Taxonomy of Driving Forces Behind Exclusive Residential Developments in South African Cities

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Article

Taxonomy of Driving Forces Behind Exclusive Residential Developments in South African Cities

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Abstract: The phenomenon of exclusive residential developments has gained substantial attention in the context of South African cities, where urbanisation and socioeconomic disparities have shaped the built environment in unique ways. This study, therefore, delves into the taxonomy of driving forces that underpin the proliferation of exclusive residential developments within these urban centres. The aim is to present results of a study that sought to examine the driving forces behind the growth of exclusive residential developments. Drawing from a literature review and a quantitative inquiry approach, primary data was also collected from 109 built environment professionals. Descriptive and inferential statistics, specifically exploratory factor analysis (EFA), were used to supplement this. According to the descriptive analysis utilising the mean score (MS) ranking technique, the perception among potential residents that exclusive residential communities provide a safer living environment was one of the higher up-front driving forces for exclusive residential developments. Additionally, there is a good chance that these developments may increase in value. Furthermore, the EFA revealed that the underlying grouped factors for exclusive development were: 'free market capitalism'; 'safety and security'; 'local demand'; 'PPP'; 'affordability'; and 'profit seeking'. These findings suggest that if housing costs rise, the average citizen may not be able to afford them due to the emphasis on maximising profits over affordability. Safety and security precautions can create a sense of exclusivity and seclusion in these communities, possibly cutting them off from the larger local community and affecting local demand for goods and services outside the community's borders.

Keywords: exclusive residential developments; taxonomy; sustainable development; fragmentation; safety and security; capitalism

1. Introduction

The rapid growth of exclusive residential developments in South African cities is a cause for concern. These developments are often located in desirable areas and offer a range of amenities that are not available to the majority of the population. This can lead to increased segregation and inequality. In South African cities, where gated and walled communities split the urban tissue and occupy a significant portion of the urban space, exclusion has become a permanent visible reality. The worldwide urban agenda has included social action and the fight against the globalization's excluding processes, such as the commercialization and privatization of urban space (Brown, 2013; Szejnfeld, 2014).

Thus, the "de-solidarization of the city" could be used to characterize the idea of exclusion, which is sometimes referred to as enclave urbanism or urban fragmentation (Bénit-Gbaffou, 2008). This implies that the city no longer operates as a system but rather increasingly as disparate, disjointed pieces that are vanishing from one another. According to Kilic et al. (2019), "a situation where one area/unit is composed of many parcels that are too small for their rational utilisation" is the most widely used definition of fragmentation. Urban fragmentation can be analysed through multiple

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lenses (Bénit-Gbaffou, 2008; Cruz & Pinho, 2014), including fiscal, ownership, political, economic, social, and physical fragments; Douglas et al. (2012) identified functional and cultural enclaves; and ownership, fiscal, and social fragments (Bénit-Gbaffou, 2008). These fragments, which are primarily found in residential projects (Borsdorf et al., 2007), are thought to have a significant impact on a number of sustainability-influencing variables and to characterize South African urban space (Douglass et al., 2012). Urban fragmentation, according to Borsdorf et al. (2007), is the solution to the process of closing off urban space and the emergence of large clusters of residential islands motivated by exclusivity and security concerns.

The two South African cities with the greatest concentration of affluent residential developments are Johannesburg and Tshwane. Johannesburg claimed that between 1996 and 2008, there were 49 neighbourhood closures that were authorized, and an additional 37 that had expired prior to their implementation. In addition, because of enclave urbanism, in the wealthiest areas of the city, there were reportedly 188 unlawful closures and 265 pending neighbourhood closure applications; each year, these numbers rapidly increase (Landman & du Plessis, 2005). The issues with access, traffic, and the resulting congestion on the city's main thoroughfares drew criticism to these road closures (Bénit-Gbaffou, 2008).

The Covid-19 pandemic is another factor that has brought to light the stark realities of urban fragmentation at a time when the country's cities' less fortunate and vulnerable populations, demographics, and occupational categories are feeling the effects of government lockdown regulations. Those who are poorest and most vulnerable to public health risks include those who are homeless, low-paid workers, unable to work from home, do not have basic health insurance, and reside in neighbourhoods where social distance is not an option (Nijman & Wei, 2020). People everywhere worry that locations and settings could change irreversibly (Honey-Roses et al., 2020; Avetisyan, 2020). Increased monitoring, de-densification, and remote work are some of the effects of pandemics on cities. In the future, urban planners will have to balance the seeming conflict between densification and the drive for cities to become more fragmented and concentrated (Lehmann, 2020). Additionally, Covid-19 may make social and class disparities in how urban public spaces are used and privatized worse (Honey-Rose, 2020; Salama, 2020).

Exclusive residential projects seem to be self-sufficient, exclusive, fragmented, privately owned and controlled urban products, according to Santos Cruz et al. (2009) and Santos Cruz et al. (2014). They do not represent an all-encompassing strategy for urban development (Ghonimi et al., 2011). They negatively affect nearby and micro communities' urban, functional, social, economic, and environmental aspects. Consequently, the goal of this study is to investigate and illustrate the factors that have fuelled the expansion of affluent residential complexes. The intention is that these forces of expansion might serve as a guide for professionals working in the built environment, government policy makers, and urban planning to counteract the spread of these phenomena.

2. Literature Review

Uncontrolled and unregulated private land developments lead to multiple residential fragments in an environment that is fast becoming more urbanized, especially in South Africa given its historical spatial fragmentation. The driving forces behind these upmarket residential projects in the country have been extensively covered in the literature. In this study, the taxonomy of these driving forces was examined and presented in Table1 below.

2.1. Taxonomy of Driving Forces Behind Exclusive Residential Developments

Urban fragmentation is mostly caused by exclusive residential construction. Urban areas that are more inclusive and well-integrated will arise when these are reduced. Exclusive residential developments deplete the natural capital stock, including clean air, water, and open green spaces both outside and inside gated communities, even though they offer high-quality physical capital and exposure in stimulating well-developed and maintained physical environment within the gates (Wojnicka-Sycz, 2013).

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Like any other industry, the property market is based on supply and demand. In South Africa, the creation of upscale residential buildings is driven more by demand than supply. Property owners' capacity to convince individuals to purchase in exclusive developments serves as another reinforcement of this exclusive development enabler. The perception of higher property prices and lower property insurance rates for properties inside the gates can help to explain this (Landman & du Plessis, 2005). Moreover, the demand for exclusive projects is driven by citizens' perceptions that these are secure settings, and this is also connected to the rise in property prices.

The expansion of exclusive developments is further facilitated by government policies that permit the creation of exclusive urban areas. Consequently, in order to control the process of urban land and property growth, cities must create or implement proactive regulations (Turok & Visagie, 2018). For urban development to advance further, policy innovation—including public-private partnerships—will be crucial (Squires, 2002).

Suburban regions are now experiencing displacement, and the process has grown incredibly multicentric. Real estate developers have created gated communities for the middle-upper class people by taking advantage of the underdeveloped peripheries of most cities worldwide. The development of exclusive and privileged residential enclaves has made the problems caused by urban space fragmentation worse. According to Steel et al. (2017), because these settlements are primarily self-sustaining, there is little to no connectedness in urban life under this system. This implies that these communities lessen the demand on local government to offer the general public essential services, which raises another issue that many academics find troubling (Mathur, 2011). These communities' members enjoy privately run infrastructure, live in privately constructed homes, and are subject to private security company surveillance—all without escaping taxation. There is not a single word regarding exemptions, discounts, or refunds in any of the current government regulations governing urban space. Because these neighbourhoods restrict law enforcement organizations' access, they provide a challenge to effective urban policing, according to a report by Habitat (2015a) on urban safety.

Gated communities are associated with a lifestyle that is more globalized and disconnected from the local context. Because the main priorities here are security and privacy, social interactions are quite limited. Some are designed to exclude and segregate other communities in addition to maintaining privacy and security (Bucheli, 2016). These communities come in a variety of shapes and sizes, including small, large, urban, inclusive, and more diverse varieties. According to Makhale and Landman (2018), a gated community in South Africa is an urban enclave that is walled or fenced off from its surroundings, with entrance limited or forbidden by booms or gates. In South Africa, there are two different kinds of gated communities: security estates or villages and walled neighbourhoods. Whereas the latter refers to recently constructed, privately built gated regions with a range of land uses, the former refers to already-existing neighbourhoods that are walled off for security reasons.

Table 1. Taxonomy of exclusive development enablers.

ED_Enabling Factors	References
• Pressure for resources because of continued economic growth • Use of innovative urban management which allows for different models	While et al, 2009; Jha et al, 2008; Adell, 1999; Wojnicka-Sycz, 2013
• Demand for exclusive residential development because space is available	Breitung, 2012 & Douglass et al, 2012
• Demand for exclusive residential development due to flight from the city centre	Landman & Badenhorst, 2012; Van Noorloos & Steel, 2016

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• Demand for exclusive residential development so residents are closer to economic and other resources	Breitung, 2012 & Douglass et al, 2012
• Demand for exclusive residential development close to newly formed economic centres	
• Demand for exclusive residential development in more peripheral locations due to lack of space closer to the city core	
• Demand for property which has a strong chance of retaining value/improving in value	Landman & du Plessis, 2005
• Availability of cohort of homeowners who would be candidates to own a property in an exclusive development.	
• Increase in demand for accommodation in such developments within the population.	
• Increase in resources of population to be able to afford accommodation in exclusive developments.	
• Improvement in ability of private sector to convince people in community to buy into exclusive developments.	Forrer et al, 2010; Kresl, 2015
• High level of certainty amongst developers that there will be sufficient reliable buyers.	
• Perception amongst potential residents that exclusive developments offer a more secure living environment.	Landman & du Plessis, 2005
• Use of joint initiatives between government and private sector to determine development of spaces and places.	Forrer et al, 2010; Hui & Hayllar, 2010; De Magalhães, 2017
• Government and the private sector have policies and practices which allow for exclusive developments.	Eick, 2012
• Stakeholders are able to develop privately owned public space into exclusive developments.	
• There is strong motivation to make profit out of residential developments.	Manaf et al, 2016; Murray, 2015; Budd & Gottdiener, 2005
• There are well off households in the population e.g., many white households which have economic capacity to buy into exclusive developments.	
• There is strong motivation amongst some members of society to develop communities based on a specific racial/religious grouping.	Abrahams & Everatt, 2019
• There is strong motivation on the part of the developer to make a good profit from developing land (use of highest and best use principle)	Manaf et al, 2016; Murray, 2015; Budd & Gottdiener, 2005
• Potential members have an available and flexible private transport system.	White Paper on transport policy, 1996
• There is lack of objectivity in city planning	Brandao, 2006; Haas & Olsson, 2014; Bahadure & Kotharkar, 2012
• Rising incomes mean there is a greater pool of potential members	Le Goix & Webster, 2008
• There is demand for single-family housing	Eade & Mele, 2002
• Reliance on capitalism as the dominant economic model.	Budd & Gottdiener, 2005

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• Transformation of urban space into commodities or objects of trade	Brown, 2013; Szejnfeld, 2014; Ramoroka & Tsheola, 2014
• 'Social Darwinism' i.e., competition for locations	Budd & Gottdiener, 2005
• To be safe from crime	
• There is demand for such development from foreign investors	Budd & Gottdiener, 2005; Klug et al, 2013
• The neoliberalisation of cities leads to demand for exclusive developments	Nemeth & Schmidt, 2011
• There is political manoeuvring to create or change zoning to allow for exclusive developments	Eade & Mele, 2002
• Privatization of urban space allows for exclusive development	
• The property market caters more for the up-market segment	Ramoroka & Tsheola, 2014
• The process of place naming 'toponymy'	Madden, 2018

3. Research Methodology

The investigation was carried out by conducting a quantitative empirical study together with a literature review. The Nelson Mandela University Research Ethics Committee (Human) granted ethical clearance (ref: H21-ENG-BQS-001) for this investigation. All study participants were then asked for their consent. The research measurement instrument, sample approach, and size, as well as data collection and analysis procedures, are all included under the subheadings below. The objective is to determine the driving factors behind exclusive residential developments in South Africa and to create a taxonomy of these factors.

3.1. Measurement Instrument

In this study, the instrument for gathering data was a structured questionnaire. A thorough literature assessment was conducted to support the development of the survey instrument, and information was sourced from various databases. These include, for example, the following: Science Direct, Scopus, Emerald, SAGE, Springer, Academia, Mendeley (reference manager), Publish-or-Perish (publish articles based on citation counts), and Google Scholar connected to university libraries (Nelson Mandela University and University of Johannesburg). Content analysis was adopted to identify themes / categories of the driving forces as presented in Table 1 above. To locate excellent, focused papers, books, theses and dissertations, and reports, keywords like "urban space production," "urban development," "property development," "gated communities," and "urban fragmentation or social exclusion" were employed. According to Torraco (2016), this aids in the researcher's ability to evaluate and synthesize representative literature on the issue in an integrated way, leading to the development of new theoretical frameworks and viewpoints.

The process of identifying the enabling factors and driving forces focused mostly on variables that received substantial coverage in earlier research conducted in a variety of contexts and nations. At the early stage after developing the questionnaire, pilot research was carried out to evaluate the applicability and logic of the questionnaire. It is significant to note that ten South African built environment professionals were given the questionnaire to review the thoroughness of the questions in order to obtain constructive input and suggestions regarding the relevance of the driving forces to the South African context. The information gathered at this point is not included in the study's findings.

The questionnaire had two sections, the first of which was used to collect demographic data from the respondents. The scales for evaluating the motivating elements that have contributed to the expansion of exclusive residential developments were provided in the following section. A five-point Likert-type scale with the following options was used to ask survey respondents to rate the impact

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that each enabling factor had on the growth of exclusive residential developments: (1) To no extent; (2) To a small extent; (3) To a moderate extent; (4) To a large extent; and (5) To a full extent.

3.2. Sampling Procedure, Size, and Data Collection

This research has an interdisciplinary approach. It is crucial to highlight that the survey participants were chosen using a straightforward random sampling technique. Only those with experience in sustainable urban development who were professionally registered with their respective councils were eligible to participate in the poll. These experts included those in the fields of architecture, landscape design, urban design, environmental management, property development, sociology, economics, and urban governance (urban law and policy). More than 5000 registered members can be found in each of these professional councils. For calculating the appropriate sample size, statisticians have created formulas. In order to select a sample size without utilizing the complex nature of these calculations, Leedy and Ormrod (2015) have supplied the following guidelines:

- Survey the complete population rather than just a sample when the population is tiny, say N = 100 or less.
- A 50% sample should be taken if the population is 500 people, give or take 100.
- A 20% sample should be taken if the population is approximately 1,500 strong.
- A sample size of 400 will suffice after the population size reaches a specific threshold (about N = 5,000).

Therefore, in order to guarantee adequate statistical power and prevent sampling error, a sample size of 400 was taken into consideration in the current investigation. Two techniques were used to gather data. First, several organizations received an online survey. When the inquirer realized after a month that the response rate was quite low, they chose to use a different approach. Second, the researcher chose to print the 11-page survey and give it to the participants by hand. The online survey revealed to the inquirer that 207 persons started it, however some did not complete all of the questions, as shown in Table 2 below.

Table 2. Number of respondents.

		valid	valid_q16	valid_q17	valid_q25	valid_q26	valid_q27	valid_q31	valid_q41a	valid_q41b	valid_q42
N	Valid	207	207	207	207	207	207	207	207	207	207
	Missing	0	0	0	0	0	0	0	0	0	0

Subsequently, 42 hard copies were scanned and combined with the internet results. The number of legitimate cases that were used from the online survey is shown in Table 3 below.

Table 3. Valid cases from online survey.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	140	67,6	67,6	67,6
	1.00	67	32,4	32,4	100,0
	Total	207	100,0	100,0	

Among the individuals (n = 207) who initiated the online survey, 140 persons finished it. The investigator then used a 70% selection criterion to weed out respondents who didn't finish the survey. The study only included respondents who completed a segment of the survey with at least 70% of the questions answered (n = 67). According to Creswell (2012), one way to handle missing data is to exclude participants whose scores are missing from the data analysis and only include those for

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whom complete data are available. As a result, the analysis only included the 67 legitimate online survey responses and the 42 valid hard copy responses, for a total of 109 valid cases. One reason for the 67.6% dropout rate could be a lack of interest in the subject matter or ignorance of it. The first set of participants (n = 59) stopped answering questions as early as 1.6 (which asked about demographic information). By the time they reached question 2.5 (which asked about characteristics of urban development), the number of dropouts had increased to 127 (n = 127), and by the time they reached the final question (n = 140), the number had increased once more (n = 140).

3.3. Data Analysis Techniques

The strategy for data analysis used both descriptive and inferential statistical techniques. The central tendency of the data, such as the mean and the dispersion (standard deviation), were measured using descriptive statistics. The driving causes or variables impacting the rise of exclusive residential developments in the nation were then ranked using this information. One of the most popular methods for evaluating the dependability of scales is Cronbach's alpha. The latter is a measure of reliability and more specifically, internal consistency (Creswell, 2012). As a result, using the Cronbach's alpha coefficient, an internal reliability test on questions of the Likert scale was conducted in this study. Alpha coefficients have values between 0 and 1, with greater values of alpha being preferable. According to Creswell (2012) and Leedy & Ormrod (2015), a coefficient of 0.60 indicates that the scale had internal consistency, 0.70 indicates that it was satisfactory, and 0.90 indicates that it was high. In this study, a Cronbach's alpha coefficient of greater than 0.80 is used to indicate a factor as reliable except for 0.70 as a minimum. Table 4 below demonstrates that the measurement using the five-point Likert scale was extremely reliable, with an alpha value of 0.946 for the 35 factors impacting the rise of exclusive residential developments. As a result, the sample that was obtained may be seen as a whole and is thus appropriate for further rating analysis as well as exploratory factor analysis (EFA) in the sections that follow.

Table 4. Reliability Statistics.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,946	0,947	35

The study used all four steps of the EFA process, which involves a family of techniques such as measures of sampling adequacy (correlation matrix, Kaiser-Meyer-Olkin, Bartlett's test of sphericity, etc.), factor extraction (principal component analysis, etc.), factor rotation (oblique: oblimin, etc.), and factor naming (examining the pattern matrix for loadings).

4. Research Findings

4.1. Demographic Information

Based on their category of involvement in sustainable urban development, the respondents indicated that academics (18.1%) were the most involved, followed by town and regional planners (21.0%) and consultants (25.7%). Upon closer examination of the table, it is evident that 1.0% of respondents were sociologists and 1.0% of respondents were criminologists. According to the respondents' most common type of urban development involvement, half of them had worked in residential buildings, followed by those in commercial buildings (39.6%), private buildings (38.7%), and government buildings (30.2%). a negligible portion (6.5%) on ecosystems and 6.6% on landscapes. Table 5 below displays the results.

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Table 5. Demographic Information – Multiple Responses.

Demographic Information Frequencies		Responses		Percent of Cases
		N	Percent	
Category of involvement in sustainable urban development	Landscaping Architect	2	1,5%	1,9%
	Architect	4	2,9%	3,8%
	Town / Regional Planner	22	16,1%	21,0%
	Academic	19	13,9%	18,1%
	Consultant	27	19,7%	25,7%
	Developer	10	7,3%	9,5%
	Land / Site Owner	5	3,6%	4,8%
	Sociologist	1	0,7%	1,0%
	Planning Authority	1	0,7%	1,0%
	Public Sector	10	7,3%	9,5%
	Government Agency	4	2,9%	3,8%
	Engineer	16	11,7%	15,2%
	Investor	7	5,1%	6,7%
	Criminologist	1	0,7%	1,0%
	Other	8	5,8%	7,6%
Category of urban development predominantly involved in	Public Parks	13	4,8%	12,3%
	Public Squares	11	4,0%	10,4%
	Streets	20	7,3%	18,9%
	Residential Buildings	54	19,8%	50,9%
	Commercial Buildings	42	15,4%	39,6%
	Government Buildings	32	11,7%	30,2%
	Private Buildings	41	15,0%	38,7%
	Landscapes	7	2,6%	6,6%
	Marketplaces	15	5,5%	14,2%
	Church Surroundings	17	6,2%	16,0%
	Ecosystems	8	2,9%	7,5%
	Other	13	4,8%	12,3%

4.2. Driving Forces Behind Exclusive Residential Developments

Table 6 presents the degree of concurrence among respondents regarding the 35 factors that drive exclusive residential development in South Africa. Responses are given on a scale from 1 (minimal) to 5 (major), with a mean score (MS) ranging from 1.00 to 5.00. According to the MS's hierarchical ranking, demand for real estate with a strong likelihood of holding or increasing in value is ranked third (MS = 4.06), followed by the perception among prospective residents that exclusive developments offer a more secure living environment (MS = 4.25), and safety from crime is ranked first (MS = 4.38). There is strong motivation on the part of the developer to make a good profit from developing land (MS = 4.01), there is strong motivation to make profit out of residential developments (MS = 3.96) are ranked fourth and fifth, respectively. The descriptive statistics also showed that the least-ranked driving forces were the need for resources due to ongoing economic growth (MS = 3.30), which was ranked 32nd, political manoeuvring to create or change zoning to permit exclusive developments (MS = 3.28) which was ranked 33rd, the process of place naming *toponymy* (MS =

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3.25) which was ranked 34th, and the use of joint initiatives between the public and private sectors to determine the development of spaces and places (MS = 3.25) which was ranked 35th.

Table 6. Driving forces behind exclusive residential developments.

ED_Enabling Factors	Mean	Std. Deviation	Ranking
To be safe from crime	4,38	0,745	1
Perception amongst potential residents that exclusive developments offer a more secure living environment.	4,25	0,805	2
Demand for property which has a strong chance of retaining value/improving in value	4,06	0,854	3
There is strong motivation on the part of the developer to make a good profit from developing land (use of highest and best use)	4,01	0,838	4
There is strong motivation to make profit out of residential developments.	3,96	0,922	5
Potential members have an available and flexible private transport system.	3,89	1,004	6
Rising incomes mean there is a greater pool of potential members	3,89	0,953	7
Privatization of urban space allows for exclusive development	3,81	1,002	8
Increase in demand for accommodation in such developments within the population.	3,80	0,934	9
Reliance on capitalism as the dominant economic model.	3,75	1,085	10
High level of certainty amongst developers that there will be sufficient reliable buyers.	3,72	0,948	11
The property market caters more for the up-market segment	3,72	1,028	12
Availability of cohort of homeowners who would be candidates to own a property in an exclusive development.	3,70	0,973	13
There are well off households in the population e.g., many white households which have economic capacity to buy in	3,68	1,045	14
There is demand for such development from foreign investors	3,67	1,111	15
Transformation of urban space into commodities or objects of trade	3,64	1,079	16
Stakeholders are able to develop privately owned public space into exclusive developments.	3,63	1,080	17
Increase in resources of population to be able to afford accommodation in exclusive developments.	3,61	0,903	18
There is demand for single-family housing	3,61	1,026	19
Demand for exclusive residential development close to newly formed economic centres	3,59	0,958	20
Improvement in ability of private sector to convince people in community to buy into exclusive developments.	3,59	0,979	21
Demand for exclusive residential development so residents are closer to economic and other resources	3,55	1,087	22

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Demand for exclusive residential development because space is available	3,54	0,961	23
The neoliberalization of cities leads to demand for exclusive developments	3,54	1,059	24
Demand for exclusive residential development in more peripheral locations due to lack of space closer to the city	3,50	0,941	25
Use of innovative urban management which allows for different models	3,49	0,972	26
'Social Darwinism' i.e., competition for locations	3,45	1,068	27
Demand for exclusive residential development due to flight from the city centre	3,43	1,104	28
Government and the private sector have policies and practices which allow for exclusive developments.	3,43	1,173	29
There is lack of objectivity in city planning	3,36	1,192	30
There is strong motivation amongst some members of society to develop communities based on a specific racial/religion	3,31	1,227	31
Pressure for resources because of continued economic growth	3,30	1,051	32
There is political manoeuvring to create or change zoning to allow for exclusive developments	3,28	1,197	33
The process of place naming *toponymy*	3,25	1,254	34
Use of joint initiatives between government and private sector to determine development of spaces and places.	3,05	1,205	35

As a means of evaluating the factors' convergent and discriminant validity, principal components analysis (PCA) was used as the extraction technique. The variables impacting the expansion of upscale residential complexes were examined using the KMO measure of sampling adequacy and Bartlett's test of sphericity. The Bartlett's test of sphericity which was conducted suggest that the statistical significance should not be greater than 0.05 ($p < .05$) and the KMO value should be 0.6 or above ($KMO \geq 0.6$). The KMO ranges from 0 to 1, the closer it is to 1 the more factor-analysable the data (Botha et al, 2013). The tests in Table 7 below display KMO value of 0.843 which is above the minimum acceptable threshold, while Bartlett's sphericity value $p = .000$ (i.e., $p < .05$). These results suggest that EFA could be conducted with the data.

Table 7. KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,843
Bartlett's Test of Sphericity	Approx. Chi-Square	2244,522
	df	595
	Sig.	0,000

Factor extraction occurred after this phase. The number of underlying factors was determined (extracted) using Principal Component Analysis (PCA). The SCREE test and Kaiser's criterion, often known as the Eigenvalue rule, were employed to help determine how many factors should be kept. Only elements with an eigenvalue of 1.0 or above are kept for additional analysis using these two methods (Botha et al, 2013; Knight & Ruddock, 2008). The result for this factor structure is reported in Table 8 below. The eigenvalues of the seven extracted components are 12,742; 3,425; 1,971; 1,651; 1,271; 1,195; and 1,007. The analysis illustrates that component one is capable of explaining 36.405% of the variance, the second component explained 9,785% of the variance, the third component

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explained 5,632% of the variance, the fourth component explained 4,718% of the variance. Furthermore, the fifth, sixth and seventh components explained 3,630%, 3,415% and 2,878% of the variance, respectively.

Table 8. Total variance explained by the components.

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	12,742	36,405	36,405	12,742	36,405	36,405	7,338
2	3,425	9,785	46,190	3,425	9,785	46,190	4,069
3	1,971	5,632	51,822	1,971	5,632	51,822	5,873
4	1,651	4,718	56,541	1,651	4,718	56,541	5,680
5	1,271	3,630	60,171	1,271	3,630	60,171	7,731
6	1,195	3,415	63,586	1,195	3,415	63,586	4,552
7	1,007	2,878	66,463	1,007	2,878	66,463	2,496

Extraction Method: Principal Component Analysis.

A seven-factor solution was also validated by the scree plot assessment. Nevertheless, several of the components were not clearly separated from one another. The seven factors displayed a moderate inter-correlation (r =.374) after Oblimin rotation. After 33 repetitions, examination of the pattern matrix revealed an ambiguous factor answer. Examining the structural matrix (Table 9) revealed that only factors one and two had good discrimination, and the other factors' discrimination was ambiguous. There were too many items loading highly on various criteria. The number of factors to be retrieved required decision-making. Since many of the items in factor 7 loaded highly on other components, it was ultimately eliminated. Overall, these findings suggested that it is possible to proceed to the next stage of analysis, which is factor naming.

The six factors as indicated in Table 9 below were named as; factor 1: market forces; factor 2: safety and security; factor 3: local demand; factor 4: public-private partnership; factor 5: affordability; and factor 6: capitalism. These factors are discussed in the following section.

Table 9. Structure Matrix of the driving forces behind exclusive residential development.

	Component					
ED_Enabling Factors	1	2	3	4	5	6
There is demand for such development from foreign investors	**0,796**					
The neoliberalization of cities leads to demand for exclusive developments	**0,744**					
There is political manoeuvring to create or change zoning to allow for exclusive developments	**0,710**					
Transformation of urban space into commodities or objects of trade	**0,683**					
'Social Darwinism' i.e. competition for locations	**0,668**					
The process of place naming *toponymy*	**0,646**					
The property market caters more for the up-market segment	**0,624**					
There are well off households in the population e.g. many white households which have economic capacity to buy in	**0,617**					
Improvement in ability of private sector to convince people in community to buy into exclusive developments.	**0,578**					
Perception amongst potential residents that exclusive developments offer a more secure living environment.		**0,762**				
To be safe from crime		**0,749**				
Demand for property which has a strong chance of retaining value/improving in value		**0,555**				
Demand for exclusive residential development because space is available			**0,776**			
Use of innovative urban management which allows for different models			**0,761**			
Demand for exclusive residential development so residents are closer to economic and other resources			**0,744**			
Demand for exclusive residential development due to flight from the city centre			**0,671**			
Demand for exclusive residential development close to newly formed economic centres			**0,661**			
Pressure for resources because of continued economic growth			**0,585**			
Government and the private sector have policies and practices which allow for exclusive developments.				**0,812**		
Use of joint initiatives between government and private sector to determine development of spaces and places.				**0,808**		
Stakeholders are able to develop privately owned public space into exclusive developments.				**0,742**		
Privatization of urban space allows for exclusive development				**0,560**		
Demand for exclusive residential development in more peripheral locations due to lack of space closer to the city					**-0,794**	
Potential members have an available and flexible private transport system.					**-0,750**	
Availability of cohort of homeowners who would be candidates to own a property in an exclusive development.					**-0,727**	

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Rising incomes mean there is a greater pool of potential members	**-0,690**	
High level of certainty amongst developers that there will be sufficient reliable buyers.	**-0,610**	
Increase in resources of population to be able to afford accommodation in exclusive developments.	**-0,607**	
There is demand for single-family housing	**-0,586**	
Increase in demand for accommodation in such developments within the population.	**-0,528**	
There is lack of objectivity in city planning	**-0,527**	
Reliance on capitalism as the dominant economic model.		**-0,659**
There is strong motivation to make profit out of residential developments.		**-0,638**
There is strong motivation on the part of the developer to make a good profit from developing land (use of highest and best use)		**-0,598**

Extraction Method: Principal Component Analysis.c Rotation Method: Oblimin with Kaiser Normalization.

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5. Discussion of Results

Component 1: Free market capitalism (market forces)

There were nine variables that made up this major component, which had the highest percentage of variation explained (36,405%), namely, there is demand for such development from foreign investors (0.796); the neo-liberalisation of cities leads to demand for exclusive developments (0.744); there is political manoeuvring to create or change zoning to allow for exclusive developments (0.710); transformation of urban space into commodities or objects of trade (0.683); competition for locations (0.668); the process of place naming *toponymy* (0.646); the property market caters more for the up-market segment (0.624); there are well off households in the population e.g., many white households which have economic capacity to buy in (0.617); and improvement in ability of private sector to convince people in community to buy into exclusive developments (0.578). These findings corroborate earlier research suggesting that capitalism's relationships with profit-making extended to real estate. Unlike agricultural land, the location of urban land is the only factor that determines its value (Budd & Gottdiener, 2005). The most potent factor shaping the form of cities is capitalism, which possesses both a structural force and forms of action. Moreover, cities are settlements centred around markets, and the role of markets has always played a dynamic role in shaping the growth and operations of cities. Furthermore, residential enclaves and business hubs are the primary targets of the city's market-led development patterns (Klug et al, 2013).

Component 2: Safety and security

There were three variables that made up this component, which had the second highest percentage of variation explained (9,785%), namely, perception amongst potential residents that exclusive developments offer a more secure living environment (0.762); to be safe from crime (0.749); and demand for property which has a strong chance of retaining value / improving in value (0.555). These findings corroborate earlier research suggesting that elites in metropolitan areas feel uncomfortable associating with the impoverished, especially Black people. Because of their feelings of protection and security, individuals erect walls and gates for themselves (Ramoroka & Tsheola, 2014). One of the obstacles to effective city policing is the limited access that law enforcement authorities have to exclusive residential projects (Habitat, 2015a).

Component 3: Demand (local demand)

There were six variables that made up this component, which had the third highest percentage of variation explained (5,632%), namely, demand for exclusive residential development because space is available (0.776); use of innovative urban management which allows for different models (0.761); demand for exclusive residential development so residents are closer to economic and other resources (0.744); demand for exclusive residential development due to flight from the city centre (0.671); demand for exclusive residential development close to newly formed economic centres (0.661); and pressure for resources because of continued economic growth (0.585). These findings corroborate earlier research suggesting that supply and demand drive the real estate market, just like they do in any other industry. But the creation of upscale homes in a nation is driven more by demand than supply (Breitung, 2012 & Douglass et al, 2012).

Component 4: Public-private partnership (PPP)

There were four variables that made up this component, which had the fourth highest percentage of variation explained (4,718%), namely, government and the private sector have policies and practices which allow for exclusive developments (0.812); use of joint initiatives between government and private sector to determine development of spaces and places (0.808); stakeholders are able to develop privately owned public space into exclusive developments (0.742); and privatisation of urban space allows for exclusive development (0.560). These findings corroborate

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earlier research suggesting that public-private partnerships (PPPs), a worldwide phenomenon, are formed as a means of implementing privatization (Forrer et al., 2010). Cities frequently work with the private sector to plan, develop, and manage areas and locations, especially those that lack the resources to draw and retain investments and tourists. This is frequently referred to as urban entrepreneurship (Eick, 2012). PPPs have been analysed and promoted for a long time as an organizational response to urgent social issues. Cities that are both locations and objects of capital accumulation in industrialized nations are depending more and more on PPPs to provide publicly accessible areas and market mechanisms (Forrer et al, 2010; Hui & Hayllar, 2010).

Component 5: Affordability (increase in target population)

There were nine variables that made up this component, which had the fifth highest percentage of variation explained (3,630%), namely, demand for exclusive residential development in more peripheral locations due to lack of space closer to the city (-0.794); potential members have an available and flexible private transport system (-0.750); availability of cohort of homeowners who would be candidates to own a property in an exclusive development (-0.727); Rising incomes mean there is a greater pool of potential members (-0.690); high level of certainty among developers that there will be sufficient reliable buyers (-0.610); increase in resources of population to be able to afford accommodation in exclusive developments (-0.607); there is demand for single-family housing (-0.586); increase in demand for accommodation in such developments within the population (-0.528); and there is lack of objectivity in city planning (-0.527). These findings are consistent with earlier research suggesting that transportation is important for a nation's social and economic growth (White Paper on Transport Policy, 1996). Squires (2002) contended that due to communication and transportation barriers, people were gathered together centuries ago. He goes on to say that since we now live in a time of high technology and quick transit, densely populated areas are unnecessary, and cities are becoming outdated. Moreover, rising earnings have an impact on the growth of privately created commodity housing enclaves, according to Le Goix & Webster (2008). The literature also supports the demand for single-family homes. According to Eade and Mele (2002), the expansion of upscale developments is contingent upon the ongoing generation of real estate transactions and the sale of single-family homes.

Component 6: Profit seeking.

There were three variables that made up this component, which had the smallest percentage of variation explained (3,415%), namely, reliance on capitalism as the dominant economic model (-0.659); there is strong motivation to make profit out of residential developments (-0.638); and use of highest and best use principle. There is strong motivation on the part of the developer to make a good profit from developing land (-0.598). These findings corroborate earlier research suggesting that private sector interests in the creation of urban space aim to maximize profits (Manaf et al., 2016). Like a lot of literature, the inquirer is adamant that space is a valuable resource for generating wealth. Consequently, the best strategy to maximize return on investment is to exclude. The investigation also revealed that developers desire autonomy in choosing different building styles and lack of government oversight so they may resell their homes to banks that will finance them. These results also corroborate other studies that found who benefits in a city depends on where and how money is invested. Becoming a member of an exclusive development makes it much easier to acquire finance or funding opportunities. As a result, social inequality is exacerbated, and exclusive projects continue to emerge.

6. Conclusions

The study's objective was to identify and categorise the forces that influenced the emergence or the continued existence of exclusive housing developments. The taxonomy of the key factors was examined in general. The study used both exploratory factor analysis and the descriptive statistical method to assess the factors found in the literature. Based on the relevance of the variables' loadings

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to the six components from the study of the inferential statistic, six components were found by principal component analysis. The principal component analysis results led to a categorisation of the driving factors into six main categories: free market capitalism (market forces); safety and security; demand (local demand); private-public partnerships; affordability (an increase in target population); and profit-seeking. The absence of data regarding an appropriate analytical taxonomy of the main factors influencing the emergence or existence of exclusive residential developments was an aspect of the knowledge gap when compared to earlier empirical investigations in the South African context. By classifying the underlying factors into taxonomies, this research has added to the body of current knowledge. However, the applicability of the findings to a larger context may not be possible due to a small sample size. More research needs to be conducted in this same area but to a larger population and in other parts of the world.

Author Contributions: Khululekani Ntakana was responsible for the experiment conception and design, experiment execution, data analysis and interpretation, material and reagent contributions, analysis tools, and paper writing. Luxien Ariyan and Sijekula Mbanga provided materials, reagents, analysis tools, and data; they also analysed and interpreted the results. Brink Botha: provided materials, analysis tools, reagents, or data.

Institutional Review Board Statement: There is no experimentation on human subjects which was conducted. The investigation was carried out by conducting a quantitative empirical study together with a literature review. The Nelson Mandela University Research Ethics Committee (Human) granted ethical clearance (ref: H21-ENG-BQS-001) for this investigation. All study participants were then asked for their consent. The informed consent was obtained in written. A copy of this consent is attached as a supplementary file.

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