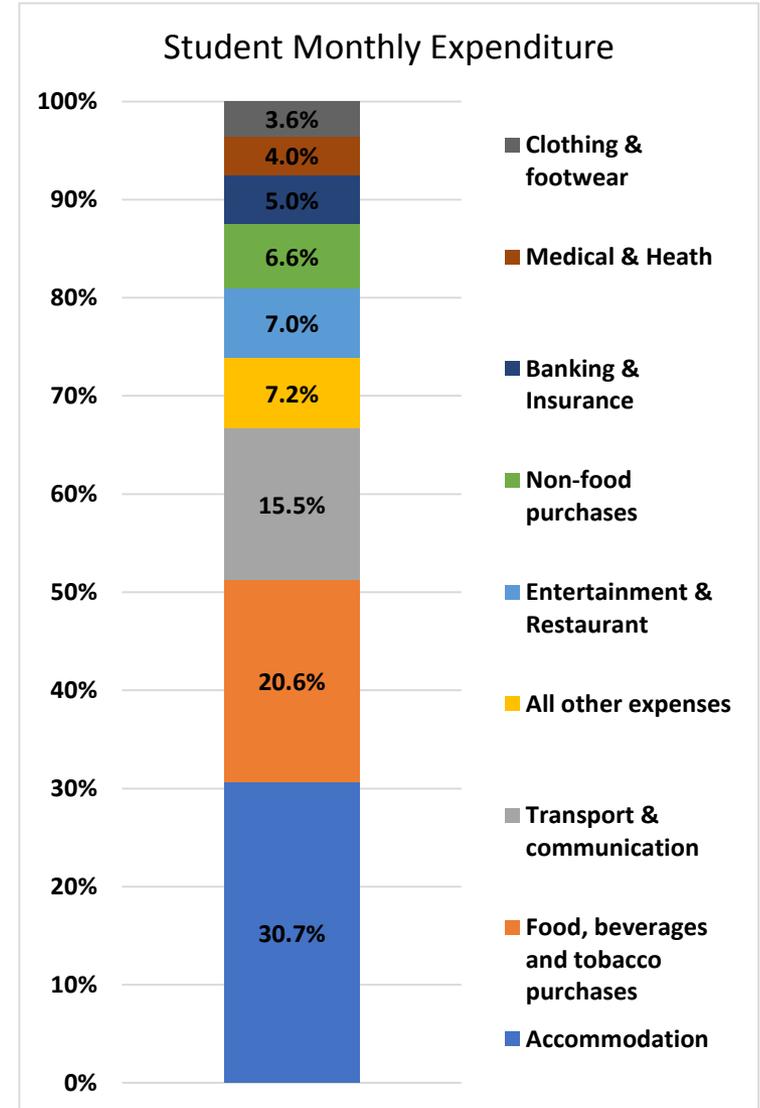
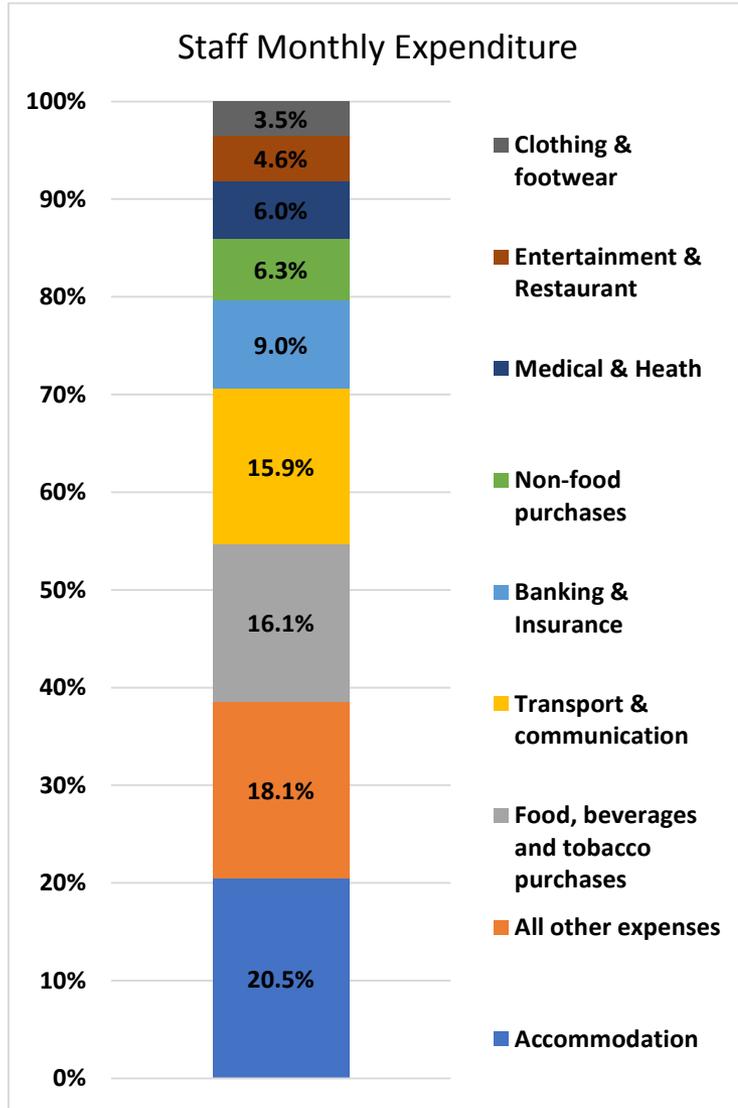
## Residential Buildings Completed, Tlokwe



# The Setting: Potchefstroom



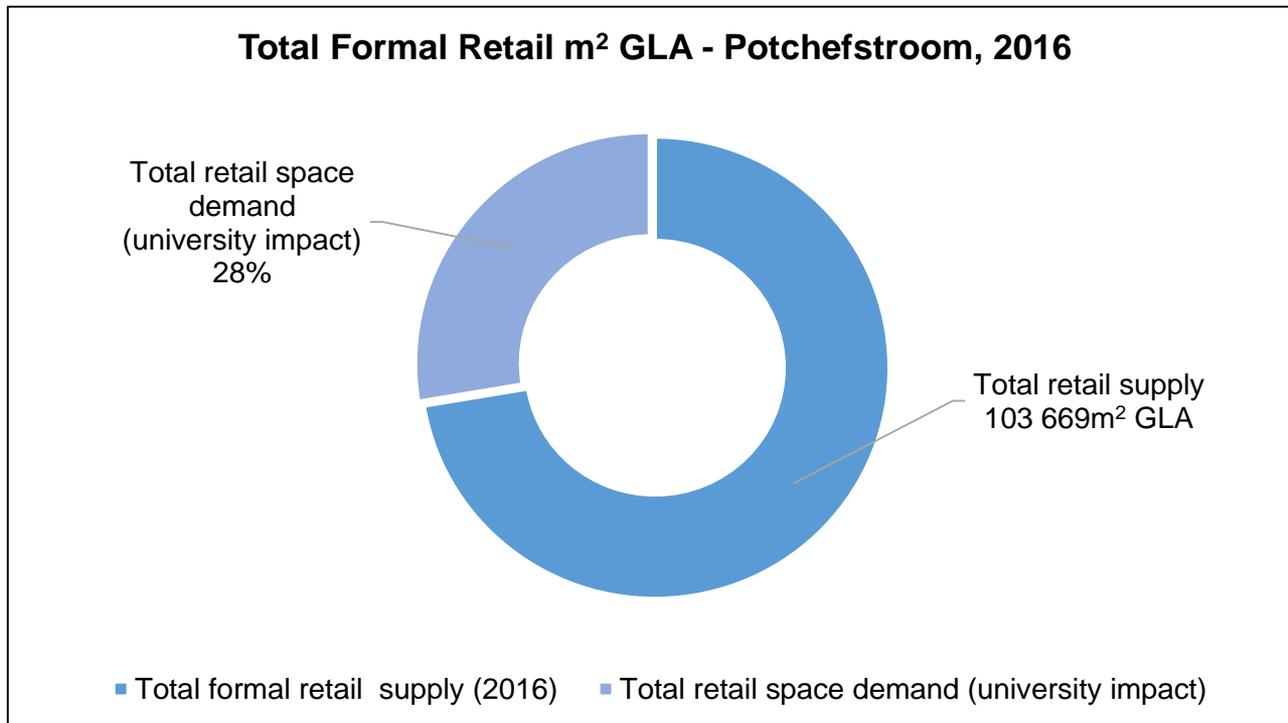
# Sector Spending & Real Estate Development



# Retail Space Demand

*Retail Space Demand (base year) = f(Population; Retail spend; Spend leakage; Trading density)*

Year: 2016 (base year)	Students	Staff	Total
Size (number of people)	21 663	2 197	23 860
Annual retail spending in Potchefstroom (Rand)	R687 million	R152 million	R 839 million
<b>Total retail space demand (m<sup>2</sup> GLA)</b>			<b>28 662m<sup>2</sup></b>

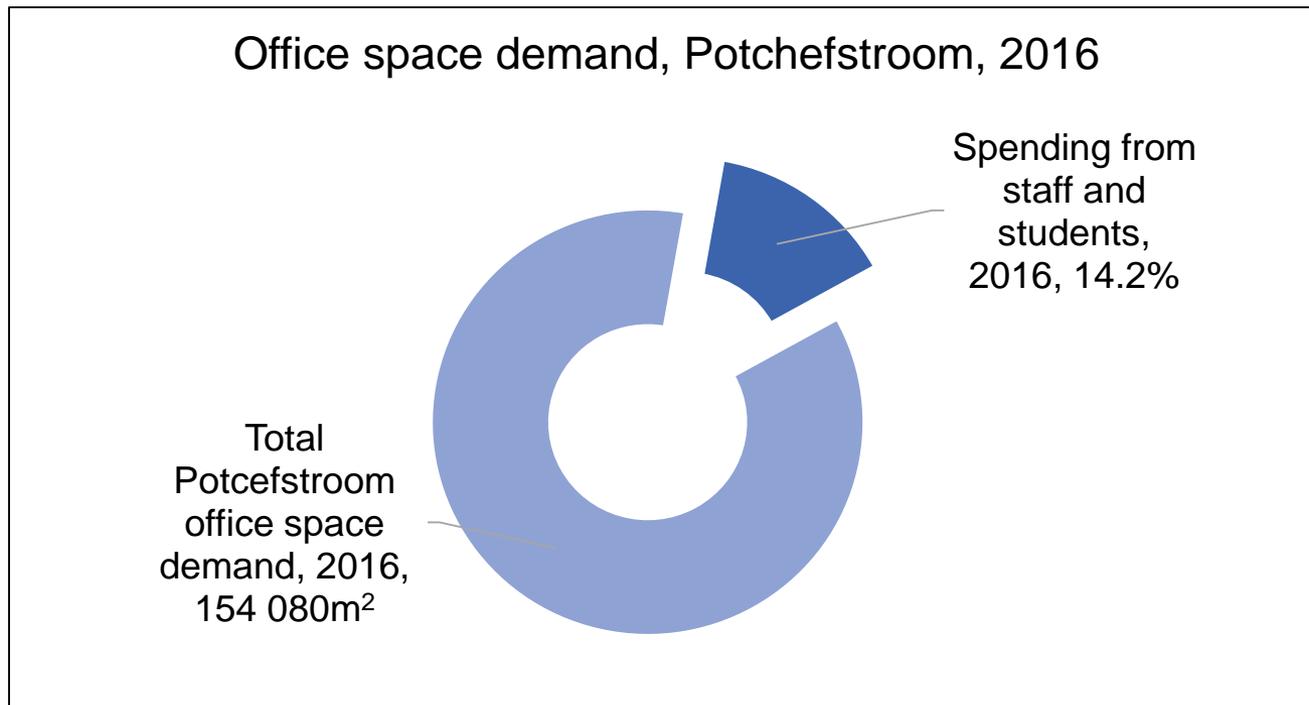


Source: SACSC & Author's calculations, 2017

# Office Space Demand

*Office Space Demand (base year) = f(Population; Spending on services; Space coefficient; Spend ratio coefficient)*

Year: 2016 (base year)	Students	Staff	Total
Size (number of people)	21 663	2 197	23 860
Annual business/office spending in Potchefstroom (Rand)	R161 million	R 99 million	R260 million
<b>Total business/office space demand (m<sup>2</sup>)</b>			<b>21 833m<sup>2</sup></b>

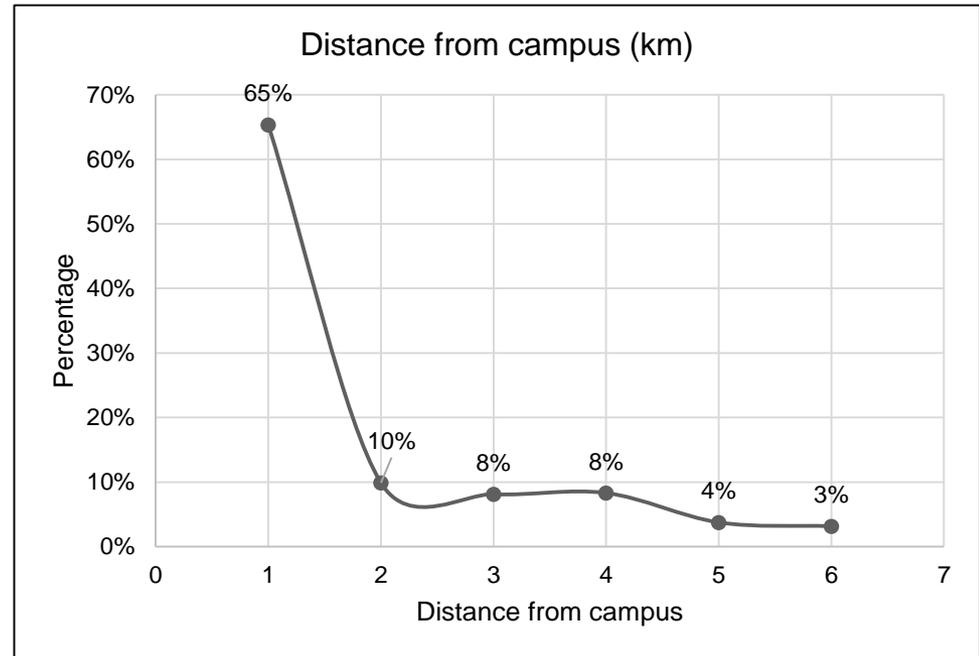


Source: Author's calculations, 2017

# Residential Space Demand

Residential Preference:

	<i>Tenure Type</i>
<i>Owned and fully paid off</i>	4%
<i>Owned but not yet paid off</i>	5%
<i>Occupied rent-free</i>	6%
<i>Other</i>	13%
<i>Rented</i>	69%



Residential Space Demand (base year) = f(Population; Average unit size)

Year: 2016 (base year)	Students	Staff	Total
Size (number of people)	21 663	1 722	
Average residential unit size	30m <sup>2</sup>	98m <sup>2</sup>	
<b>Total residential space demand (m<sup>2</sup> building only)</b>	<b>652 655m<sup>2</sup></b>	<b>215 160m<sup>2</sup></b>	<b>867 815m<sup>2</sup></b>

# Where to from here?

1. Understanding the expenditure patterns and preferences of staff and students enables detailed and more accurate market space demand estimations.
2. The 2016 space demand model provides a basis from where to estimate future growth potential for the local economy.
3. Once completed the study findings & models used for forecasting the floor space demand for areas such as Kimberley, Mbombela and other cities with new or existing university campus are.

**Thank you**

**Comments and suggestions are welcome.**

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