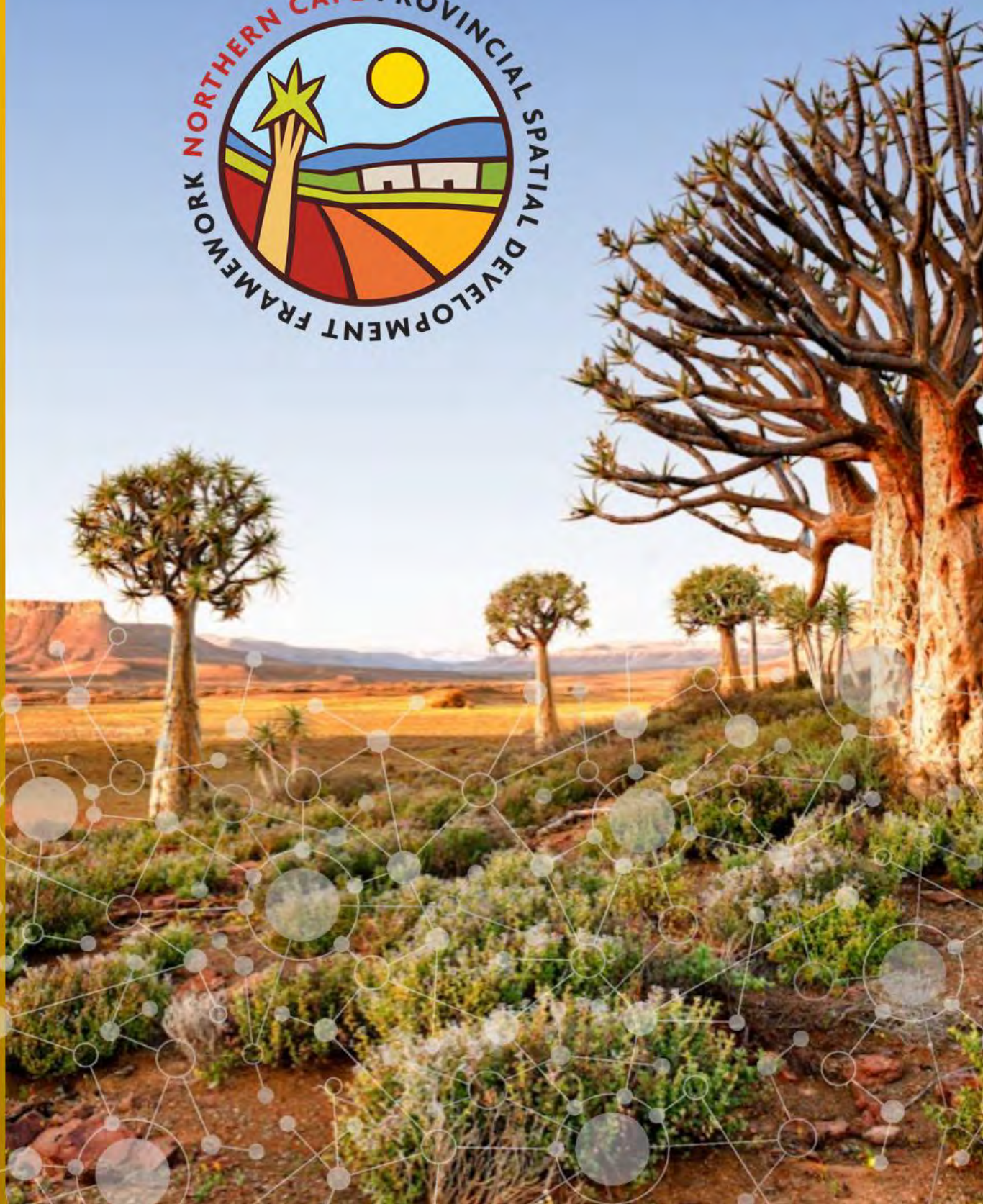
SOCIO-ECONOMIC POTENTIAL OF TOWNS

NORTHERN CAPE

PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK



PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (PSDF)

FOR THE NORTHERN CAPE PROVINCE

REVIEW OF THE SOCIO-ECONOMIC POTENTIAL OF TOWNS STUDY

Joint Venture between PULA Strategic Resources Management and

MVD Kalahari Town and Regional Planners

Specialist Consulted:

Tel: (053) 831 1889

E-mail: NC@mvdkalahari.co.za

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CHAPTER 1

1 SETTING THE SCENE: DECLINING SETTLEMENTS

1.1 CONTEXT OF THE STUDY

The settlement system in the Northern Cape is characterised by numerous small isolated and fairly inaccessible urban and quasi-urban settlements scattered across the vast area of the province. Many of these settlements find it hard to provide basic services and sufficient income generating opportunities to their inhabitants.

A general consensus in the international literature is that sustainable rural development is closely bound to a vibrant and functional urban settlement system. Villages, towns and cities are the "engine rooms" that drive regional development and economic growth. Unfortunately, not all urban settlements have the same growth potential. Growth trends fluctuate over time due to many influencing factors. In a large province such as the Northern Cape these centres make a special contribution towards meeting the general needs in both the towns, as well as in the surrounding rural communities. They also affect global links, the national spatial economy and sustainable regional development in the province.

1.2 PROBLEM STATEMENT

As described by (Visser & Hoogendoorn, 2015) research on the roles and functions of small towns of South Africa is limited, and often skewed due to spatial and characteristic preferences of studies that have been conducted. In the case of the Northern Cape, the above observation is highly applicable, as the rural nature and vast landscape of the Northern Cape, has limited representation in academic studies and literature, typically due to lack of accessibility and limited amount of existing data, which creates difficulties when aiming to conduct detailed research on settlements.

Due to the limited academic knowledge on the characteristics and inter-relations of settlements within the Northern Cape, it is crucial for government, private sector and communities to collaborate in order to develop the required body of knowledge.

Internationally and nationally (Donaldson, 2012) the excepted method to guide government spending and interventions is the development of a study to determine the potential and challenges within various settlements, in order to determine which settlements are most likely to provide the highest level of return on investment, as well as how to sustainably manage areas with limited potential.

In 2011, in conjunction with the Provincial Spatial Development Framework, the first Socio-Economic Potential of Towns Study was conducted in order to identify and address the ad-hoc nature of investment within the Northern Cape. Due to the conflict experienced between the timeframe of the study and that of the 2011 StatsSA census period, resulted in the utilisation of outdated data (2001 and 2007 census and community survey data) that resulted in the questionable accuracy of the study. Thus in order to address the accuracy of the original results and include new policy and legislative developments, the study will be reviewed as part of the review process of the Northern Cape PSDF.

The reviewed Provincial Spatial Development Framework (PSDF) within the Northern Cape regional context must prioritise the effective development of urban and rural spaces over the long term as a.

Town with a real potential for growth must be identified accountably in terms of the demonstrated capacities in the interest of the region as a whole. Several towns in the Northern Cape have been struggling to survive, for some time -to the detriment of the broader regional economy, quality of life and rural development in the province.

1.3 OBJECTIVES OF THE REVIEW OF THE URBAN AUDIT

This urban audit investigates the challenges and problems of urban development in the Northern Cape. But this process must be carried out within the framework of existing national and provincial policy strategies, as well as recognised development theory. The overall aim of this study is to determine the growth performance and development potential of the urban settlements in the province, with a focus on their role in the creation of a dynamic urban and rural development system. More specifically this will include the following specific objectives:

I. Identify criteria and indicators for assessing the urban growth/development potential from relevant academic literature and policy documents. The National Spatial Development Perspective (NSDP) (and National Spatial Development Framework) and the Northern Cape Provincial Growth and Development Strategy (PGDS) provide valuable guidelines in this regard;
II. Statistically measure and compare the growth performance of the urban settlements and local municipalities in the Northern Cape;
III. Qualitative assessment of the economic base and place identity of these localities by engaging local stakeholders - in the process communities will have the opportunity to make input regarding their municipality/town's growth potential.
IV. Index and categorise these settlements according to their development potential and human needs levels;
V. Make appropriate recommendations for appropriate decision-making and investment strategies to facilitate comprehensive rural development and performance management in the towns and municipalities.

1.4 STRUCTURE OF THE REPORT

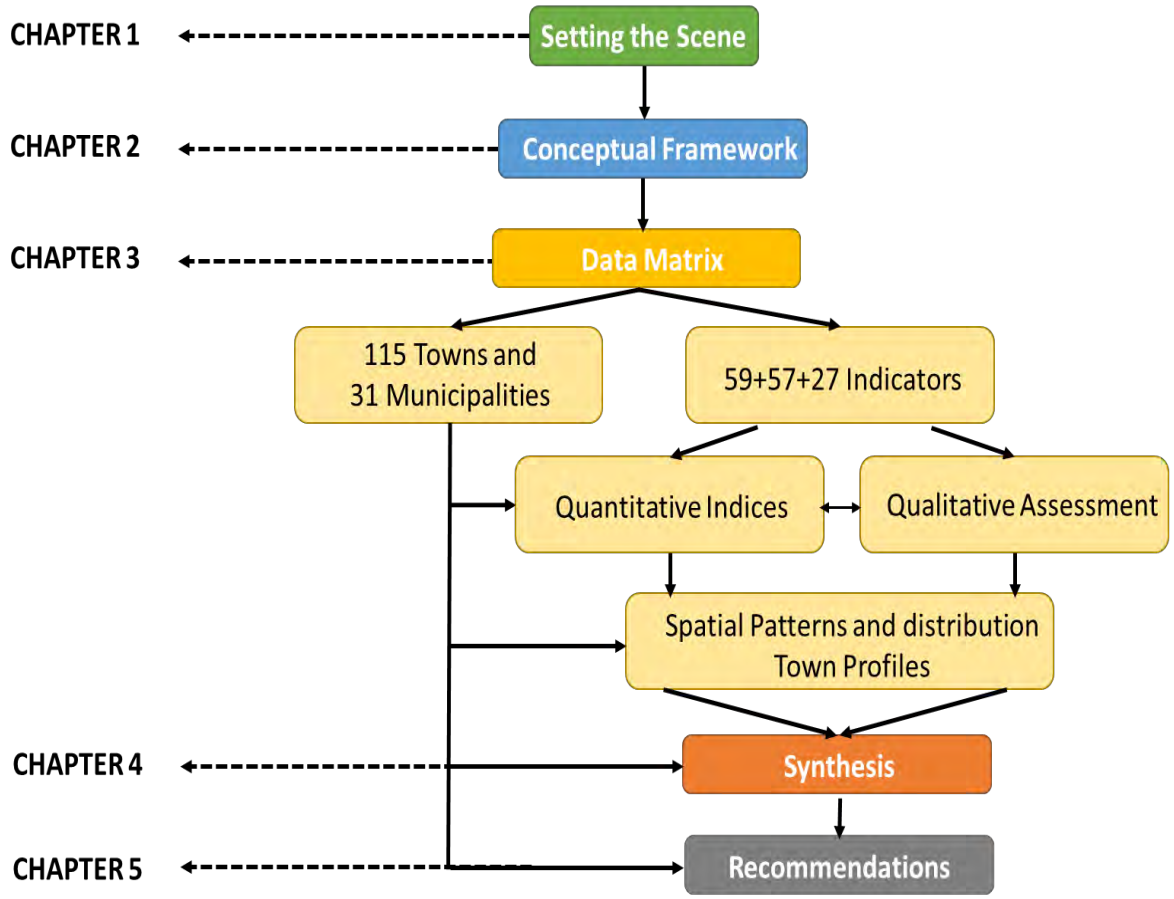


Figure 1: Research structure

CHAPTER 2

1 CONCEPTUAL FRAMEWORK: INSTITUTIONAL AND THEORETICAL GUIDELINES

It is imperative for an empirical analysis of this nature to be aligned with national and international norms regarding town development and associated urban growth dynamics. For that reason, a synoptic overview of relevant international literature and national policy documents is provided.

1.5 ACADEMIC LITERATURE REVIEW

In order to provide a conceptual framework for investigating the growth potential of towns in the Northern Cape, this chapter starts with a short survey on the definition of the concepts 'development', 'capital investment' and 'potential'. Secondly, the role that small towns play in regional and rural development as well as the factors that influence their growth dynamics is summarised. Thirdly, we focus on the role and guidelines contained in the institutional policy documents relevant for the construction of the Northern Cape PSDF.

1.5.1 Defining Rural Development

There is a lack of a common understanding and agreement on the definition of economic development amongst stakeholders. This is manifested in the persistence of unhelpful dichotomies in the development discourse: i.e. pro-growth vs. pro-poor; urban vs. rural; town vs. township; environment vs. development; big vs. small business; formal vs. informal business, etc. This in turn leads to a lack of consensus on what needs to be done and an absence of a common agenda. What is needed is an integration of these concepts (Economic Development Agency, 2011).The following definitions will give an indication of the development scenario that can be expected from the Northern Cape PSDF.

i. **DEVELOPMENT**: This is a process through which matters are changing to an improved state. The process of economic and social transformation is based on a set of complex cultural and environmental factors and their interactions. Development comprises different manifestations:

- Economic development to about cities and regions continually improving their investment climate and business-enabling environment to enhance their competitiveness, to retain jobs and improve incomes. It is, therefore, the increase in the standard of living in a region's population with sustained growth, usually from a lower-level economy to a higher-income economy. This typically involves improvements in a variety of indicators such as literacy rates, life expectancy, poverty rates, GDP and other aspects such as leisure time, environmental quality, freedom, social justice, and economic wellbeing (Economic Concepts, 2010).
- Social development is a related process which results in the transformation of social structures in a manner which improves the capacity of the society to fulfil its aspirations. A region's economic development, therefore, is linked to its human development, which

encompasses, among other things, health and education. These factors are closely related to economic growth so that development and growth go hand in hand (World Bank, 2017).

- Rural development in general denotes the actions and initiatives taken to improve the standard of living in non-urban neighbourhoods, countryside, and remote villages. These communities demonstrate a low population density ratio. Agricultural activities are prominent whereas economic activities relate to the primary sector, production of food items and raw materials. Rural development actions mostly aim at the social and economic development of the areas. Rural development aims at finding ways to improve the quality of life with participation of the rural people themselves so as to meet the required needs of the rural area. As such, local people themselves have to participate in creating their own comprehensive rural development landscape. In this context many approaches and ideas have been developed and followed in the past, i.e. the "bottom-up approach", "participatory rural appraisal", "rapid rural appraisal" and "rural-urban linkage development perspective" etc. (World Bank, 1975)

ii. **DEVELOPMENT CAPITAL**: As defined within the previous Socio-Economic potential of Towns study is, the various forms of "development capital" vested in the region in order to reach its goals and objectives pertaining to sustainable development in the towns. The "Five Capitals Model" (Forum for the Future, 2013) suggests the following capital components in this regard: (I) Natural Capital; (ii) Human Capital; (iii) Social Capital; (iv) Manufactured (Infrastructure) Capital; and (v) Financial (Monetary) Capital.

- Human Capital refers to people's health, education, training, knowledge, skills, spirituality and motivation, which are needed for a flourishing economy, productive work, poverty reduction and capacity for human relationships.
- Social Capital concerns investments by institutions that help us maintain and develop human capital e.g. families, communities, municipalities, trade unions, hospitals and schools. This means access to varied and supportive opportunities for work, health, living conditions, etc.
- Manufactured (Infrastructure) Capital comprises material goods or fixed assets which contribute to the production process and service provision rather than being the output itself - e.g. tools, machines and buildings. The main components include buildings and infrastructure such as roads, communications, waste disposal, water systems, etc
- Natural Capital of the physical environment refers to the natural resources (matter and energy) and processes that are needed to maintain life and to produce/deliver goods and services. They include renewable resources (such as fresh water, fisheries and wood) and non-renewable resources (such as mineral deposits).
- Financial (Monetary) Capital plays a critical role in any economy, enabling the other types of capital to be owned and traded, for example, through shares, bonds or banknotes.
- It is only when the networked relations and correlations among these five capitals are recognised and operational, that a sustainable economy and a "happy" society can be created in the Northern Cape.

iii. **POTENTIAL**: The term "potential" can linguistically be defined as latent excellence or ability that may be developed or is capable of becoming but not yet in existence. The implications of this concept for the development potential of the Northern Cape will become evident in the coming chapters.

1.5.2 The role of small towns in regional and rural development

The role of small- and medium-sized towns has received renewed interest and recognition globally as bridges on the rural-urban development continuum. In a well-balanced settlement system, they act as infrastructural clusters and growth engines for regional development (Weliwita, A & Okpala, D., 2004). During the 1980s many academics, regional planners and policy makers reached consensus that small towns played an essential role as service centres in the development of a region through their economic base, production linkages, as well as trickle down effects (Van der Merwe, 1983; Rondinelli. 1988; Evans, 1992; Gayle, 1992). Lately a team of geographers from Utrecht University (Netherlands) has been conducting an international comparative research programme determining the role of a small town in the developments of its rural hinterland under certain conditions (Titus and Hinderink, 1998). Public funds should be applied for the improvement of a small town's structure and functioning (e.g. investment in market support, provision of water and electricity, development of housing and new industrial areas) only if the basic rural development conditions are found to be suitable (Hinderink & Titus, 2002). The basic driving force behind a town's growth is provided by its specific economic activities, which generate job opportunities, capital, buildings and infrastructure (Badcock 2002: 66).

The potential contribution of small rural towns to local economic development has probably not been sufficiently recognised in rural development strategies. There is scope for a more positive and dynamic approach, which duly recognises the existing and potential economic and social role of rural towns and attaches greater importance to these locations as entry points for policy, investment, job creation, enterprise development and service delivery. Analysis of key sub-sectors can offer significant insights into commodity flows across the rural and urban spaces, as well as these towns' role as market and distribution centres (Wandschneider, 2003)

In order to produce a balanced set of criteria to credibly rank the growth potential of towns in the Northern Cape, a series of national and international case studies on the ranking of central place towns were examined. These methods were initially highly subjective, but ranking studies gradually became statistically more objective. Lately subjective and statistical techniques became much more integrated. At the same time the ranking mechanisms shifted away from a single criterion towards a more comprehensive multidimensional set of criteria (Van der Merwe et al, 2005). Van Lindert and Verkoren's (1997) set of town criteria includes the population profile, the morphological structure, the economic profile, the service infrastructure and the social structure of the respective towns. Hendrik and Titus's (2002) criteria refer to the towns' rural hinterland, the natural resource base, population density, market accessibility, political and economic structures, income distribution, as well as purchasing power of the population which can be considered in determining the growth potential of towns. In a World Bank study on India (Wandschneider, 2003) factors such as markets, raw materials, labour, infrastructure and management were emphasised. In a South African rural town study Local Economic Development initiative was linked to factors such as labour and energy costs,

infrastructure, markets, education and training, capacity and employment opportunities (Lloyd & Horn. 2001).

It is now widely recognised that an economic, social and environmental interdependence exists between urban and rural areas and the “rural-urban linkage development perspective " is increasingly becoming the accepted approach in developing countries. Rural-urban linkage generally refers to the flow of monetary capital, people, goods and information between urban and rural areas. Infrastructure such as transportation, communications, energy and basic services, form the backbone of the urban-rural development linkage approach. Adequate investment in this domain improves rural productivity and better access to markets, jobs and public services (Weliwita & Okpala, 2004).

Recent developments in the urban and rural development literature focus on sustainable development and growth (Schneider et al, 2010), New Ruralism, Agricultural Urbanism, Post-Productivist Landscapes, and Slow City Development (Stellenbosch University & CSIR, 2010). Especially "New Ruralism” is quite relevant and is defined as a framework for creating a bridge between sustainable agriculture and new urbanism. The theory is that sustainable agriculture can assist in bringing cities nearer to earth, with a greater commitment to the ecology and the economy of the surrounding rural hinterland on which the cities depend. Linked to this is the notion of place-making/sense of place, which can assist agriculture to shift its narrow production focus to a more broad-based resource-preservation value approach.

According to Tacoli (2004), the spatial aims of regional planning policies assume that small and intermediate urban centres contribute to regional and rural development in four main ways, namely by being centres:

i. Of demand and markets for rural agricultural produce and products;
ii. In which rural non-farm activities and employment can grow and consolidate;
iii. Where goods and services to surrounding rural areas are produced and distributed;
iv. That attract rural migrants from the surrounding rural areas in order to decrease the labour pressure on larger urban centres.

The recent move to a global economy has been painful for many towns because of the loss of manufacturing jobs the vulnerability of export agriculture, and the increased competition in the energy and mining sectors. Larger commercial towns seem to have a built-in growth dynamic based on a sufficient level of diversification. Net (2005) identifies several noticeable changes taking place in small towns:

- The collapse of many once-prosperous mining towns and the demise of railway towns.
- The decline in agricultural output in many areas or the shift to new rural activities such as game farming, which have significantly reduced reliance on local small centres as points of sale and service supply.
- Advances in transport technology and changes in retail patterns, which have facilitated access to the more distant regional centres and displaced the role of the small agricultural service centres.
- A positive trend is the growth of tourist towns and towns in areas of natural beauty.

- Growth of the larger centres has extended service fields and a diversified economy and has often displaced and absorbed the functions of smaller towns in their area.
- In many of the smaller centres, there is an artificial economic dependence on state welfare on the part of the town's people, the loss of many formal sector job opportunities, continuing poverty and the out-migration of the skilled.
- As result of the amalgamation of smaller centres under a single authority, the loss of local government status has weakened many towns.

Atkinson (Atkinson, 2008) stresses the following arguments in aid of struggling towns:

- There is a need for productive government spending in small and medium-sized towns. The future of small and medium-sized towns should be understood in relation to the spatial strategies of national and provincial governments (i.e. NSDF and PGDP). It will be argued that these towns require some level of productive government spending i.e. expenditure which will raise local production and multipliers.
- To stimulate local economies and to bring additional private sector capital into small and medium-sized towns, the comparative advantages of such towns need to be analysed. Much more effort needs to be done to investigate and promote the real economic drivers of a town and its hinterland.
- To understand the comparative advantage of these towns, there is no "one-size-fits-all" solution to small and medium-sized settlements. This means that every town should be understood in its regional context.
- Efforts should be made to bring services for the second economy into these towns. An injection of funding is required to stimulate the local economy.

1.5.3 Criteria influencing growth and development of towns

Towns originate to meet a particular need or provide a specific service for a specific community at an appropriate location. In this process urban settlements can be classified into a variety of functional types. The majority of towns in the Northern Cape fall into the group of central places, being service centres or market towns that meets the needs of the rural farming community for goods and services (Van der Merwe et al, 2005). Other settlements may have much more specific functions, such as those focussing on mining activities or tourism attractions. It is a well-known fact that not all towns grow at a uniform rate or to the same size. Certain economic functions offer more opportunities for growth and prosperity than others. Over time natural resources may become exhausted and spatial economic relations could change due to technological innovations or altered political and economic policies. Some urban settlements may be adversely affected and stagnate or decline while others may flourish, giving rise to regional inequalities and a sub-optimal functional settlement system.

Certain growth energy is inherent in an urban settlement's location. A town's location with respect to infrastructure, main transport routes, natural resource base and large population concentrations influences its growth trend in a specific manner. Settlements are thus encouraged where there are better living, working, marketing, labour and investment opportunities. Such opportunities usually exist in towns close to metropolitan centres and secondary centres as the towns benefit from the big

city's population concentrations, economic agglomerations, overflow effects and positive externalities. The expansion and improvement of transport systems have also contributed towards a reduction of distance as a barrier in the development and growth of towns. Small and medium-sized settlements located on traffic nodes or along prominent transport corridors should be among the first to intercept or channel extensive economic activities away from the more isolated towns.

Apart from the population migration patterns to and from towns, there is also inherent growth energy for a town in the natural increase of its inhabitants. In this regard the particular demographic and socio-economic structures (i.e. race. sex, age, occupation, income and level of education) have an effect on the birth and death rates of a town. A large and growing population, however, does not guarantee healthy economic growth, especially if the inhabitants are not able to apply economic initiative and labour force productivity. If the Human Development Index (HDI) of a settlement is very low a large and growing population can become a huge economic burden for a town and inhibit its development.

Probably the most prominent requirement for urban change and development is the capacity for management and leadership by means of productivity, new strategies, new technologies and capital investment. The quality of the human resource base and associated behaviour patterns and leadership are important factors that can influence the growth energy of a town. Individuals, entrepreneurs, companies and government institutions have the ability to stifle or stimulate the growth of a settlement through their decisions. The three imperatives of sustainable development (economic viability, social equity and ecological integrity) are equally relevant in this regard. The strong link between the development of small towns, the environment and the types of agricultural development and land tenure structures should also be incorporated.

The most fundamental growth regulator of a town is its economic base. The basic driving force behind a town's growth is provided by its economic activities, which generate job opportunities, capital investment and infrastructure. (Hoyt, 1939; Smith, 1965; Carter, 1981; Hartshorne, 1980; Cheshire, 1990; Marcuse & Giada, 1994; Badcock, 2002; and Pacino, 2001).

The diversity of economic activities (mixture of industrial, service and business composition), represented in a town usually holds the key to how well the urban economy performs. The functional classification of towns offers a very useful analytical instrument that can help to explain why settlements with a certain economic profile perform well or poor. (Cheshire 1990; Markusen & Gwiasda 1994). From a conceptual perspective it is important to refer back to the export base theory, which states that job opportunities will increase most rapidly in those towns that can extend their comparative advantage by the production of goods and services for which there is the greatest demand on the world and national market. The extent to which an enterprise or economic activity can render a service and make sales outside of the town can be regarded as a measure of its contribution or importance to the growth of the settlement. Such activities bring new capital into circulation in the town by attracting it from outside the so-called primary, propulsive, external or basic activities. Other activities are geared more towards meeting the needs of the local inhabitants and thus simply keep capital that is already in the town in circulation. This means that the existing situation is maintained without new growth - the so-called secondary, service, internal or non-basic activities. If the basic activities of a city expand, a chain reaction (multiplier effect) takes place, which also increases non-

basic activities and thus leads to growth in the town. The basic/non-basic ratio for the economic activities of a town can be calculated quantitatively and this can be an indication of the town's potential growth energy and economic links with its region. However, very detailed economic data is necessary for this operation.

The most important cause behind the decline of many towns has to do with the reason for their existence or function within a changing technological framework in a globalised environment. It is obvious that a town that no longer fulfils an appropriate function will start to decline. The reason for the existence of many of the agricultural service centres in the Northern Cape area has been eroded by technological development, especially in the communication and transport sector (Van der Merwe et al, 2005). The mobility of people has increased as a result of better roads, extensive ownership of private vehicles, and access to the internet, which implied the relativity of distance and greater human interaction possibilities. Lower order towns, with their limited variety of goods and services, can no longer compete with higher-order centres. In developing countries, the population usually grows faster than the economy and the capacity of the urban economy cannot create sufficient job opportunities for the growing town population. The key question, then, has to do with how to create employment services and quality of life in such settlements.

Quality of life is also related to the 'sense of place' experienced in a town. The extent to which an urban place developed a unique identity or spirit that differentiates it from other towns is an important gauge of the values and emotional well-being of the local community. This encourages a sense of belonging and personal identification with the specific town (Moore & Graeme, 1994; Tuan, 1977). 'Sense' depends on spatial form and quality, but also on the culture, temperament, status, experience, and purpose of the observer. Lynch (1998) describes sense as the degree to which a place can be clearly perceived and mentally differentiated and structured in time and space by its residents and the degree to which that mental structure connects with their values and concepts - the match between environment, one's sensory capabilities, and one's cultural constructs. The most basic form of sense is 'sense of place'. Identity is the degree to which a person can recognise a place as being distinct from other places and having a character of its own. Lynch (1998) refers to this quality as a convenient peg to hang personal memories, feelings and values on.

In summary: Recent studies (Van der Merwe et al, 2005), which ranked towns for meaningful development assistance, demonstrated that the evaluation mechanism shifted away from a single criterion towards a more comprehensive multidimensional set of criteria.

Van Lindert and Verkoren's (1997) set of town criteria includes the population profile, the morphological structure, the economic activities, the service infrastructure and the social structure. Hendrik and Titus (2002) refer to the role of small towns' rural hinterland, natural resource base, population density, market accessibility, political economic structures, income distribution and purchasing power of the population as resources that can be considered in determining the growth potential of town. In Krige, Schur and Spiel's (1998) analysis of small towns in the Free State, two sets of criteria were used: (i) the quantitative criteria included settlement type, demographic and economic trends, financial and management capacity, as well as access to services and housing; and (ii) a qualitative set of criteria included the level of community participation, sense of place, economic potential as well as delivery record on specific projects.

On the basis of this academic literature study, as well as discussions with specialists in the field of small town and regional development, it is evident that the growth potential of individual towns in the Northern Cape province can best be evaluated comprehensively through a balanced set of multi-dimensional criteria that accounts for the diversity and complexity of comprehensive rural development and accompanying town growth. In the next chapter these criteria will be given empirical substance through a set of measurable indicators and variables in the data matrix developed for this study.

1.6 RELEVANT POLICY DOCUMENTS

After the conclusion of the original socio-economic potential of town study, many new policy and legislative documents have been promulgated that aims to guide development on National, and Provincial levels as well as within Municipal spaces. The following section will provide an overview of the policy and legislative document that are applicable to the study.

1.6.1 National Development Plan 2012 (NDP)

The National Development Plan (NDP) of 2030 envisions a society where everybody is equally and Optimally empowered by changing the past narrative of conquest, oppression and resistance (NPC$_1$, 2012:1). The primary objective of the NDP is to eliminate poverty and reduce inequality by 2030. Since the Commissions' Diagnostic Report of 2011, the National Planning Commission set out to address 9 challenges as a long-term goal for 2030. Those challenges are as follow (NPC, 2012:15):

- High Unemployment rate;
- Substandard education quality;
- Poorly located and maintained infrastructure;
- Inclusive development is prohibited by spatial divides;
- Current economic resource consumption is unsustainable;
- Public health is under capacitated to meet the growing demand;
- Public services are unsystematically located and poor in quality;
- Corruption is beyond limits; and
- South Africa remains a divided country.

The NDP is intrinsically a multidimensional framework, meaning that addressing the challenges would need to be done interactively by fostering social cohesion through strong leadership, effective government, and active citizenry, in order to enable growth, reduce poverty and capacitate people. In broad terms, the NDP focuses on a few core areas such as poverty alleviation by increasing employment, improving quality of education, skills development and innovation. This would mean that business, labour, communities and government need to collaborate on achieving faster and sustainable economic growth. Unfortunately, the Northern Cape's economy is not a closed system and is influenced by global and national drivers and trends.

The National Development Plan (NDP) sets out to describe the envisioned scenario for South Africa in which its goals and objectives will be achieved. These objectives include an increased Gross Domestic Product (GDP) at an annual growth rate of 5.4 % and a national saving increase to 25% of the GDP. This also includes the rise of fixed investment to 30% of the GDP. Numerous actions are stipulated

within the NDP to reinforce trade. These actions include, inter alia, trade penetration and diplomatic presence should be focused on fast growing markets (Asia, Brazil and Africa) and that the focus of implementation should be on Regional Integration Strategies. In view of the NDP's wide-ranging and extensive coverage, almost every government department is involved in its implementation, not only at national, but also at provincial and municipal levels.

Key observations for the PSDF include:

- Eliminate deficiencies in administrative procedures;
- Looking at spatial contracts;
- Development of plans that cross municipal, and even provincial boundaries;
- Explicit spatial restructuring strategy;
- Retool instruments of land-use management to achieve spatial objectives

1.6.2 National Spatial Development Perspective and Draft National Spatial Development Framework

At this point in time, the National Spatial Development Framework is being compiled by the Department of Rural Development and Land Reform. Until the National Spatial Development Framework is approved by the Cabinet, the National Spatial Development Perspective and its guidelines are still valid, regarding identification and prioritisation of areas.

One key mechanism of the Draft NSDF is the service wheel as illustrated below, which provides guidance to local and provincial government regarding the accepted level of services per the hierarchy of the settlement (Department of Rural Development and Land Refrom, 2018)

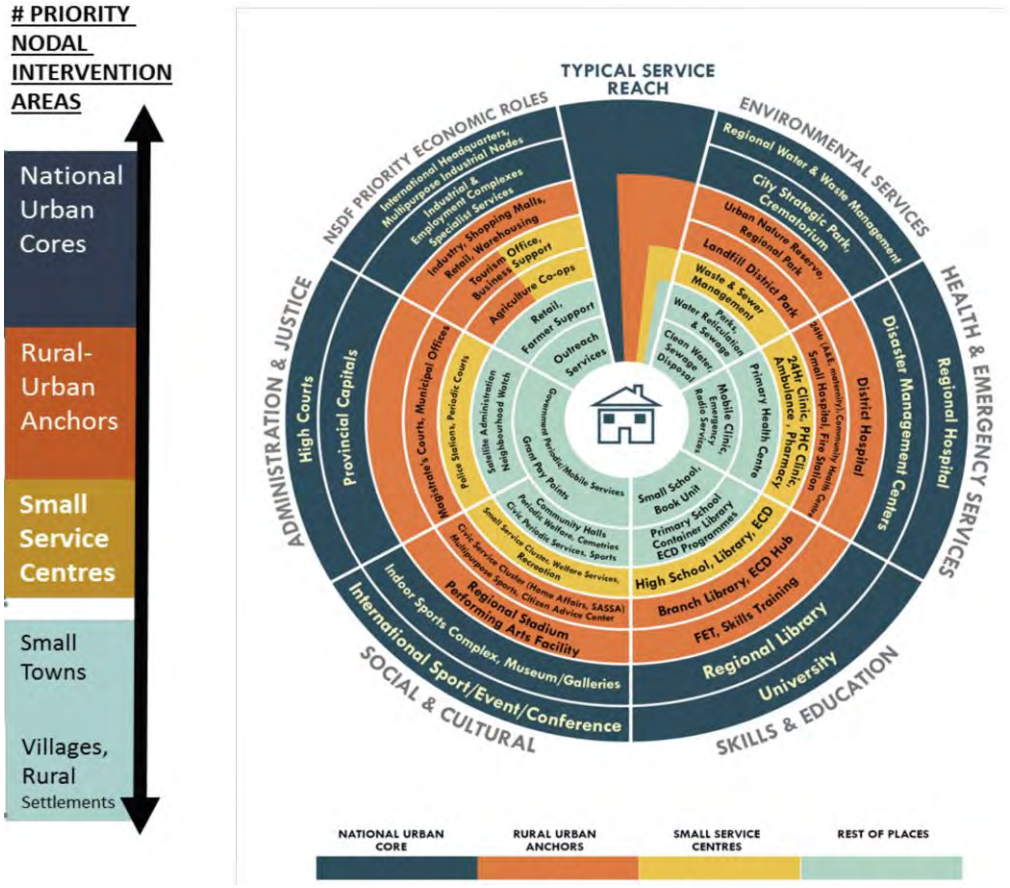


Figure 2: Draft NSDF distribution of services wheel

The National Spatial Development Perspective (NSDP, 2006) issued by the Presidency of South Africa indicates a dramatic new approach in future policy directions with respect to investment and other support for national regional and town development.

In no country in the world is social and economic development evenly distributed in geographic space. Spatial disparities are a universal problem affecting all countries. South Africa is not unique. The NSDP (2006) is informed by international case studies which show the following observations:

i. Unfocused infrastructure spending does not necessarily result in improved GDP growth;
ii. Regions which already have some economic success are more likely to grow than other regions;
iii. Success is often achieved through focused and polarised investment;
iv. Redirecting public investment from economically dominant regions to lagging regions has not automatically spurred economic activity in these regions.
v. The poor benefit when they have more options to which to turn, and more options are created in the profile of dynamic growth processes, not in the declining sectors that are left behind.

The National Spatial Development Perspective, therefore, is underpinned by the following assumptions:

- Location is critical for the poor to exploit growth opportunities;
- The poor that are concentrated around vibrant economic centres have greater opportunity of gaining from economic growth;
- Areas with demonstrated economic potential provide greater livelihood and come protection as well as a more favourable environment to combat poverty.

The national space economy suggests the identification of localities (towns and cities) with development potential in terms of the following six categories (see Table 2.1) of development potential (NSDP, 2006):

These categories were developed to (i) enable an identification of areas of economic significance and enable comparison between areas; (ii) highlight key characteristics and the diverse and unique attributes of localities; and (iii) provide signals as to which sectors and institutions need to be supported to ensure the maintenance and growth of the areas of demonstrated economic significance.

Table 1: Development Potential Categories suggested by the NSDP

Category	Description
Innovation and experimentation	Research and development and the application of technology to production processes.
Production of high-value. differential goods	All forms of production that focus on local and/or global niche markets such as manufacturing and some specialised agricultural or natural resource-based products.
Production of labour-intensive. mass- produced goods	Industries in this category. such as iron and steel producers and agricultural and mining activities arc highly dependent on proximity or good cheap transport linkages to the huge volumes of natural resources

Category	Description
	that they use in their production processes as well as the availability of greater numbers of unskilled and semi- ski lied labour.
Public services and administration	Activities in this group tend to take place in larger towns and cities with significant public-sector employment and consumptions, supporting private-sector activities.
Retail and private sector services	These consist of retail catering and personal services both formal and informal. These are major components of any economy and of large employers of skilled and semi-skilled workers in most advanced economics. Such activities flourish in diverse settlements with large populations.
Tourism	These diverse set of activities, while generally less spatially focused than the manufacturing and services sector are nonetheless all dependant on a tourist-attractions (e.g. eco- scenery. culture. heritage): good transport routes: safety: and. in certain cases high-quality medical services restaurants. retail outlets and hotels

In order to identify the development potential of the respective urban settlements the NSDP recommended the creation of a composite spatial profile of resource potential, existing economic activity and human needs. The results of such an analysis should be translated in specific potential categories. From such an analysis, broad guidelines can be put forward:

- The further concentration of people in need in low potential areas should not he encouraged Where possible, people should be assisted through social investment to become more mobile so that they may choose to move out of such an area.
- Future economic growth should primarily be explored in those areas with a medium to high value resource base where there is economic potential to be exploited. Economic activity should be encouraged and supported by infrastructure (fixed) investment where there is already a medium to high level of economic activity and where (natural and human) resource potential is medium to high (NSDP, 2006).
- Of course, this does not mean that localities not identified may not have potential, but that the current interpretation of the available data will need to be supplemented by more local area assessments of potential as required. In order not to discriminate against people who are currently location ally disadvantaged, it is proposed that the government seek to redress these inequities by maintaining the current distribution of fiscal resources to these areas, but that this investment be shifted to fewer fixed assets. This could mean that only a very basic level of infrastructural services (or mobile services) should be provided and that an additional social investment goes into skills development, labour-market information and other resources that will enable those living in these areas to become more mobile (NSDP, 2006).

The NSDP's reference to 'fixed investment' and 'social investment' relate to development capital theory (see section 2.1.1). The five types of capital assets explain the goods and services that are needed to improve quality of life and also to sustain urban and regional development (Forum for the Future, 2005). The underlying objective of any government policy for balanced development should

identify and implement practices aimed at maintaining and, where possible, increasing the different types of capital stocks.

The NSDP's reference to social investment links to the human and social capital, while fixed infrastructural investment connects with manufactured capital. Social investment thus implies the allocation of capital to advance peoples' socio-economic and cultural well-being. Public expenditure investment in quality education and health provision is a good example of social/ human capital being crucial in achieving substantial poverty reduction.

Given the national government's objectives of growing the economy, creating jobs, addressing poverty and promoting social cohesion, the NSDP (2006) assists local and provincial governments in confronting the following fundamental planning questions:

- Where should government direct its investment and development initiatives to ensure sustainable and maximum impact?
- What kinds of spatial forms and arrangements are most conducive to the achievement of the objectives of democratic nation-building, as well as social and economic inclusion?
- How can government capitalise on complementarities and facilitate consistent decision-making?

In order to contribute to the broader growth and development policy objectives of government, the NSDP puts forward a set of five normative principles:

i. Rapid economic growth that is sustained and inclusive is a pre-requisite for the achievement of other policy objectives, among which poverty alleviation is a key facet.
ii. Government has a constitutional obligation to provide basic services (social capital) to all citizens (e.g. water, energy, health and educational opportunities) wherever they reside.
iii. Beyond this constitutional obligation, government spending on fixed investment (infrastructural capital) should be focused on localities of proven economic growth and development potential in order to gear up private-sector investment, to stimulate sustainable economic activities and to create long-term employment opportunities.
iv. Efforts to address past and current social inequalities should focus on people, not on places. In localities with high levels of need and low demonstrated economic potential, government should, beyond the provision of basic services, concentrate primarily on social/human investment by providing education, training, and social transfers. It should also reduce migration costs by providing better information regarding opportunities and capabilities. This could enable people to gravitate - if they choose so - to localities that are more likely to provide sustainable employment and economic opportunities.
v. In localities where there are high levels of need (poverty) and demonstrated high economic potential, this could be an indication for fixed and social investment to exploit the potential of those localities.
vi. In order to overcome the spatial distortions of apartheid, future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or link with national growth centres. Infrastructure investment should further support localities that may become major growth nodes in South Africa and the SADC region

to create regional gateways to the global economy (Namibia and Botswana are quite relevant for the Northern Cape in this regard).

While the idea of focusing government spending on fixed infrastructure in areas with some potential for economic development may seem to exclude other areas/towns from development this is in fact not the case. Different regions and settlements have different economic potential and the spatial variations in the incidence of poverty are also vastly different. The NSDP argues that these diverse and disparate spatial contexts suggest a policy approach that itself should be differentiated and conducive to the requirements of the different contexts. Hence, in areas of low or no economic potential, the path of development and poverty reduction should be through a focus on investment in human and social capital (e.g. education, training, social welfare, rural development planning, land and agrarian reform, expansion of agricultural extension services, etc.). This means that each individual town should discover its real development potential and then grow to the maximum of that development level. It is important to stress that the NSDP does not in any way rule out investment in small towns per se. What matters is whether an area has the potential to grow economically in a sustainable way, create jobs and alleviate poverty. If a small town has such potential there is nothing that precludes such investment (Orange et al, 2008).

The NSDF is supported by the National Urban Development Framework (Dept. of Co-operative Governance and Traditional Affairs, in conjunction with the Presidency and SA Cities Network, 2009.) The purpose of a national urban development framework is to provide a common view on how to strengthen the capacity of South Africa's towns, cities and city-regions to realise their potential to support shared growth, social equity as well as environmental sustainability as, key components of our national agenda. Additional recommendations are also made for the differentiated support required by the different types of urban settlement, in line with the NSDP.

1.6.3 Spatial Planning and Land Use Management Act, Act 16 of 2013 (SPLUMA)

The Constitution assigns provincial and regional planning as exclusive responsibilities of Provincial Government. In terms of Section 15 of SPLUMA 2013 and Section 4 of the Land Use Planning Act, Premiers are required to compile and publish a spatial development framework (SDF) for their Province. This PSDF must coordinate, integrate and align:

- Provincial plans and development strategies with policies of national government;
- the plans, policies and development strategies of provincial departments; and
- The plans, policies and development strategies of municipalities.

Whilst the Constitution assigns shared and exclusive spatial responsibilities to each sphere of government, it is evident that provincial government's PSDF mandate requires coordination, integration and alignment between all spheres of government.

In response to the quest of reversing the spatial effects of apartheid and infusing a new South African spatial perspective, the SPLUMA was gazetted on the 5th of August 2013, with the following aims:

- This act, as a consequence ultimately paves the way for municipalities to become the primary regulators of land use;

- The implementation of this act will assist the transformation agenda and quite progressively engineer South Africa's spatial planning and land use management systems in a way that promotes socio and economic inclusion; and
- Furthermore, it provides for the sustainable and efficient use of land resources and the redress spatial inequalities.

The Spatial Planning and Land Use Management Act (SPLUMA) was signed into law by the President on 02 August 2013, and formally came into effect on the 1st of July 2015. This Act provides a framework for all spatial planning and land use management legislation and processes in South Africa. It seeks to promote consistency and uniformity in procedures and decision-making regarding spatial planning across the country. SPLUMA embodies the constitutional imperatives relating to the protection of the environment and property rights; the right of access to housing and the rights to sufficient food and water.

The preamble to SPLUMA specifically refers to sustainable development, which requires the integration of social, economic and environmental considerations in future planning and ongoing land use management. The intent of the legislature is that municipalities must participate in national and provincial development programmes.

As the Socio-Economic Potential of Towns study aims to inform the PSDF and other decision-making processes and structures, as it forms a key component in the implementation of the SPLUMA principles, as defined and described within the PSDF Status Quo document (Office of the Premier, 2018).

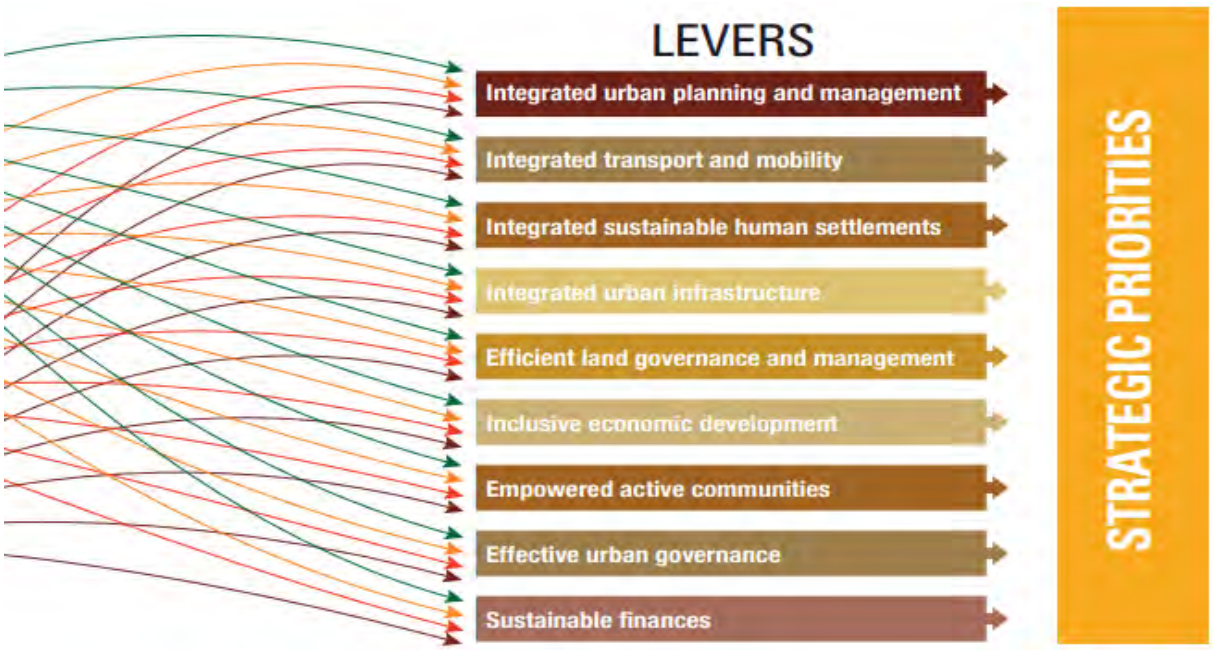
1.6.4 Integrated Urban Development Framework, 2016 (IUDF)

The Integrated Urban Development Framework (IUDF) is a policy initiative coordinated by the Department of Cooperative Governance and Traditional Affairs. The IUDF seeks to foster a shared understanding across government and society about how to effectively manage urbanisation and achieve the goals of economic development, job creation and improved living conditions for our people.

THE IUDF RESPONDS TO THE POST-2015 SUSTAINABLE DEVELOPMENT GOALS (SDGS), IN PARTICULAR TO GOAL 11:

Making cities and human settlements inclusive, safe, resilient and sustainable. It also builds on various chapters of the National Development Plan (NDP) and extends Chapter 8 'Transforming human settlements and the national space economy' and its vision for urban South Africa.

The IUDF presents an urban vision of creating "liveable, safe, resource-efficient cities and towns that are socially integrated, economically inclusive and globally competitive, where residents actively participate in urban life". Alignment of people's jobs, livelihoods, service promises and urban dividend that can reset the country's social and economic growth trajectory. The key development levers identified within the IUDF are illustrated in the figure below.



The Socio-Economic potential of towns study will support and provide insight to the developmental status of municipalities and towns within the Northern Cape Province, thus assisting in the identification of areas with potential, as well as areas in need of intervention or assistance regarding the mitigation of challenges faced by the towns, as well as measures on how to unlock the latent potential within a town. Thus, the study will support COGHSTA in the implementation and monitoring of the IUDF.

1.6.5 Northern Cape Provincial Growth and Development Framework (PGDP)

Currently the PGDP is being reviewed simultaneously with the PSDF. After the completion of the PGDP document the key drivers and objectives will be included.

1.6.6 Northern Cape Provincial Spatial Development Framework (PSDF)

The Provincial Spatial Development Framework is currently in the process of being reviewed. As described in the Spatial Planning and Land Use Management Act, Act 16 of 2013 (SPLUMA) section, the PSDF is mandated to provide guidance to decision-makers regarding the prioritisation of projects and on the measures required to obtain the desired spatial form.

The Socio-economic potential of town study will inform the Settlement Hierarchy contained within the PSDF document that will indicate which towns and municipalities provides the highest levels of return on investment, to aid the efficient use of government funds and investment, in order to promote the SPLUMA principles and address the Apartheid spatial legacy.

CHAPTER 3

1 RESEARCH METHODOLOGY: CREATING AN URBAN INVESTMENT TYPOLOGY.

As the research agenda indicates (Figure 1), the data matrix for this study consists of a list of towns in the Northern Cape Province as cases/entities, each evaluated in accordance with a set of quantitative variables synthesized as indicators of urban development potential. Our explication of the data matrix commences with the selection of towns and the quantitative indicators decided upon. It then progresses through an explanation of the measurement methodology, followed by the presentation of the quantitative town profiles.

Using state of the art technology in combination with well-defined scientific methodology of multi-criteria decision analysis and analytical hierarchical approach, the potential of towns study was updated as follows. Using GIS data of the Northern Cape of which there is approximately 140 individual datasets of which the latest data used included 2016, the data was converted into their pixel-based counterparts (raster images), which is done through the spatial analysis function available in ArcGIS. After conversion the pixel values is recalibrated using a range calculation which simply takes the lowest value in the image and the highest value and recalculated each pixel to be a percentage based on the range. For example, pixels with the highest values will be near 100% (most potential) and those with the lowest near 0% (no potential). When each image in now in the same percentage format ranging from 0-100%, multiple datasets (images) can now be combined based on multi-criteria decision analysis and analytical hierarchical approach using a percentage weight for each input in the final answer. The various index criteria stipulated in the potential of towns study is then calculated accordingly.

With the final answers in image format covering the whole Northern Cape spatially, the values can be abstracted by taking the average pixel values around each town using a radius of 20km (large towns such as Kimberly and Upington) and 10km (small towns such as Springbok, Prieska, Sutherland etc.). Using zonal statistics provided through the ArcGIS platform the final answer per town is calculated.

With all the potential values calculated per town based on a 0-100% the data is reformatted into a standard deviation index (STD). Using the Northern Cape as a whole, the average value for all the towns per index is calculated to be used as a balance line. Then the values above the average and the maximum value is recalculated into a range of zero to one with one (0 to 1) being the maximum value. Values below the average is also formatted into a range of zero to minus one (0 to -1). This index then vividly portrays the potential of each town per index by showing whether it's above or below average.

1.1 SELECTION OF TOWNS

The brief for the 2011 research directed the study was to the consideration of all urban places in the Northern Cape Province. The basis for the selection of urban places was the 2011 Population Census. Geographical units availed by this Census qualifying for inclusion were all 'sub places' with area-types classified as 'non-traditional' Single settlements often consisted of multiple polygons - consequently it was necessary to group these units to represent their respective urban areas. In order to do this, sub-places with similar 'main-place' names were grouped. Once this was completed, urban polygons belonging to the same urban settlement were recoded and their town names assigned. The total

population was calculated for each of these settlements. The urban places were ranked on population size and all urban settlements exceeding 350 residents were selected for further analysis in the data matrix. These units were mapped and inspected for possible omissions and further grouping. Other 'main places' in the 2011 Population Census that were also grouped with their functional counterparts are former 'black' and "coloured' townships.

This procedure resulted in the creation of a final data matrix consisting of 98 urban places within 26 local municipalities in the Northern Cape Province for which data were collected from various sources to measure their growth potential. The map in Figure 3 displays the municipal boundaries and geographical distribution of these towns, while Table 1 lists the towns within their 31 encompassing municipal structures.

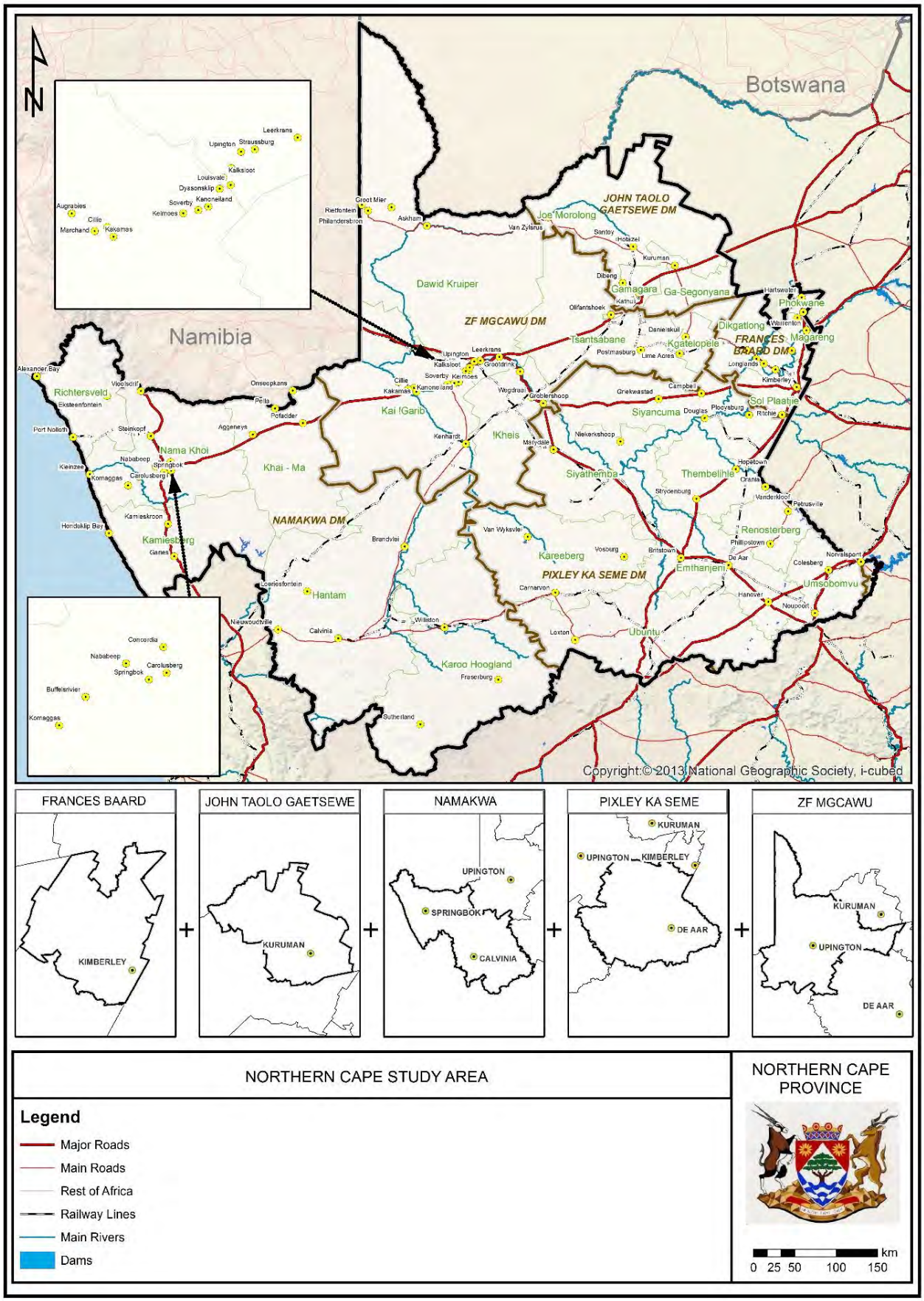


Figure 3 Spatial distribution of the selected towns for the 2018 study review

Table 2: Selected town for 2018 Study Review

SETTLEMENT	LOCAL MUNICIPALITY	DISTRICT MUNICIPALITY	2011 POPULATION
Kimberley	**Sol Plaatje**	**Frances Baard**	**225155**
Jan Kempdorp	Phokwane	Frances Baard	23003
Warrenton	Magareng	Frances Baard	22588
Barkly West	Dikgatlong	Frances Baard	20105
Ritchie	Sol Plaatje	Frances Baard	14850
Hartswater	Phokwane	Frances Baard	10465
Delpoortshoop	Dikgatlong	Frances Baard	10346
Windsorton	Dikgatlong	Frances Baard	6250
Ganspan	Phokwane	Frances Baard	3518
Pampierstad	Phokwane	Frances Baard	2272
Ulco	Dikgatlong	Frances Baard	1754
Longlands	Dikgatlong	Frances Baard	507
Kuruman	**Ga-Segonyana**	**John Taolo Gaetsewe**	**13057**
Kathu	Gamagara	John Taolo Gaetsewe	11510
Olifantshoek	Gamagara	John Taolo Gaetsewe	10234
Dibeng	Gamagara	John Taolo Gaetsewe	7848
Hotazel	Joe Morolong	John Taolo Gaetsewe	1756
Van Zylsrus	Joe Morolong	John Taolo Gaetsewe	438
Santoy/Blackrock	Joe Morolong	John Taolo Gaetsewe	346
Upington	**Dawid Kruiper**	**ZF Mgcawu**	**67581**
Postmasburg	Tsantsabane	ZF Mgcawu	30089
Danielskuil	Kgatelopele	ZF Mgcawu	13598
Kakamas	Kai! Garib	ZF Mgcawu	9539
Keimoes	Kai! Garib	ZF Mgcawu	9501
Groblershoop	!Kheis	ZF Mgcawu	4938
Kenhardt	Kai !Garib	ZF Mgcawu	4842
Lime Acres	Kgatelopele	ZF Mgcawu	4408
Augrabies	Kai! Garib	ZF Mgcawu	3627
Marchand	Kai! Garib	ZF Mgcawu	3223
Kalksloot	Dawid Kruiper	ZF Mgcawu	2752
Grootdrink	!Kheis	ZF Mgcawu	2645
Rietfontein	Dawid Kruiper	ZF Mgcawu	2293
Kanoneiland	Kai! Garib	ZF Mgcawu	2251
Wegdraai	!Kheis	ZF Mgcawu	2189
Cillie	Kai!Garib	ZF Mgcawu	1969
Louisvale	Dawid Kruiper	ZF Mgcawu	1637
Leerkrans	Dawid Kruiper	ZF Mgcawu	1383
Soverby	Kai! Garib	ZF Mgcawu	1292
Philandersbron	Dawid Kruiper	ZF Mgcawu	1081
Riemvasmaak	Kai! Garib	ZF Mgcawu	694
Askham	Dawid Kruiper	ZF Mgcawu	607
Dyasonsklip	Kai! Garib	ZF Mgcawu	580
Groot Mier	Dawid Kruiper	ZF Mgcawu	500

SETTLEMENT	LOCAL MUNICIPALITY	DISTRICT MUNICIPALITY	2011 POPULATION
Straussburg	Dawid Kruiper	ZF Mgcawu	450
Klein Mier	Dawid Kruiper	ZF Mgcawu	449
Olynvenhoutsdrif	Kai! Garib	ZF Mgcawu	389
De Aar	**Emthanjeni**	**Pixley ka Seme**	**29989**
Douglas	Siyancuma	Pixley ka Seme	20082
Colesberg	Umsobomvu	Pixley ka Seme	16870
Prieska	Siyathemba	Pixley ka Seme	14246
Hopetown	Thembelihle	Pixley ka Seme	10260
Victoria West	Ubuntu	Pixley ka Seme	8254
Noupoort	Umsobomvu	Pixley ka Seme	7848
Carnarvon	Kareeberg	Pixley ka Seme	6613
Griekwastad	Siyancuma	Pixley ka Seme	6428
Petrusville	Renosterberg	Pixley ka Seme	5211
Britstown	Emthanjeni	Pixley ka Seme	5145
Phillipstown	Renosterberg	Pixley ka Seme	3365
Strydenburg	Thembelihle	Pixley ka Seme	2987
Marydale	Siyathemba	Pixley ka Seme	2624
Campbell	Siyancuma	Pixley ka Seme	2179
Niekerkshoop	Siyathemba	Pixley ka Seme	1729
Van Wyksvlei	Kareeberg	Pixley ka Seme	1721
Orania	Thembelihle	Pixley ka Seme	1400
Vosburg	Kareeberg	Pixley ka Seme	1259
Vanderkloof	Renosterberg	Pixley ka Seme	1228
Hanover	Emthanjeni	Pixley ka Seme	1200
Norvalspont	Umsobomvu	Pixley ka Seme	1198
Loxton	Ubuntu	Pixley ka Seme	1063
Plooysburg	Siyancuma	Pixley ka Seme	594
Springbok	**Nama Khoi**	**Namakwa**	**12789**
Calvinia	Hantam	Namakwa	9680
Steinkopf	Nama Khoi	Namakwa	7842
Port Nolloth	Richtersveld	Namakwa	6092
Nababeep	Nama Khoi	Namakwa	5374
Concordia	Nama Khoi	Namakwa	4988
Williston	Karoo Hoogland	Namakwa	3368
Pofadder	Khai-Ma	Namakwa	3287
Komaggas	Nama Khoi L	Namakwa	3116
Fraserburg	Karoo Hoogland	Namakwa	3029
Brandvlei	Hantam	Namakwa	2859
Sutherland	Karoo Hoogland	Namakwa	2836
Loeriesfontein	Hantam	Namakwa	2744
Pella	Khai-Ma	Namakwa	2470
Aggeneys	Khai-Ma	Namakwa	2262
Garies	Kamiesberg	Namakwa	2105
Nieuwoudtville	Hantam	Namakwa	2093

SETTLEMENT	LOCAL MUNICIPALITY	DISTRICT MUNICIPALITY	2011 POPULATION
Onseepkans	Khai-Ma	Namakwa	2090
Kleinzee	Nama Khoi	Namakwa	1946
Alexander Bay	Richtersveld	Namakwa	1736
Carolusberg	Nama Khoi	Namakwa	1335
Buffelsrivier	Nama Khoi	Namakwa	1065
Kamieskroon	Kamiesberg	Namakwa	893
Vioolsdrift	Nama Khoi	Namakwa	600
Hondeklip Bay	Kamiesberg	Namakwa	540
Eksteenfontein	Richtersveld	Namakwa	520

1.6.7 Selection and derivation of quantitative indicators

In the 2011 study, a set of 59 variables was identified for which information could be obtained for each of the 115 selected towns. The 2018 study makes use of 72 variables, which was sourced at ward or municipal level, where possible. The choice of these variables was based on the brief of the study, the availability of data, as well as the criteria identified by the literature study discussed in the previous chapter. Only 98 towns fit the criteria, mostly due to changes in the scope of "main" and "sub places" in the 2011 Census data. The intention was to measure the required criteria/dimensions of urban growth potential and human needs as comprehensively as possible, in as wide as possible area, in order to ensure that towns of all characteristics would be included. In line with the NSDP, variables were grouped into two major indicator dimensions representing (i) urban development/growth potential; and (ii) human development needs, which is then further guided by the NSDF in terms of identifying the hierarchy of the settlements.

The first major dimension, development potential was divided into three representative sub-themes. These sub-themes were further subdivided into eight functional groups of indicators as indicated by the table below:

Table 3: Indicator and sub-theme categories

<table>
<tr><td>Natural Resources (20)</td><td rowspan="2">COMPOSITE RESOURCE POTENTIAL INDEX (23)</td><td rowspan="5">COMPOSITE DEVELOPMENT INDEX (52)</td></tr>
<tr><td>Human Resources (3)</td></tr>
<tr><td>Transportation and communication (6)</td><td rowspan="2">COMPOSITE INFRASTRUCTURE INDEX (14)</td></tr>
<tr><td>Institutional services (8)</td></tr>
<tr><td>Economic sectors (5)</td><td rowspan="4">COMPOSITE ECONOMIC ACTIVITY INDEX (15)</td></tr>
<tr><td>Commercial services (4)</td></tr>
<tr><td>Market and accessibility (4)</td></tr>
<tr><td>Property market (2)</td></tr>
<tr><td>Human Development Index (19)</td><td>COMPOSITE HUMAN NEEDS INDEX (19)</td><td>COMPOSITE NEEDS INDEX (19)</td></tr>
</table>

=This number refers to the number of variables in each indicator group

Although the main focus of this study is to identify those towns in the province that have inherent positive growth and development potential, it is also incumbent upon the analysis to provide guidelines that will allow formulation of nuanced policies for handling places with low growth potential, but where human needs are high. To this end another set of variables measuring a fourth dimension on human development needs was derived. These themes and sub-themes not only comply with the requirements set out in the NSDP and Northern Cape PGDP policy documents, but also with the guidelines distilled from the international literature.

Apart from giving a cross-sectional perspective on the status quo in the 98 urban places, the study also endeavours to add a regional and contextual element to the analysis by computing and mapping the same set of indices for the 26 local municipalities, principally based on 2011 census data.

Change analysis at local municipality and town level, was done by comparing the 2011 study results with that of the 2018 study results. As the 2011 study mainly uses 2001 and 2007 StatsSA data, and the 2018 study 2011 and 2016 StatsSA data, it provides an adequate time-lapse to indicate the level of changes experienced at municipal and town level.

A detailed explanation of how the values for different variables in the data matrix were derived will now be provided. Combined quantitative indicators indexing each of the urban development dimensions were devised by standardizing the selected individual variables and summing the standardized z-scores to derive compound indices. Standardized z-scores are computed by the formula:

$$z_{ik} = (x_{ik} - \bar{x}_k) / sd_k$$

Where:

x_{ik} = Raw value of variable k for town *i*

$\bar{X}_k$ = Mean value of variable *k* for all towns in the province

sd_k = Standard deviation of variable *k*.

The z-score of variable k has an average value of zero and a standard deviation of 1.0. This means that towns that have values above the provincial average for a particular variable have positive z-scores, whereas towns that have negative z-scores have values below the provincial average. Those towns with values close to the average have small deviations from zero, whereas those that have large positive or negative z-scores are substantially above or below the mean for the province. As z-scores for different variables are comparable, these were aggregated to create the various indices. The index values represent the mean of the z-scores. See Table 4 for details regarding the specific variables used to create the compound indices for each of the levels of analysis. The table provides a brief explanation of the data sources and statistical procedures used to generate each of the variables for respectively the 98 towns and the 26 municipalities. Each of the indices and their derivation is discussed in the following section.

1.6.8 Indices status of towns and municipalities

1.6.8.1 Building on the 2011 Study Indices:

The 2018 review of the Socio-Economic Potential of Towns Study, utilised, where possible the same techniques and data sources, in order to be able, the results with the previous study result. With this said, various indicators were added to some of the indices in order to provide a more accurate reflection of the town development profiles. The following section outlines the methods and data utilised for each index.

1.6.8.1.1 Natural resources index

The indicators assess the amount of developable land available within the municipal or commonage areas. It also considers the amount of water available, the agricultural and tourism potential as well as the environmental sensitivity of the municipal area towards tourism and other economic activities.

1.6.8.1.2 Human resources index

The human resource potential indicators are to be measured using both existing literacy levels as well as education levels. The indicators are to assess the size and quality of the labour force.

1.6.8.1.3 Transportation and communications index

Transportation and communication infrastructure to be measured using either available (sourced) variables or computed (through a cost surface analysis or standard deviation process) mean values using infrastructure data. The indicators assess the availability and accessibility of transport and communication infrastructure. These are measured by the presence and distance to national or main roads, airports and commercial harbours, as well as access to cell phone coverage

1.6.8.1.4 Institutional services index

The provision level of public institutional services is to be measured using variables that measure the presence of municipal or other governmental offices, the value of the property tax base, as well as the provision of a variety of institutional services such as educational, postal and police services.

1.6.8.1.5 Economic sectors index

The strength and size of the economic sectors are to be measured by using different variables. The indicators are to assess the strength of the local economy in terms of the size and composition of the labour force in those sectors of the economy generating primary jobs and income in the primary and secondary sectors, namely agriculture, fishing, mining and manufacturing. The size of the regional economy is measured by the Gross Geographical Product (GGP) of the district in which the town is located.

1.6.8.1.6 Commercial services index

This index is devised to express the size and range of private commercial and professional service functions offered by the towns in the study. Key commercial types of activities that would cover the retail, financial and professional services sectors

1.6.8.1.7 Market potential index

The strength and size of a town's market potential was measured by four variables. The index combines measures of population size in towns with the total gross personal income of their inhabitants and the total household potential income. Accessibility to the markets is calculated as the sum of the weighted distance to the two major metropolitan centres (Cape Town and Bloemfontein) in South Africa.

1.6.8.1.8 Human Development Needs index:

All the variables included in this index measure some aspect of vulnerability or development need. Consequently, the size of those groups in society more often in need of some form of assistance is used to profile the towns. The proportion of black and coloured population groups (generally considered apartheid victims), children and aged, female household heads, educationally deprived, lower income groups, unemployed, unskilled, and recent in-migrants are typical indicators. Other measures could relate to housing conditions and access to domestic services such as water, sanitation and electricity. The index combines measures of population size in towns with the total gross personal income of their inhabitants and the potential household income of the magisterial district in which the town is located, as well as the density of the population and weighted measures of accessibility to the major towns in the Northern Cape Province (it could include major towns/cities near that falls outside the provincial boundary as well).

THE FOLLOWING TABLES BREAKS DOWN EACH COMPOSITE INDEX, INDICATING WHAT DATA IS UTILISED FOR EACH OF THE INDICES.

Table 4: 2011 Urban Growth Potential Indices

2011 URBAN GROWTH POTENTIAL			
Natural	Nr	Derivation methods and data sources	Mun.
Availability of water	1	Mean annual precipitation (mm) (SA Weather Bureau polygon shapefile) assigned to town	Yes
	2	Towns: Proximity (<10 km) to perennial river (Class> 4). (GIS analysis) (Mun: Length pern100sq/km)	Yes
	3	Groundwater potential (in million cubic metres) per annum assigned to town by intersection of towns with groundwater potential polygon shapefile obtained from DW A. (Mun: Groundwater potential (in million cubic metres) per annum per sq/km)	Yes
Agricultural potential	4	Perennial and annual commercial crops, National Land cover (2000). (Towns closer than 10 km from cultivated areas> 10 sq km). (Mun: Area of perennial & annual commercial crops as % of municipal area) (GIS analysis).	Yes
	5	Weighted average grazing capacity (Large Stock Units) (LSU) in closest area (Within Thiessen polygon). (Dept. Agriculture)	Yes
Mining potential	6	Status of mineral deposits (Number of working mines closer than 20 km (Mun: Status of mineral deposits as number of working mines per 100 sq km) (Council for Geoscience).	Yes
	7	Size of unexplored minerals (Average rank size of deposits closer than 20 km). (Council for Geoscience)	No
Tourism Potential	8	Mean weighted SA Terrain Index (SA TI) in closest area derived from ENPA T (2002)	Yes
	9	Number of cultural and heritage sites (excluding graves & burial sites) closer than 20 km derived from ENPAT (2002). (Mun: Number of cultural and heritage sites per I00 sq km)	Yes

2011 URBAN GROWTH POTENTIAL			
Natural	Nr	Derivation methods and data sources	Mun.
Environmental sensitivity	10	% Conservation/Protected areas in closest area (Thiessen polygon). (GIS analysis)	Yes
	11	Weighted mean bio-sensitivity index per town derived from ENPAT (2002)	Yes

Table 5: 2018 Urban growth potential indices

2018 URBAN GROWTH POTENTIAL			
Natural resources	Nr	Derivation methods and data sources	Mun.
Availability of water	1	Mean annual precipitation (mm)	Yes
	2	Proximity (<20km) from a major registered dam	Yes
	3	Proximity (<10km) to perennial river (class>4)	Yes
	4	Groundwater potential per annum assigned to town by intersection of towns with groundwater potential	
	5	Concentration and quality of boreholes within a 20km radius of each Town	
Agricultural potential	6	Perennial and annual commercial crops, National Land Cover (2014). Towns closer than 10km from Cultivated areas	Yes
	7	Weighted average grazing capacity (large livestock Units - LSU) within a <20km radius	Yes
	8	Concentration of existing abattoirs and silos within a <10km radius of each town. Value presented as a percentage from high to low	
	9	Weighted average of the land capability values within a <20km radius of each town using the 2016 Land Capability data set - GIS analysis	
	10	Weighted average of aridity zone occurrence within a <20km radius (occurrence to reflect a low score and non-occurrence or less occurrence a higher score)	
Mining potential	11	Number of working mines closer or within a radius of 20km of each town	Yes
	12	Concentration of Mineral deposits within a 20km radius of each town	No
	13	Number of unexplored minerals, mines within a 20km radius using granted / approved mining applications	
Tourism Potential	14	Mean weighted SA Terrain index in closest area derived from Terrain Capability, 2016	Yes
	15	Number of Heritage and Cultural sites closer or within a radius of 20km (see count of heritage sites and use ENPAT shape files)	Yes
	16	Tourism routes within a proximity of 20km of each town	
	17	Occurrence and/or concentration of Conservation/Protected areas within a 20km radius of each town	Yes

2018 URBAN GROWTH POTENTIAL			
Natural resources	Nr	Derivation methods and data sources	Mun.
Environmental sensitivity	18	Occurrence and/or concentration of Critical Biodiversity areas within a radius of 20km of each town	Yes
	19	Occurrence/concentration of geohazards within a 20km radius	
	20	Proximity (<10km) to perennial river (class>4)	

Table 6: 2011 Human Resources indices

2011 URBAN GROWTH POTENTIAL			
Human Resources	NR	Derivation methods and data sources	Mun.
Size of labour force	1	Total size of labour force using labour participation rate data from Quantec, Stats SA 2011, ward level data	Yes
Quality of labour force	2	Labour force > 10 < 65 years with education levels equal to or better than Grade 12 as percentage of total labour force (Population Census 2011 - Most recent data that can be accessed per ward)	Yes
	3	White collar workers as percentage of economically active population using Census 2011 Ward Based Statistics	Yes

Table 7: 2018 Human Resources indices

2018 URBAN GROWTH POTENTIAL			
Human resources	Nr	Derivation methods and data sources	Mun.
Size of labour force	1	Total size of labour force using labour participation rate data from Quantec, Stats SA 2011, ward level data	Yes
Quality of labour force	2	Labour force > 10 < 65 years with education levels equal to or better than Grade 12 as percentage of total labour force (Population Census 2011 - Most recent data that can be accessed per ward)	Yes
	3	White collar workers as percentage of economically active population using Census 2011 Ward Based Statistics	Yes

Table 8:2011 Transportation and Communication indices

2011 URBAN GROWTH POTENTIAL			
Transportation and communications	Nr	Derivation methods and data sources	Mun
Accessibility to transport infrastructure	1	Inverse of distance to nearest national or main road (km) x 100. (Mun: Average inverse of distance to nearest national or main road (km) x 100. Calculated from all towns in the municipality (GIS analysis).	Yes
	2	Inverse of distance to nearest commercial harbour (km) x 1000. Average inverse of distance to nearest commercial harbour (km) x 100. Calculated from all towns in the municipality (GIS analysis).	Yes

2011 URBAN GROWTH POTENTIAL			
Transportation and communications	**Nr**	**Derivation methods and data sources**	**Mun**
	3	Inverse of distance to nearest commercial harbour (km) x 100. Average inverse of distance to nearest commercial harbour (km) x 100.Calculated from all towns in the municipality (GIS analysis).	Yes
	4	Inverse of distance to nearest scheduled airport (km) I 00. Average inverse of distance to nearest scheduled airport (km) x I 00. Calculated from all towns in the municipality (GIS analysis).	Yes

Table 9: 2018 Transportation and communications indices

2018 URBAN GROWTH POTENTIAL			
Transportation and communications	**Nr**	**Derivation methods and data sources**	**Mun.**
Accessibility to transport infrastructure	1	Inverse of distance to nearest national or main road (km) as a percentage of overage distance to the nearest town - GIS analysis	Yes
	2	Inverse of distance to nearest commercial harbour (km) as a percentage of overage distance to the nearest town - GIS analysis	Yes
	3	Inverse of distance to nearest commercial or Scheduled Airports (km) as a percentage of overage distance to the nearest town - GIS analysis	Yes
	4	Inverse of distance to nearest Passanger, Commercial train station (km) as a percentage of overage distance to the nearest town - GIS analysis	Yes
	5	Cell Phone coverage 2017, Using number of Networks present within a 30m radius of a Town	
	6	Inverse of distance to nearest Fibre Network (km) as a percentage of overage distance to the nearest town - GIS analysis	

Table 10: 2011 Institutional indices

2011 URBAN GROWTH POTENTIAL			
Institutional services	**Nr**	**Derivation methods and data sources**	**Mun.**
Municipal seat	1	Presence of seat/s	Yes
Public institutions represented	2	Number of secondary educational institutions. (National Dept. Education)	Yes
	3	Number of post offices. (SA Postal Service)	Yes
	4	Number of hospitals and clinics. (National Dept. of Health)	Yes
	5	Number of police stations. (SA Police Service)	Yes
Social service organizations	6	Number of social grants pay points. (SA Security Agency)	Yes
Safety and security	7	Crime: All occurrences per I 00 people (2009-	Yes

		2010). Towns with no police stations get nearest town's stats. Pop totals based on 2004 Thiessen Polygons. (Mun: Aggregated per municipality from town data) (SA Police Services).	
Democratic status	8	Voter turnout (2009). (Demarcation Board)	

Table 11: 2018 Institutional indices

2018 URBAN GROWTH POTENTIAL			
Institutional services	**Nr**	**Derivation methods and data sources**	**Mun.**
Municipal seat	1	Presence of seat/s	Yes
Public institutions represented	2	Number of Secondary Educational Facilities or Institutions per Town	Yes
	3	Number of Post Offices per Town	Yes
	4	Number of Clinics or Hospitals per Town	Yes
	5	Number of Police Stations per Town	Yes
Social service organizations	6	Number of grant pay-out points per Town	Yes
Safety and security	7	Crime: Occurrences per 100 people.	Yes
Democratic status	8	Voter turnout as a percentage of registered voters per Ward	

Table 12: 2011 Economic sectors indices

2011 URBAN GROWTH POTENTIAL			
Economic sectors	**Nr**	**Derivation methods and data sources**	**Mun**
Diversity of economy	1	Concentration/diversity index based on labour distribution in economic sectors. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Strength of primary and tertiary economic sectors	2	Workforce in primary sectors (agriculture, forestry and fisheries) is calculated as percentage of economically active population. (Population census 2001). (Mun: 2007 Community Survey)	Yes
	3	Workforce in mining activities as percentage of economically active population. (Population census 2001). (Mun: 2007 Community Survey)	Yes
	4	Workforce in financial services as percentage of economically active population. (Population census 2001)	Yes
Size of the economy	5	Total Gross Value-Added product (GVA) (2004). (CSIR GAP)	Yes

Table 13: 2018 Economic sectors indices

2018 URBAN GROWTH POTENTIAL			
Economic sectors	**Nr**	**Derivation methods and data sources**	**Mun.**
Diversity of economy	1	Labour distribution in economic sectors	Yes
Strength of primary and tertiary economic sectors	2	Workforce in primary sectors calculated as percentage of economically active population	Yes
	3	Workforce in mining activities as percentage of economically active population	Yes
	4	Workforce in financial services as percentage of economically active population	Yes
Size of the economy	5	Total Gross Value-Added product (GVA), 2018 (CSIR GAP) - www.StepSA.org	Yes

Table 14: 2011 Commercial Services indices

2011 URBAN GROWTH POTENTIAL			
Commercial services	**Nr**	**Derivation methods**	**Mun**
Presence of commercial and financial establishments	1	Total annual value of retail sales (2010). (Global Insight)	Yes
	2	Number of banks & ATMs (GIS data)	Yes
	3	Urban Functional Index. (UFI). Number of commercial establishments as percentage of city in South Africa with highest tally) (CSIR GAP).	No

Table 15: 2018 Commercial Services indices

2018 URBAN GROWTH POTENTIAL			
Commercial services	**Nr**	**Derivation methods**	**Mun**
Presence of commercial and financial establishments	1	Total annual value of retail sales, 2017 - Quantec	Yes
	2	Mean weighted average of the Number of Banks and ATM's per Town as a percentage	Yes
	3	Urban functionality index (UFI), Quantec 2017	No
	4	Mean weighted average of the number of commercial establishment as a percentage	

Table 16: 2011 Market Potential and Accessibility

2011 URBAN GROWTH POTENTIAL			
Market potential and accessibility	**Nr**	**Derivation methods and data sources**	**Mun.**
Size of local population	1	Number of people per town. (Population census 2001). (Mun:	Yes
Size of local personal income	2	Total rand value of personal monthly income per town. (Population census 2001). (Mun: total income per municipality; 2007 Community Survey)	Yes
Household income potential index	3	Market Potential Index computed by applying Population Potential Index Method to total household income values rather than population numbers. (GIS analysis)	Yes

Access to primary Metropolitan market	4	Weighted distance to major metropolitan areas (Sum of metro populations divided by the distance to the metros). (GIS analysis)	Yes

Table 17: 2018 Market Potential and Accessibility

2018 URBAN GROWTH POTENTIAL			
Market potential and accessibility	**Nr**	**Derivation methods and data sources**	**Mun.**
Size of local population	1	Number of people per town using population census 2011 data	Yes
Size of local personal income	2	Total rand value of personal monthly income per town using population census 2011 data	Yes
Household income potential index	3	Market potential index computed by applying population potential index method to total household income values rather than population numbers	Yes
Access to primary Metropolitan market	4	Weighted distance to major metropolitan areas using GIS analysis	Yes

Table 18: 2011 Property market indices

2011 URBAN GROWTH POTENTIAL			
Property market	**Nr**	**Derivation methods and data sources**	**Mun**
Size of property market	1	Number of property transactions (2001-2007) . (Knowledge Factory)	Yes
	2	Average value of property transactions (2001-2007). (Knowledge Factory)	Yes

Table 19: 2018 Property market indices

2018 URBAN GROWTH POTENTIAL			
Property market	**Nr**	**Derivation methods and data sources**	**Mun**
Size of property market	1	Number of property transactions per town (2015-2017)	No
	2	Average value of property transactions per Town (2015-2018)	No

Table 20: 2011 Human Development Needs Indices

2011 HUMAN DEVELOPMENT NEEDS			
	Nr	Derivation methods and data sources	Mun.
Racial composition (Empowerment eligibility)	1	% Black and coloured population. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Family stability	2	% Female household heads. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Age (Dependency)	3	% < IO years old. (Population census 2001). (Mun: 2007 Community Survey)	Yes

2011 HUMAN DEVELOPMENT NEEDS			
	4	% > 60 years old. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Education (Employability)	5	% > 20 years old with primary education only. (Population census 200I). (Mun: 2007 Community Survey)	Yes
	6	% Matric pass rate (2010). (National Dept. Education)	Yes
Income (Welfare)	7	Average per capita personal income (Rand). (Population census 2001). (Mun: 2007 Community Survey)	Yes
	8	% Population living below national Mean Level of Living (MLL) in 2004. (CSIR GAP)	Yes
	9	% Population receiving social grants (2010) (Towns with none get closest town's value) (Thiessen Pop 2004). (SA Security Agency)	Yes
Occupation (Employability)	10	% Unskilled workers. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Dependency ratios	11	% Unemployed as proportion of Labour force. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Labour dependency ratios	12	Total number of persons supported by every person in the labour force, excluding him or herself. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Health status	13	% Population with HIV/AIDS (2007). (Global Insight)	Yes
Migration rates	14	% In-migrants past 5 years. (Population census 200 I). (Mun: 2007 Community Survey)	Yes
Housing	15	% Population living in informal housing units. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Access to domestic services	16	% Population with electricity in home. (Population census 2001). (Mun: 2007 Community Survey)	Yes
	17	% Population with running water in home. (Population census 2001). (Mun: 2007 Community Survey)	Yes
	18	% Population with toilets in home. (Population census 2001). (Mun: 2007 Community Survey)	Yes
Human Development Index	19	HDI is based on measuring of life expectancy, literacy levels and income (2010). (Global Insight)	Yes

Table 21: 2018 human Development Needs Indices

2018 HUMAN DEVELOPMENT NEEDS			
	Nr	Derivation methods and data sources	Mun.
Racial composition	1	% Black and coloured population. StatsSA 2011 data	Yes
Family stability	2	% female households heads	Yes
Age (Dependency)	3	% of population <14 years old	Yes
	4	% of population > 60 years old	Yes
Education (Employability)	5	% > 20 years old with primary education only	Yes
	6	% Matric pass rate (2017)	Yes
	7	Average per capita personal income	Yes

2018 HUMAN DEVELOPMENT NEEDS			
Income (Welfare)	8	% population living below national mean level of living in 2011	Yes
	9	% population receiving social grants	Yes
Occupation (Employability)	10	% Unskilled Workers	Yes
Dependency ratios	11	% Unemployed as portion of labour force	Yes
Labour dependency ratios	12	Total number of persons supported by every person in the labour force, excluding him or herself	Yes
Health status	13	% Population with HIV/AIDS	Yes
Migration rates	14	In-Migrants the past 5 years	Yes
Housing	15	% population living in informal housing units	Yes
Access to domestic services	16	% population with electricity in home	Yes
	17	% population with running water in home	Yes
	18	% population with toilets in home	Yes
Human Development Index (CDI City Development Index)	19	CDI study of the Northern Cape (StatsSA)	Yes

1.6.9 Composite indices

For the cross-sectional analyses of towns and municipalities the indices described in the previous sections were combined to produce the following three composite indices in accordance with the NSDP stipulations. These composite indices aggregate the major urban developmental dimensions to enable the higher-level generalization required to classify the 89 towns and 26 municipalities into useful typologies:

- **Composite Resource Index**: Natural Resources+ Human Resources
- **Composite Infrastructure Index**: Transportation and Communication + Institutional Services.
- **Composite Economic Index**: Economic Sectors + Commercial services + Market and Accessibility Potential + Property Market

At an even higher level of aggregation and generalization all the growth indicators were combined to create a single grand Index of Development Potential: Resource Index + Infrastructure Index + Economic Index. It was not necessary to further create a compound index of Human Needs as no sub-themes were distinguished within this dimension.

By integrating the Development Potential Index with the Human Needs Index, towns and municipalities were classified into a population category to provide a clearer insight into the development potential and the development needs of the various towns and local municipalities, as well as the investment policies required to manage urban growth and development in the province in future. Apart from the town indicators, indices computed for municipalities (cross-sectional and temporal) are used as contextual information for providing further investment guidelines to the various spheres of government on the type and locations for stimulating economic growth and social advancement.

1.6.10 Application of indices and index results

From interactions with users of the previous study, it became clear that the results were not always applied in the most effective and appropriate manner. Many users simply used the overall composite *Development Potential Index* for various and widely differing decision support requirements and ignored the other more targeted indices and indicators that the study provides. It is critical for users to understand that the thematic and composite indices provide an overall perspective of growth potential and socio-economic needs in the Northern Cape, with its primary application to inform and guide strategic and cross-cutting decisions at a provincial level. These composite indices should however be used in conjunction with a broader range of decision support tools when informing specific programmes within individual departments.

Table 22: Application level of the Socio-economic potential of Town Study Results

	Provincial Strategic Level Guidance	Cross-cutting Strategic Objectives	Individual Departmental Programmes & Objectives	Programme or Project-Specific
Composite Indices	●	o	o	o
Thematic Indices	o	●	o	o
Indicator Bundles	o	o	●	o
Individual Indicators	o	o	o	●

- ● Primary application
- o Secondary application

1.6.11 Illustrating the quantitative profiles

Addendum A and B presents a full inventory of the 2011 and 2018 quantitative data profiles of all 26 municipalities on all the indicators included in the GIS data matrix. From this data input various output products were created to evaluate and classify the growth potential of the various towns and municipalities.

1.6.11.1 Cross-sectional profiles of municipalities

To provide insight to local and provincial government on a strategic level, a sample of the municipal profiles will be discussed below to aid with the interpretation and implementation of the information provided by this study.

1.6.12 Sample of Cross-sectional profiles of municipalities

From the variety of tabulation options for the 72 indicators, the ranking of the 26 municipalities according to the five composite indices were highlighted as the basic framework for the evaluation process in Chapter 4. The eight individual dimension indices and the full spectrum of each municipality in a comparable way are displayed in the tables, figure and maps. The full spectrum of all 26 quantitative town profiles is furthermore presented in histogram format (Addendum A).

1.6.12.1 Municipal rankings of composite indexes

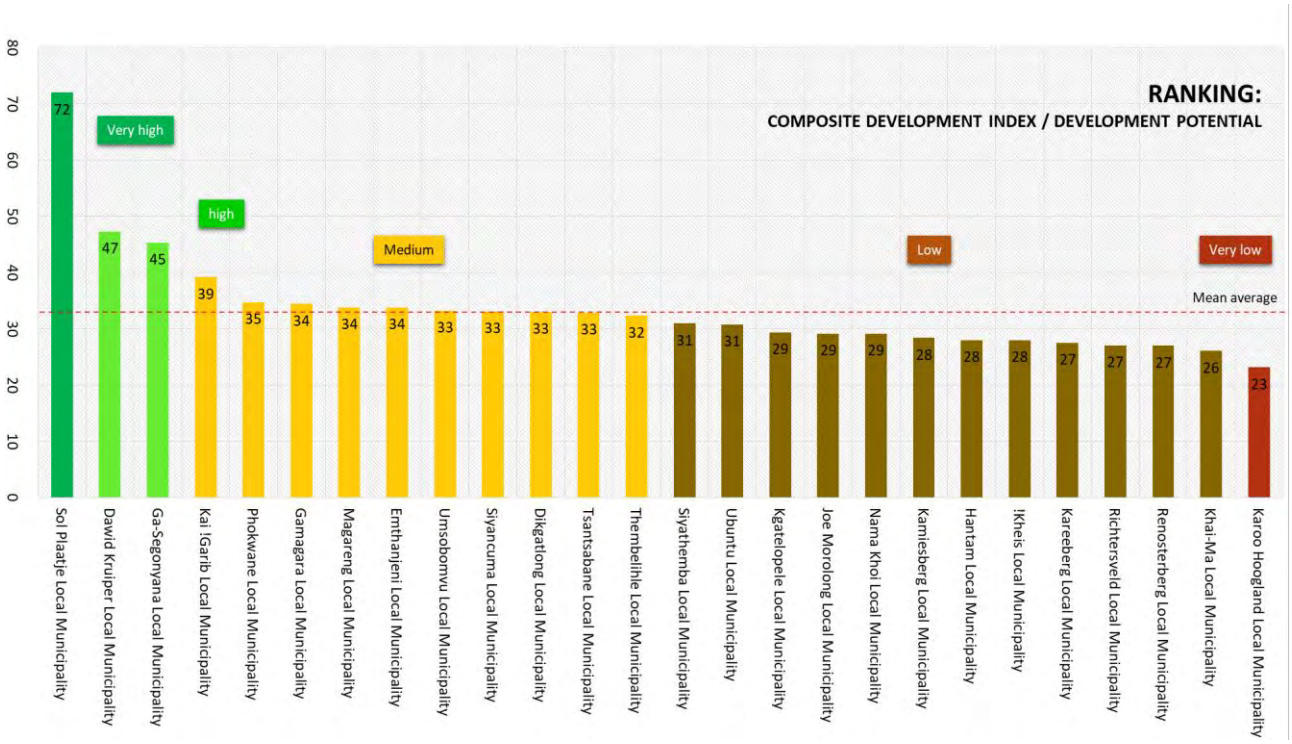


Figure 4: Composite Municipal Development Potential Index

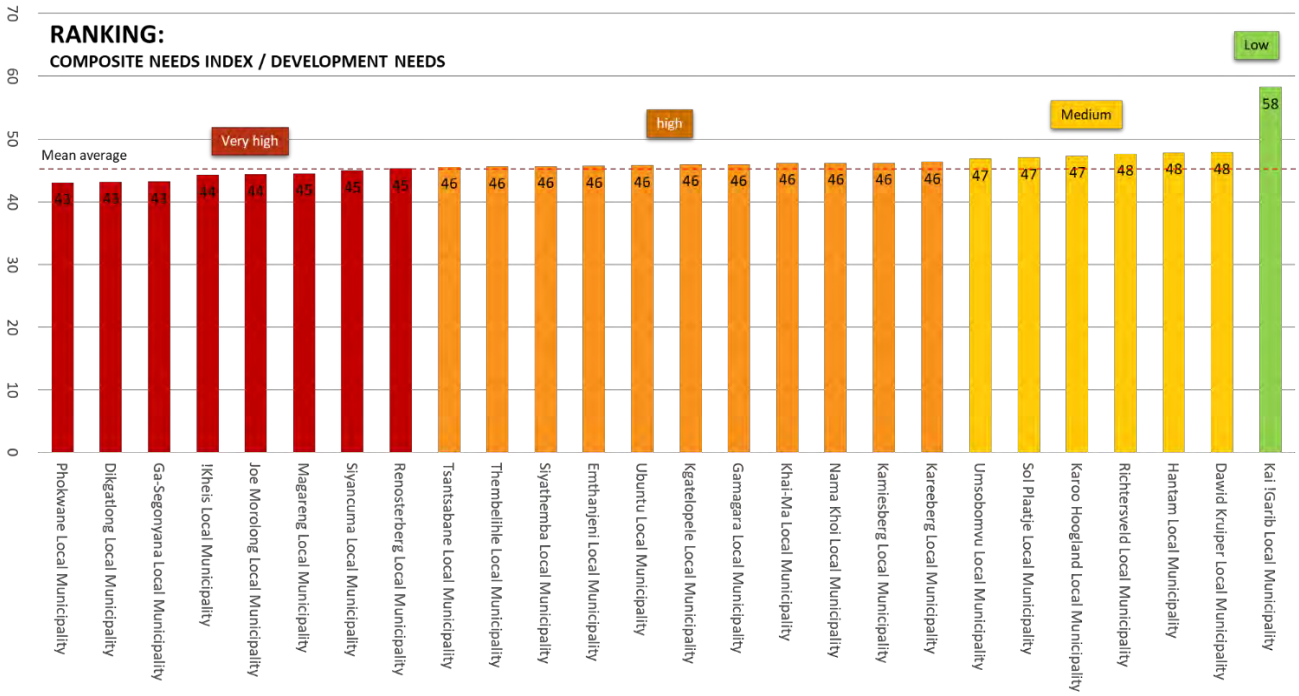


Figure 5: Composite Municipal Needs Index

Table 23: Municipal Development Index and Human Needs Index matrix

		DEVELOPMENT CATEGORY			
		High	**Medium**	**Low**	**Very Low**
HUMAN NEEDS CATEGORY	**Very high**	Ga-segonyana	Dikgatlong Magareng Siyancuma Phokwane	Renosterberg !Kheis Joe Morolong	
	High Need		Tsantsabane Thembelihle Emthanjeni Gamagara	Siyathemba Kamiesberg Kareeberg Nama-khoi Ubuntu Kgatelopele Khai-ma	
	Medium	Sol Plaatje Dawid Kruiper	Umsobomvu	Richtersveld Hantam	Karoo Hoogland
	Very low need		Kai! Garib		

As depicted by the figures and table above, the majority of the Northern Cape Municipalities fall within 4 categories namely:

- Medium Development Potential/Very high Need
- Medium Development Potential/High Need
- Low Development Potential/Very high Need
- Low Development Potential/High Need

Of the 26 municipalities, 18 falls within the above mentioned four categories, which represents 69% of the Northern Cape municipalities. Typically, the municipalities with a high level of need tends to consist out of various smaller towns, and not necessarily larger dominant towns such as Upington.

1.6.12.2 Cross-sectional profiles of towns

From the variety of tabulation options for the 72 indicators, the ranking of the 89 towns according to the five composite indices were highlighted as the basic framework for the evaluation process in Chapter 4. The eight individual dimension indices and the full spectrum of each town in a comparable way are displayed in the tables, figure and maps. The full spectrum of all 89 quantitative town profiles is furthermore presented in histogram format (Addendum B).

Furthermore, the spatial differentiation of the Development Potential and Human Needs scores of the individual towns were displayed in Figures 6 and 7. The three combined indices and eight individual indices (Addendum B) on which the Development Potential and Human Needs indices were based are presented in a further series of maps. On each map towns were classified into five development typologies according to the statistical procedures for map interval categorisation based on the attribute mean and a standard deviation of town values. The following five categories of development

potential indices provide a framework to assign the individual development components and the towns· attainable prospects for future growth or decline:

Table 24: Growth Potential Categories

CATEGORY	DESCRIPTION
'Very Low" and "Low" growth potential	These towns possess limited economic and human resources, devoid of the potential to stimulate the urban economy in a significant way. The difference between 'Low' and 'Very Low' is only a degree variation.
"Medium" growth potential	These towns· development indices are roughly in line with the average value of the provinces' aggregate on the 89 towns. Consistent and moderate growth prevails in these towns and certain sectors of the economy show signs of growth. or have the potential for it;
"High" growth potential	These towns experience sustainable growth on the positive side of the provincial average. They already have an established and proven track record to operate as ·growth engines· at a certain level. They have the potential to grow at a sustainable and powerful rate in line with the capacity of their resources and to operate as service providers to a relatively extensive hinterland.
"Very High" growth potential	The difference between 'High' and 'Very High' status only lies in the diversity and intensity of the town dynamics.

The final integration of the towns' 'development potential' and 'human needs' indices in investment groups are presented in Figure 3 and 4. On the first diagram the Development Potential and Human Needs scores were superimposed and plotted on a scatter diagram and the five typologies mapped spatially in Figure 4. This exercise led to a fivefold typology of the towns according to the integrated development and needs performance in the four quadrants and central orange base of the diagram. An investment type could be coupled with each town, applied to the quadrant that would best stimulate Infrastructure Capital and Social Capital investment. This is in line with the National Spatial Development Perspective (NSDP) in this regard. These visuals integrate the needs and development performances in a combined image by presenting it in both diagrammatic and map formats. These investment typologies represent the climax of the quantitative analysis.

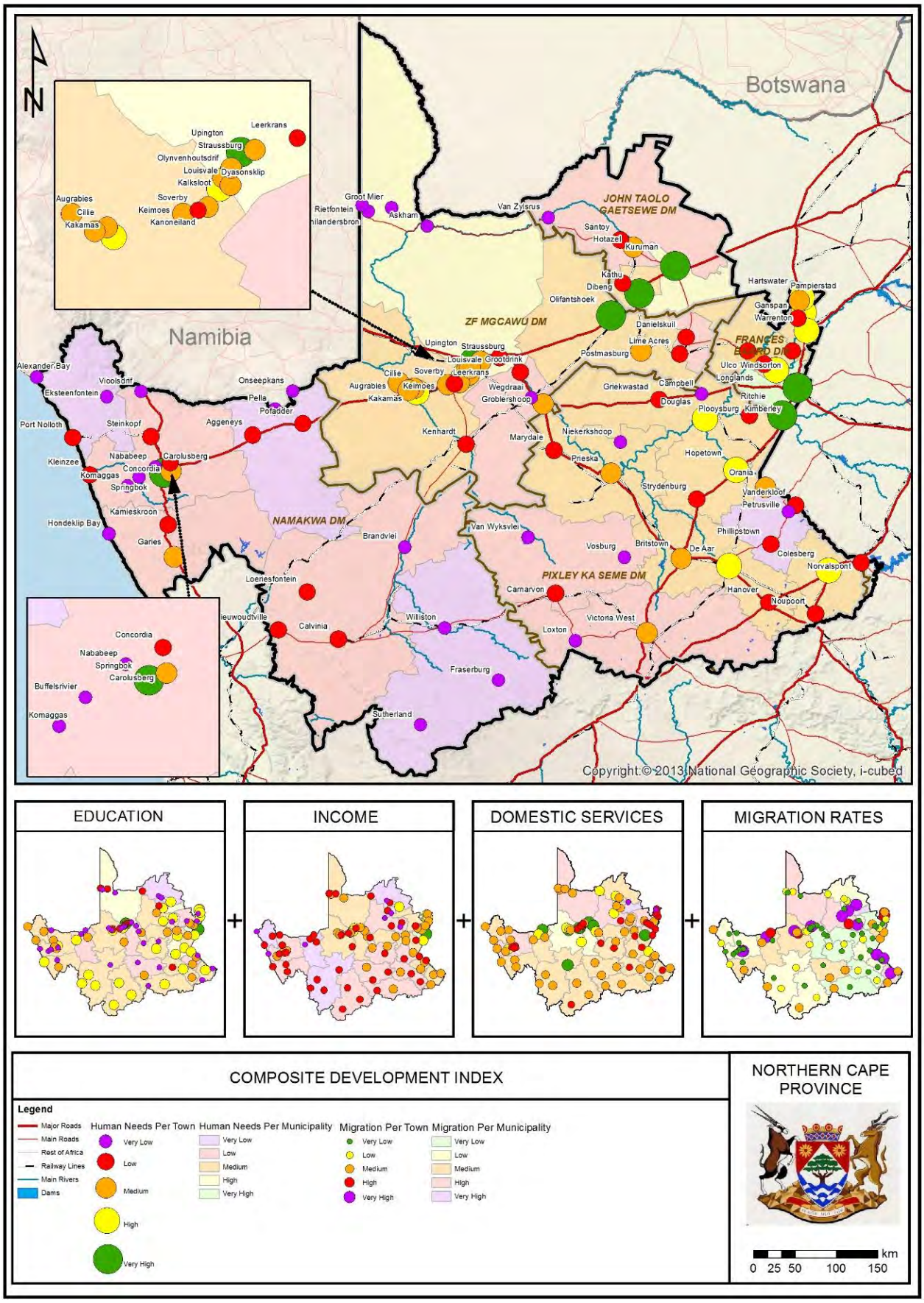


Figure 6: Composite Development Potential Results

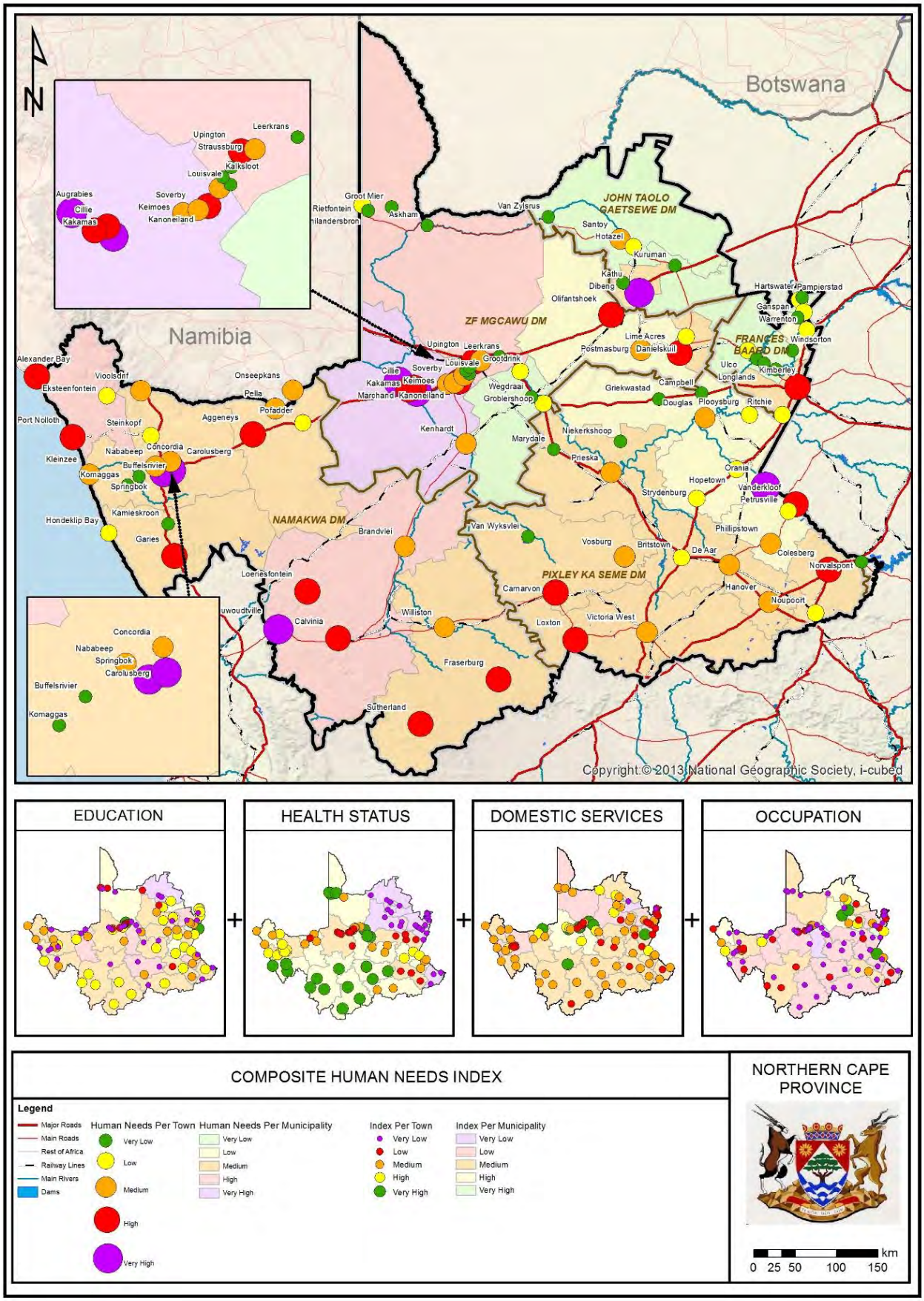


Figure 7: Composite Human Needs Results

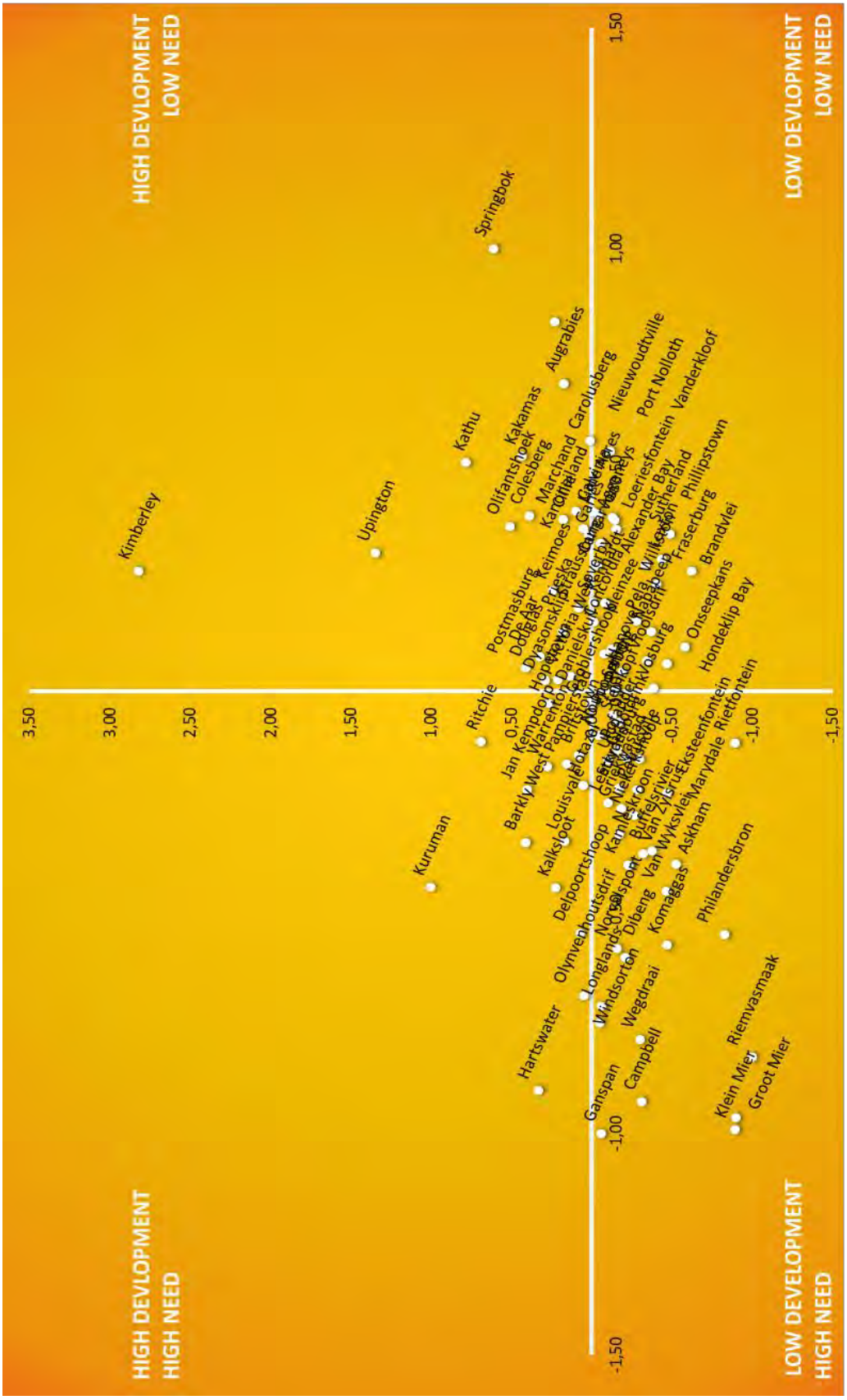


Figure 8: Integration and plotting of the composite need and development indexes

Table 25: Development Potential Hierarchy per settlement population concentration

		DEVELOPMENT POTENTIAL INDEX			
		Very high/High Potential	**Medium Potential**	**Low Potential**	**Very Low**
POPULATION DENSITY	**10 000≤**	Kimberley Upington Kuruman Kathu Ritchie Springbok Olifantshoek Douglas Barkley west Jan Kempdorp De Aar Warrenton Hopetown Colesberg Hartswater	Warrenton Hopetown Postmasburg Prieska Delporthoop Danielskuil		
	3000-10000	Kakamas	Keimoes Augrabies Victoria West Britstown Marchand Groblerhoop Calvinia Concordia Carnarvon Lime Acres Noupoort Windsorton Ganspan	Kenhardt Philipstown Port Nolloth Pofadder Steinkopf Griekwastad Dibeng Petrusville Nababeep Williston Komaggas Fraserburg	

	DEVELOPMENT POTENTIAL INDEX			
	Very high/High Potential	**Medium Potential**	**Low Potential**	**Very Low**
1500-3000		Kalksloot Cillie Louisvale Pamierstad Kanoneiland Hotazel Garies	Kleinzee Ulco Niewoudtville Aggeneys Loeriesfontein Strydenburg Grootdrink Marydale Niekerkshoop Pella Wegdraai Campbell Alexander Bay Van Wyksvlei Brandvlei Sutherland Onseepkans	Rietfontein
≥1500		Dyasonsklip Orania Straussburg Olynenhoutsdrif Carolusberg Soverby Vanderkloof Longlands	Leerkrans Plooysburg Santoy Norvalspont Hanover Kamieskroon Hondeklip Bay Van Zylsrus Vioolsdrif Buffelsrivier Vosburg Loxton Eksteenfontein Askham	Philandersbron Klein Mier Groot Mier Riemvasmaak

Table 26: Needs Index Hierarchy per settlement population concentrations

		HUMAN NEED INDEX			
		Very/High Need	**Medium Need**	**Low Need**	**Very Low Need**
POPULATION DENSITY	10 000≤	Hartswater Delportshoop Kuruman Barkley West Jan Kempdorp Warrenton Ritchie Danielskuil	Postmasburg Douglas De Aar Prieska Kimberley Upington	Olifantshoek Colesberg	Kathu Hopetown Springbok
	3000-10000	Windsorton Ganspan Dibeng Petrusville Griekwastad Noupoort Windsorton Steinkopf Pofadder Petrusville Komaggas	Carnarvon Williston Fraserburg Keimoes Kenhardt Concordia Nababeep Philipstown Victoria West Britstown Groblerhoop Noupoort Windsorton Ganspan Steinkopf Pofadder	Calvinia Lime Acres Port Nolloth Marchand	Augrabies Kakamas
	1500-3000	Wegdraai Campbell Van Wyksvlei Kalksloot Marydale Louisvale Niekerkshoop Hotazel	Pamierstad Kleinzee Pella Alexander Bay Onseepkans Brandvlei Ulco Grootdrink Rietfontein	Niewoudtville Kanoneiland Cillie Aggeneys Loeriesfontein Sutherland Garies	Niewoudtville

	HUMAN NEED INDEX			
	Very/High Need	**Medium Need**	**Low Need**	**Very Low Need**
≥1500	Klein Mier Groot Mier Riemvasmaak Olynenhoutsdrif Carolusberg Norvalspont Philandersbron Kamieskroon Ashkham Van Zylsrus Buffelsrivier Leerkrans Eksteenfontein	Loxton Soverby Straussburg Vioolsdrif Hanover Dyasonsklip Vosburg Santoy Plooysburg Orania Hondeklip Bay	Vanderkloof	Carolusberg

The above tables indicate, by way of population density, in conjunction with the calculated development potential of towns and human needs index, which towns are experiencing high need, high development potential, per each population density category. Thus, providing a guideline to how to prioritise spending within similar settlements, in order to gain the most results and positive change on ground level. The higher the development potential, human needs and population density, the more suitable an area is for large investment.

1.6.12.3 Town rankings of composite indexes

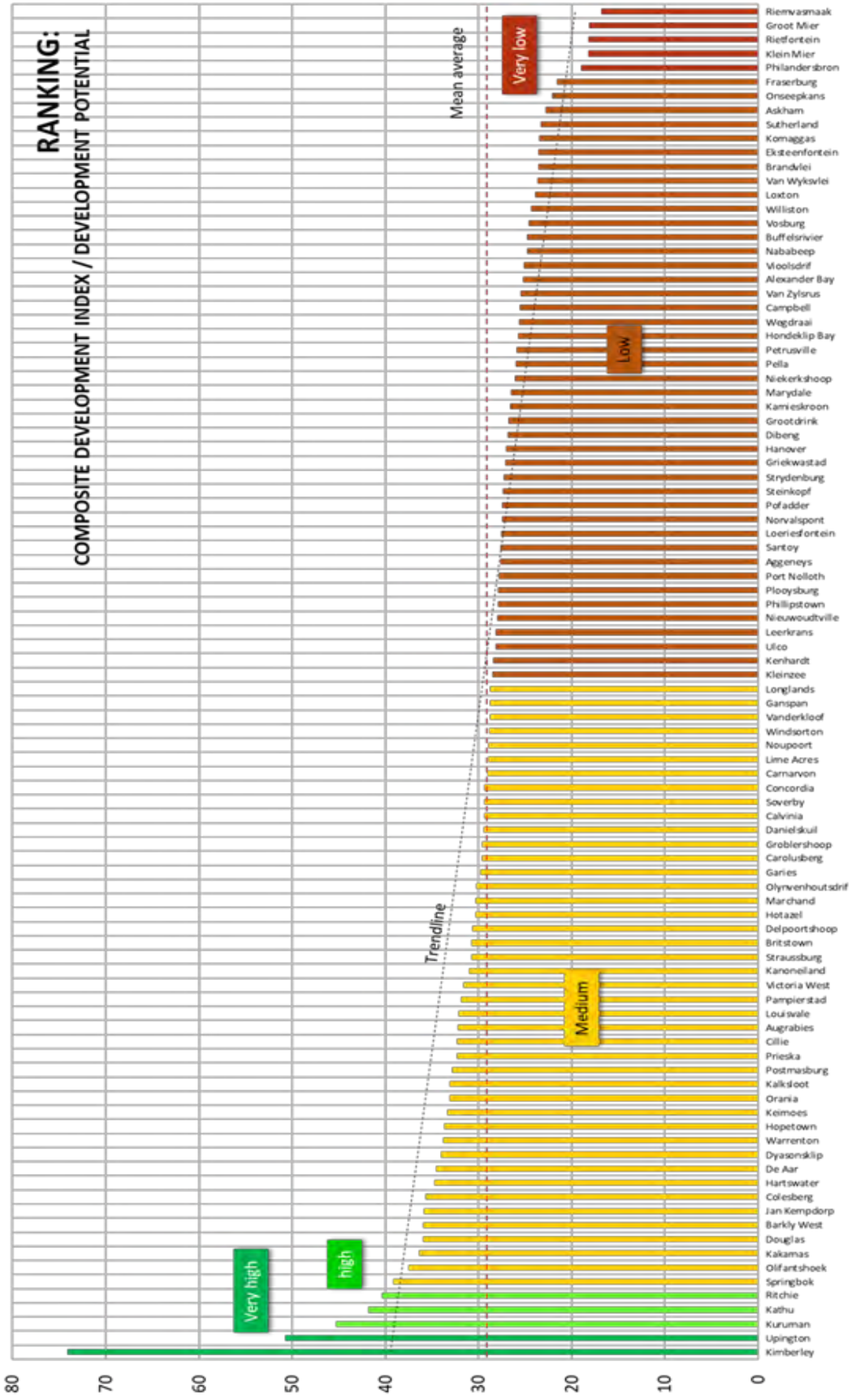


Figure 9: Town rankings of composite development potential

The overall growth potential of individual towns must be interpreted within the context of their population sizes. The results do not imply that a relatively small town such as Ritchie will necessarily grow to the same size as other towns with similar growth potential (e.g. Kimberley). What it does imply is that Ritchie has a much higher potential for growth compared to other towns of a similar size. Conversely, it also implies that not all large towns necessarily have a high or very high growth potential. However, overall, the towns with larger population sizes generally performed better in the Growth Potential Index, as numerous small towns in the Northern Cape have minute populations and are typically isolated.

The above figure indicates the distribution of potential of towns analysed within the study. Five clear leader towns are identified, where Kimberley and Upington are identified as towns with very high development potential, which are supported by Kuruman, Kathu and Ritchie, as high development potential towns. Most of the remaining towns are divided into medium and low development potential categories, as to be expected with smaller towns that are dispersed over the vast region.

As an extended analysis town or the settlements were divided into categories according to the population size, to provide insight to which towns, with similar characteristics and populations sizes have more growth potential that its counterparts. The figures below provide an indication of the calculated development potential for each town according to the population concentrations.

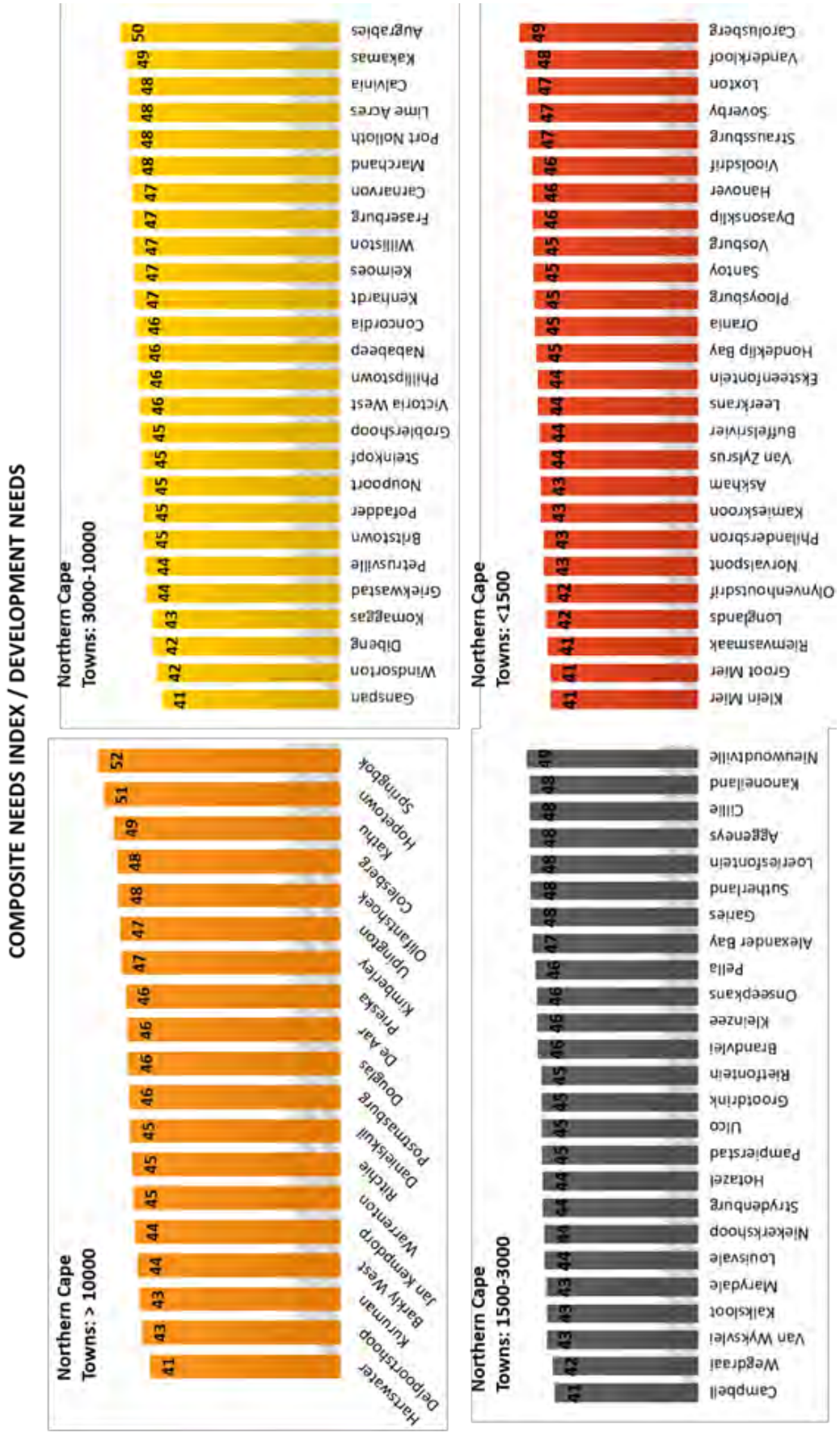


Figure 10: Town Development Potential per population concentration

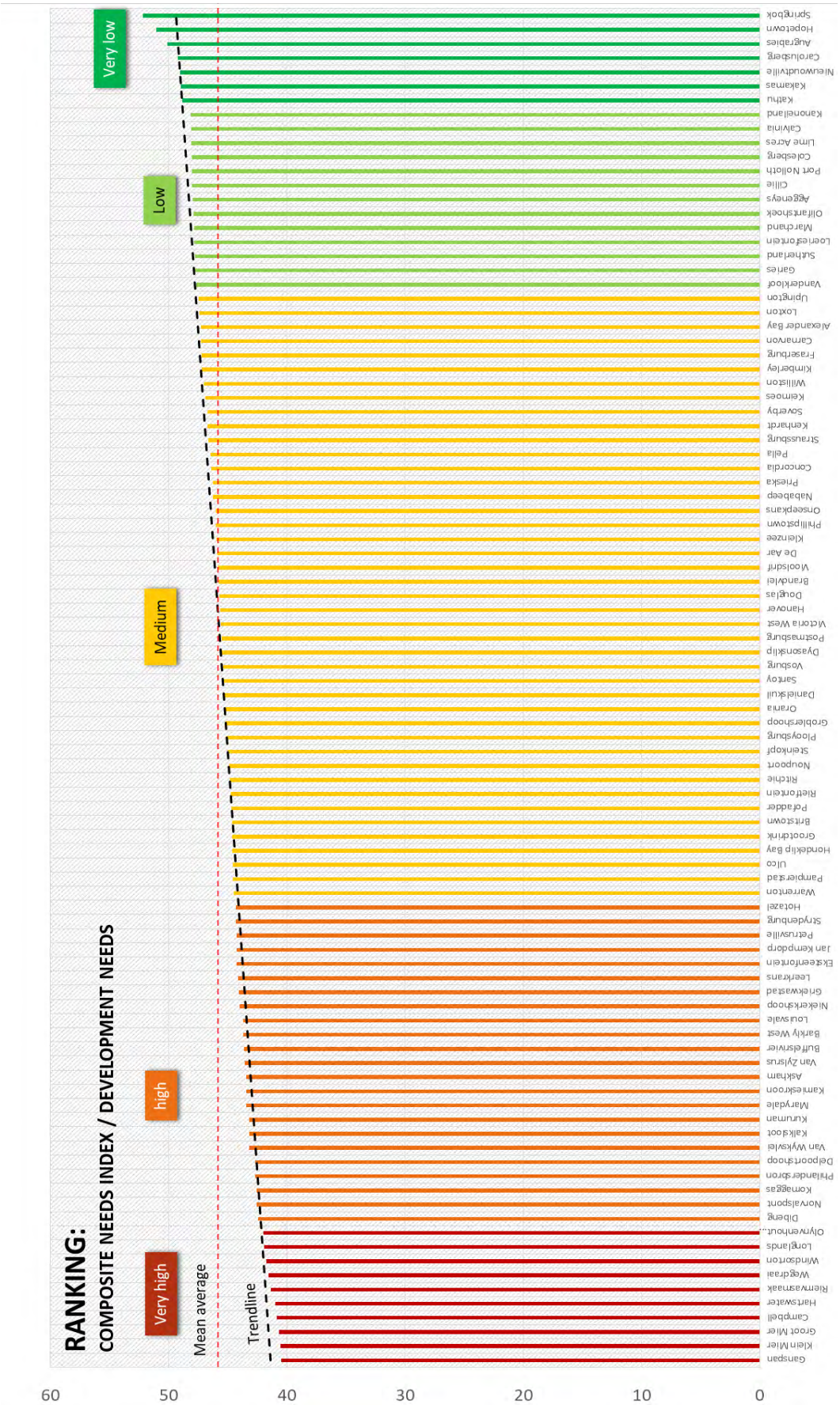


Figure 11: Composite Needs index

Similar to the overall growth potential of individual towns, the overall human needs index, must be interpreted within the context of their population sizes, and location. The results do not imply that a relatively small town such as Garies has the same level of human needs, then to the same size as other towns with similar human needs (e.g. Kathu). What it does imply is that Garies's human needs are relatively high, as a large percentage of the community in dependant on others. Conversely, it also implies that not all small towns necessarily have a high or very high human needs. However, overall, the towns with larger population sizes generally have a higher index, as informal settlements or housing backlogs etc. are prevalent in these towns.

The above figure indicates the distribution of human needs index of towns analysed within the study. Ten towns are identified as having high human needs namely, Ganspan, Klein Mier, Groot Mier, Campbell, Hartswater, Riemvasmaak and Wegdraai, Windsorton, Longlands and Olynvenhout. Most of the remaining towns are divided into medium and low human need categories.

As an extended analysis, towns or the settlements were divided into categories according to the population size, to provide insight to which towns, have similar characteristics and population sizes. The figure below provides an indication of the calculated development potential for each town according to the population concentrations.

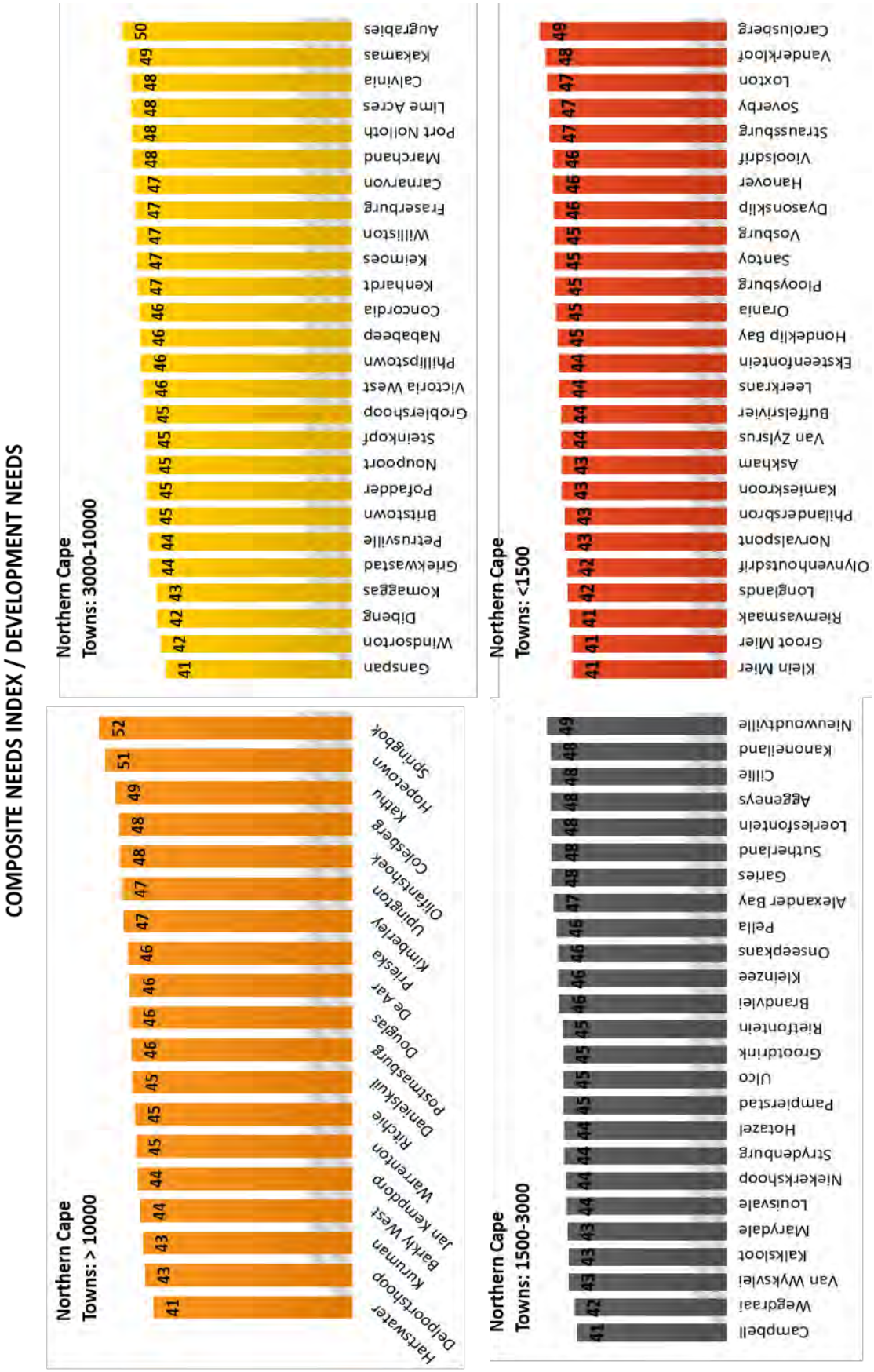


Figure 12: Town Needs Index per population concentration

1.6.12.4 Sample of cross sectional town profile analysis

1.6.12.4.1 Upington

Upington was chosen as it has a central location and dominating presence in the central region of the Northern Cape Province. Furthermore, Upington has undergone various changes, as the renewable energy sector is growing in the areas, as well as the existing intensive agriculture activities in the areas.

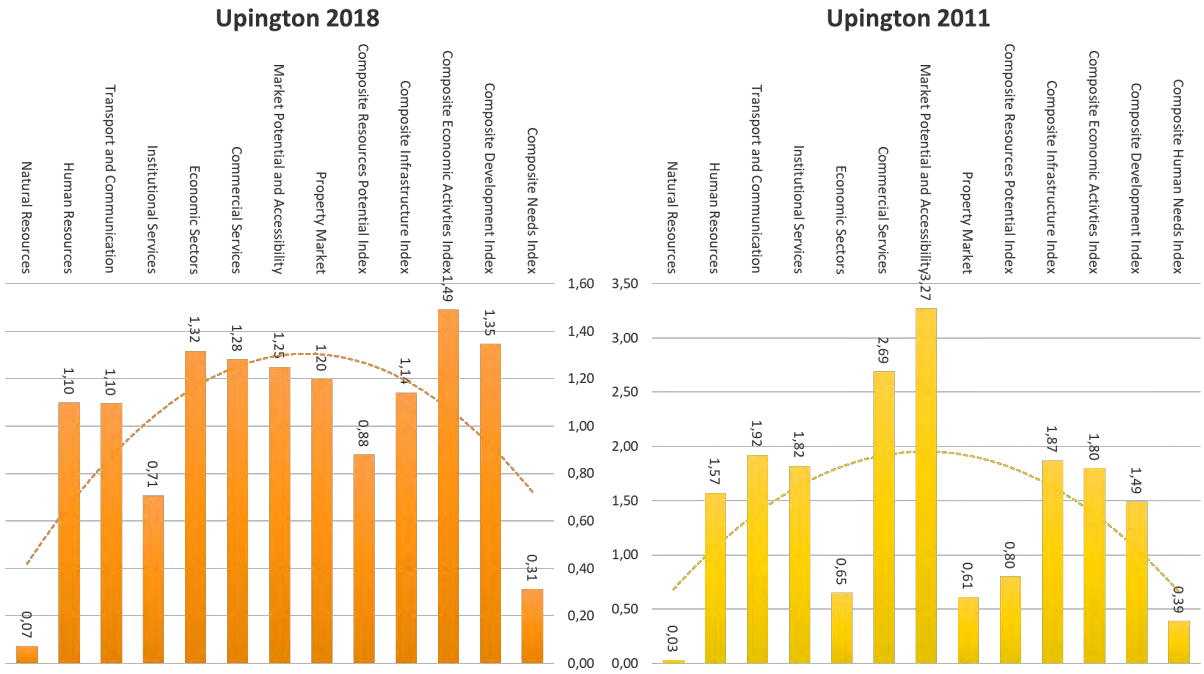


Figure 13: 2011 and 2018 Upington Development Profiles

KEY CHANGES OBSERVED:

- Upington's economic sectors indicate a large growth, mainly due to diversification of economic activities, by including solar energy generation, as well as the diversifying of agriculture commodities.
- The property market has also seen a large growth, as property value and demand increased during the construction of solar energy plants.
- Although the economic and property sector grown, the commercial sector has stayed stable.
- According to the results the infrastructure index decreased slightly, which is mainly due to population growth, indicating the infrastructure vs. people ratio is increasing.
- The graphs further indicate that Upington has experienced a slight decrease in human needs.

Table 27: Upington Strength, Challenges and Action analysis

UPINGTON		
Strengths	**Challenges**	**Proposed actions**
• Central location, and along the Orange River. • High level of accessibility due to National transport routes.	• Population growth due to in-migration and natural • Limited electrical infrastructure is hindering growth	• Expansion of electrical infrastructure capacity and reach. • Protection of remaining natural resources.

UPINGTON		
Strengths	**Challenges**	**Proposed actions**
• Existing economic infrastructure • Diversifying economy • Growth in property market • High tourism potential	• Distance from other major markets	• Promotion of beneficiation of agricultural products. • Tourism initiatives. • Social development initiatives

1.6.12.4.2 Kuruman

Kuruman was chosen as it was one of the sampling towns as it a large mining orientated settlement, that was affected by the iron ore commodity price slump, as well the recovery thereof.

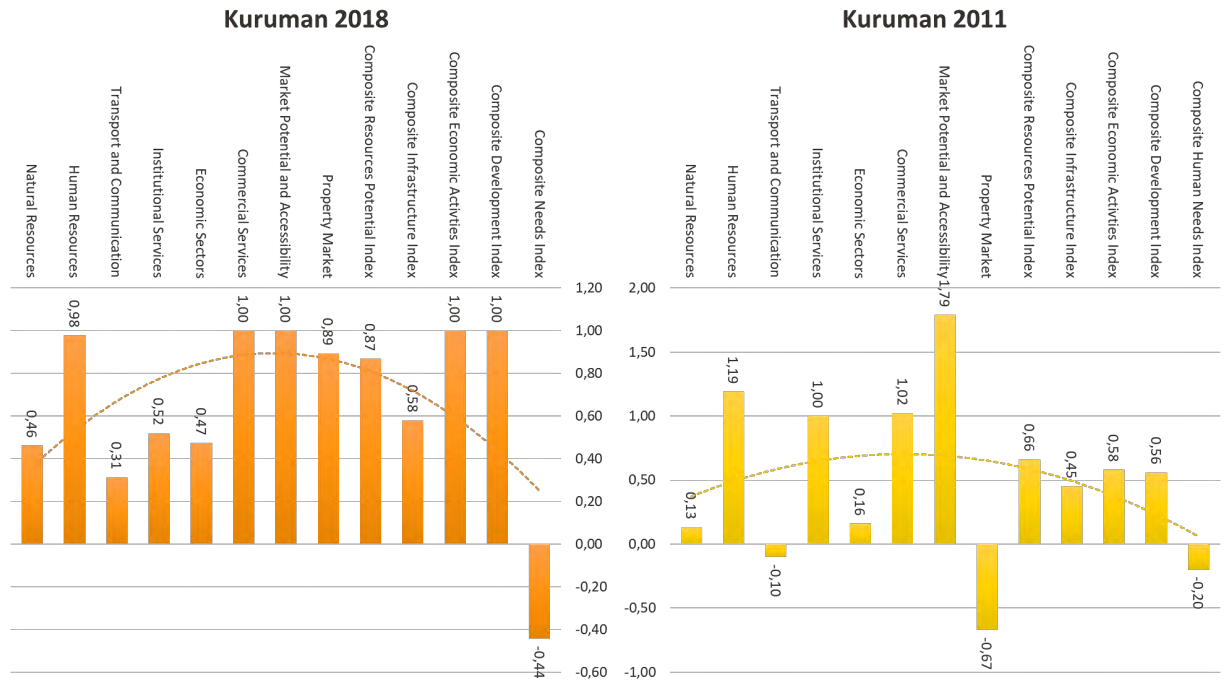


Figure 14: 2011 and 2018 Kuruman Development Profiles

KEY CHANGES OBSERVED:

- Kuruman's economic sectors indicate a noticeable growth, mainly due to growth in the mining sector.
- Natural resources have increased, due to the inclusion of the Kuruman woodlands.
- The property market has also seen a large growth, as property value and demand increased due to in-migration caused by the growth in the mining sector.
- The institutional services have increased, as Kuruman is the municipal and district seat, resulting in a concentration of administrative functions within the town.
- Along with the high level of in-migration, the level of human needs has increased, as informal housing, lifestyle diseases etc. become more prominent.
- The graphs further indicate that the human needs index has worsened, indicating an increase in human needs.

Table 28: Kuruman Strengths, Challenges and Action analysis

KURUMAN		
Strengths	**Challenges**	**Proposed actions**
• Institutional concentration. • Presence of natural resources. • Existing economic infrastructure • Growth in property market	• Dependence on mining as an economic sector. • Limited electrical infrastructure is hindering growth and economic diversification. • Municipal and Tribal Authority relationship	• Expansion of electrical infrastructure capacity and reach. • Protection of remaining natural resources. • Promotion of beneficiation of minerals.

1.6.12.4.3 Postmasburg

Similarly, to Kuruman, Postmasburg was chosen as it was one of the sampling towns as it's a smaller mining orientated settlement which associated with the Gamagara Mining Corridor, that was affected by the iron ore commodity price slump, as well the recovery thereof.

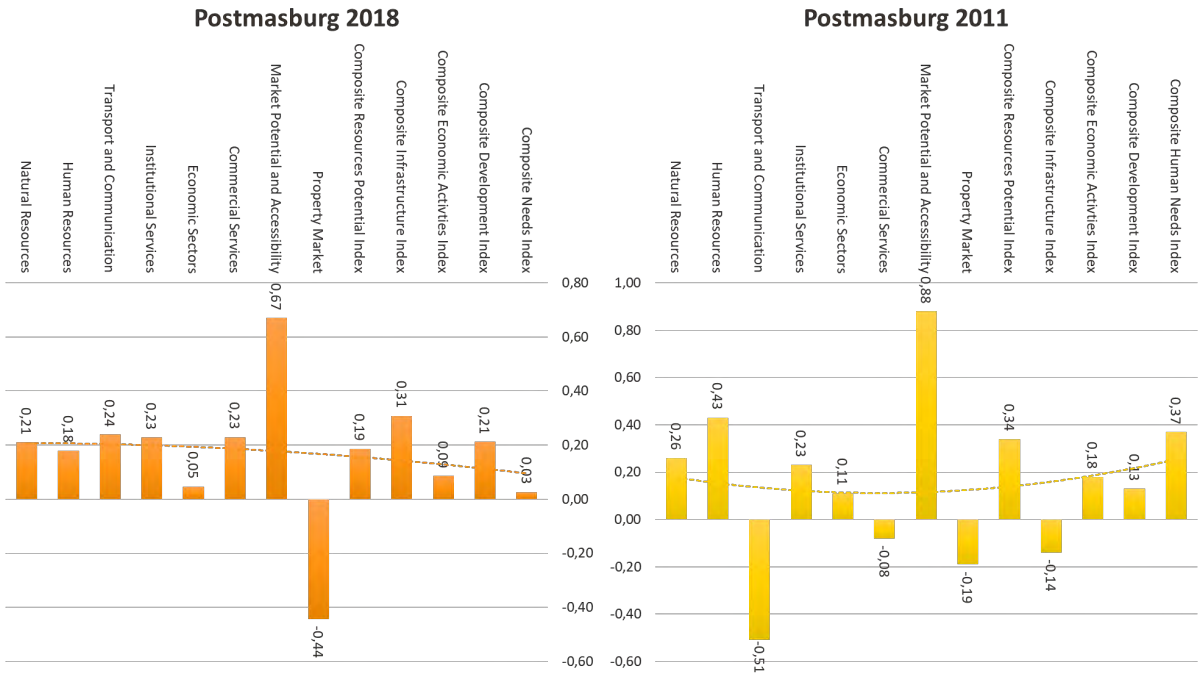


Figure 15: 2011 and 2018 Postmasburg Development Profile:

KEY CHANGES OBSERVED:

- Postmasburg economic sector has seen a decline, as it lower level of resilience toward commodity price drops, as well as where numerous mining activities were shifted to Kathu between 2005 and 2015.
- The property market has also seen a decline, as would be expected to decline in mining activities and economic sectors within the town.
- Natural resources have decreased slightly, indicating natural resources are being degraded.
- Transport and communication has experienced a noticeable increase, mainly due to maintenance and upgrading of infrastructure within the town, increasing the accessibility.
- The human needs have increased, somewhat over the extended period.

Table 29:Postmasburg Strengths, Challenges and Action analysis

POSTMASBURG		
Strengths	Challenges	Proposed actions
• Presence of natural resources. • Existing economic infrastructure	• Dependence on mining as an economic sector. • Limited electrical infrastructure is hindering growth and economic diversification. • Municipal and Tribal Authority relationship	• SMME and support for emerging sectors • Protection of remaining natural resources. • Promotion of beneficiation of minerals. • Re-use or renewal of existing infrastructure.

1.6.12.4.4 Carnarvon

Carnarvon was chosen, to get an indication on what the impact of Square Kilometre Array (SKA) Telescope, as the 2011 study was concluded before the SKA was awarded to South Africa, where the 2018 study results may indicate whether the SKA developments, up to date, have had a noticeable effect on the development potential of Carnarvon.

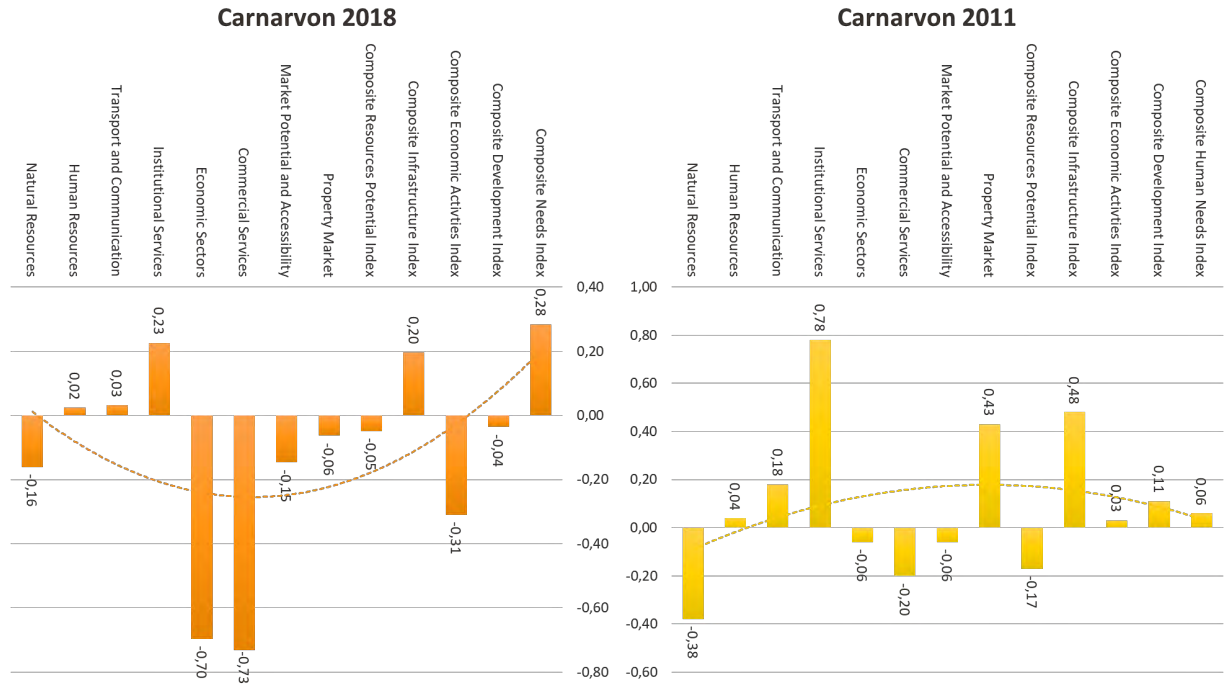


Figure 16: 2011 and 2018 Carnarvon Development Profiles

KEY CHANGES OBSERVED:

- Carnarvon's economic and commercial services experienced a noticeable decline.
- The property market has also seen a decline, mainly due to out-migration.
- Natural resources have increased slightly, while human resources have stayed consistent.
- Transport and communication has experienced a noticeable increase, mainly due to maintenance and upgrading of infrastructure within the town, increasing the accessibility.
- The level of human needs has lower drastically.

- Clear influences of the development and establishment of the SKA is not yet visible, as the main sources of data pertains to 2011, the full impact of the SKA on Carnarvon should become more apparent during the following Census.

Table 30: Carnarvon Strengths, Challenges and action analysis

CARNARVON		
Strengths	**Challenges**	**Proposed actions**
• Strong linkage with the SKA • Rich in heritage	• Dependence on agriculture as an economic and employment sector. • Relatively isolated location. • Capitalising on SKA opportunities.	• Investigate SMME opportunities, emanating from the SKA. • Promotion of Carnarvon as a tourism destination (incl. aesthetic enhancements to public spaces etc.).

1.6.12.4.5 Petrusville

Petrusville was chosen due to it characteristics of a declining town. Furthermore, Petrusville was identified in the Pixley ka Seme Rural Development Plan, as a potential Agri-Hub site.

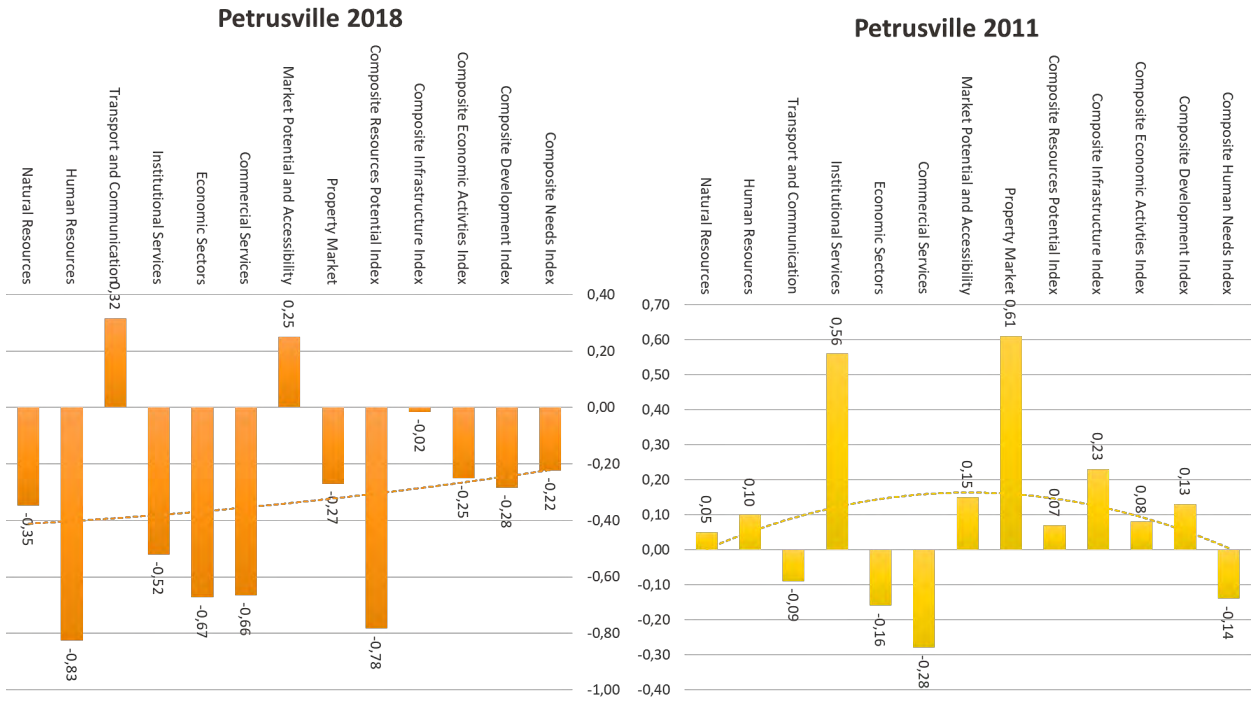


Figure 17: 2011 and 2018 Petrusville Development Profiles

KEY CHANGES OBSERVED:

- Petrusville experienced a decline in most sectors, between 2001 and 2011 as indicated above.
- The property market and human resources has also seen a decline, mainly due to out-migration.
- Natural resources have decreased noticeably, while human resources have stayed consistent.
- Transport and communication has experienced a noticeable increase, mainly due to maintenance and upgrading of infrastructure within the town, increasing the accessibility.

- The level of human needs has stayed at a consistent, somewhat high, level.
- Overall the development potential of Petrusville has declined, indicating it may not be a suitable candidate for the Agri-hub location, or may require various supporting interventions when the Agri-hub is developed.

Table 31: Petrusville Strengths, Challenges and action analysis

PETRUSVILLE		
Strengths	**Challenges**	**Proposed actions**
• Accessible location • Agricultural industry	• Dependence on agriculture as an economic and employment sector. • Expansion and diversification of the economic sectors • Creation of decent job opportunities.	• Investigate SMME opportunities, emanating from the Agri-hub. • Investigation of potential mechanisms to unlock economic potential.

1.6.12.4.6 Brandvlei

Brandvlei was chosen due to it characteristics of a declining town, within an isolated and arid region, with limited economic diversity and economic activities.

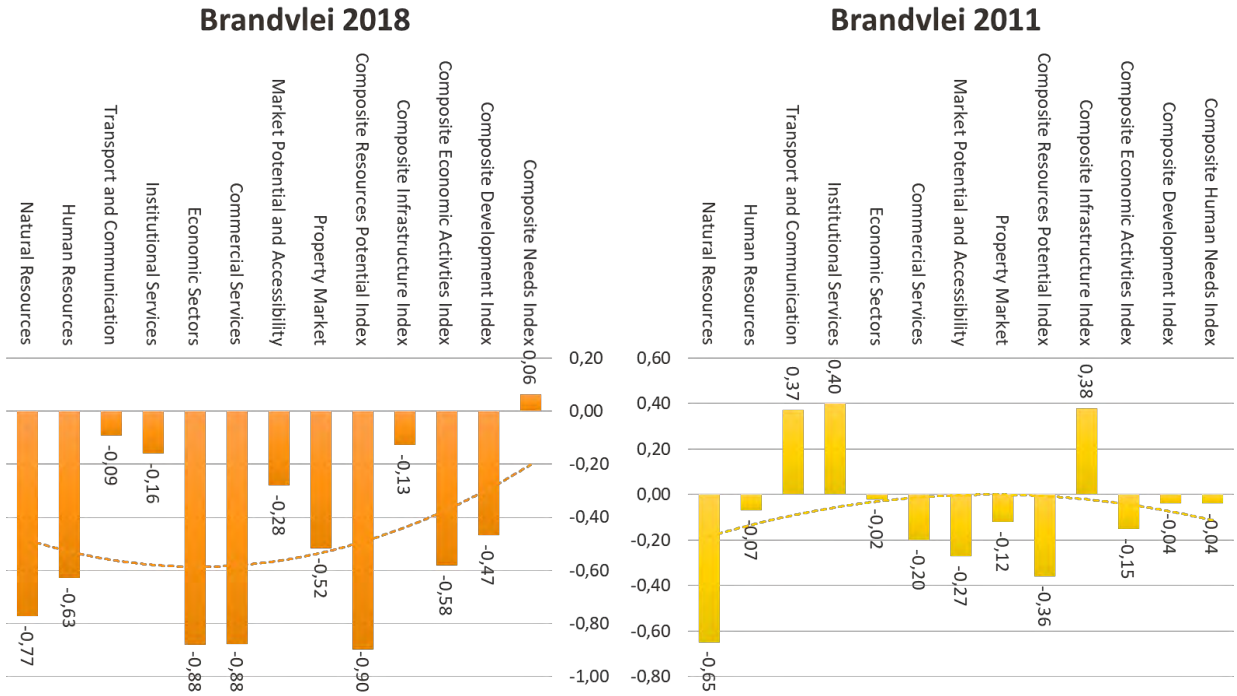


Figure 18: 2011 and 2018 Brandvlei Development Profiles

KEY CHANGES OBSERVED:

- Brandvlei experienced a major decline in most sectors, between 2001 and 2011 as indicated above.
- The economic sectors and human resources has also seen a decline, mainly due to out-migration, due to the economic hardship.

- As to be expected with the economic hardship faced in the areas, the human needs index has experienced an increase.
- Overall the development potential of Brandvlei has declined drastically, indicating it requires a maintenance strategy in order to maintain the current infrastructure and services provided in the town, without necessarily promoting growth.

Table 32: Brandvlei Strengths, Challenges and action analysis

BRANDVLEI		
Strengths	**Challenges**	**Proposed actions**
• Accessible location • Agricultural industry	• Dependence on agriculture as an economic and employment sector. • Expansion and diversification of the economic sectors • Creation of decent job opportunities.	• Development of a maintenance strategy. • Invest in social and skills development initiatives.

1.6.12.4.7 Riemvasmaak

Riemvasmaak was chosen due to it characteristics of being situated relatively closely to a major regional economic driver, such as Upington, as well as in close proximity to natural resources, with a small population.

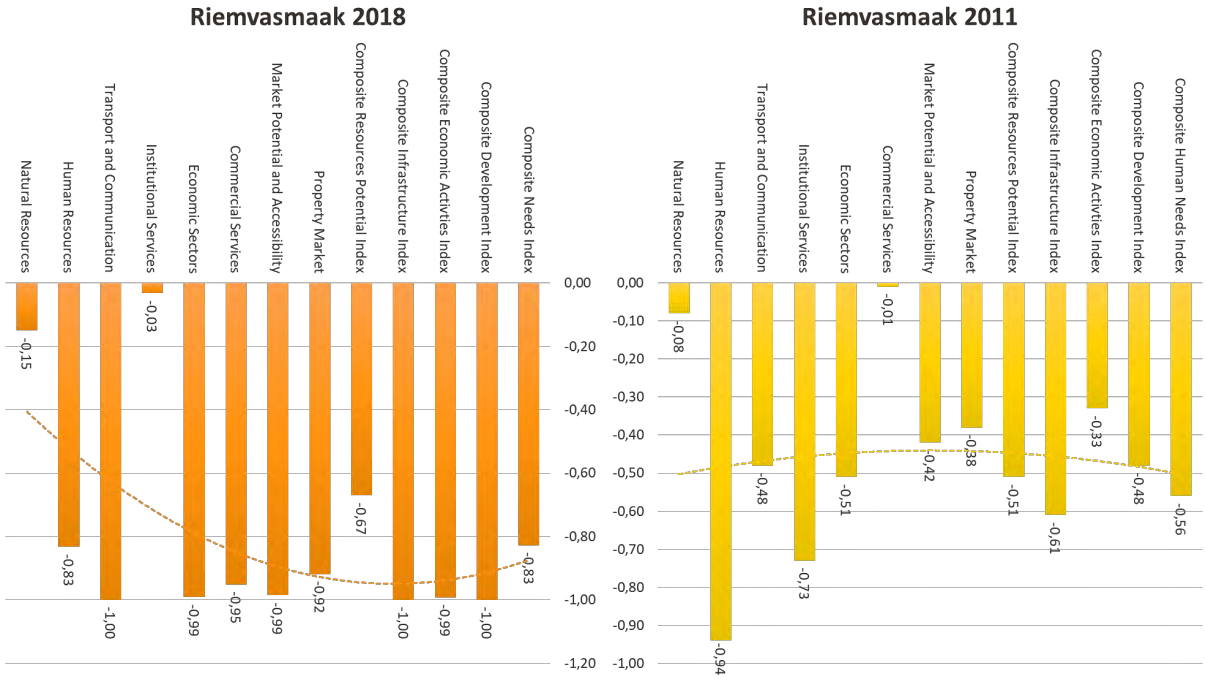


Figure 19: 2011 and 2018 Riemvasmaak Development profiles

KEY CHANGES OBSERVED:

- The development profile of Riemvasmaak stayed similar to that of the 2011 study results.
- A major decline in human resources and the economic sectors, indicating that the town experienced economic hardship from 2001 to 2011, as the stats indicate.

- Due to the out-migration and resulting population decline, the human needs index has also declined.
- Overall the development potential of Riemvasmaak has declined somewhat, indicating it requires a maintenance strategy in order to maintain the current infrastructure and services provided in the town, without necessarily promoting growth.

Table 33: Riemvasmaak Strengths, Challenges and action analysis

RIEMVASMAAK		
Strengths	Challenges	Proposed actions
• Relatively accessible location • Tourism potential • Proximity to the Augrabies Nature reserve	• Dependence on agriculture as an economic and employment sector. • Unlocking of tourism potential • Creation of decent job opportunities.	• Development of a maintenance strategy. • Invest in social and skills development programmes that will support tourism initiatives.

1.6.13 Measuring change of the towns and municipal development potential

In order to measure the level of change that has occurred during the period between the 2011 and 2018 study, the composite indexes of the towns will be compared on a district level. The following figures and maps will provide insight to the level of change experienced by each town, per each composite index.

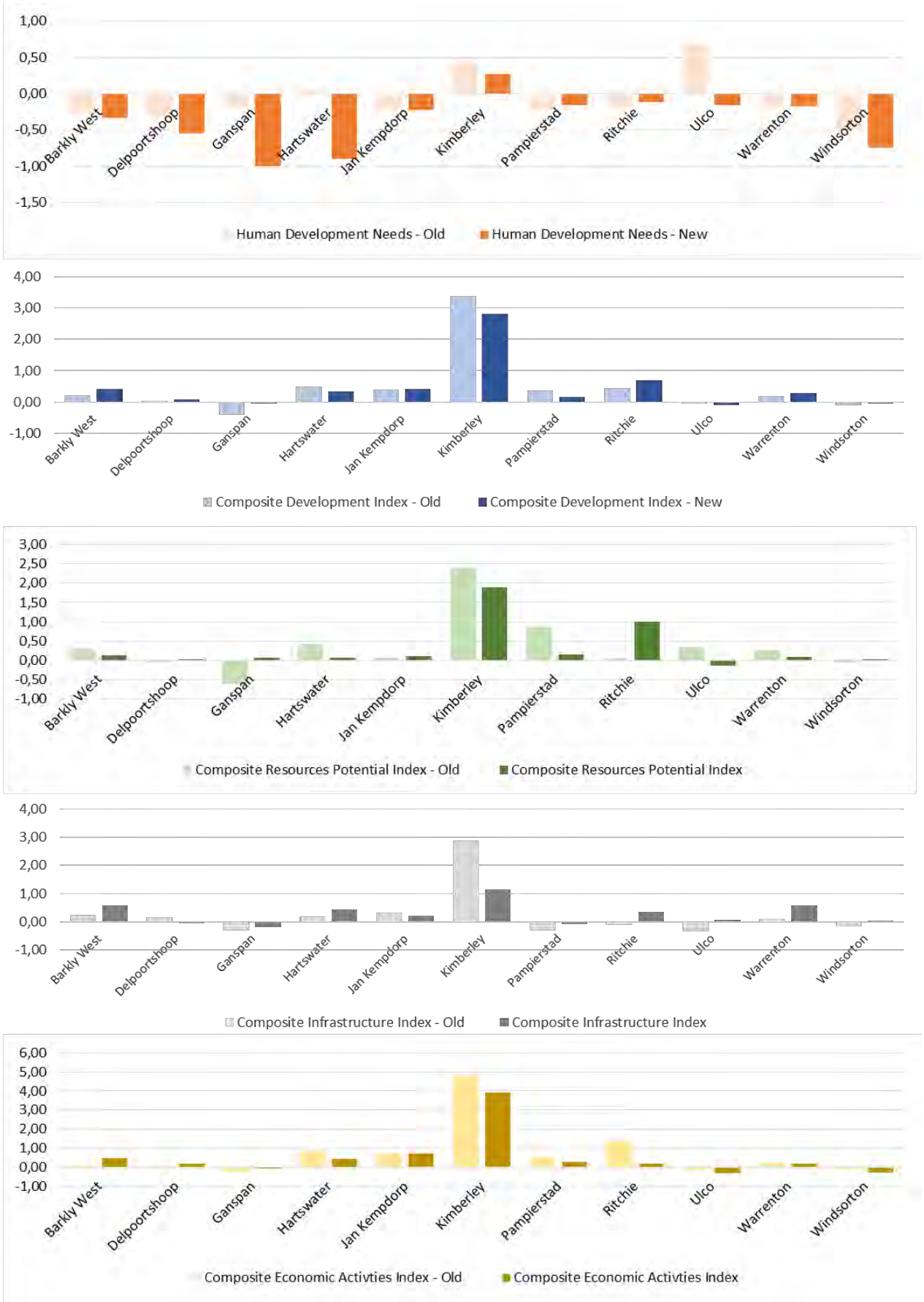


Figure 20: Change observed per Composite Index in the Frances Baard District

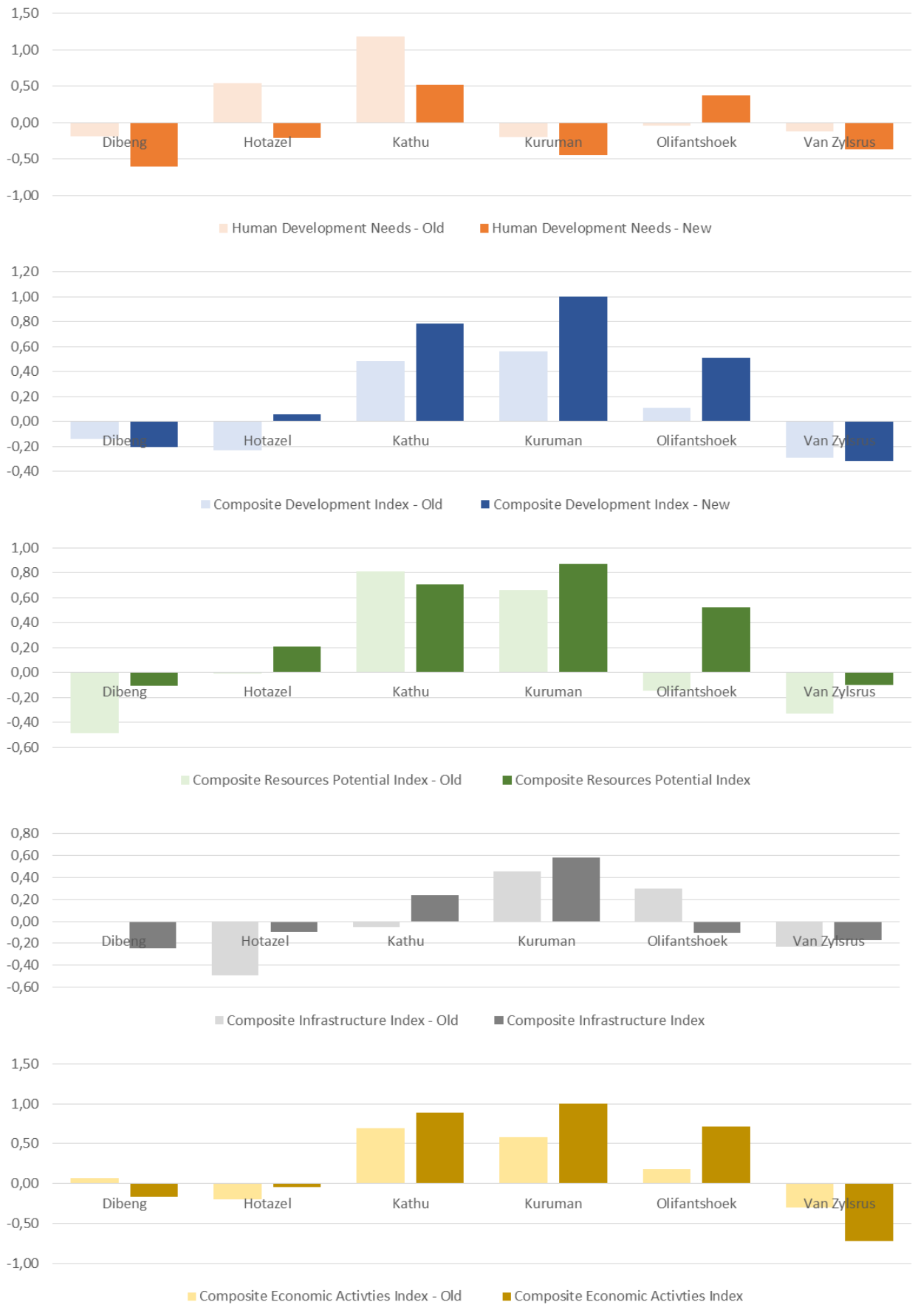


Figure 21: Change observed per Composite Index in the John Taolo Gaetsewe District

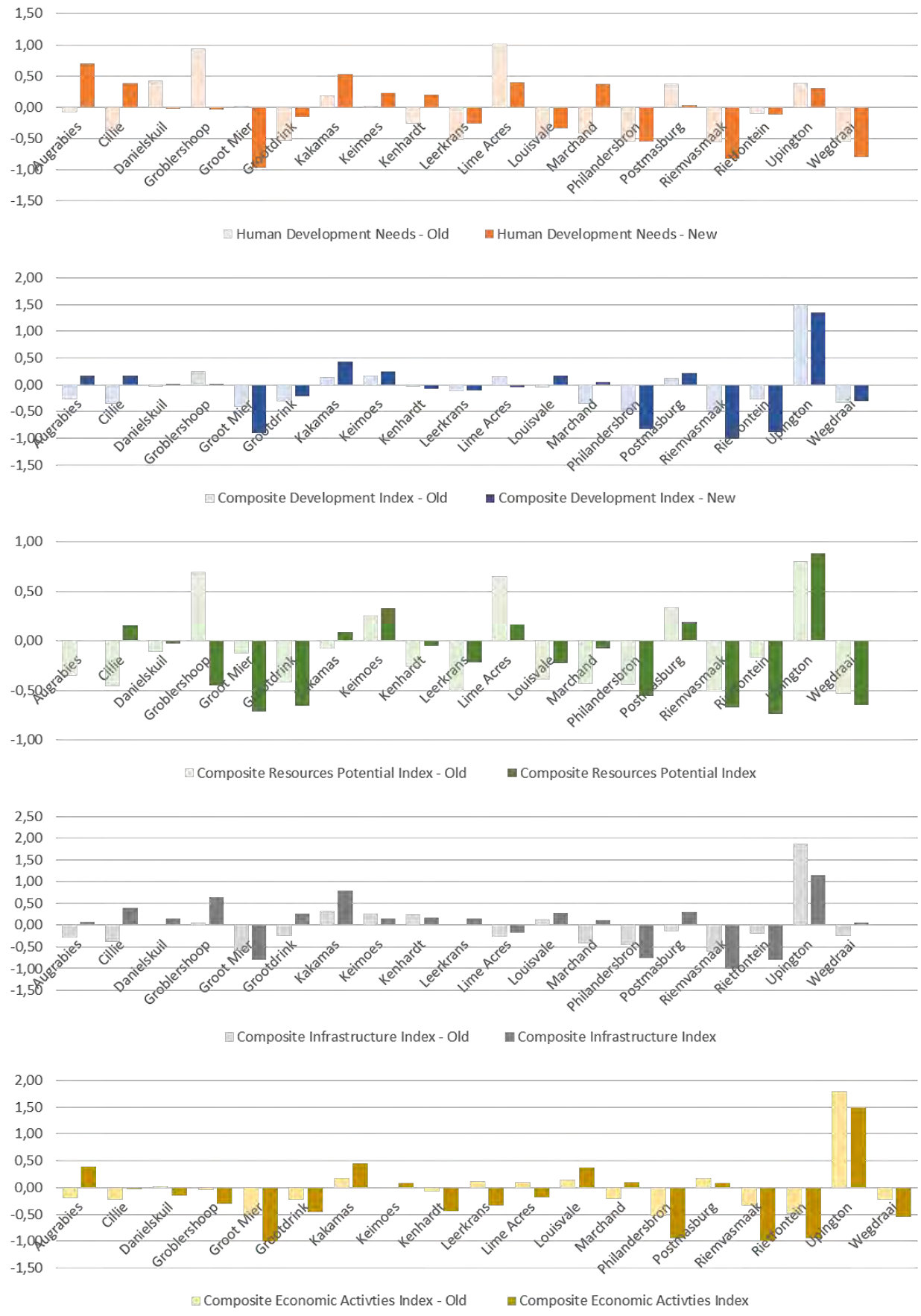


Figure 22: Change observed per Composite Index in the ZF Mgcawu District

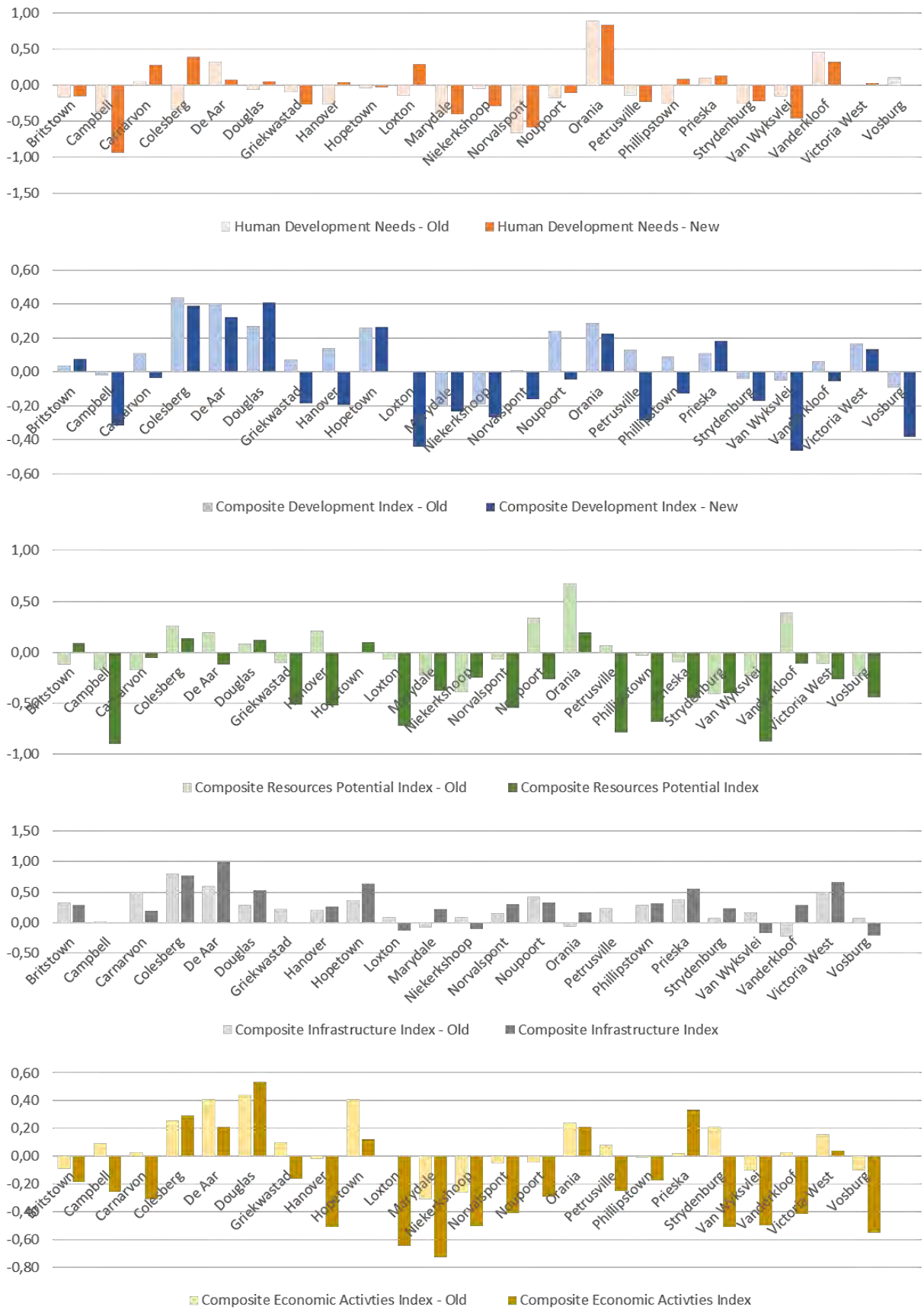


Figure 23: Change observed per Composite Index in the Pixley ka Seme District

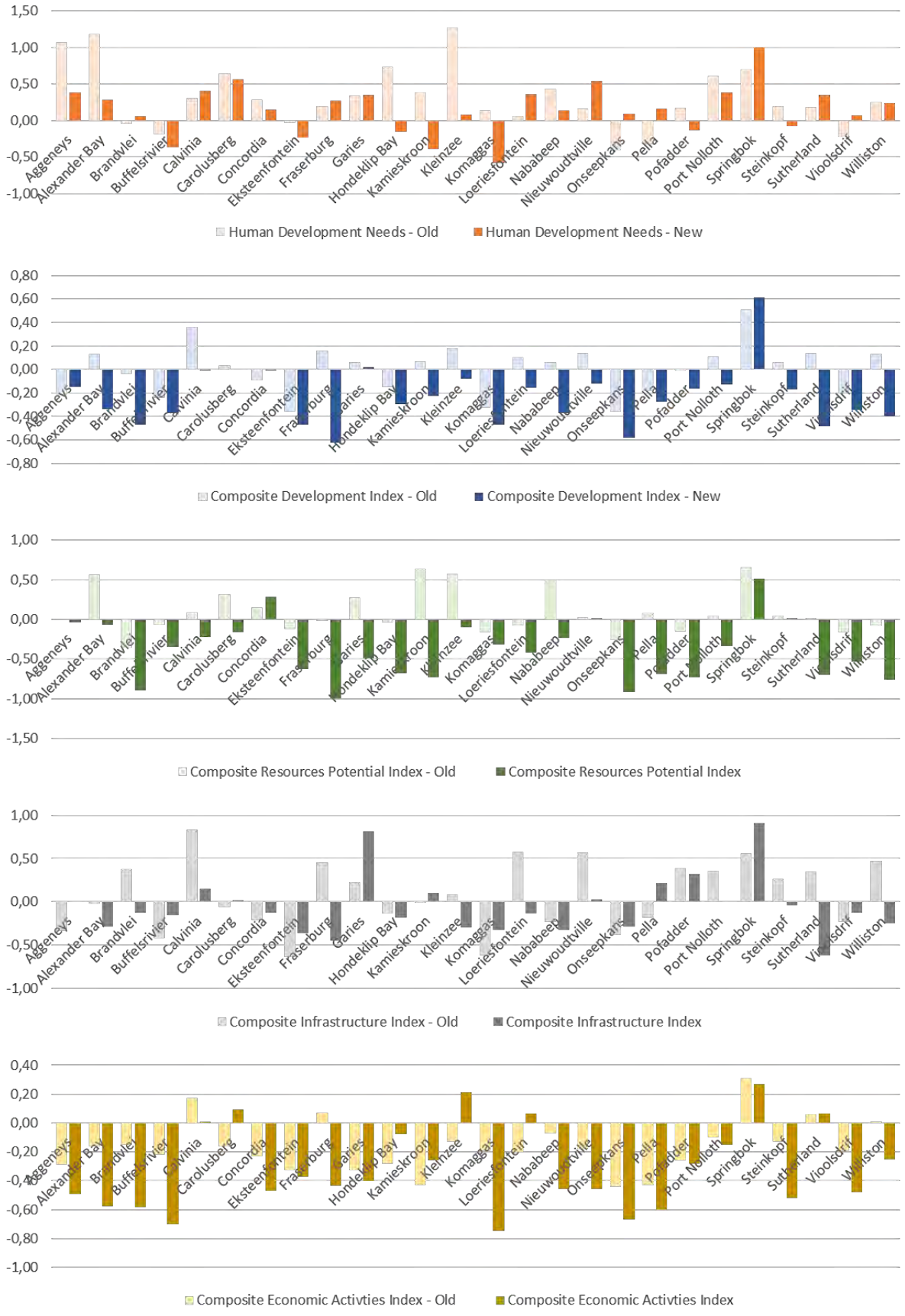


Figure 24: Change observed per Composite Index in the Namakwa District

To gain further insight, the various composite indexed were mapped separately, to identify spatially what are the current trends and challenges that are facing Northern Cape settlement. The maps below will be briefly discussed.

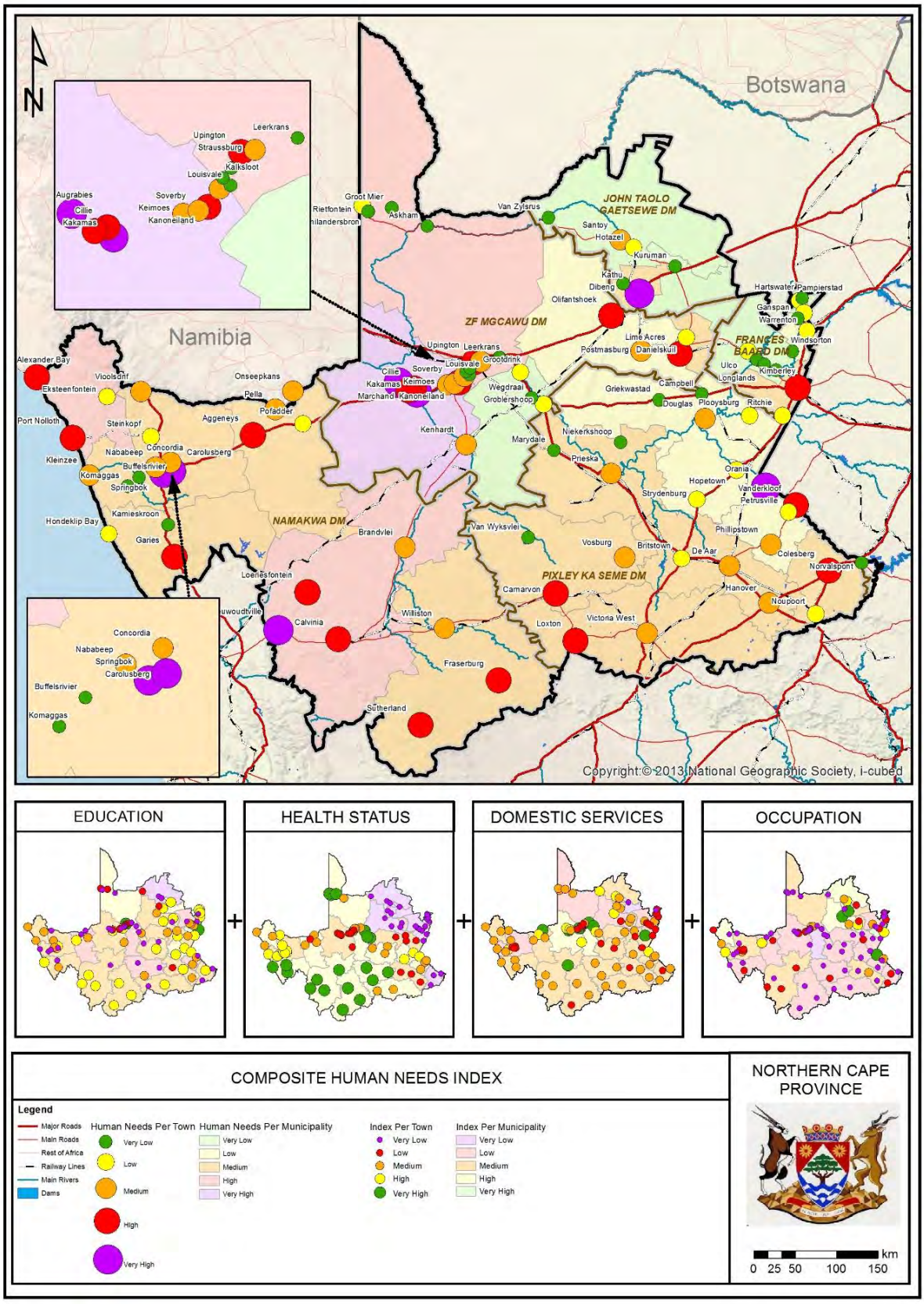


Figure 25: 2018 Composite Human Needs Index

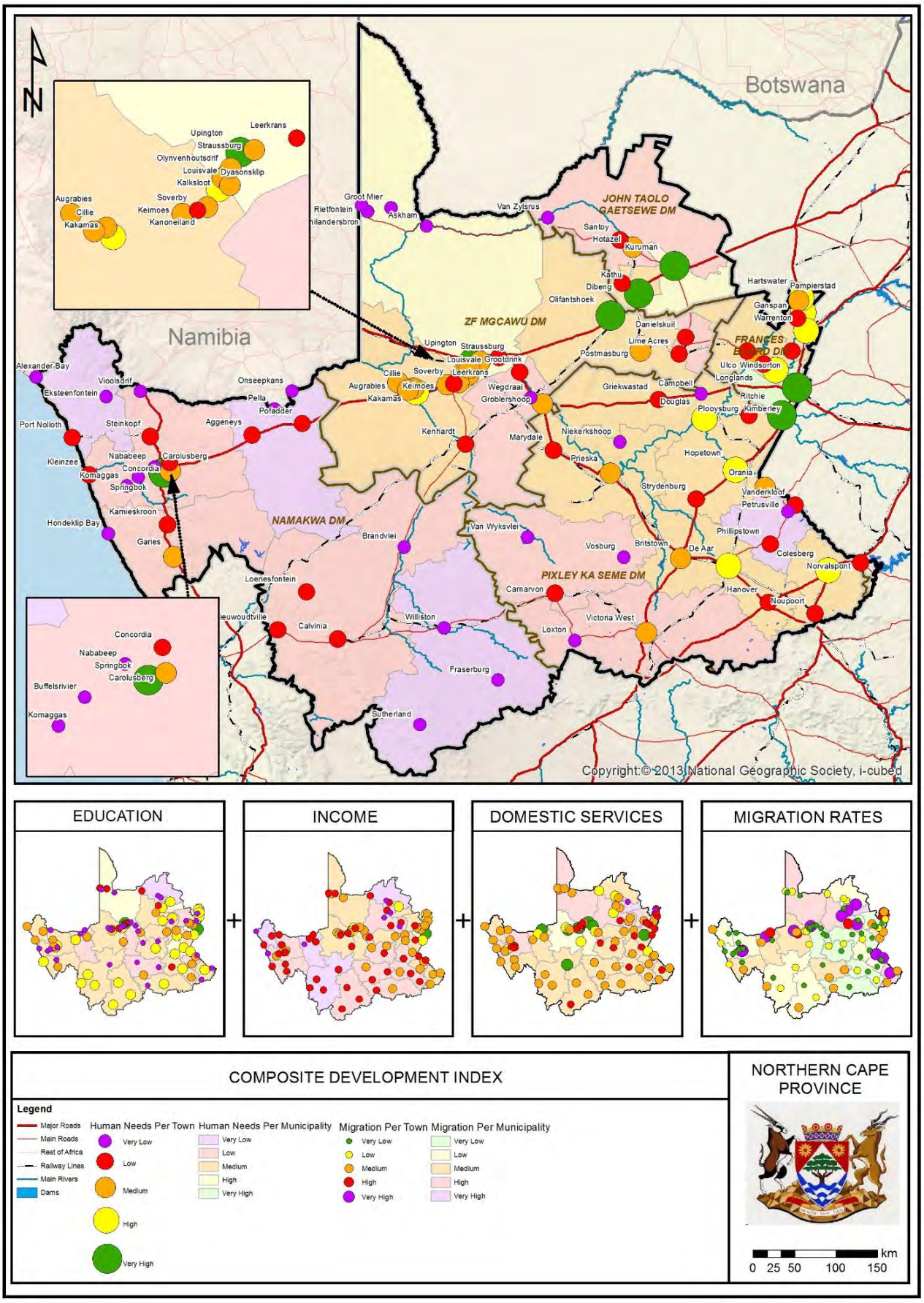


Figure 26: Composite Development Index

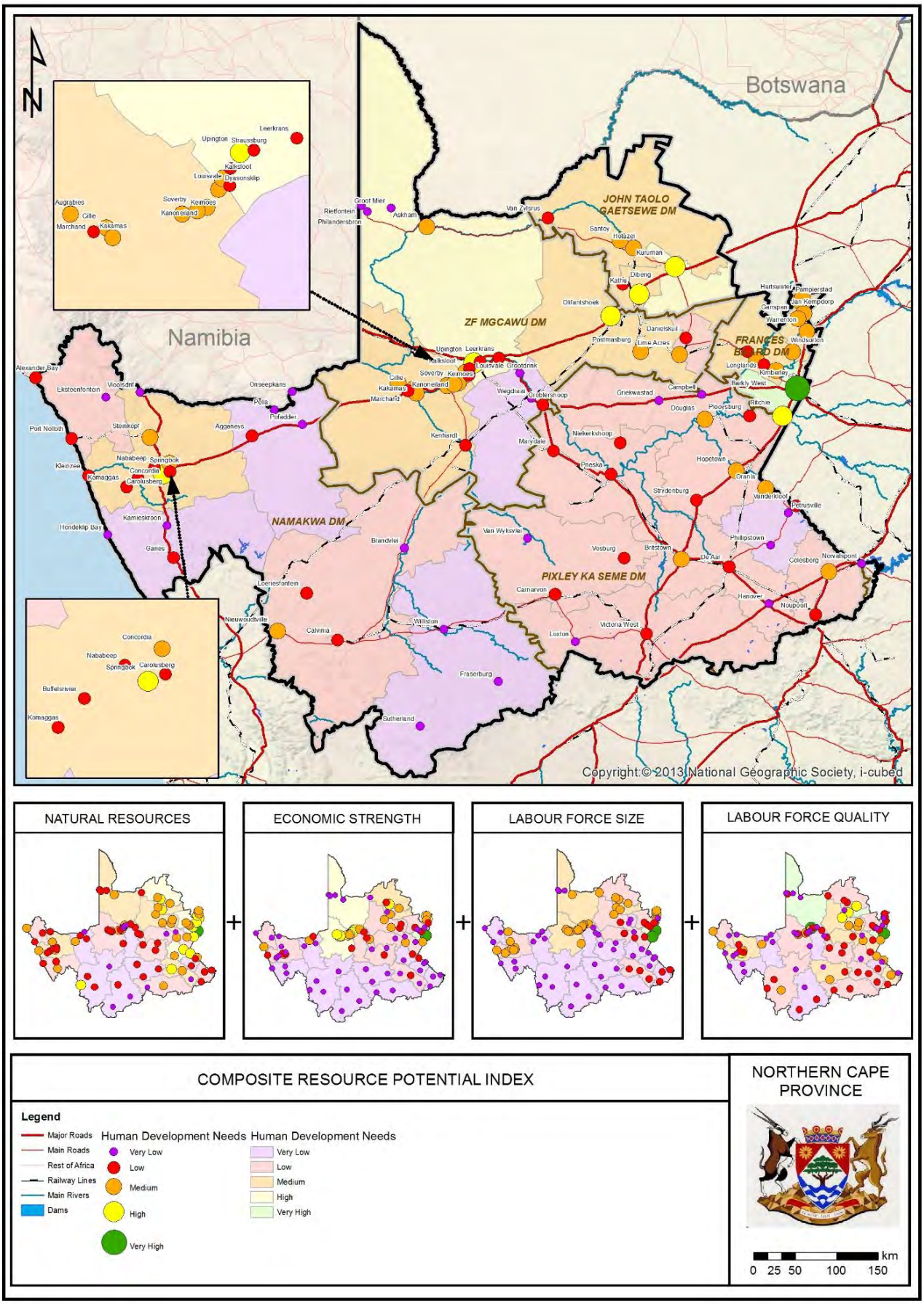


Figure 27: Composite Resource Potential Index

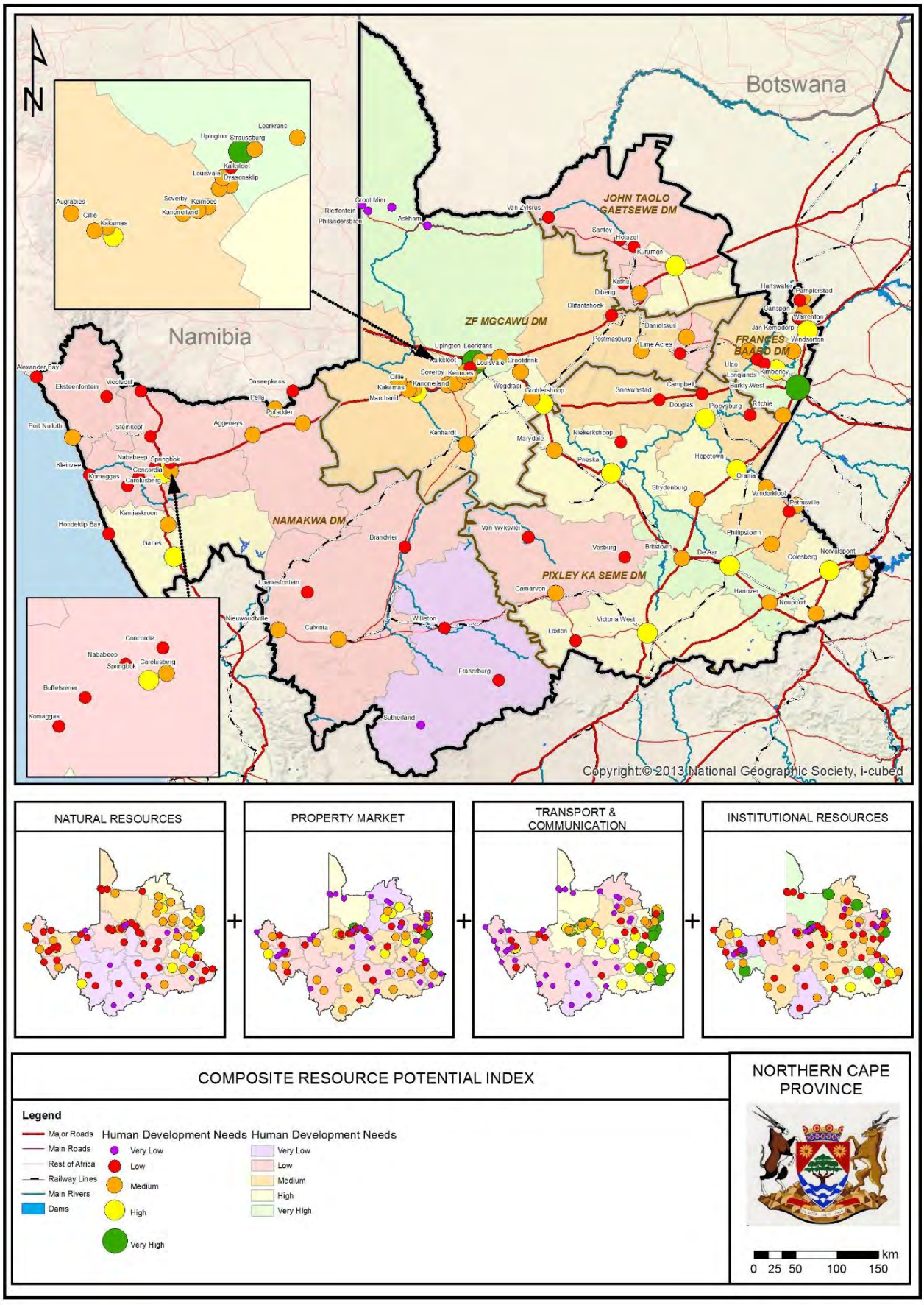


Figure 28: Composite Infrastructure Index

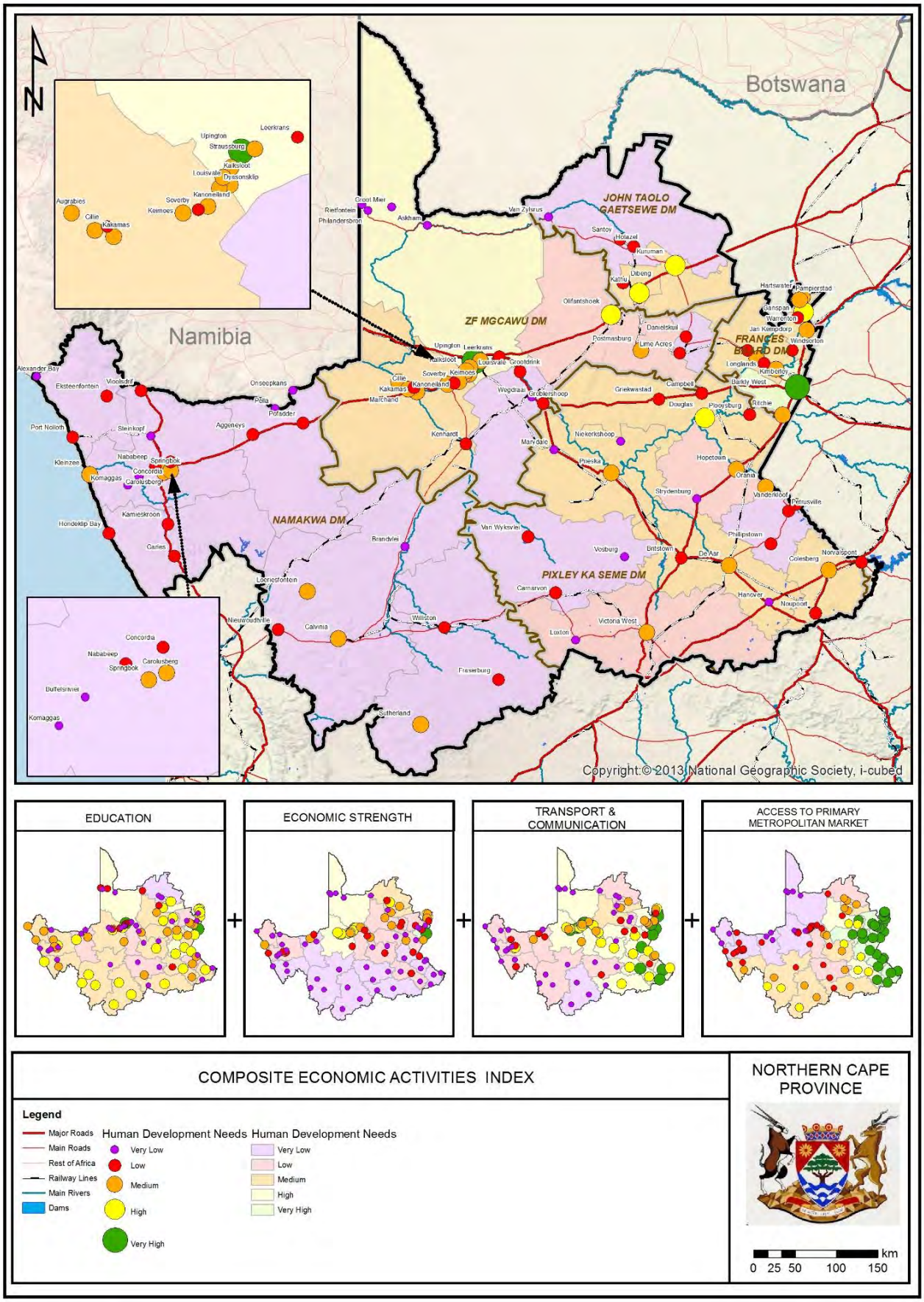


Figure 29: Composite Economic Activities Index

CHAPTER 4

1 RESULTS: MESSAGE FROM THE TOWN PROFILES

A town profile can potentially convey multiple messages at different levels and scales to inform the socio-political and economic decision-making process. The scope and complexity of the analytical profiles focus primarily on the dominant trends of the town and municipality profiles as it is disclosed in the composite indices and the related investment scenarios. The factual version of the findings will at this stage, therefore, highlight only the general trends from the statistical tables, maps and diagrams at a regional level and not so much at a detailed level of the individual towns. The latter analysis would be possible from these results but requires a separate micro-scale internal town focus.

1.7 INTEGRATION OF TOWN DEVELOPMENT INDICATORS

As a point of departure, the 89 towns were integrated in terms of their critical development characteristics. This first-level integration of the town profiles (in alphabetical order) provides a comprehensive overview of the Northern Cape settlement landscape.

The various population sizes of the urban settlements were categorised five classes for comparison of the 89 towns as listed below.

A fundamental element of the individual town profiles was to expose the dominant economic base of each town to better understand and appreciate the towns' development and socio-cultural potential.' By evaluating each town's rationale for existence, the individual settlements were qualitatively categorised according to the following economic base categories. Although towns usually have more than one economic base function, in these cases only the predominant function is highlighted:

i. Service centre: Traditional central place towns serving the daily needs of a surrounding farming community, e.g. providing educational, religious, shopping and professional services.
ii. Agriculture centre: Related to traditional service centres are those towns with a substantial component of agriculture activities within the town structure.
iii. Residential centre: A dormitory town where people live permanently, but work elsewhere, or are jobless.
iv. Recreational centre: Leisure activities undertaken by residents and tourists to exploit local natural and cultural recreation opportunities.
v. Mining centre: Towns where mining activities provide the resource base for economic development.
vi. Transportation centre: Towns where road, rail, air or water activities play a dominant role in their economic functioning.
vii. Regional centre: Towns serving several lower-order settlements with higher-order services and goods over a relatively extensive spatial sphere of influence.
viii. Diverse centre: Towns with a well-established and balanced economic base, incorporating a diversified amalgam of economic functions - such towns do not rely on only one or two sectors as their economic base.

Table 34: Integrated composite town results

Name	Population size	Economic base	Need	Dev	Dev vs Need	Invest. type
Aggenevs	Medium	Mining	Very Low	Low	Low Dev/Low Need	Basic
Alexander Bay	Small	Mining	Very Low	Low	Low Dev/Low Need	Basic
Augrabies	Medium	Agriculture	Medium	Low	Low Dev/High Need	Social
Barklv West	Large	Mining	High	Medium	Hiqh Dev/High Need	Infra and Social
Blackrock	Small	Mining	Very Low	Low	Low Dev/Low Need	Basic
Brandvlei	Medium	Service Centre	Medium	Medium	Transition	Social*
Britstown	Medium	Service Centre	Medium	Medium	Transition	Infra and Social*
Buffelsrivier	Small	Residential	Medium	Low	Transition	Social*
Calvinia	Large	Service Centre	Low	High	High Dev/Low Need	Infra and Basic
Campbell	Medium	Mini no	High	Medium	Low Dev/Hiqh Need	Social
Carnarvon	Medium	Service Centre	Medium	Medium	Transition	Infra and Basic*
Carolusberg	Small	Mining	Low	Medium	High Dev/Low Need	Infra and Basic
Cillie	Small	Agriculture	High	Low	Low Dev/High Need	Social
Colesberg	Large	Service Centre	High	High	High Dev/High Need	Infra and Social
Concordia	Medium	Mining	Low	Medium	Low Dev/Low Need	Basic
Danielskuil	Large	Mining	Low	Medium	Low Dev/Low Need	Basic
DeAar	Large	Transportation	Low	High	Hiqh Dev/Low Need	Infra and Basic
Delportshoop	Large	Mining	High	Medium	High Dev/High Need	Infra and Social

Name	Population size	Economic base	Need	Dev	Dev vs Need	Invest. type
Dibeng	Medium	Residential	Medium	Medium	Transition	Social*
Douglas	Large	Agriculture	Medium	High	High Dev/High Need	Infra and Social
Eksteenfontein	Verv Small	Residential	Medium	Low	Low Dev/High Need	Social
Fraserburg	Medium	Service Centre	Medium	Medium	Transition	Infra and Basic*
Garies	Medium	Service Centre	Low	Medium	High Dev/Low Need	Infra and Basic
Griekwastad	Medium	Service Centre	Medium	Medium	Transition	Infra and Social*
Groblershoop	Verv Small	Service Centre	Very Low	High	High Dev/Low Need	Infra and Basic
Groot Mier	Very Small	Residential	Medium	Low	Low Dev/Low Need	Basic
Grootdrink	Medium	Agriculture	High	Low	Low Dev/High Need	Social
Hanover	Medium	Service Centre	High	Medium	High Dev/High Need	Infra and Social
Hartswater	Medium	Agriculture	High	High Dev/Low Need	Infra and Basic	Infra and Basic
Hondeklip Bay	Very Small	Fishing	Verv Low	Medium	Low Dev/Low Need	Basic
Hopetown	Large	Service Centre	Medium	Hioh	High Dev/High Need	Infra and Social
Hotazel	Small	Mining	Low	Low	Low Dev/Low Need	Basic
Jan Kernodorp	Large	Agriculture	Medium	Hiqh	High Dev/High Need	Infra and Social
Kakamas	Large	Service Centre	Medium	Medium	Transition	Infra and Basic*
Kamieskroon	Small	Residential	Low	Medium	High Dev/Low Need	Infra and Basic
Karkams	Small	Residential	Medium	Medium	Transition	Social*

Name	Population size	Economic base	Need	Dev	Dev vs Need	Invest. type
Karos	Small	Agriculture	Medium	Medium	Transition	Infra and Social*
Kathu	Large	Mininq	Verv Low	High	Hiqh Dev/Low Need	Infra and Basic
Keimoes	Large	Service Centre	Medium	Medium	Transition	Infra and Basic*
Kenhardt	Medium	Service Centre	Hiqh	Medium	Low Dev/High Need	Social
Kheis	Very Small	Residential	Verv High	Medium	Low Dev/High Need	Social
Kimberley	Verv Large	Reaional Centre	Low	Very High	High Dev/Low Need	Infra and Basic
Kleinzee	Medium	Mining	Verv Low	Medium	High Dev/Low Need	Infra and Basic
Komaggas	Medium	Mining	Medium	Low	Low Dev/Low Need	Basic
Kuruman	Large	Regional Centre	Medium	Hicih	High Dev/High Need	Infra and Social
Leerkrans	Small	Agriculture	High	Medium	Low Dev/High Need	Social
Lime Acres	Medium	Mining	Very Low	Medium	High Dev/Low Need	Infra and Basic
Loeriesfontein	Medium	Service Centre	Medium	Medium	Transition	Infra and Basic*
Louisvale	Small	Agriculture	High	Medium	Low Dev/High Need	Social
Loxton	Small	Service Centre	Medium	Medium	Transition	Infra and Social*
Marchand	Medium	Agriculture	Hioh	Low	Low Dev/High Need	Social
Marydale	Medium	Service Centre	Hiqh	Medium	Low Dev/High Need	Social

Name	Population size	Economic base	Need	Dev	Dev vs Need	Invest. type
Nababeep	Medium	Mining	Low	Medium	High Dev/Low Need	Infra and Basic
Niekerkshoop	Medium	Agriculture	Medium	Medium	Transition	Social*
Nieuwoudtville	Small	Recreation	Medium	Medium	Transition	Infra and Basic*
Norvalspont	Small	Recreation	High	Medium	High Dev/High Need	Infra and Social
Noupoort	Medium	Service Centre	Medium	High	Transition	Infra and Social*
Olifantshoek	Large	Service Centre	Medium	Medium	Transition	Infra and Social"
Onseepkans	Small	Agriculture	High	Low	Low Dev/High Need	Social
Orania	Very Small	Residential	Very Low	High	High Dev/Low Need	Infra and Basic
Pampierstad	Large	Residential	High	High	High Dev/High Need	Infra and Social
Pella	Small	Residential	High	Medium	Low Dev/High Need	Social
Petrusville	Medium	Service Centre	Medium	Medium	Transition	Infra and Social*
Philandersbron	Small	Residential	High	Low	Low Dev/High Need	Social
Phillipstown	Medium	Service Centre	High	Medium	Transition	Infra and Social*
Pofadder	Medium	Service Centre	Medium	Medium	Transition	Basic*
Port Nolloth	Medium	Transportation	Low	Medium	High Dev/Low Need	Infra and Basic
Postmasburg	Large	Mining	Low	Medium	High Dev/Low Need	Infra and Basic
Prieska	Large	Service Centre	Medium	Medium	Transition	Infra and Basic*
Richmond	Medium	Service Centre	Medium	Medium	Transition	Infra and Social*

Name	Population size	Economic base	Need	Dev	Dev vs Need	Invest. type
Riemvasmaak	Small	Residential	High	Low	Low Dev/High Need	Social
Rietfontein	Medium	Residential	Medium	Low	Low Dev/High Need	Social
Ritchie	Large	Agriculture	Medium	High	High Dev/High Need	Infra and Social
Springbok	Large	Regional Centre	Low	High	High Dev/Low Need	Infra and Basic
Steinkopf	Large	Residential	Medium	Medium	Transition	Infra and Basic*
Strydenburg	Medium	Service Centre	High	Medium	Transition	Social*
Sutherland	Medium	Recreation	Medium	Medium	Transition	Infra and Basic*
Ulco	Small	Mining	Low	Medium	Low Dev/Low Need	Basic
Upington	Very Large	Regional Centre	Low	Very High	High Dev/Low Need	Infra and Basic
Van Wyksvlei	Small	Service Centre	Medium	Medium	Transition	Social*
Van Zylsrus	Small	Service Centre	Medium	Low	Low Dev/High Need	Social
Vanderkloof	Small	Recreation	Low	Medium	High Dev/Low Need	Infra and Basic
Victoria West	Medium	Service Centre	Medium	Medium	Transition	Infra and Basic*
Vioolsdrif	Very Small	Transportation	Medium	Medium	Transition	Social*

1.7.1 Integration of municipal development indicators

The same procedure and results as in the previous description of the town patterns were executed for the 26 municipalities. Table 34 integrates the municipal profiles on the critical development characteristics.

Table 35: Composite integrated municipal results

Name	Population	Need	Dev	Dev and Need	Invest. type
!Kheis	Medium	High	Low	Low Dev/High Need	Social
Dawid Kruiper	Very Large	Low	High	High Dev/Low Need	Infra and Basic
Dikgatlong	Large	High	Medium	Low Dev/High Need	Social
Emthanieni	Large	Low	Medium	Low Dev/Low Need	Basic
Gamagara	Large	Low	Medium	High Dev/Low Need	Infra and Basic
Ga-Segonyana	Very Large	High	High	High Dev/High Need	Infra and Social
Hantam	Medium	Low	Medium	Low Dev/Low Need	Basic
Kai! Garib	Large	Medium	Medium	Transitional	Infra and Social*
Kamiesberg	Small	Medium	Medium	Transitional	Basic*
Kareeberg	Very Small	Medium	Low	Low Dev/High Need	Social
Karoo Hoogland	Very Small	Medium	Medium	Transitional	Infra and Basic*
Kgatelopele	Medium	Low	Medium	Low Dev/Low Need	Basic
Khai-Ma	Small	Low	Low	Low Dev/Low Need	Basic
Magareng	Medium	High	Medium	Low Dev/High Need	Social
Joe Morolong	Very Large	Very High	High	High Dev/High Need	Infra and Social
Nama Khoi	Large	Low	High	High Dev/Low Need	Infra and Basic
Phokwane	Large	High	High	High Dev/High Need	Infra and Social
Renosterberg	Very Small	High	Low	Low Dev/High Need	Social
Richtersveld	Medium	Low	Medium	High Dev/Low Need	Infra and Basic

Siyancuma	Large	Medium	Medium	Transitional	Infra and Social*
Siyathemba	Medium	Medium	Low	Low Dev/High Need	Social
Sol Plaatie	Verv Large	Low	Very High	High Dev/Low Need	Infra and Basic
Thembelihle	Small	Medium	Medium	Transitional	Social*
Tsantsabane	Large	Medium	Medium	Transitional	Basic*
Ubuntu	Medium	High	Medium	Low Dev/High Need	Social
Umsombomvu	Medium	High	Medium	High Dev/High Need	Infra and Social

CHAPTER 5

1 CONCLUSIONS AND RECOMMENDATIONS

1.8 GENERAL INVESTMENT TYPOLOGY

Areas indicated with a high Human development need index scores as well as a high development potential index score, are the towns that should be prioritised in order to, effectively spend government funds by concentrating on multiplier effects.

This procedure will give effect to the guidelines in the National Spatial Development Strategy (NSDP, 2006) and Draft National Development framework, as well as the Northern Cape Provincial Spatial Development Frameworks and the Provincial Growth and Development Plan Strategy.

Such a clinical exercise, however, does not take all the complex nuances into consideration that characterise the different towns and municipalities. Therefore, this merely represents a 'suggested model' and point of departure for further discussion and negotiations with all the relevant role players.

1.9 PROPOSED LEADER TOWNS

The centres that will serve as the main growth engines for regional and social development in the province are identified with reference to the findings of this study. Table 5.1, as well as all the previous tables, maps and histograms supplement such a complex evaluation and decision. The spatial location of the selected towns is also considered to mobilize optimal trickle-down benefits for the surrounding lower order towns with only a marginal development potential and high community needs. The challenge to devise a more equitable spatial development strategy for the province could be tackled via rational choices for future town development and appropriate investment strategies. In this process the provision of services over the entire provincial space could be structured more efficiently.

A starting point for a selection of towns for substantial Infrastructural Capital investment are the following six established growth centres: Kimberley, Upington, Kuruman, Springbok and Colesberg, while either Calvinia or De Aar could be added on account of their accessibility and centrality in the vast Karoo region. Other towns could also be considered and added in the same way depending on the special niche to be filled, but it is doubtful whether the population numbers and economic base of the Northern Cape Province can support more than six leader towns.

1.10 SALIENT RESEARCH RESULTS

- Significant for future development strategies, centres with a proven development record are of paramount importance as potential 'growth engine' nodes for their respective. They should be priority targets for Infrastructural Capital Investment from government in order to enhance sustainable and balanced economic development throughout the province.
- Various reasons for the relatively slow/negative growth obtained in certain towns and municipalities - versus strong/positive growth experienced in others - can be advanced. These causes linked to the multi-dimensional set of growth criteria described in section 2, erode the towns· economic bases. Each settlement demonstrates a unique town profile in accordance with the quantitative indicators (Addendum A and B) on which they scored positive and

negative values. From these profiles the following overarching causes for retarded town growth may be deduced:

- Technological transformation, linked to faster motorcars on better roads, railroad electrification and computer/internet networking that facilitate more efficient and rapid interaction with a multitude of urban places at an increasing global scale. Towns that do not adapt to these changes may suffer negative consequences.
- Economic transformation includes a fundamental shift from primary economic activities (e.g. fishing, mining and agriculture) to higher order service industries (e.g. IT, financial and professional services), that eroded the original reason for the existence of many towns.
- Human behavioural transformation amongst modem and post-modem urban dwellers redefines inter alia recreation preferences, retirement patterns and general lifestyle preferences. Residents continually develop new expectations and demands to which town structures must respond in order to survive and to continue occupying a niche function in the province's urban system. Management capacity and leadership reflected in the quantity and quality of local municipal and provincial staff contingents and other decision-making role players in the communities. In the absence of clear development visions and concomitant management skills, local authorities are reluctant to launch robust initiatives to counter negative growth tendencies and to capitalize on their positive attributes.
- Many towns fail to capitalize optimally on their inherent development potential. Certain settlements misinterpret their potential and embark on futile initiatives that are not aligned with their resource base and development profile. They do not, therefore, maximise their real economic and resource assets.
- Some towns simply lack sufficient resources to support inherent economic sustainability of the settlement. According to their town profiles and associated growth indicators, their future development prospects seem bleak and further external infrastructural investment in these towns should be minimized.
- In some urban centres unrealistic expectations prevail regarding the role that tourism might fulfil as an economic growth mechanism for the town. Governments of developing countries often consider tourism a desirable route to accelerated economic development. However, the development of tourism in any given location requires that several key elements combine to produce conditions conducive to growth. Usually they are: Natural and cultural resources and attractions, infrastructure, investment, labour and strategic vision. Tourism is a resource-based industry, dependent for its basic appeal upon nature's endowment and society's heritage. Although many towns in the Northern Cape possess the resources and attractions to support tourism development, local and national competition as well as various competitive elements has to consider. Other prerequisites are still absent from some Northern Cape towns, i.e. tourism infrastructure, marketing, potential investors and appropriately skilled labour.
- A number of towns possess a unique place identity and should therefore be preserved to qualitatively enrich the province's urban character. These identities mainly relate to unique natural features, cultural heritage, and human and economic activities for which these settlements became renowned or that provided the inhabitants with a special sense of

belonging and purpose. Although some of these towns lack a vibrant economic base, they may deserve government protection. Quite often the tourism function plays a role in such cases. In a follow-up study the qualitative evaluation of the province's settlements should highlight this element.

- In many towns segregation and disparities inherited from the apartheid era are still visible in various forms, especially in spatial and institutional structures, as well as in some residents' perceptions and behaviour. Intentions and resolutions in this regard are generally well documented, but implementation is slow. This is probably one of the reasons for the persistence of high levels of human needs in many towns.

1.11 CONCLUSION

Empirically and methodologically, the issue of the actual number of small towns in South Africa and within each presents a major obstacle for research. Many investigations argue that South Africa has 500 small towns with up to 50,000 residents. This is undoubtedly incorrect, as there are 234 local municipalities in South Africa with many small towns in each municipality. It is problematic that the Census counts no longer distinguish between urban areas that can be considered small towns or suburban areas in cities and therefore do not provide an insight into the size, number and scope of small town spatial distribution in South Africa.

While it may not be empirically helpful to have discussions about the definitions of what constitutes a small town, it is crucially important that representative research on small towns in South Africa and the Northern Cape is conducted and updated on a 5-10-year basis, to accurately track the progress and regress of settlements within the province. This point is important in terms of spatially marginalised small towns which may fall outside of the research currently conducted.

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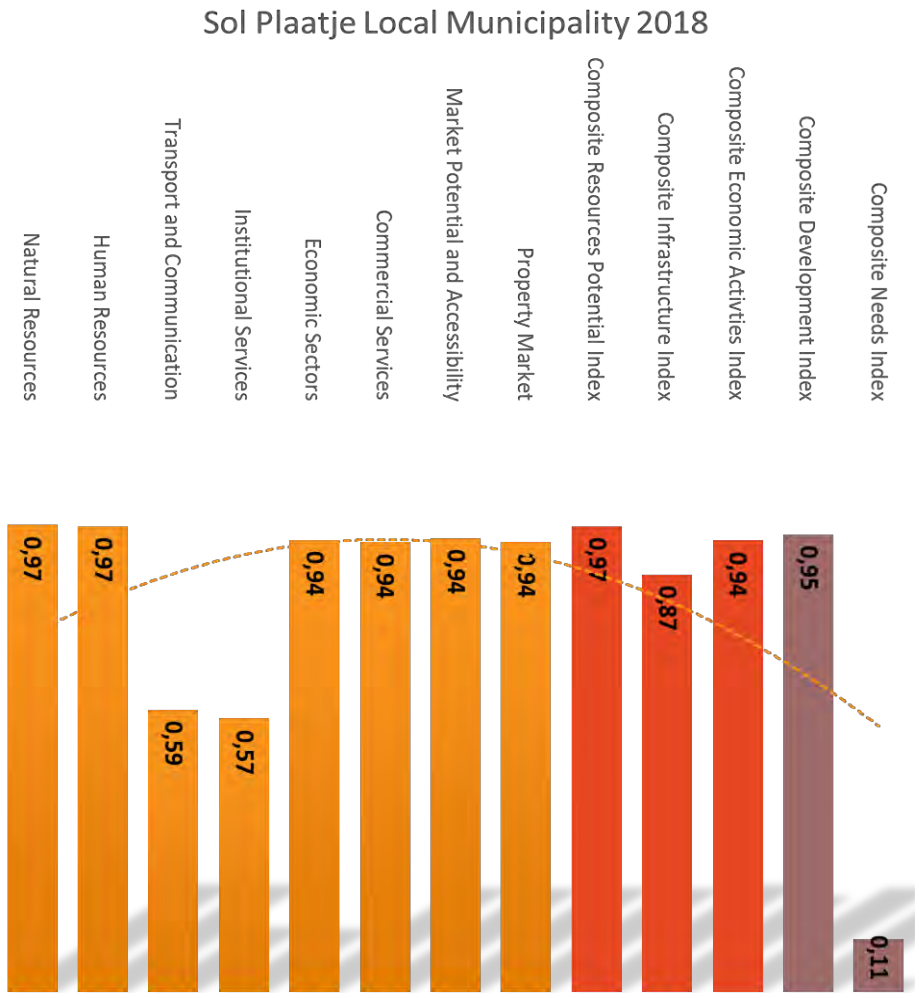
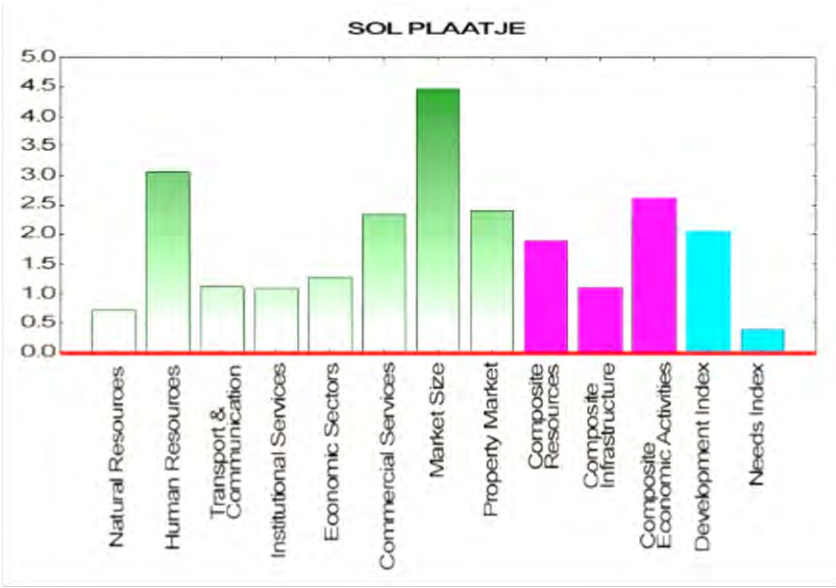
ADDENDUM A:

MUNICIPAL PROFILE RESULTS AND COMPARISONS

1 FRANCES BAARD LOCAL MUNCIPALITIES

1.12 SOL PLAATJE LOCAL MUNICIPALITY

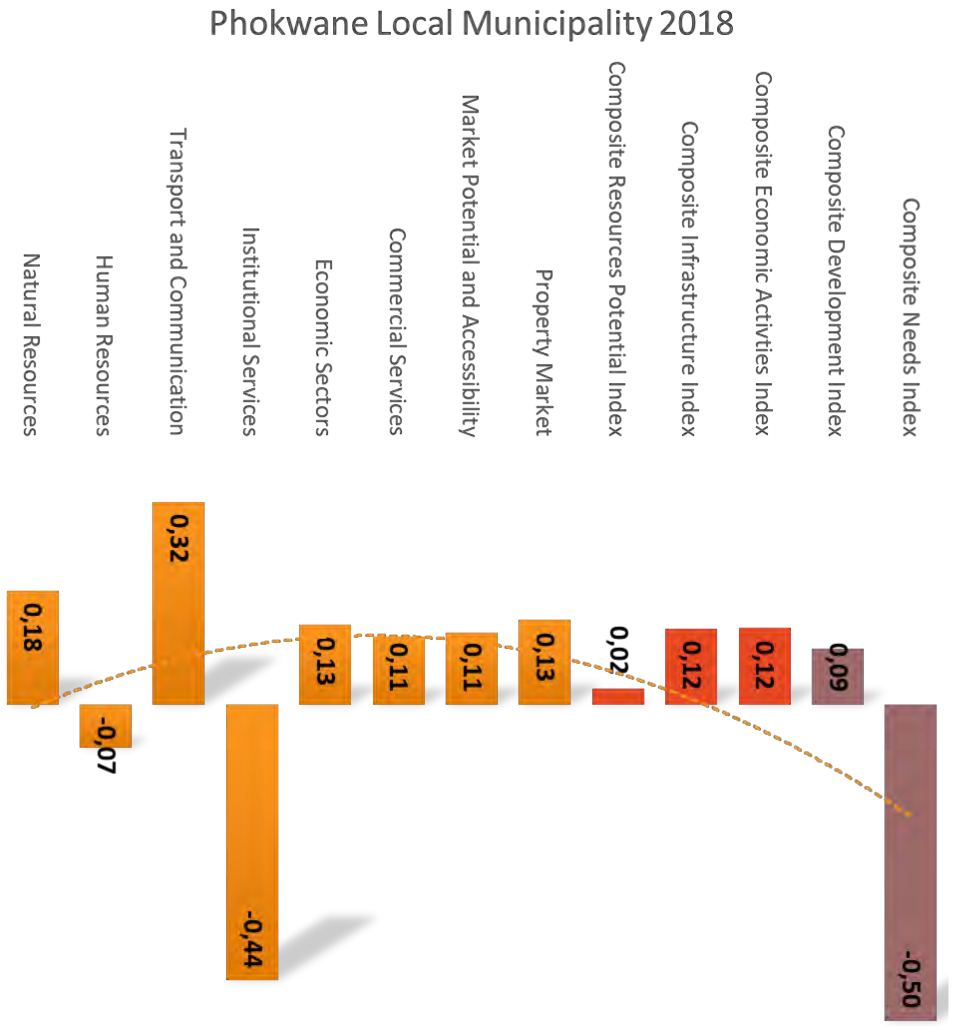


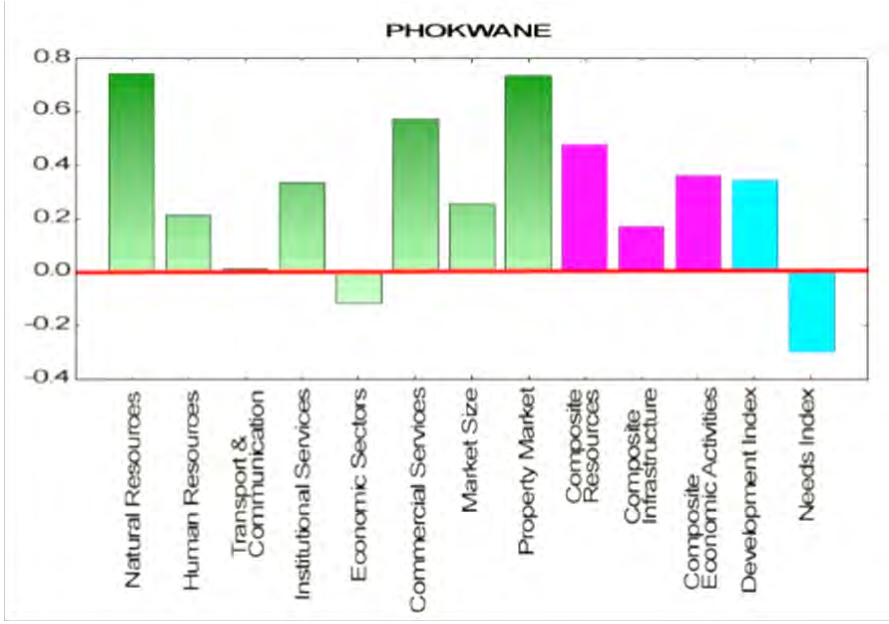


KEY OBSERVATIONS:

- The results indicate, that Sol Plaatje received the highest ratings due to the high impact of Kimberley on the municipal rating.
- As Sol Plaatje has the highest concentration of infrastructure and services, all indexes are positive.
- Overall the development potential profile increased significantly, mainly due to the increase of the majority if the index ratings.
- The human need index has however decreased slightly.

1.13 PHOKWANE LOCAL MUNICIPALITY

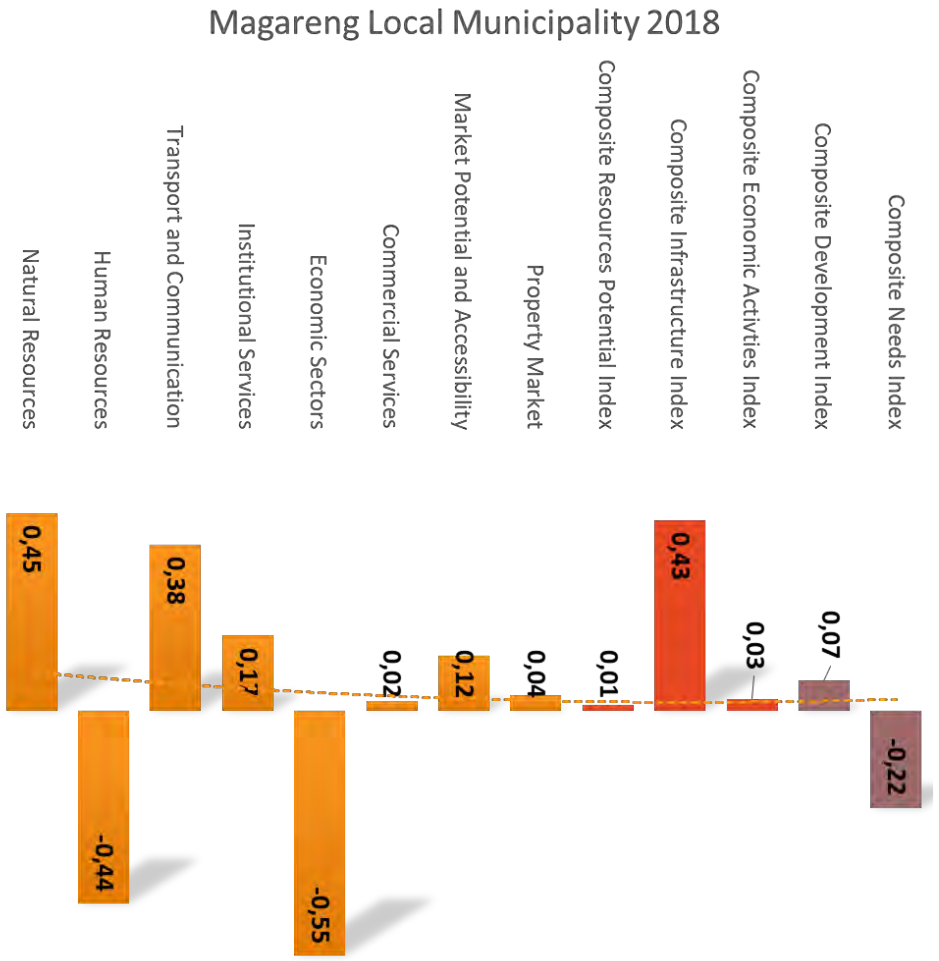


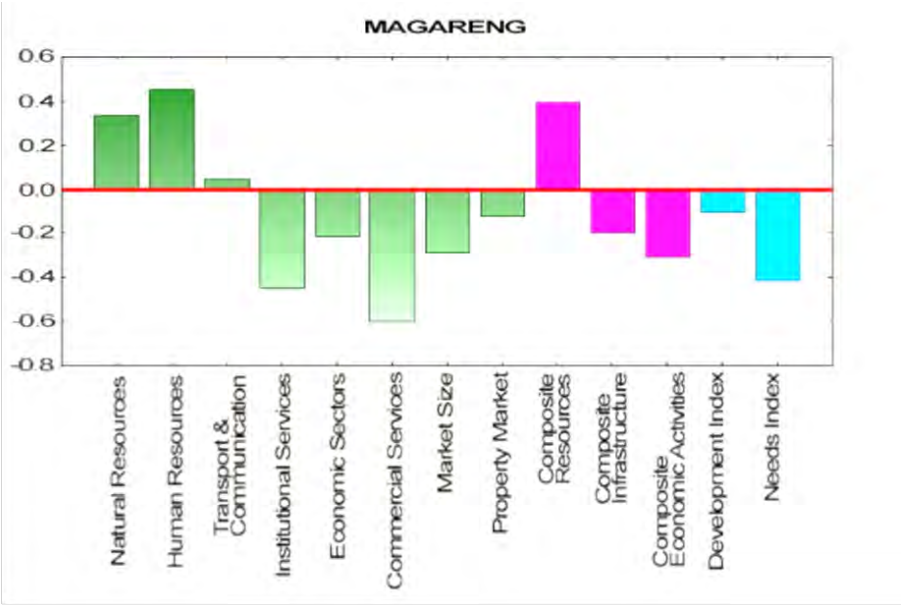


KEY OBSERVATIONS:

- The results indicate, that the human resources and institutional services are the only remaining negative index ratings.
- The property market and market potential and accessibility indicated an increase.
- Overall the development potential profile decreased somewhat, mainly due to the decrease of the resource index rating but retained an overall positive rating.
- The human need index has increased significantly.

1.14 MAGARENG LOCAL MUNICIPALITY

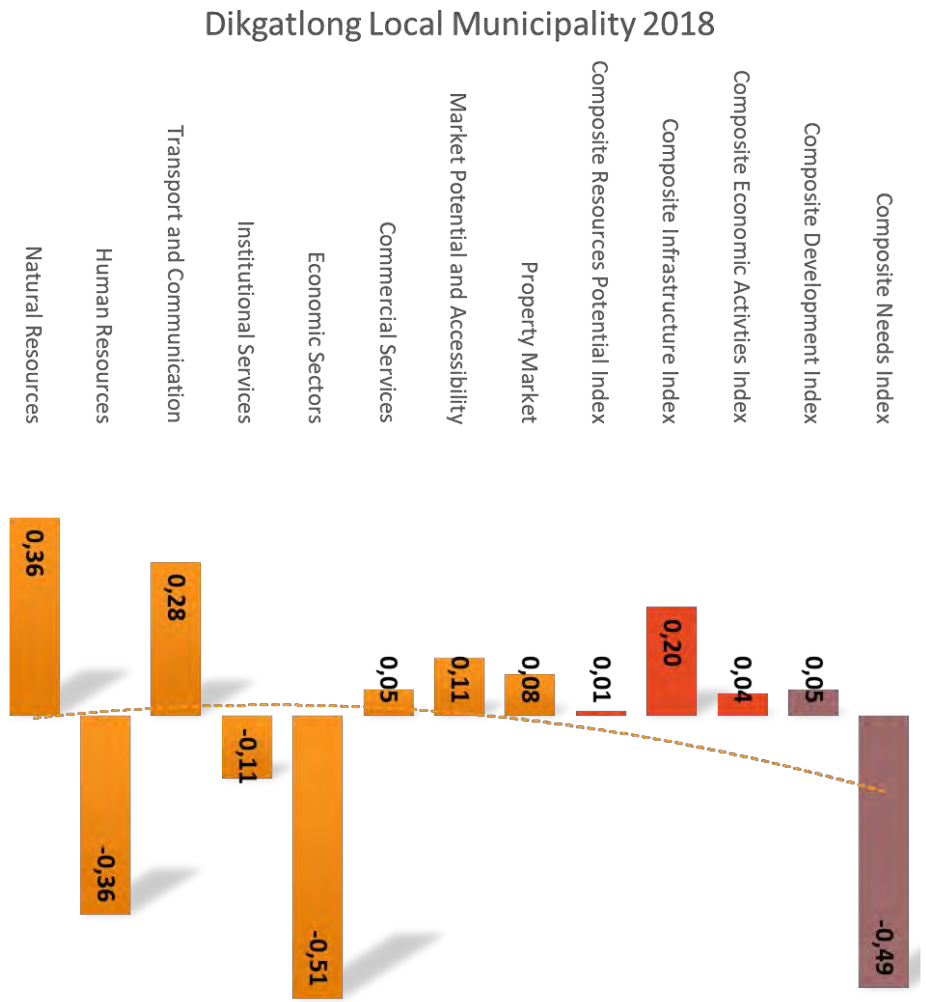


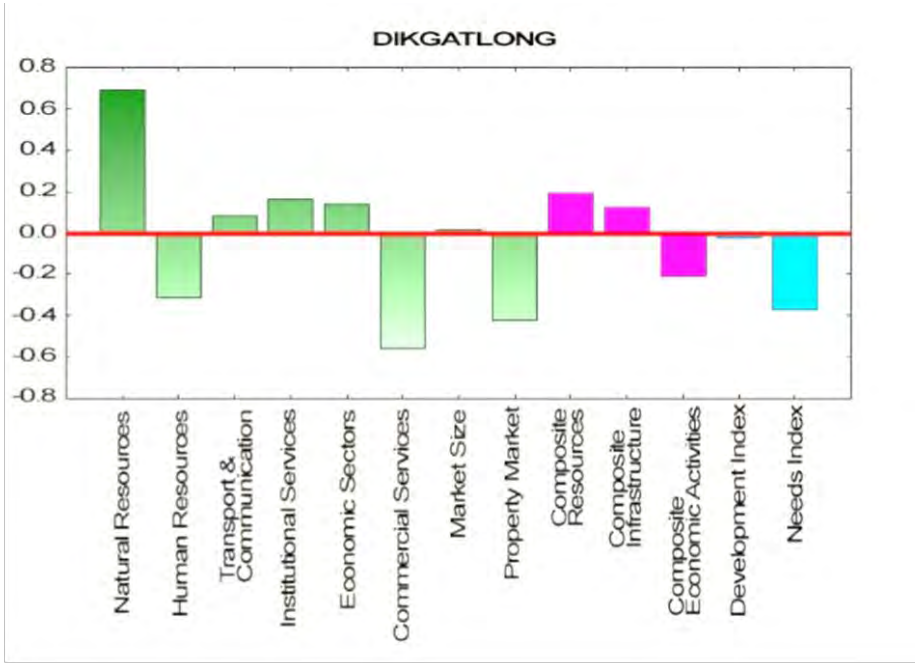


KEY OBSERVATIONS:

- The results indicate numerous indexes, such as transport and communication, intuitional and commercial services received higher index ratings.
- The property market and market potential and accessibility indicated an increase.
- Overall the development potential profile increased somewhat, resulting in a positive infrastructure, economic and development index.
- The human need index has decreased slightly.

1.15 DIKGATLONG LOCAL MUNICIPALITY



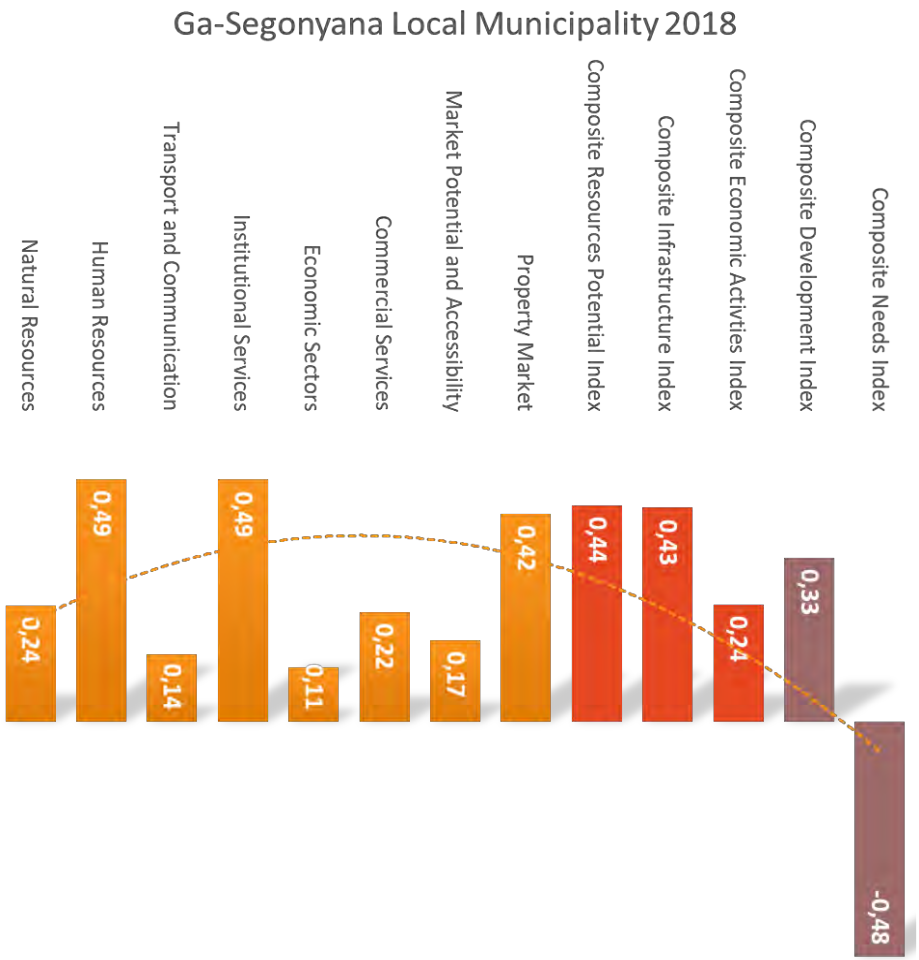


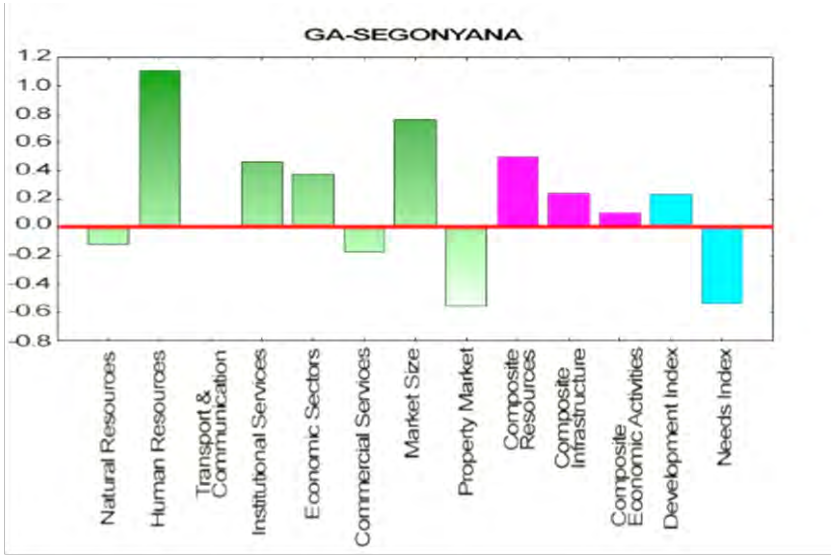
KEY OBSERVATIONS:

- The results indicate the regression of the status of human and resources, institutional services and economic sectors, likely due to out-migration experienced during periods of economic hardship.
- The property market and market potential and accessibility indicated an increase.
- Overall the development potential profile increased somewhat, regardless of the various fluctuations of the indexes.
- The human need index also increased drastically.

2 JOHN TAOLO GAETSEWE LOCAL MUNCIPALITIES

2.1 GA-SEGONYANA LOCAL MUNICIPALITY

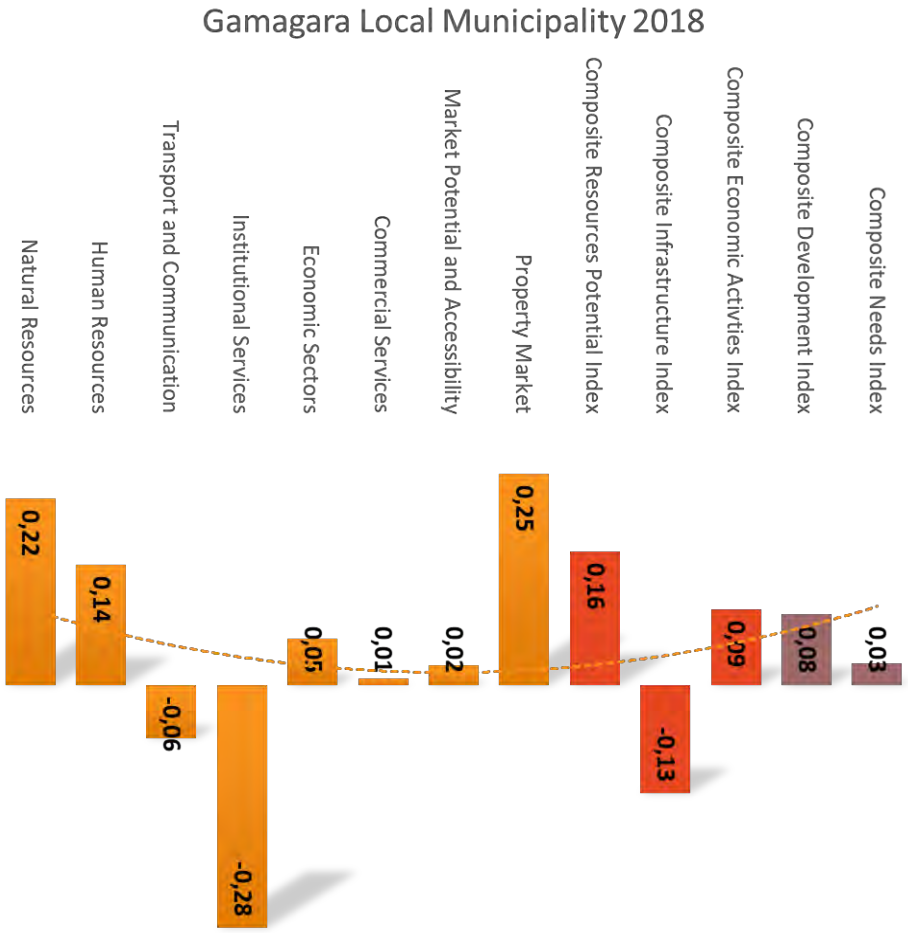


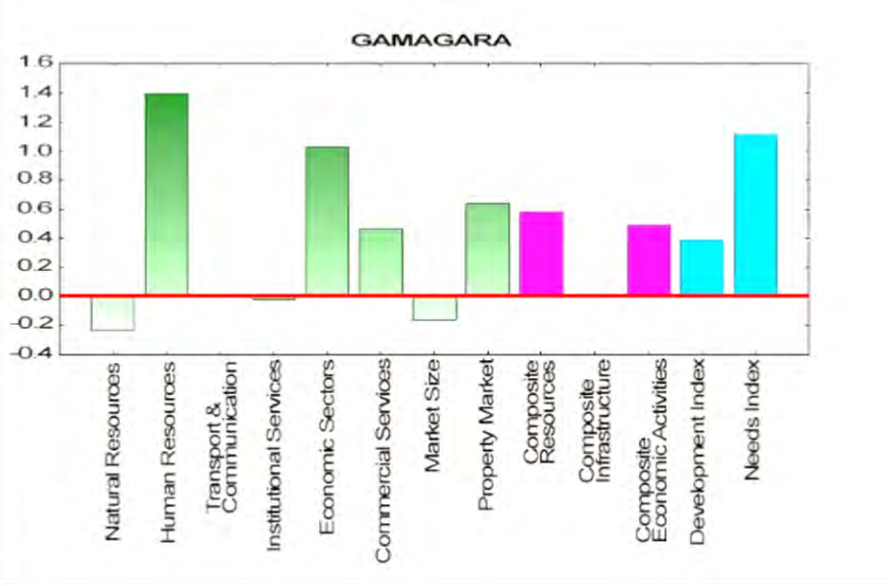


KEY OBSERVATIONS:

- The results indicate a significant increase of natural resources, transport and communication, intuitional services and the property market.
- Overall profile indicates, despite the remaining indicators receiving fluctuating ratings, Ga-segonyana's development potential increased.
- The data further indicates the composite need index has increased noticeably.

2.2 GAMAGARA LOCAL MUNICIPALITY

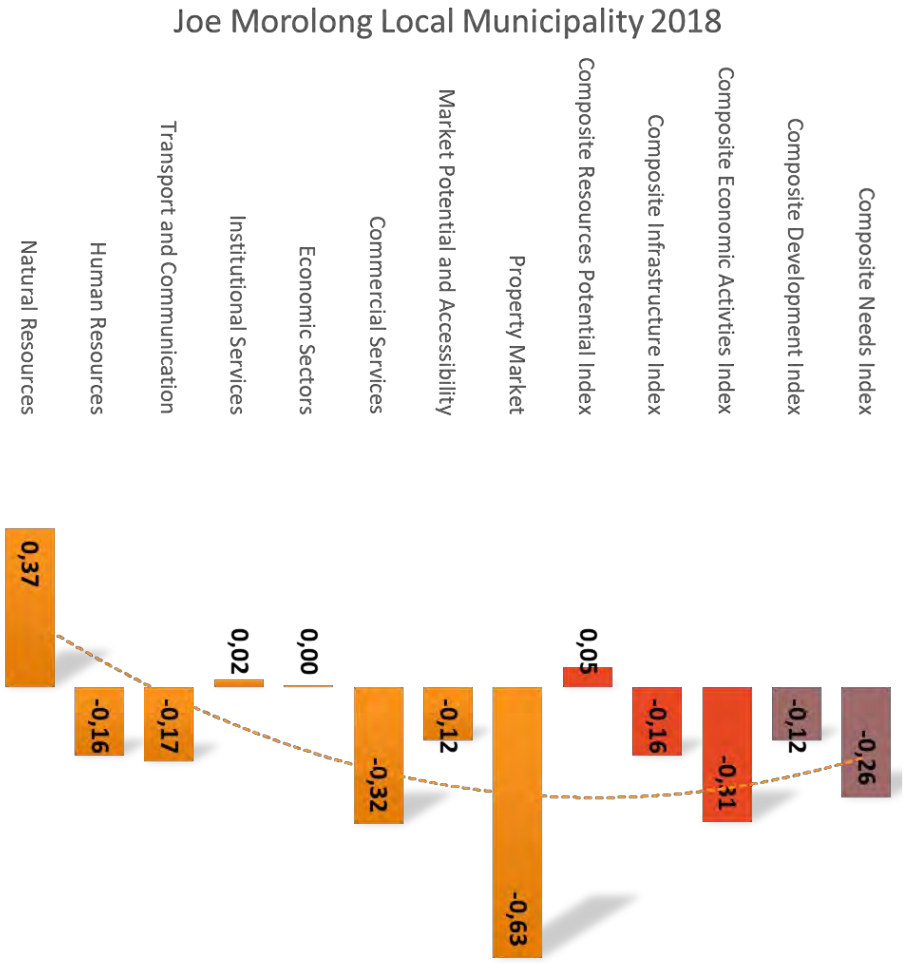


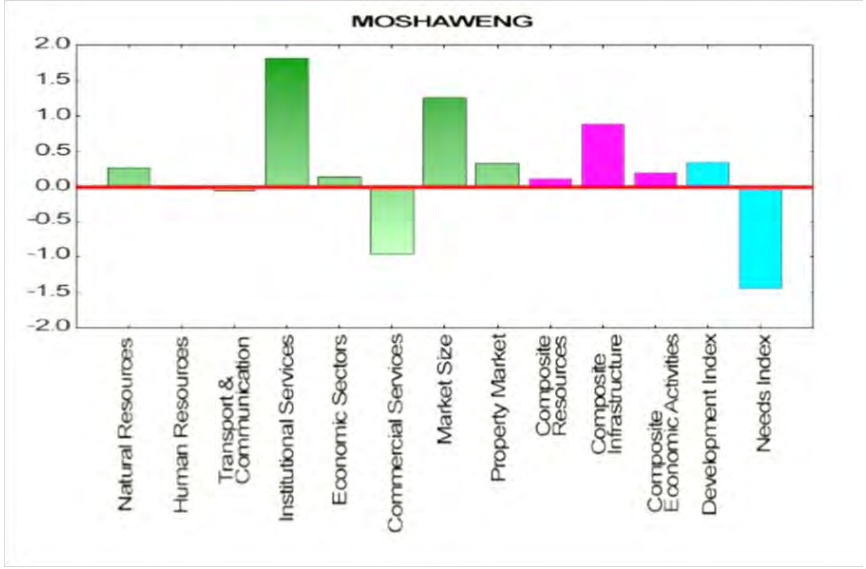


KEY OBSERVATIONS:

- The results indicate a significant increase of natural resources and market potential and the property market.
- Overall profile indicates, despite the remaining indicators receiving lower ratings, positive development potential.
- The data further indicates the composite need index has increased drastically.

2.3 JOE MOROLONG LOCAL MUNICIPALITY



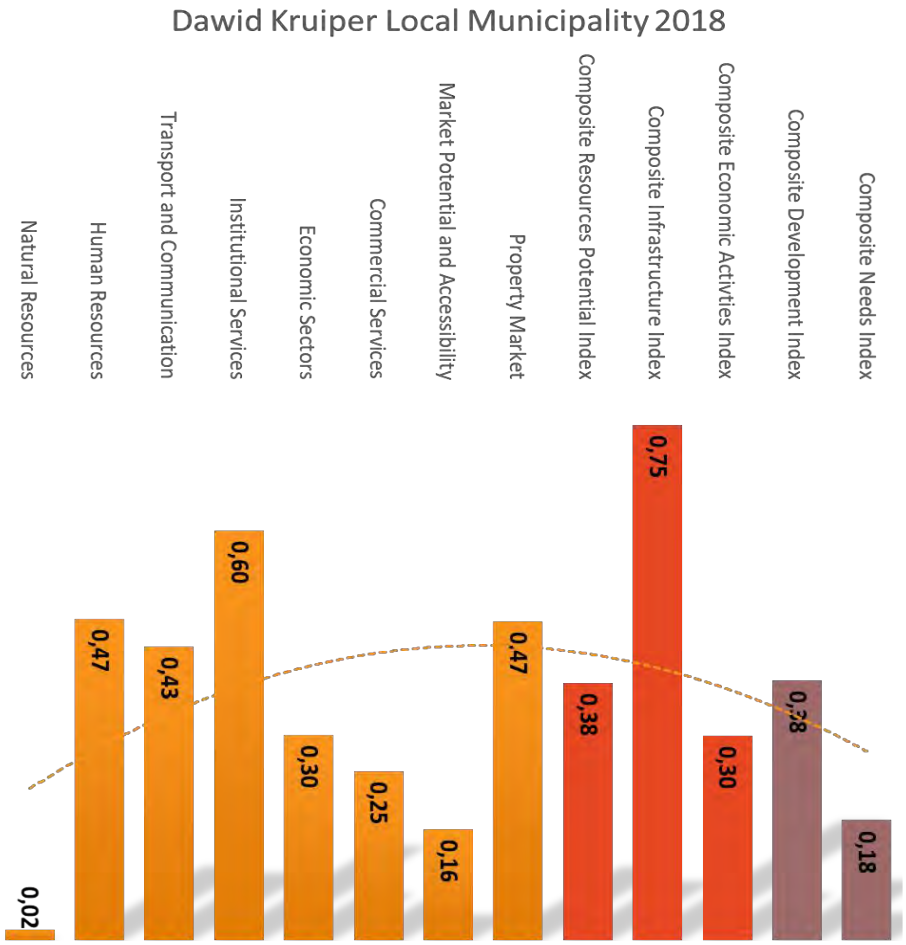


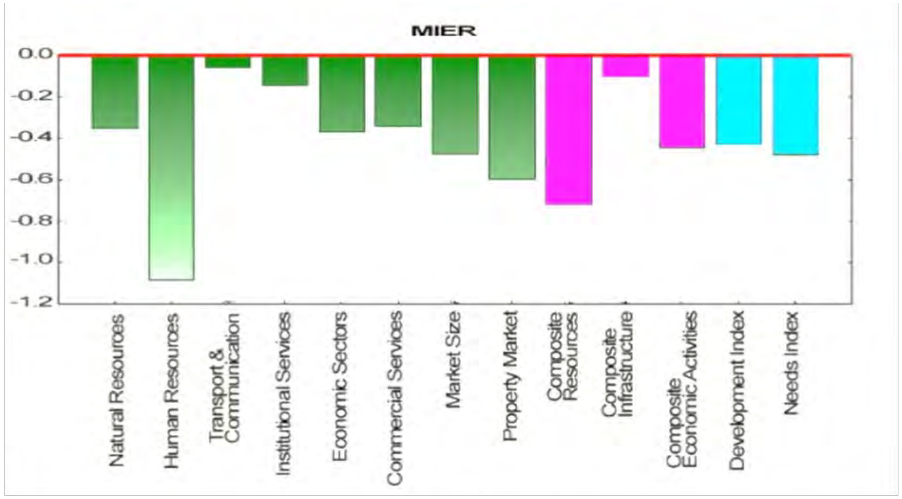
KEY OBSERVATIONS:

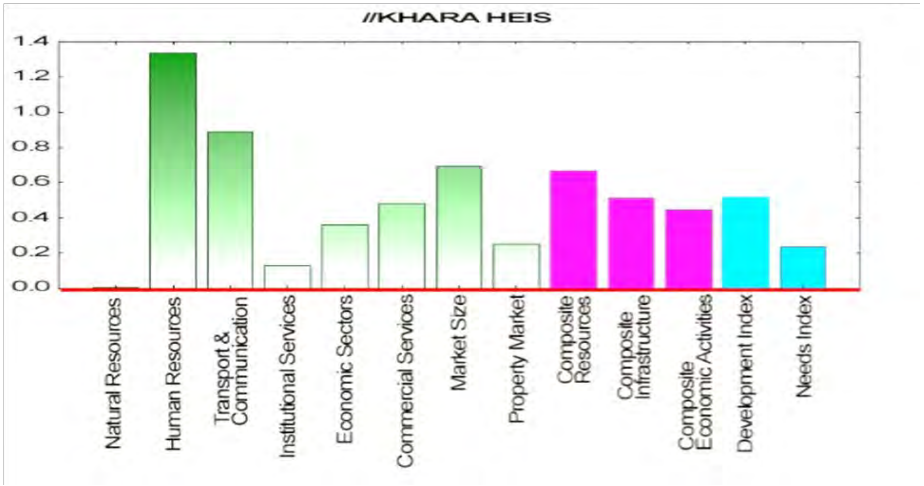
- The results indicate a significant decrease of the majority of index ratings.
- Overall profile indicates, that the development potential profile has decreased significantly.
- The data further indicates the composite need index has decreased noticeably.

3 ZF MGCAWU LOCAL MUNCIPALITIES

3.1 DAWID KRUIPER LOCAL MUNICIPALITY

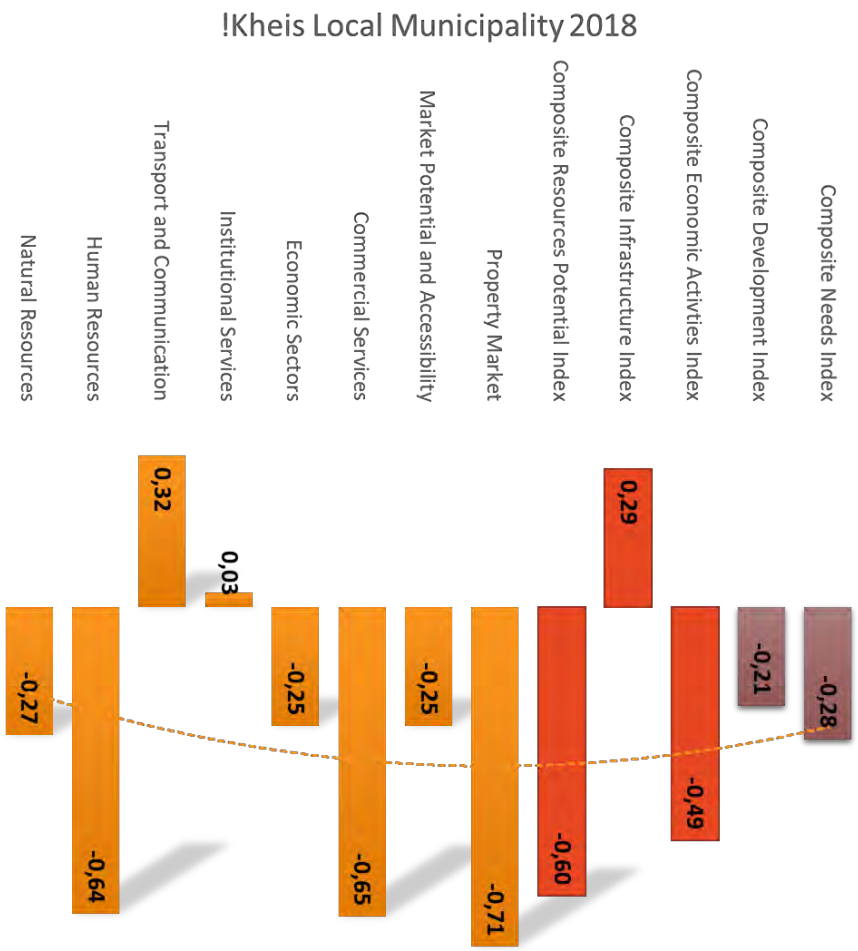


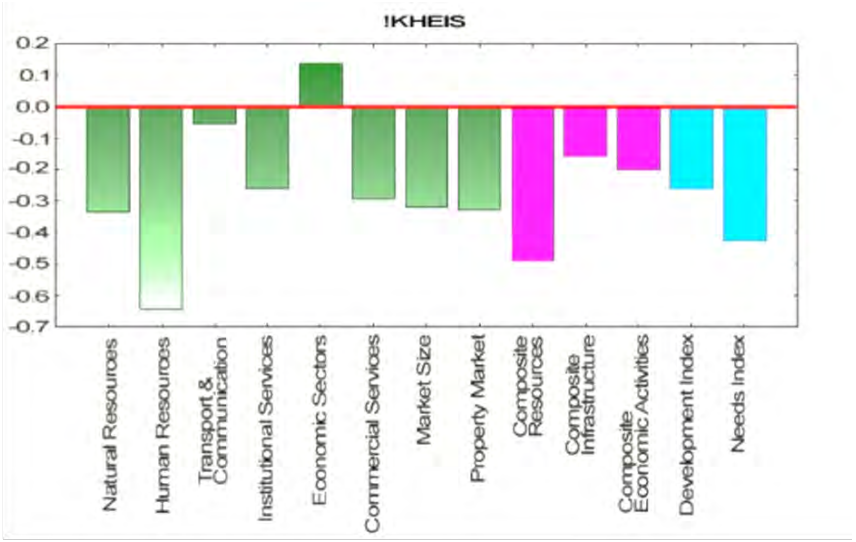




The positive development profile of Dawid Kruiper indicates the dominant presence of Upington, and the various smaller settlements, despite the additional land cover acquired as part of the amalgamation of the //Khara Heis and Mier Municipalities.

3.2 !KHEIS LOCAL MUNICIPALITY

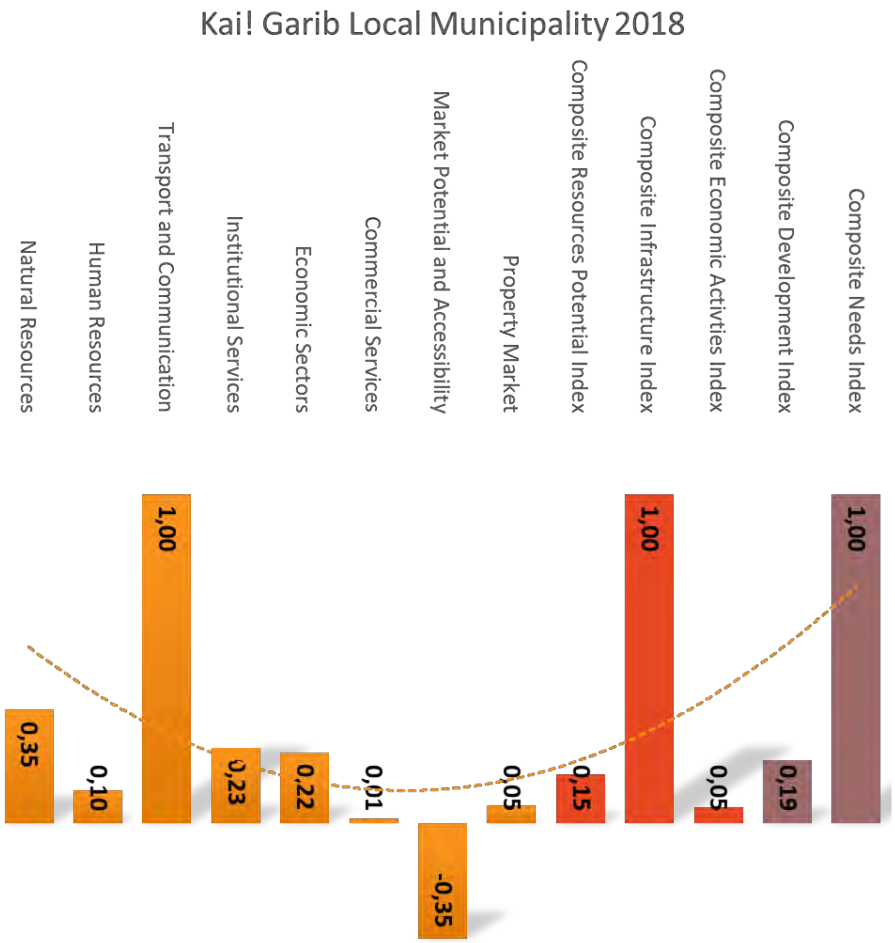


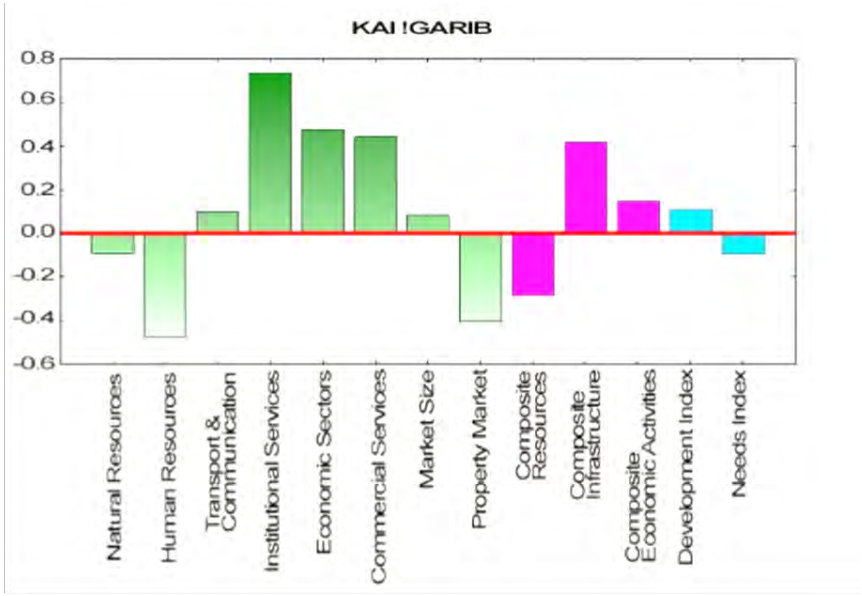


KEY OBSERVATIONS:

- The results indicate a significant increase of the transport and communication infrastructure and institutional indexes.
- Overall profile indicates, despite the various fluctuation of the indexes, the overall development potential remains negative, where the economic activities index has declined greatly, indicating the primary economic base is likely to experience fluctuations and be sensitive to external shocks.
- The data further indicate the composite need index has stayed stable.

3.3 KAI! GARIB LOCAL MUNICIPALITY

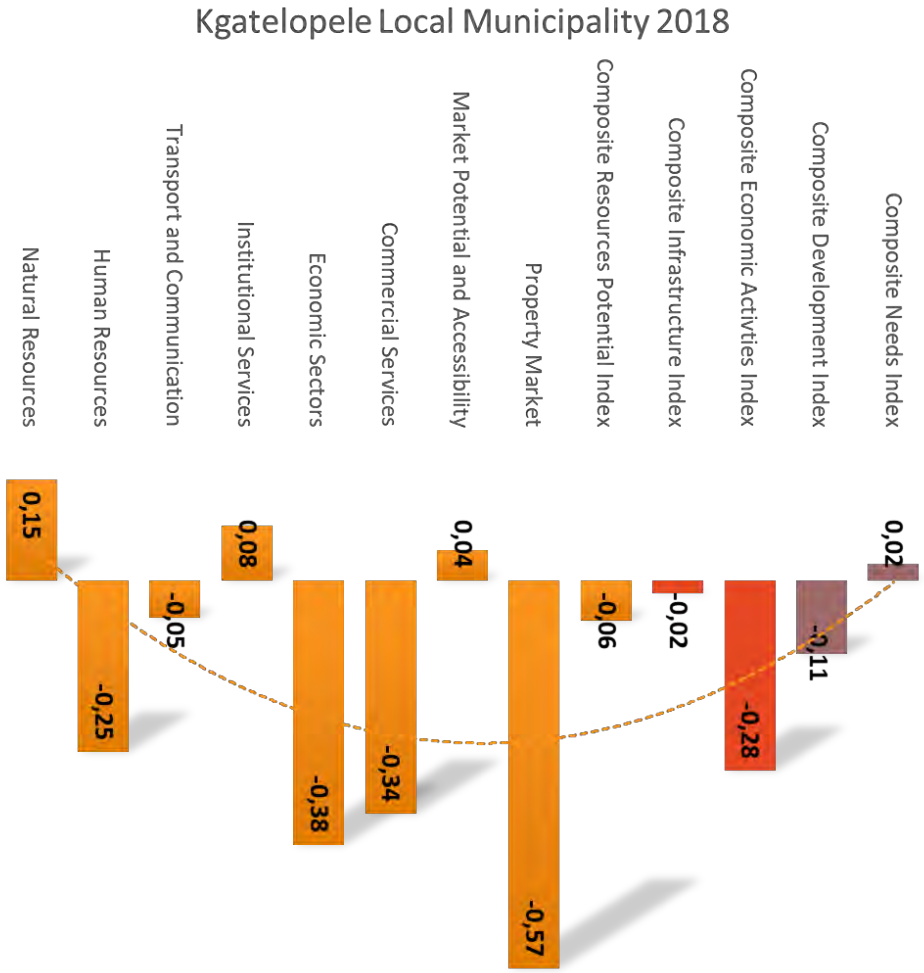


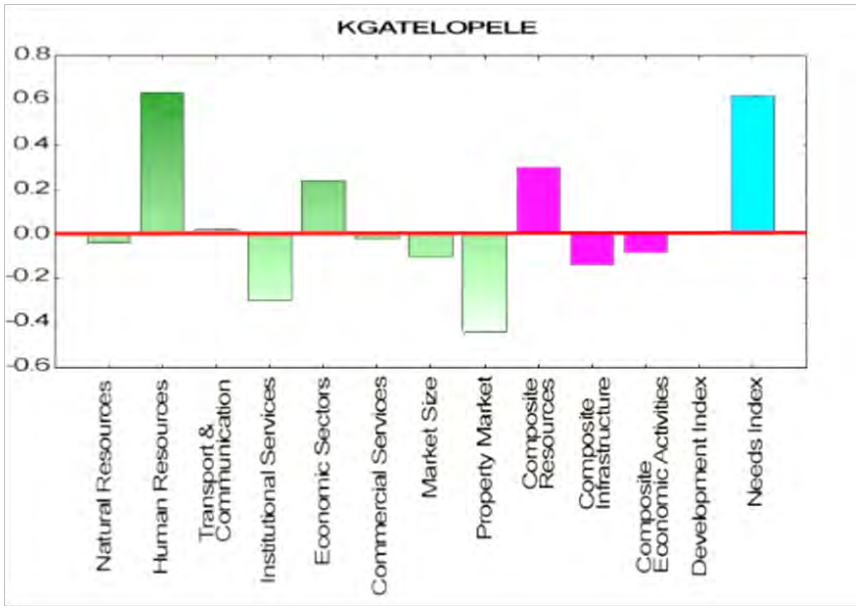


KEY OBSERVATIONS:

- The results indicate a significant increase of the transport and communication infrastructure and natural and human resources.
- Overall profile indicates, despite the various fluctuation of the indexes, the overall development potential has increased slightly, mostly due to the increase of the infrastructure index rating.
- The data further indicate the composite need index has experienced a significant decrease.

3.4 KGATELOPELE LOCAL MUNICIPALITY

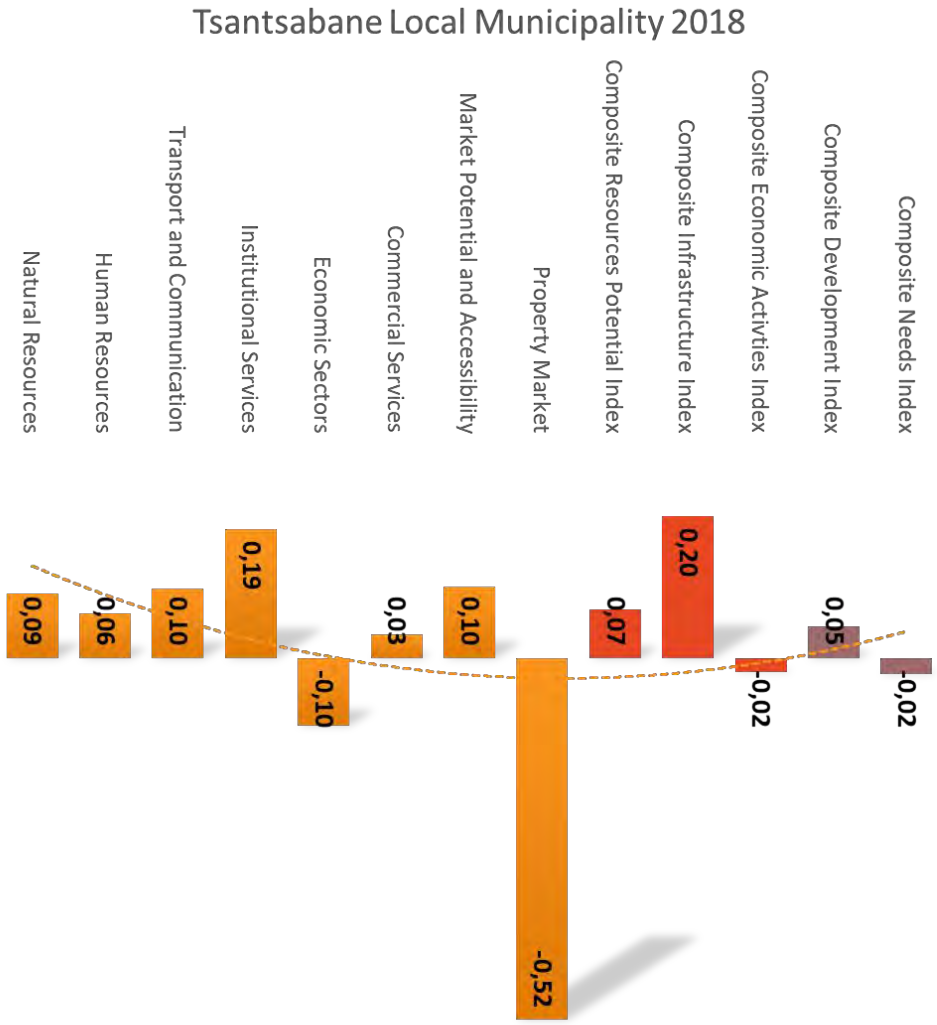


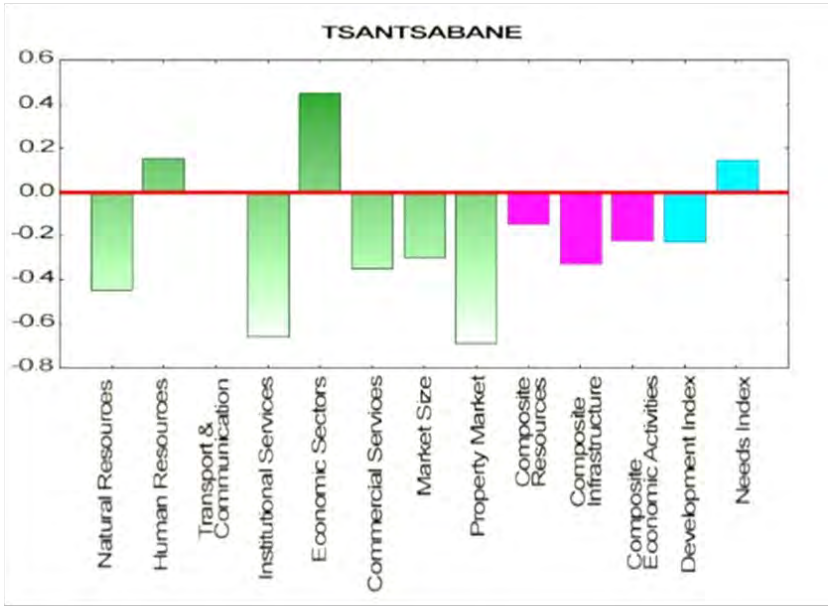


KEY OBSERVATIONS:

- The results indicate a significant increase of the transport and communication infrastructure and institutional indexes.
- Overall profile indicates, despite the various fluctuation of the indexes, the overall development potential has decreased slightly, indicating the primary economic base is likely to experience fluctuations and be sensitive to external shocks.
- The data further indicates the composite need index has increased.

3.5 TSANTSABANE LOCAL MUNICIPALITY



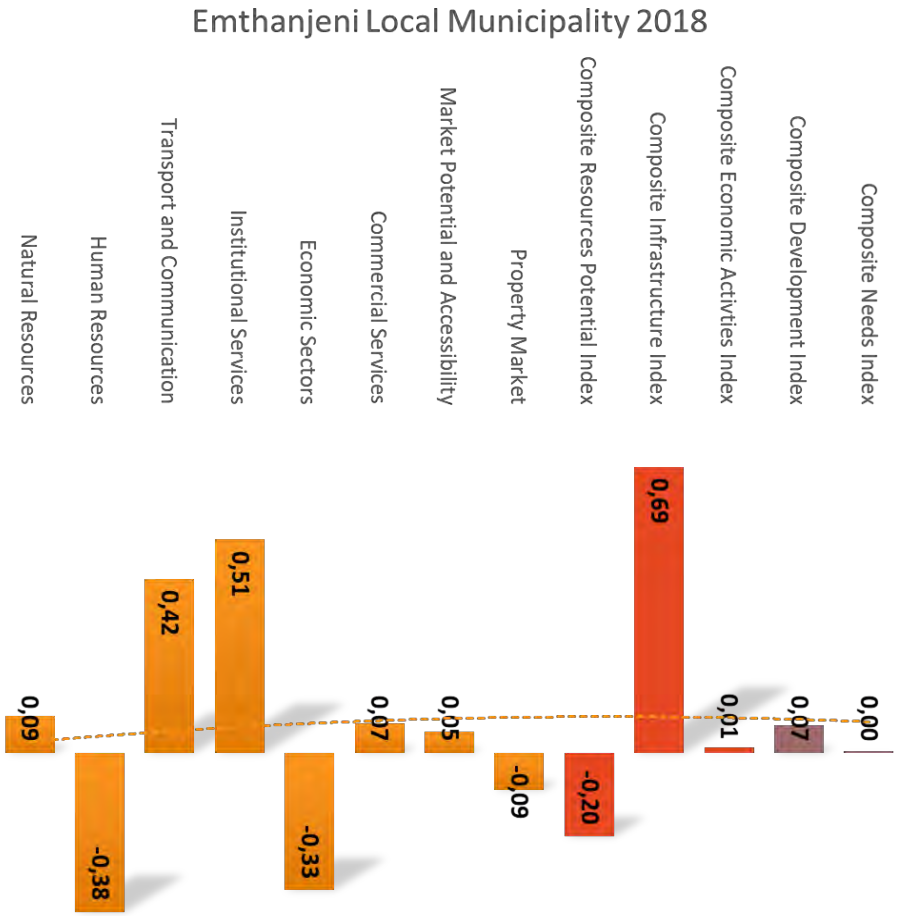


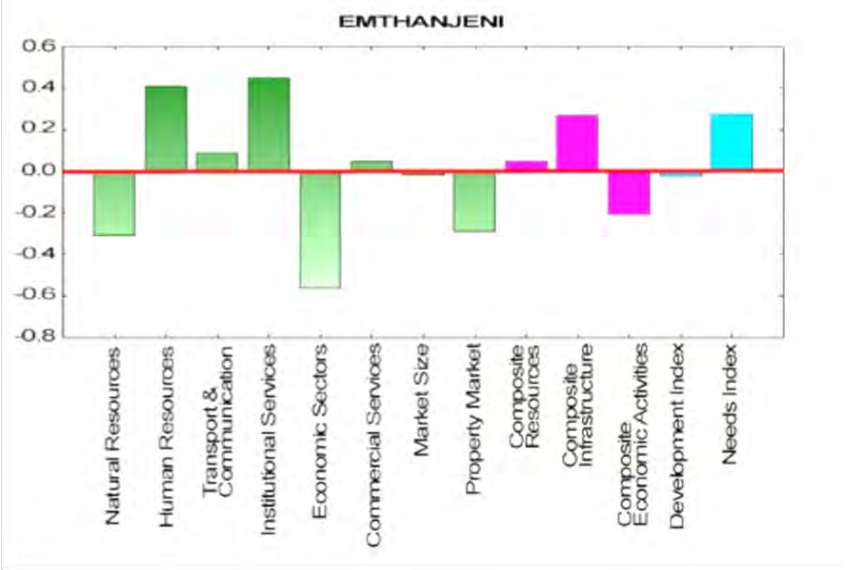
KEY OBSERVATIONS:

- The results indicate a significant increase of the transport and communication infrastructure and institutional, natural resources indexes.
- Overall profile indicates, despite the various fluctuations of the indexes, the overall development potential has increased slightly, indicating the primary economic base is likely to experience fluctuations and be sensitive to external shocks.
- The data further indicates the composite need index has increased slightly.

4 PIXLEY KA SEME LOCAL MUNICPALITIES

4.1 EMTHANJENI LOCAL MUNICIPALITY

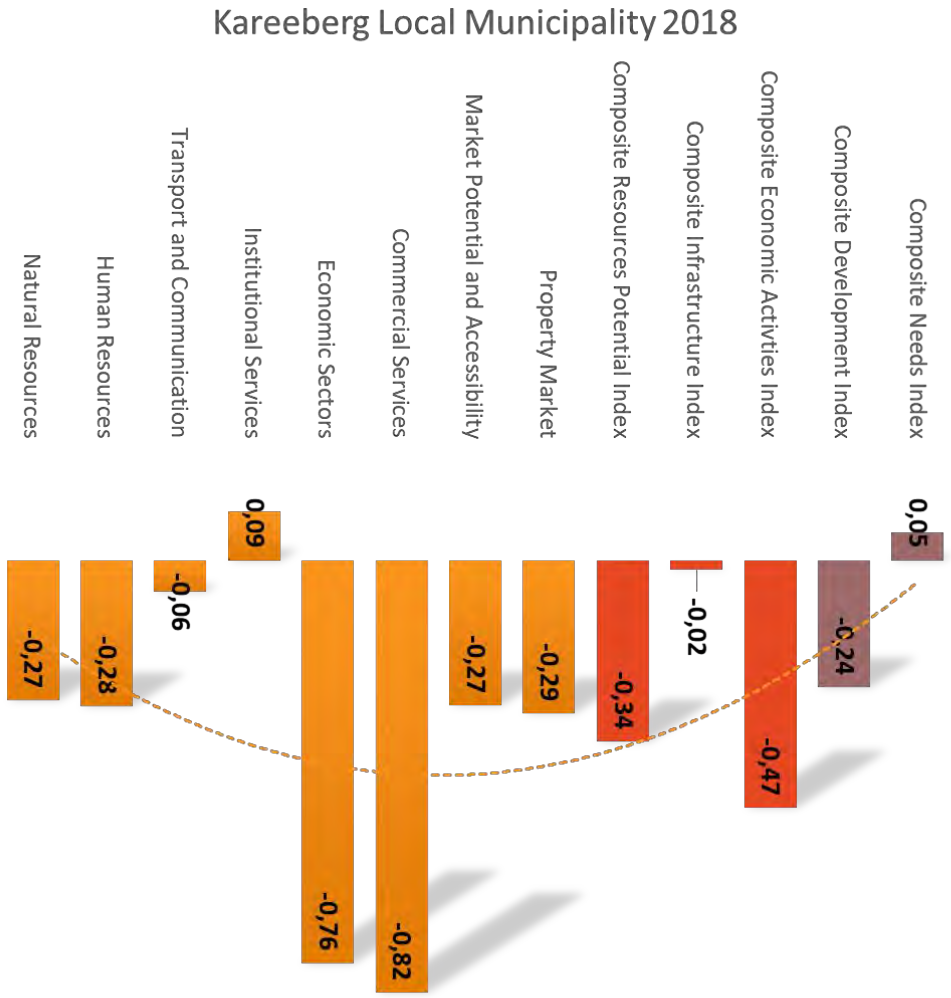


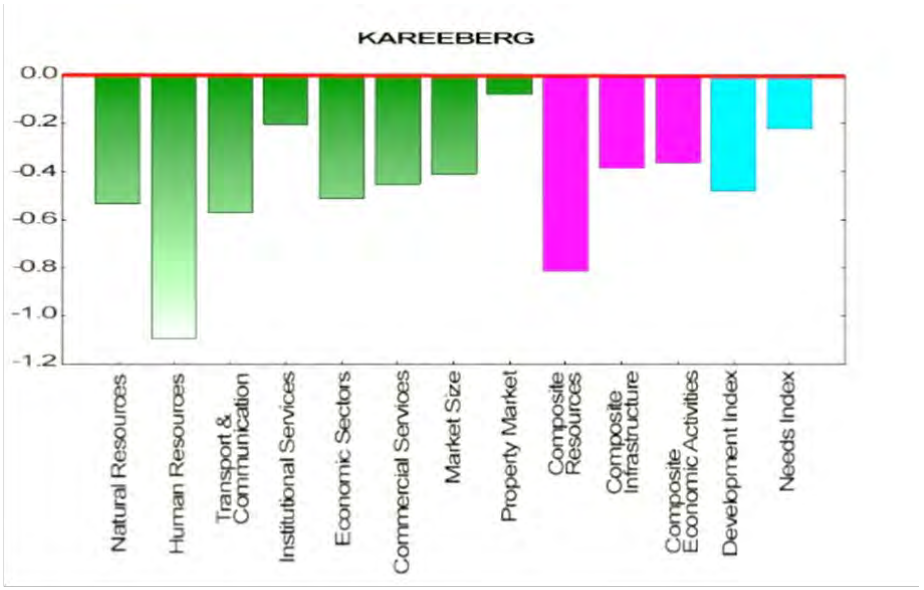


KEY OBSERVATIONS:

- The results indicate a similar profile to that of the 2011 study.
- The majority of the sectors and indexes experienced an increase, except for human resources.
- The concentration of infrastructure is clearly reflected by the high infrastructure index.
- The high infrastructure index is due to the increase in the transport and communication infrastructure and associated economic sectors.
- The 2018 study result further indicate a significant increase in human needs, within the municipality.

4.2 KAREEBERG LOCAL MUNICIPALITY

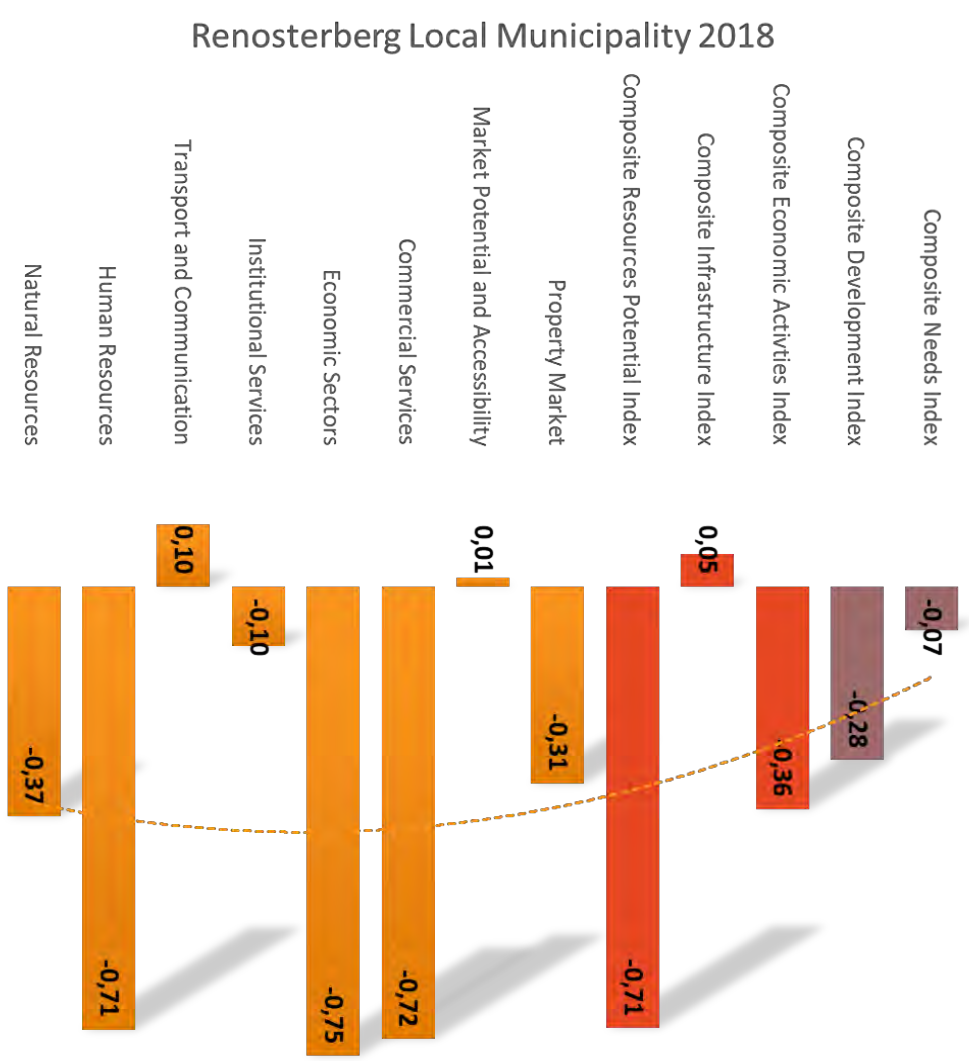


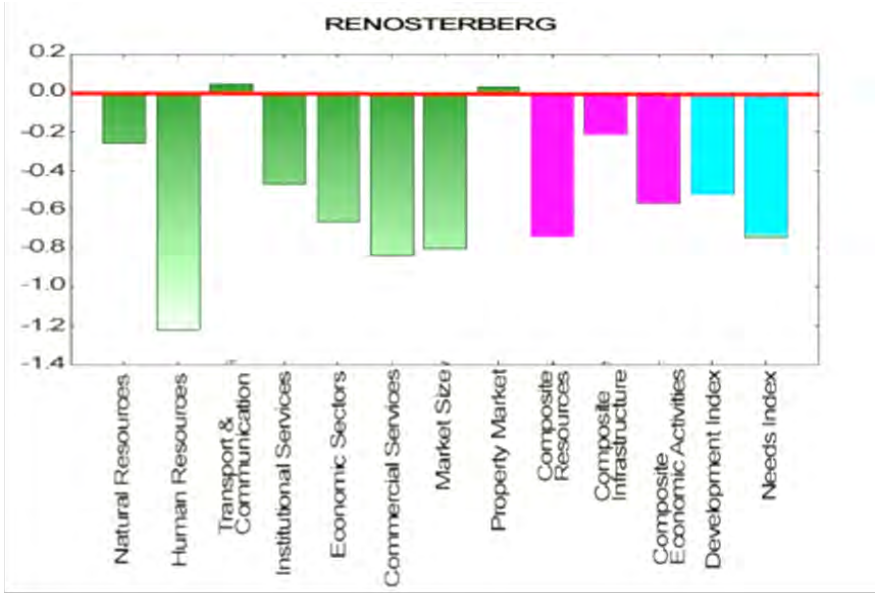


KEY OBSERVATIONS:

- The result indicates a rise of the presence of transport and communication infrastructure, as well as an increase in human resources.
- Institutional services also experienced a notable increase between the 2001 and 2011 Census data.
- The increase in human resources and transport and communication infrastructure resulted in a positive infrastructure potential index.
- As the majority of the data (Census 2011) relates to the period before the SKA was awarded to South Africa, a clear economic footprint of the SKA is not visible.
- The 2018 study result further indicate a significant decrease in human needs, within the municipality.

4.3 RENOSTERBEG LOCAL MUNICIPALITY

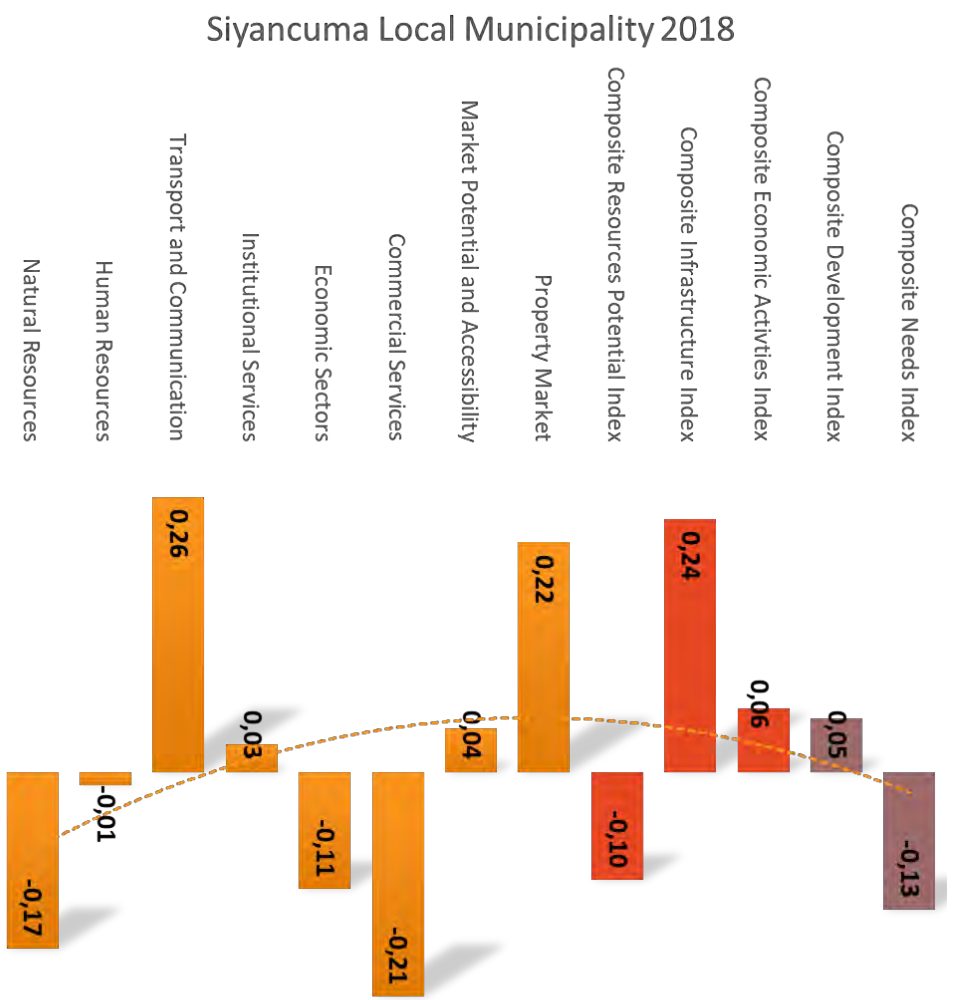


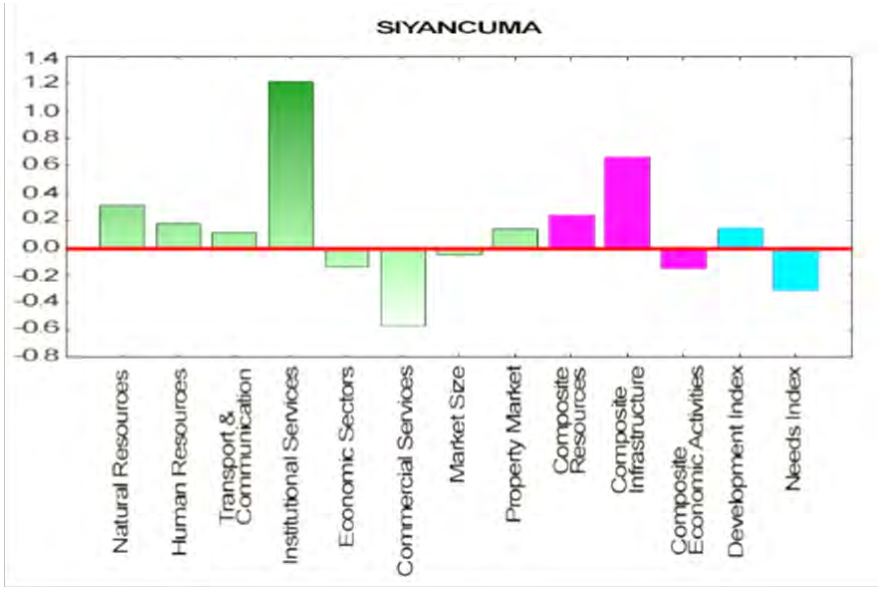


KEY OBSERVATIONS:

- The results indicate a very similar profile to that of the 2011 study results.
- Institutional services and infrastructure sector indexes experienced a notable increase between the 2001 and 2011 Census data.
- The increase in human resources and transport and communication infrastructure resulted in a positive infrastructure potential index, which is also related to the market potential and accessibility index.
- The 2018 study result further indicate a significant decrease in human needs, within the municipality.

4.4 SIYANCUMA LOCAL MUNICIPALITY

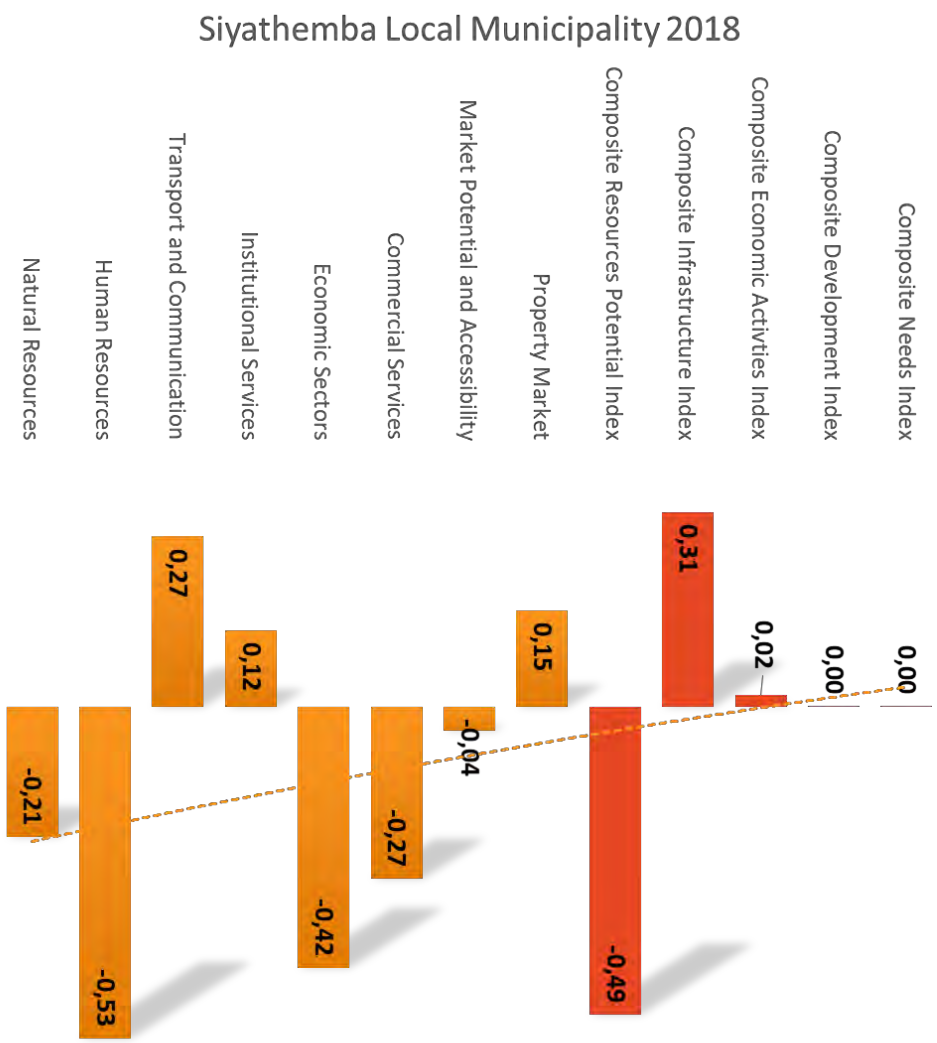


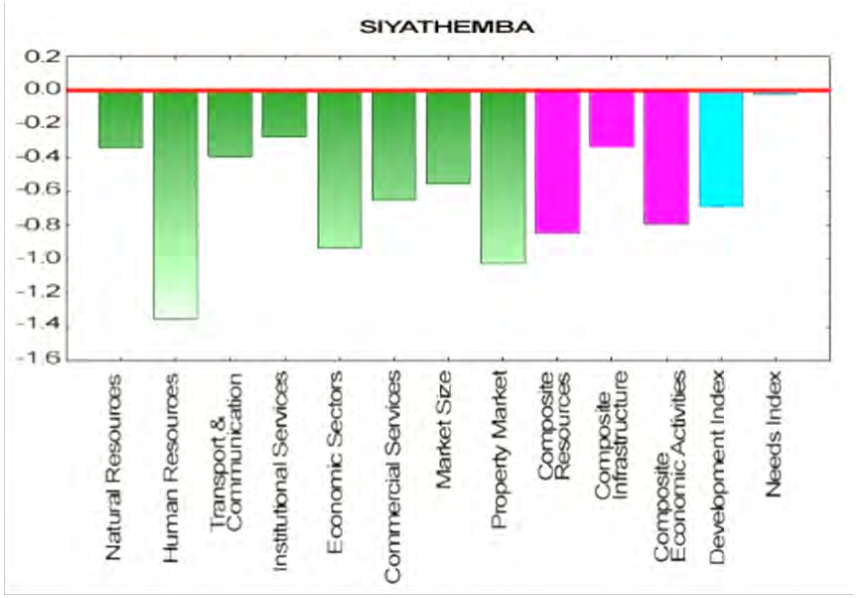


KEY OBSERVATIONS:

- The result indicates a varying results to that of the 2011 study results.
- Natural and Human resources experienced a significant decrease according to the difference between the 2001 and 2011 Census data.
- The majority of indexes experienced a decrease with the exception of
- Transport and Communication, market potential and accessibility experienced growth and resulted in positive infrastructure, economic and development indexes.
- The 2018 study result further indicate a slight increase in human needs, within the municipality.

4.5 SIYATHEMBA LOCAL MUNICIPALITY

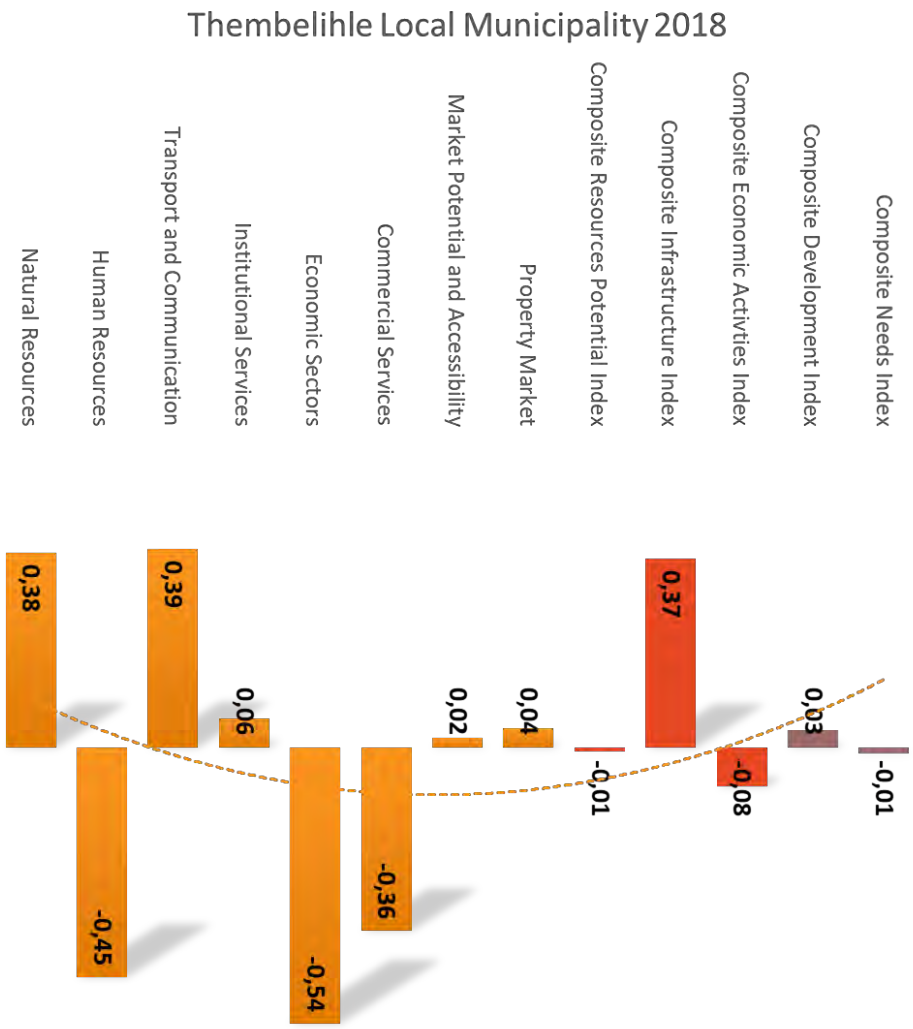


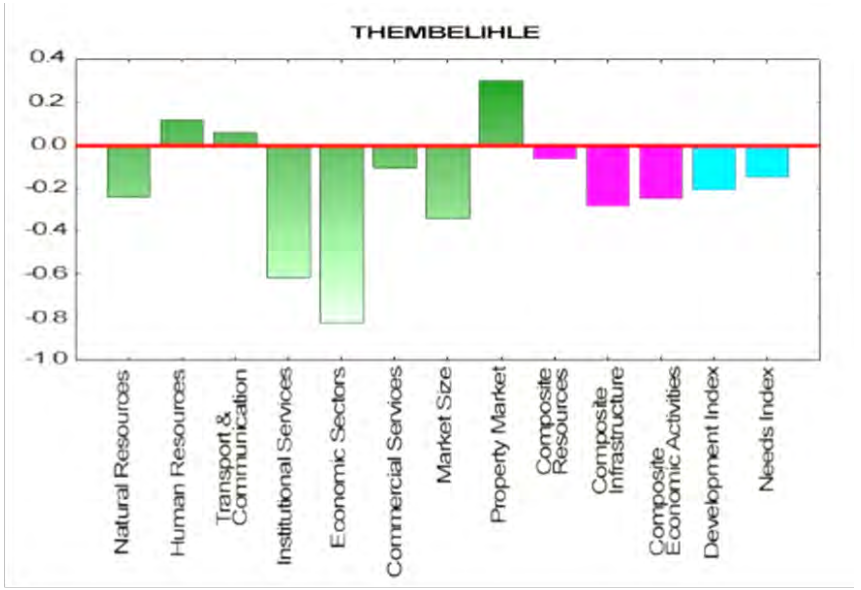


KEY OBSERVATIONS:

- The result indicates a various disparity regarding the 2011 study results.
- Transport and communication infrastructure and institutional services indexes indicate a significant increase.
- The overall profile indicates a limited potential for development, despite the increase in the above-mentioned indexes.
- The 2018 study result further indicate that the human needs index stayed low within the Siyanthemba municipality.

4.6 THEMBELIHLE LOCAL MUNICIPALITY

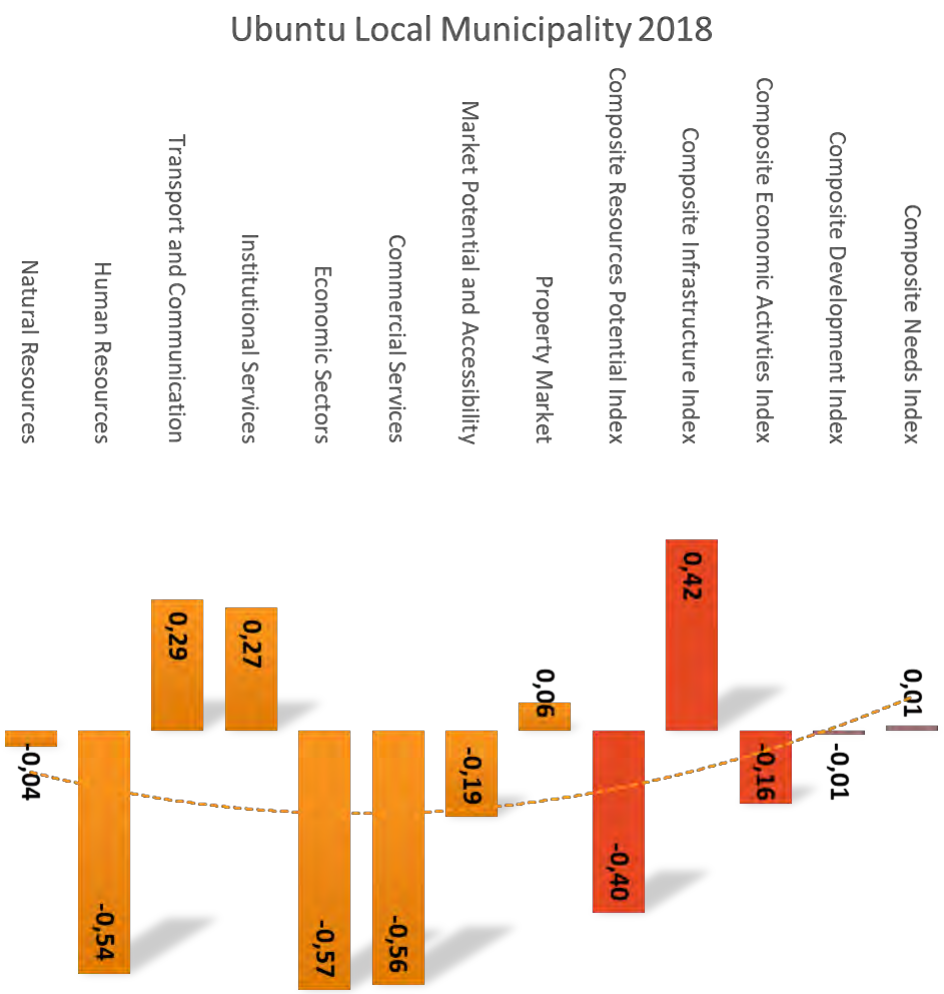


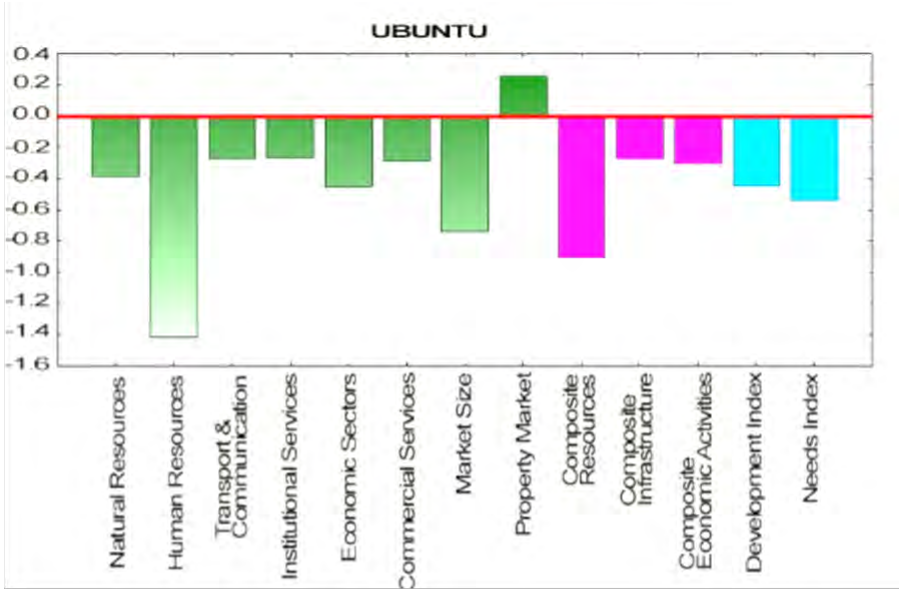


KEY OBSERVATIONS:

- The result indicates a significant increase of the natural resources, transport and communication, institutional services and market potential and accessibility indexes.
- The overall profile indicates a limited potential for development, despite the increase in the above-mentioned indexes.
- The 2018 study result further indicate that the human needs index improved slightly for the Thembelihle municipality.

4.7 UBUNTU LOCAL MUNICIPALITY

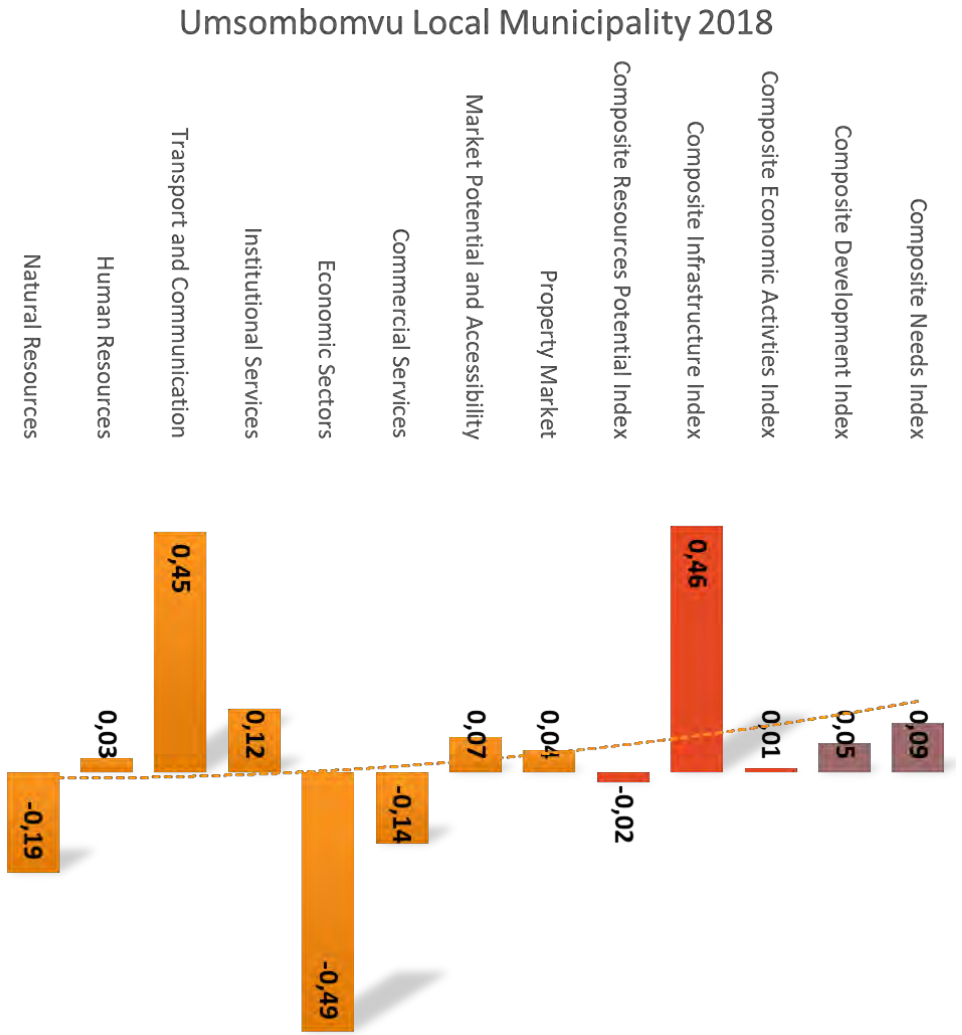


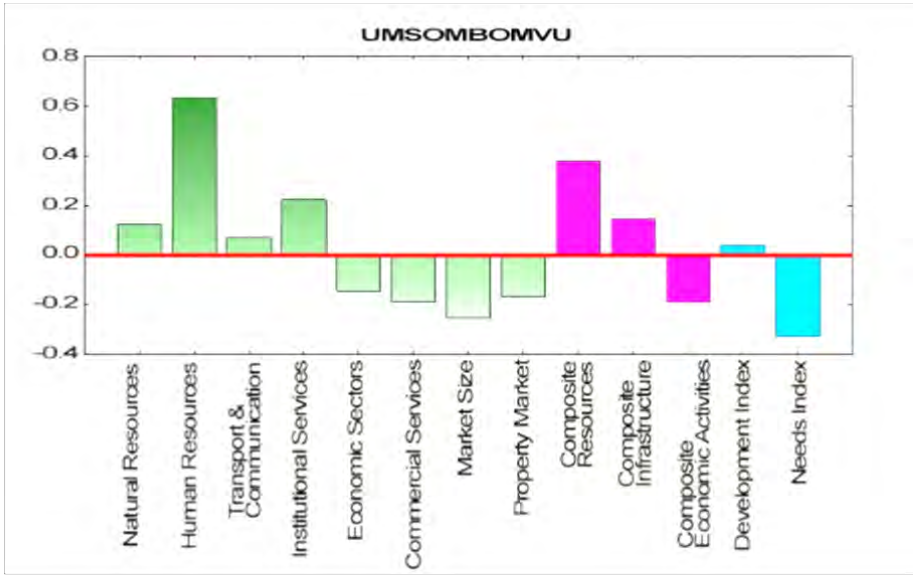


KEY OBSERVATIONS:

- The result indicates a significant increase of the natural resources, transport and communication and institutional services indexes, institutional services and market potential and accessibility indexes.
- The overall profile indicates a limited potential for development, despite the increase in the above-mentioned indexes.
- The 2018 study result further indicate that the human needs index decreased significantly for the Ubuntu municipality.

4.8 UMSOMBOMVU LOCAL MUNICIPALITY



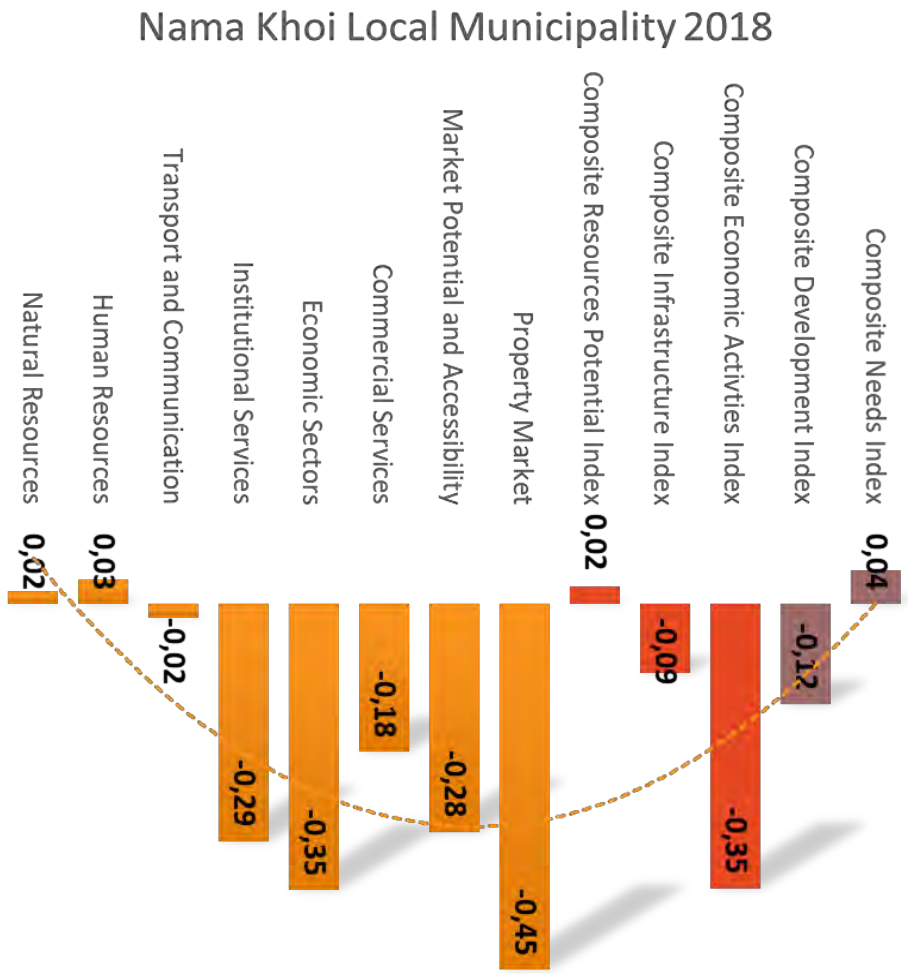


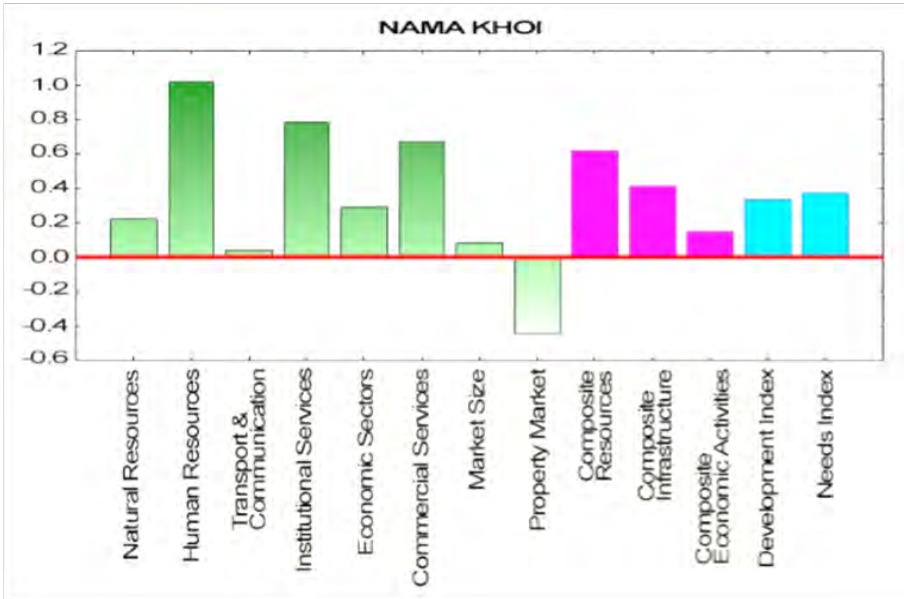
KEY OBSERVATIONS:

- The result indicates a significant decrease of the natural resources and human resources, economic sectors indexes.
- Transport and communication and market potential and accessibility indexes, experienced increases.
- The overall profile indicates a limited potential for development, despite the increase in the above-mentioned indexes, as the development potential index is barely positive.
- The 2018 study result further indicate that the human needs index improved significantly for the Umsombomvu municipality.

5 NAMAKWA LOCAL MUNCIPALITIES

5.1 NAMA-KHOI LOCAL MUNICIPALITY

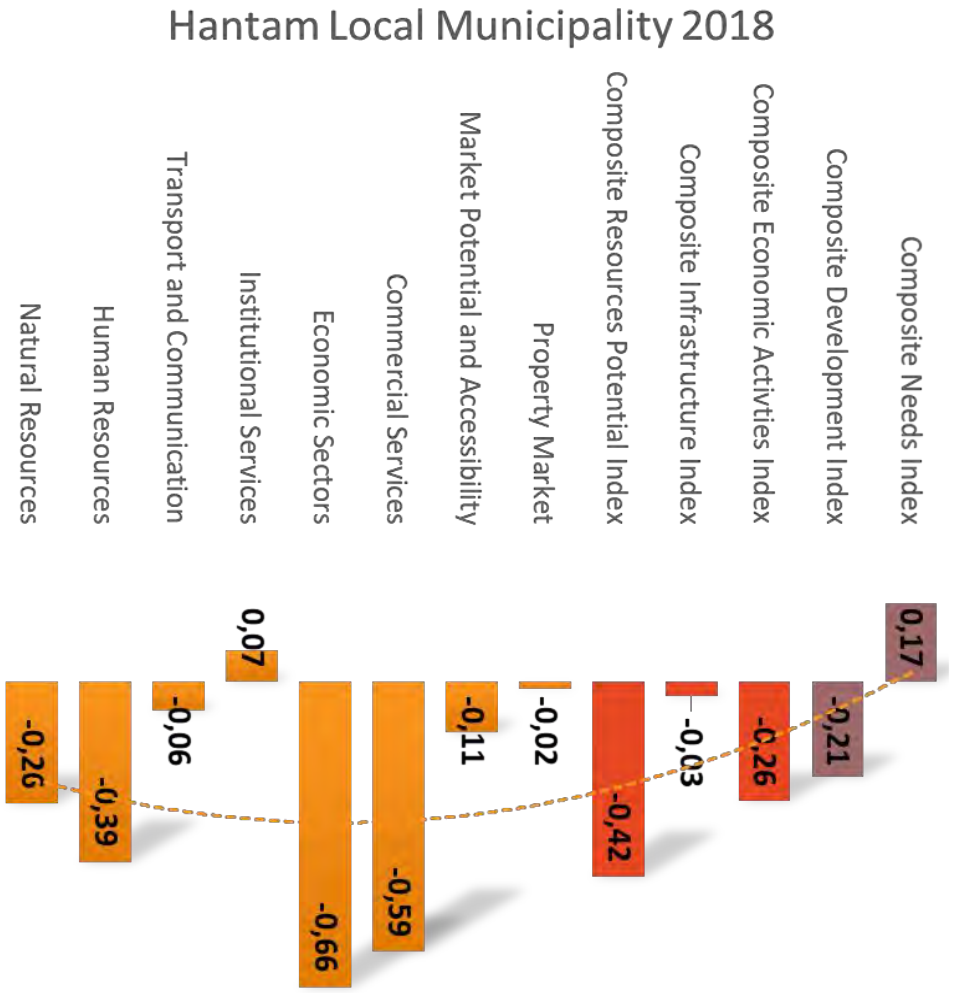


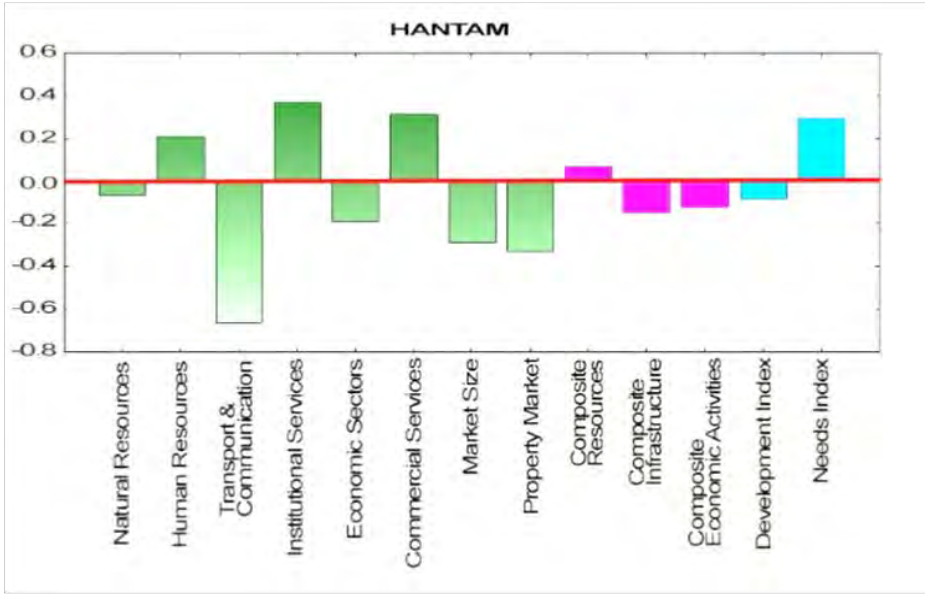


KEY OBSERVATIONS:

- The results indicate a significant difference between the 2001 and 2011 StatsSA data.
- Overall, the time-lapse between the 2001 and 2011 StatsSA census data indicates that the majority of sectors of the Nama-khoi LM declined, although natural and human resources are positive resulting in a positive resource index.
- The data further indicate the composite need index has experienced a noticeable increase.

5.2 HANTAM LOCAL MUNICIPALITY

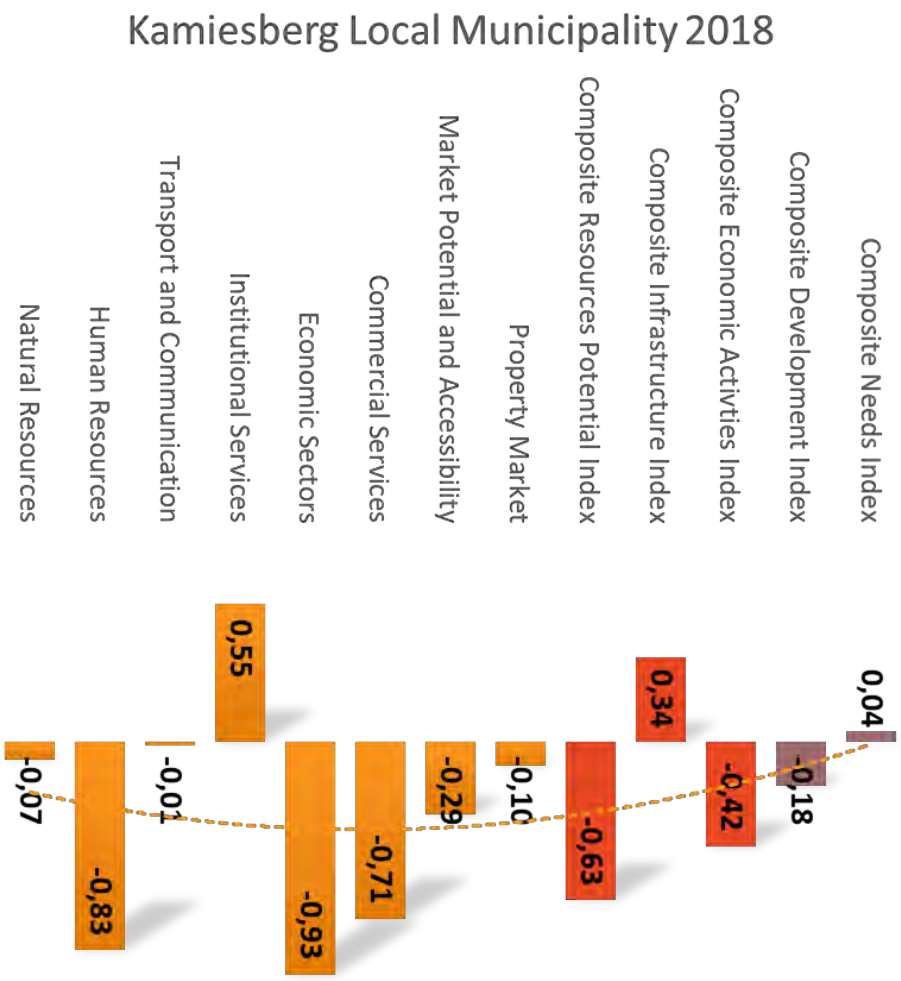


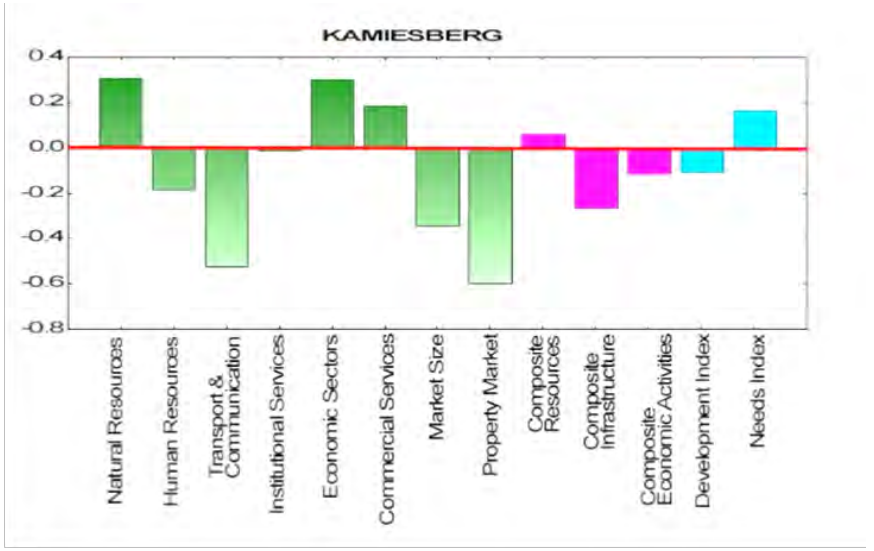


KEY OBSERVATIONS:

- The results indicate the regression of the status of human and natural resources, likely due to out-migration and drought conditions.
- Overall, the time-lapse between the 2001 and 2011 StatsSA census data indicates all sectors of the Hantam LM declined.
- The data further indicate the composite need index has stayed stable.

5.3 KAMIESBERG LOCAL MUNICIPALITY

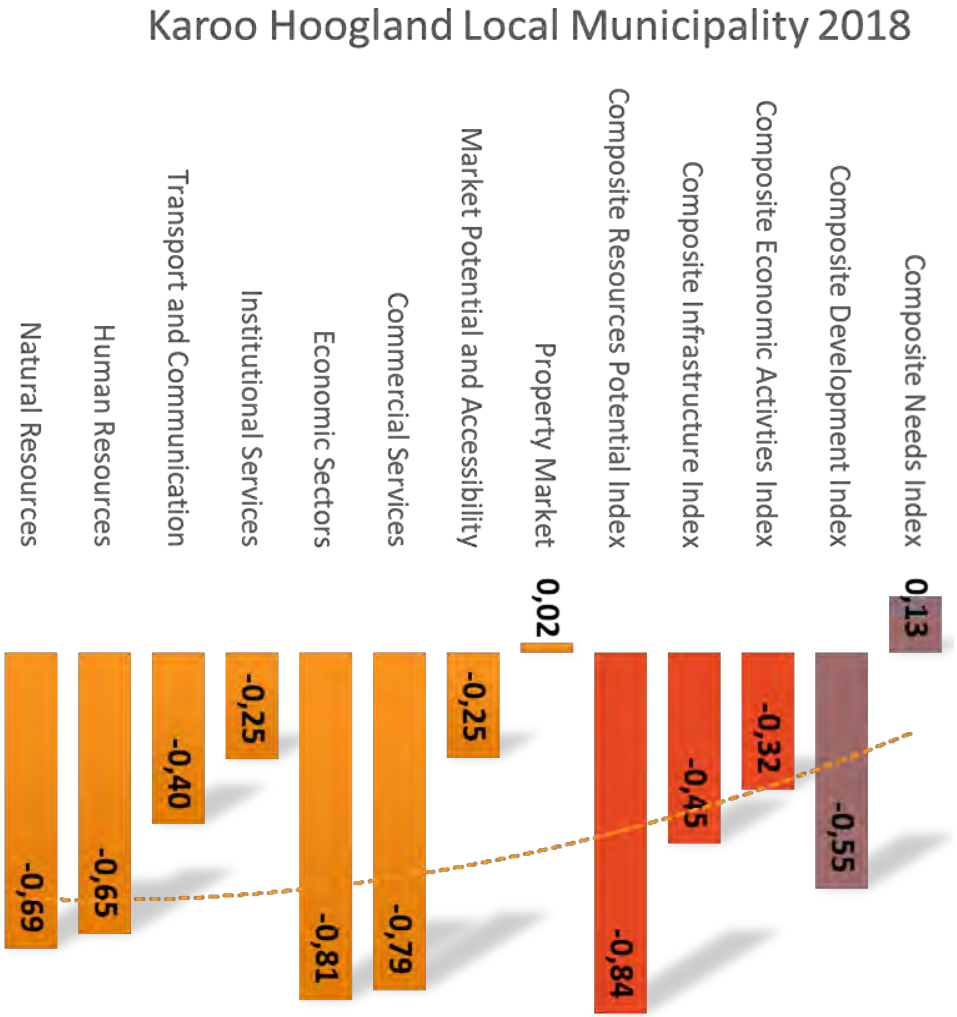


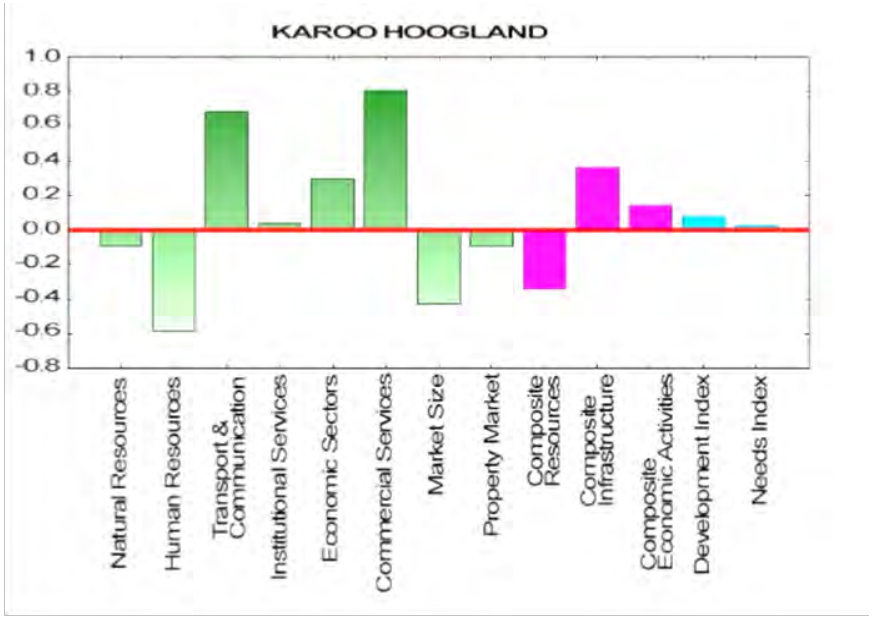


KEY OBSERVATIONS:

- The results indicate an increase in institutional capacity and infrastructure.
- Overall, the time-lapse between the 2001 and 2011 StatsSA census data indicates all other sectors of the Kamiesberg LM declined.
- The data further indicate the composite need index has increased slightly.

5.4 KAROO HOOGLAND LOCAL MUNICIPALITY

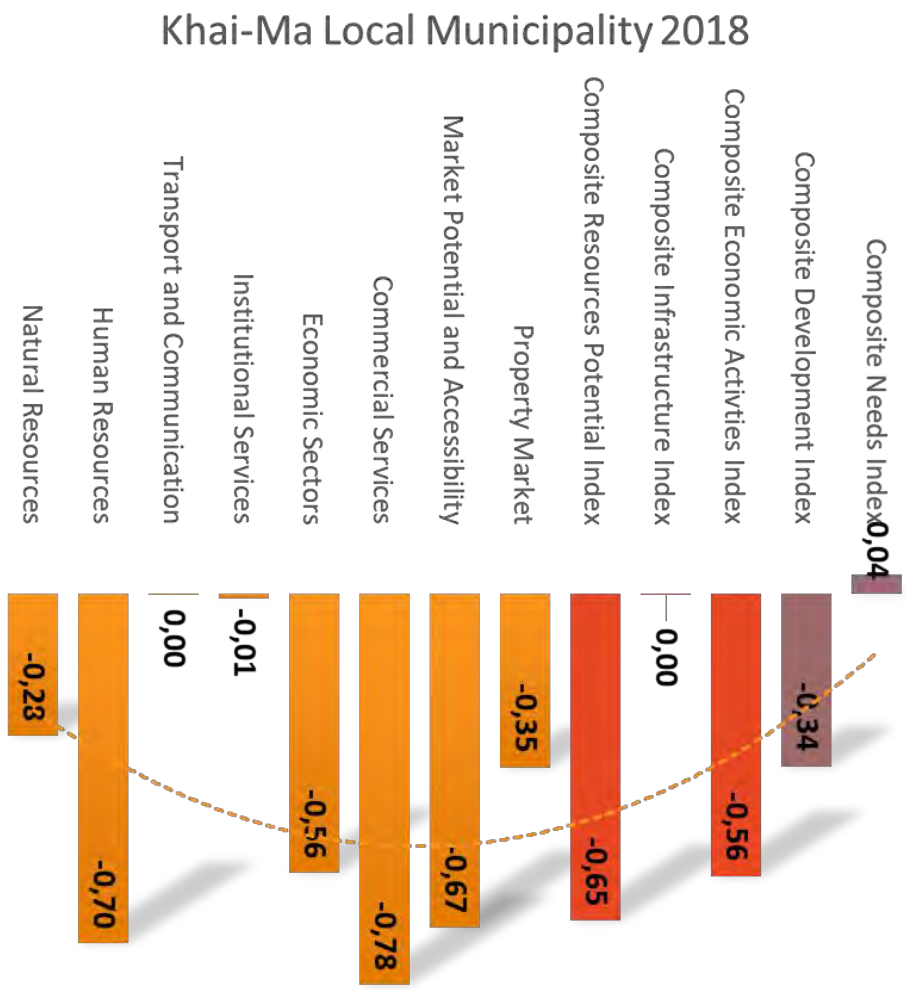


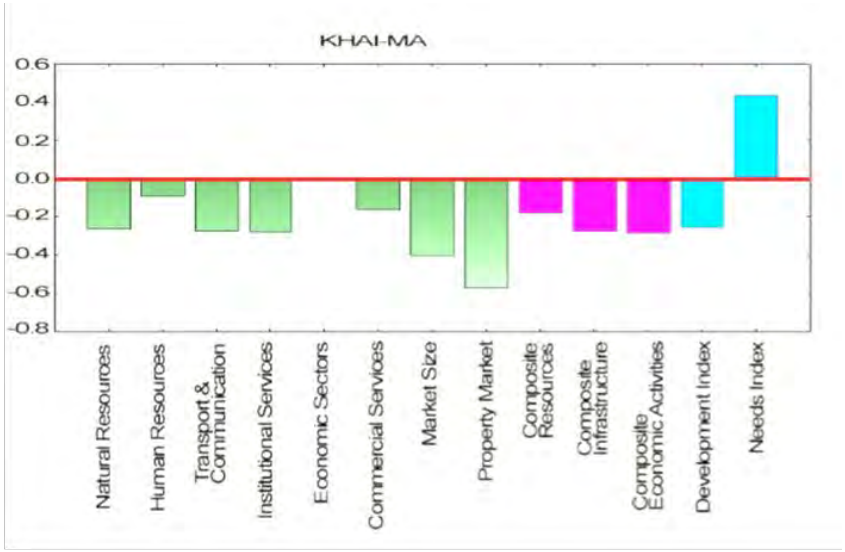


KEY OBSERVATIONS:

- The results indicate a significant decrease of all the indices, except for the property market.
- Overall, the time-lapse between the 2001 and 2011 StatsSA census data indicates that the majority of sectors of the Karoo Hoogland LM declined.
- The data further indicate the composite need index has experienced a noticeable improvement.

5.5 KHAI-MA LOCAL MUNICIPALITY

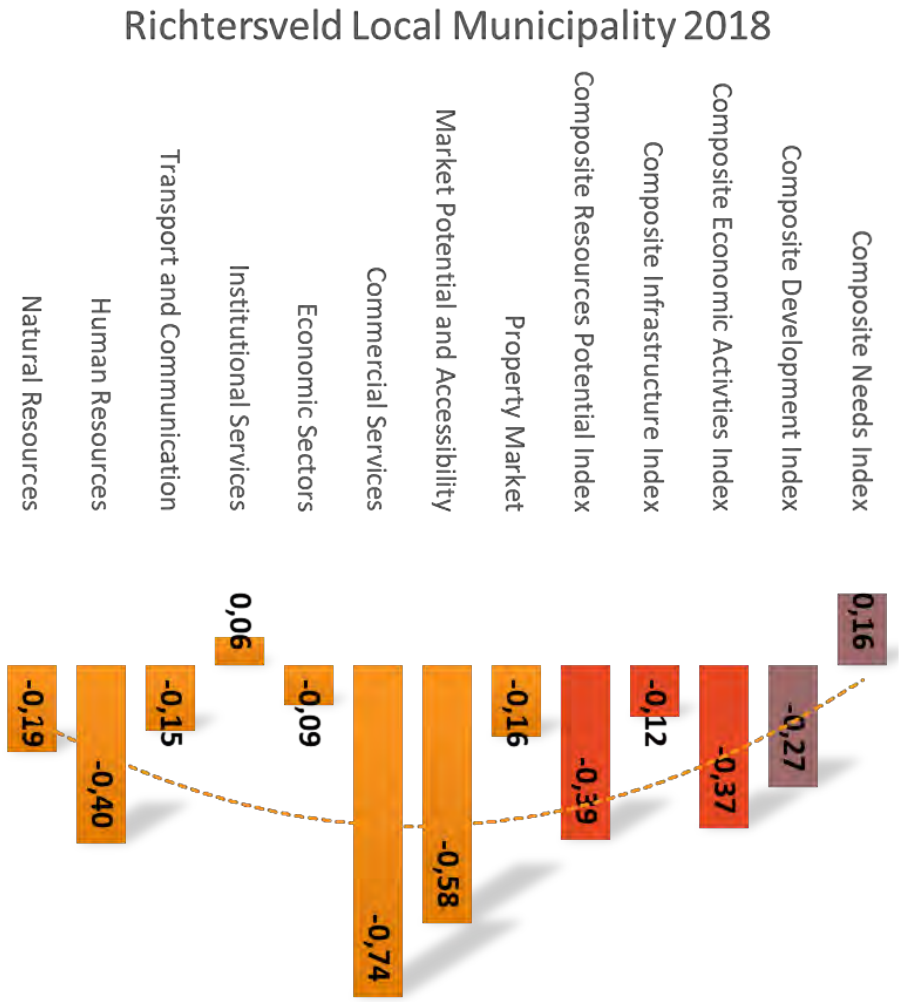


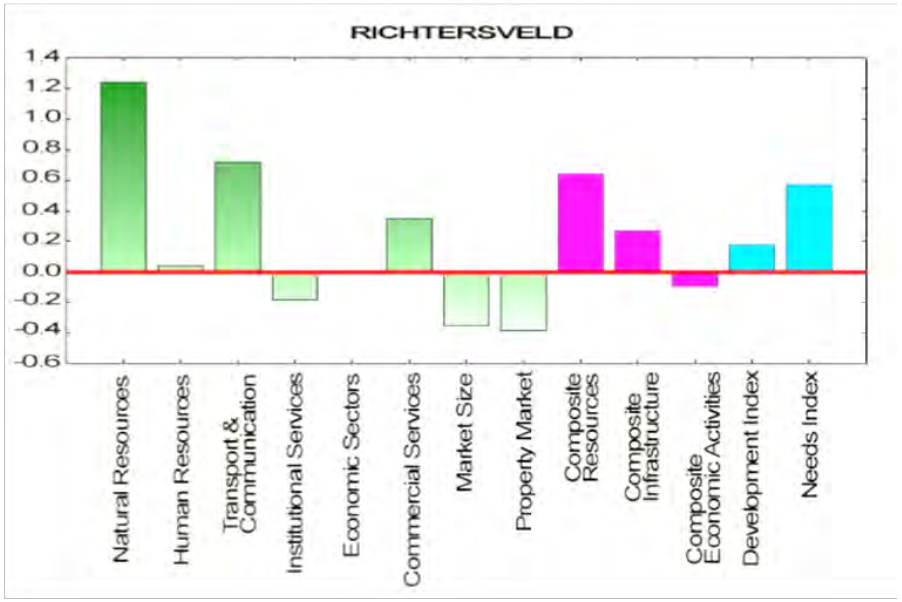


KEY OBSERVATIONS:

- The results indicate a slight increase in transport and communication, as well as institutional services sectors.
- Overall, the time-lapse between the 2001 and 2011 StatsSA census data indicates that the majority of sectors of the Khai-ma LM declined, although the composite infrastructure index increased slightly.
- The data further indicate the composite need index has experienced a slight increase.

5.6 RICHTERSVELD LOCAL MUNICIPALITY





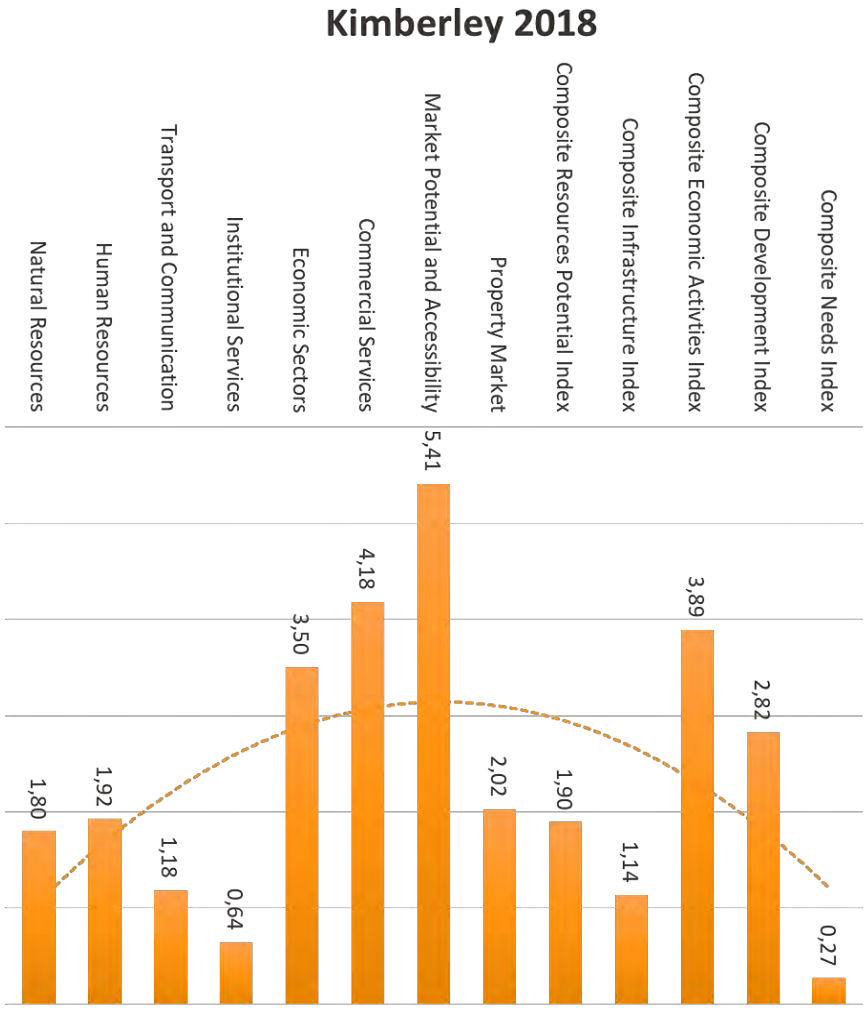
KEY OBSERVATIONS:

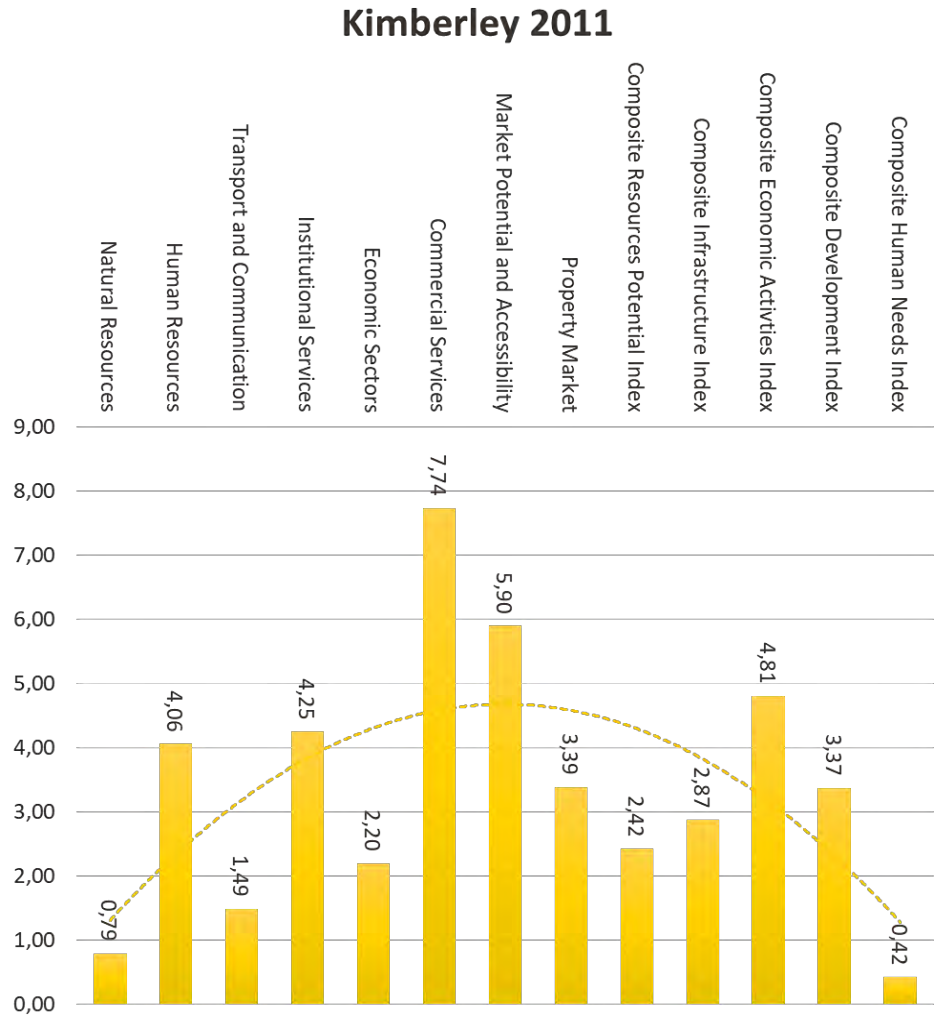
- The results indicate a decrease in natural resources, although various natural resources are present, the isolated nature of the resources, decreases the accessibility thereof.
- Overall, the time-lapse between the 2001 and 2011 StatsSA census data indicates the majority of sectors of the Richtersveld LM declined, except for intuitional services.
- The data further indicate the composite need index has increased slightly.

ADDENDUM B: 2011 AND 2018 TOWN DEVELOPMENT PROFILES

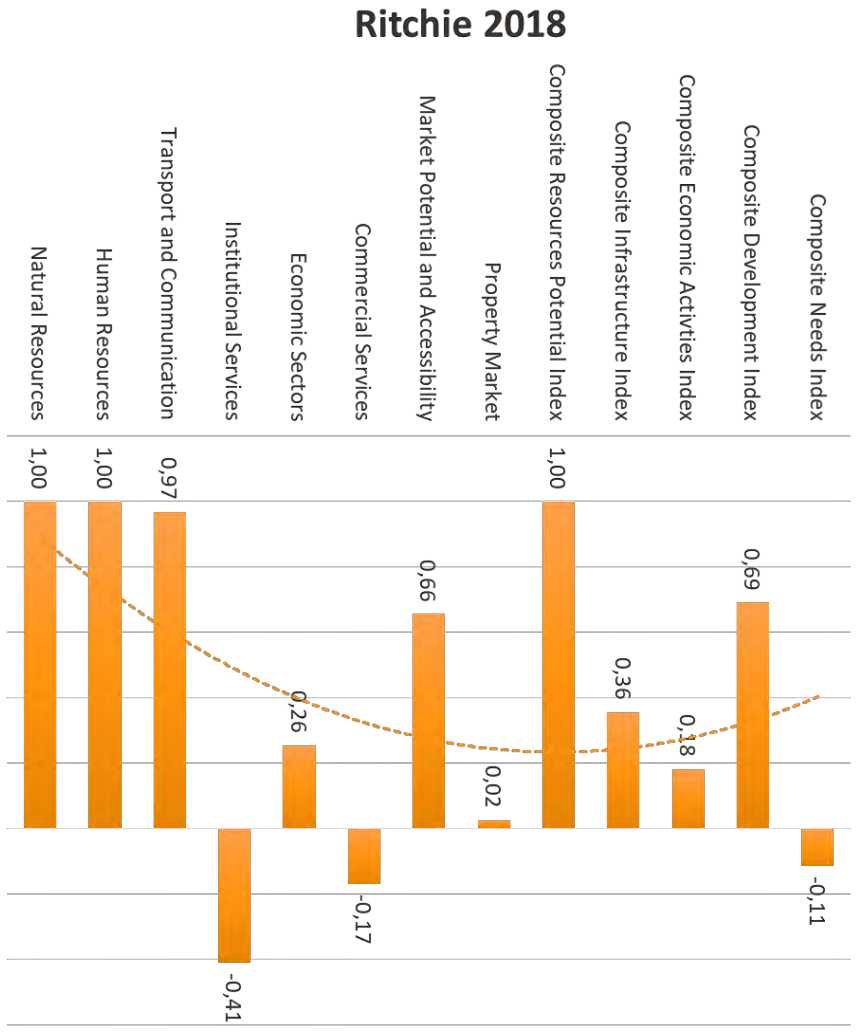
1 FRANCES BAARD TOWN DEVELOPMENT PROFILES

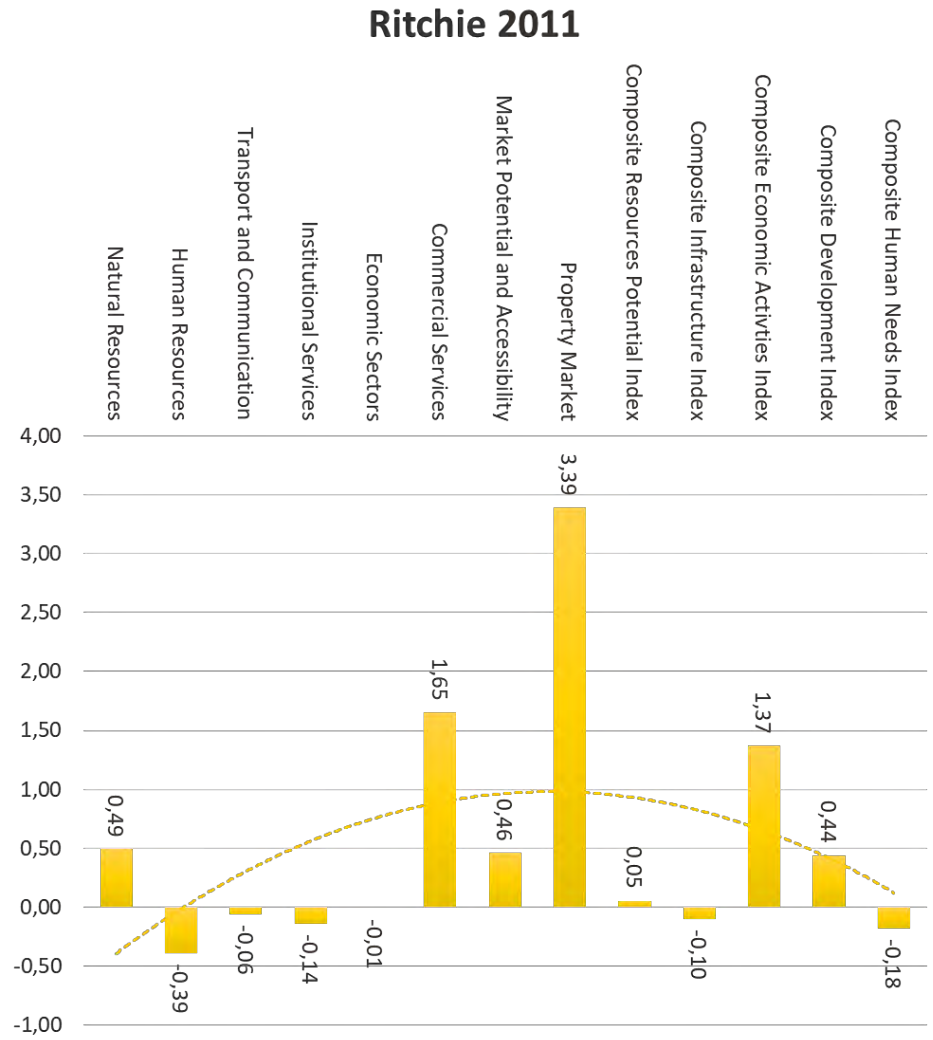
1.1 KIMBERLEY



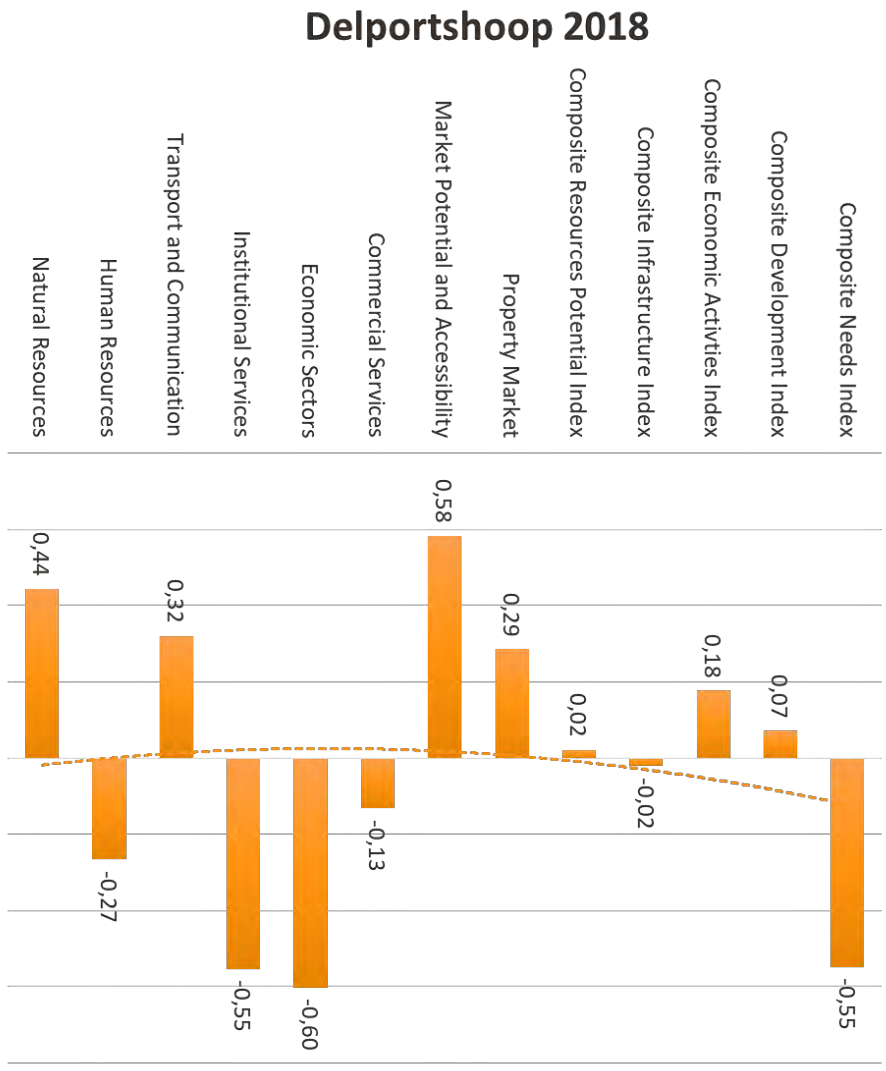


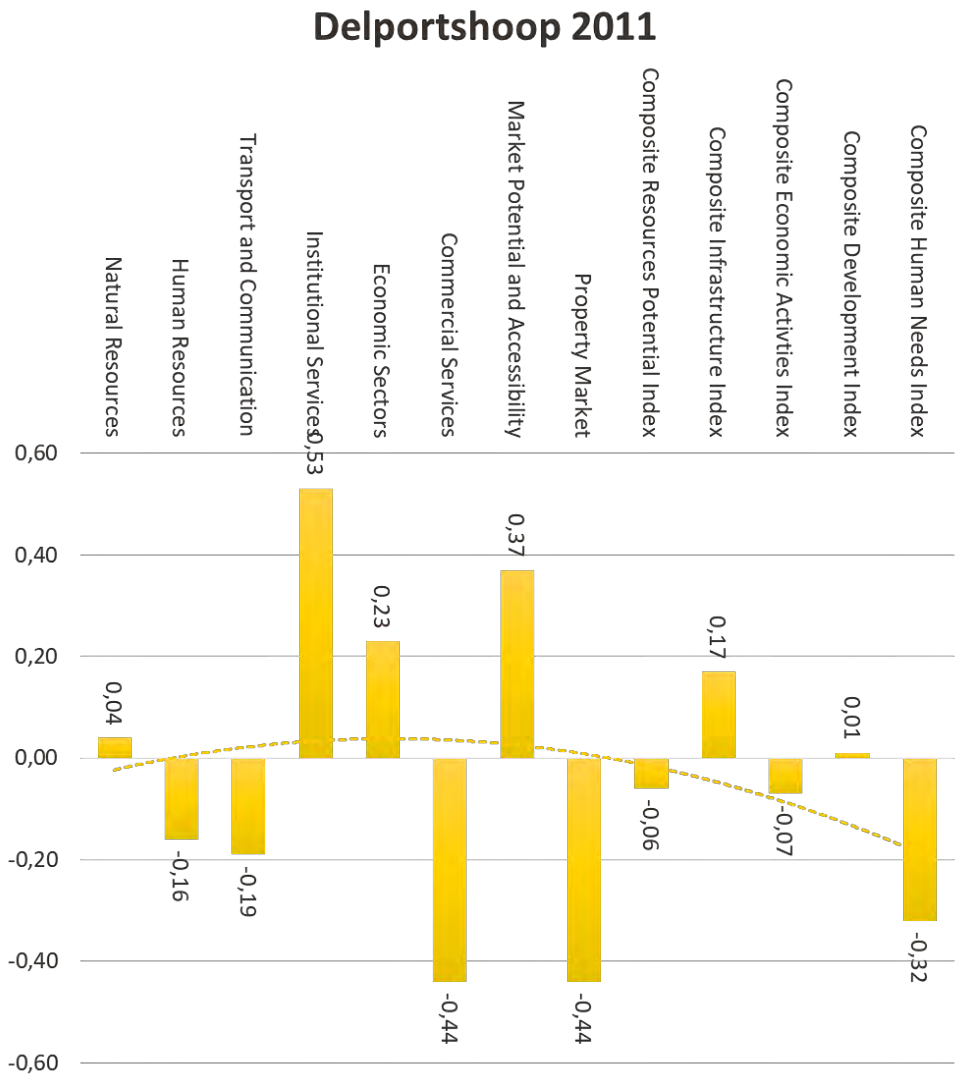
1.2 RITCHIE


Ritchie 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
1,00
1,00
0,97
-0,41
0,26
-0,17
0,66
0,02
1,00
0,36
0,18
0,69
-0,11
1,20
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60

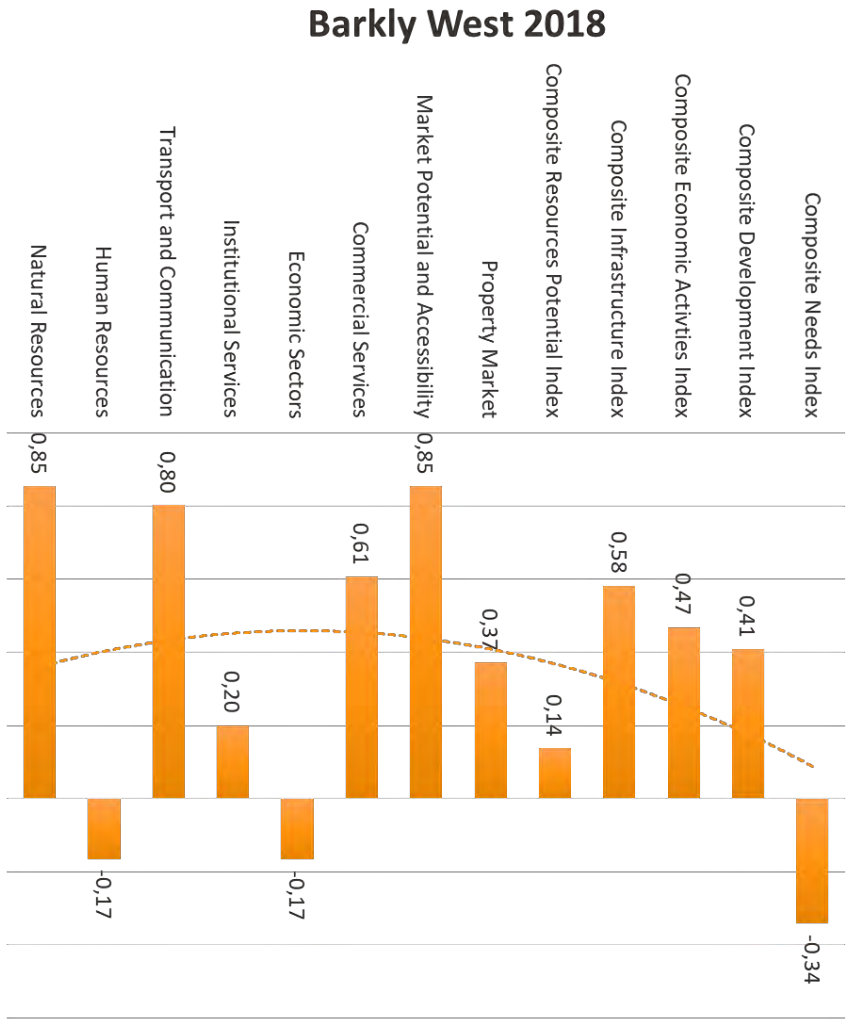

Ritchie 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
0,49
-0,39
-0,06
-0,14
-0,01
1,65
0,46
3,39
0,05
-0,10
1,37
0,44
-0,18
4,00
3,50
3,00
2,50
2,00
1,50
1,00
0,50
0,00
-0,50
-1,00

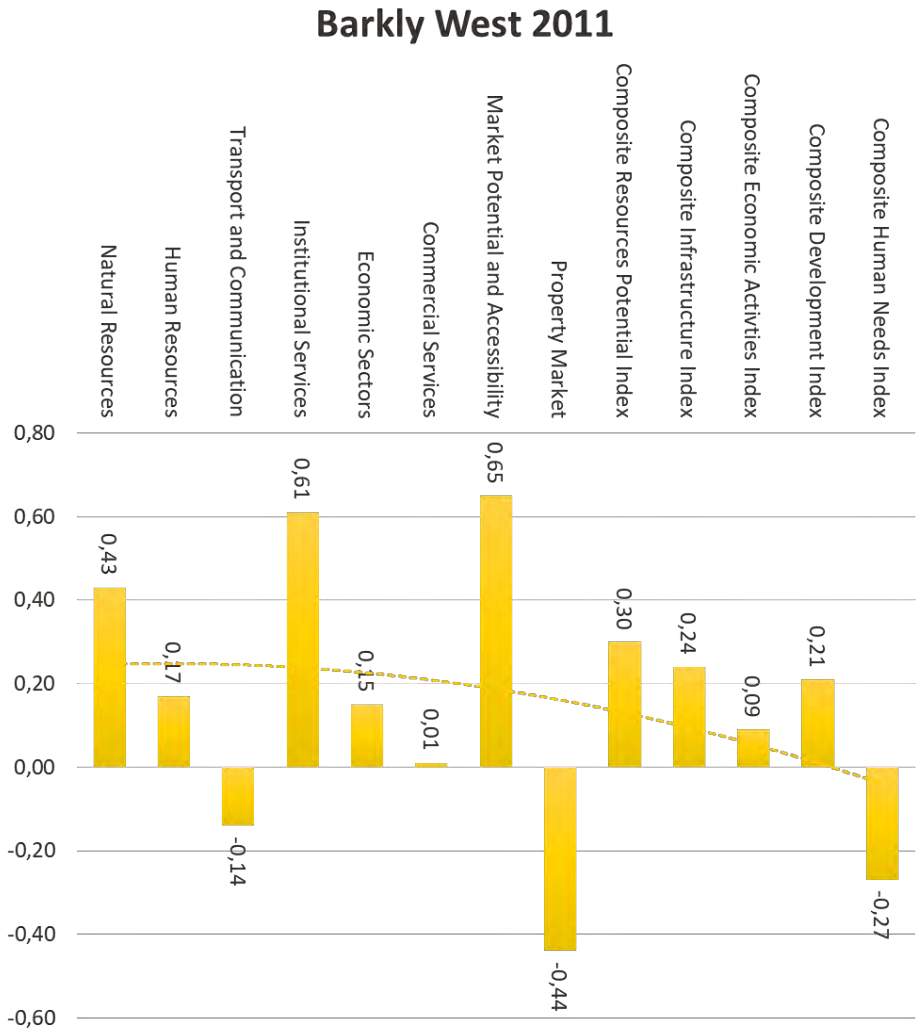
1.3 DELPORTSHOOP



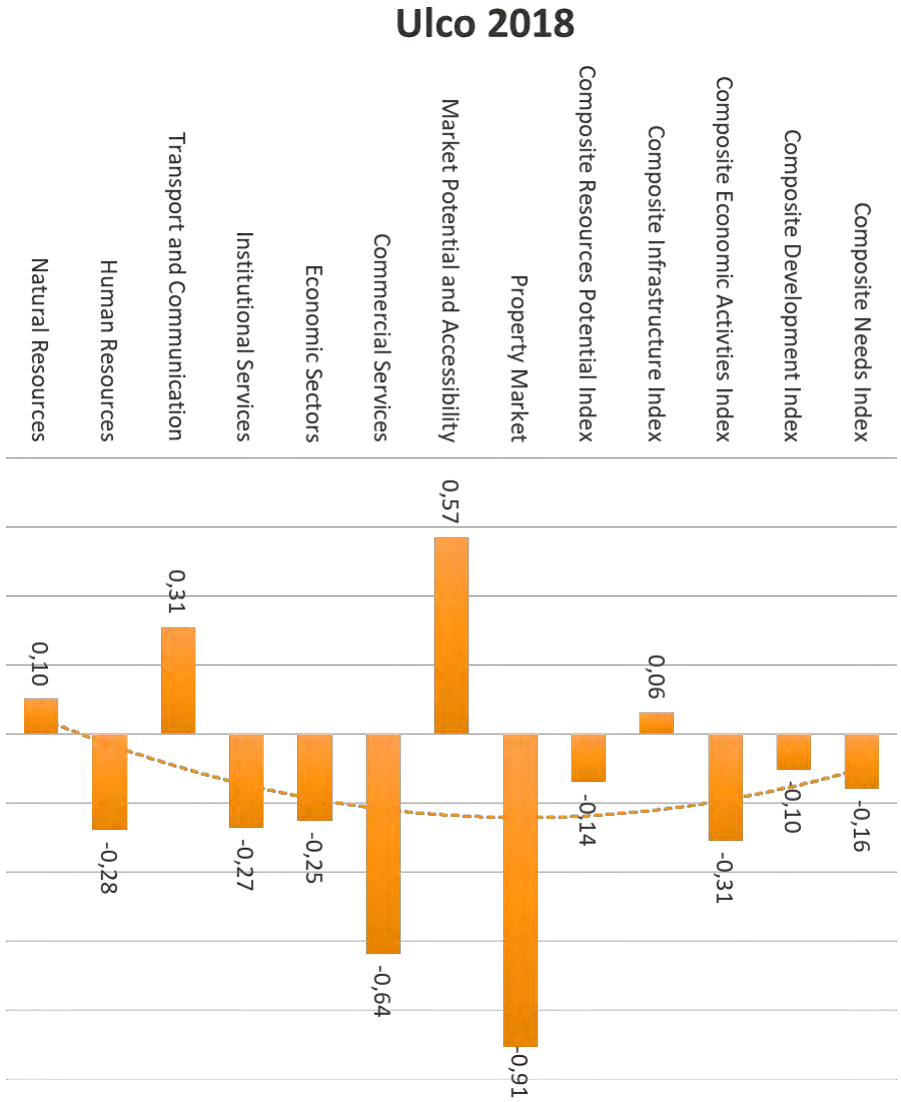


1.4 BARKLEY WEST





1.5 ULCO


Ulco 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
0,10
-0,28
0,31
-0,27
-0,25
-0,64
0,57
-0,91
-0,14
0,06
-0,31
-0,10
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0,60
0,40
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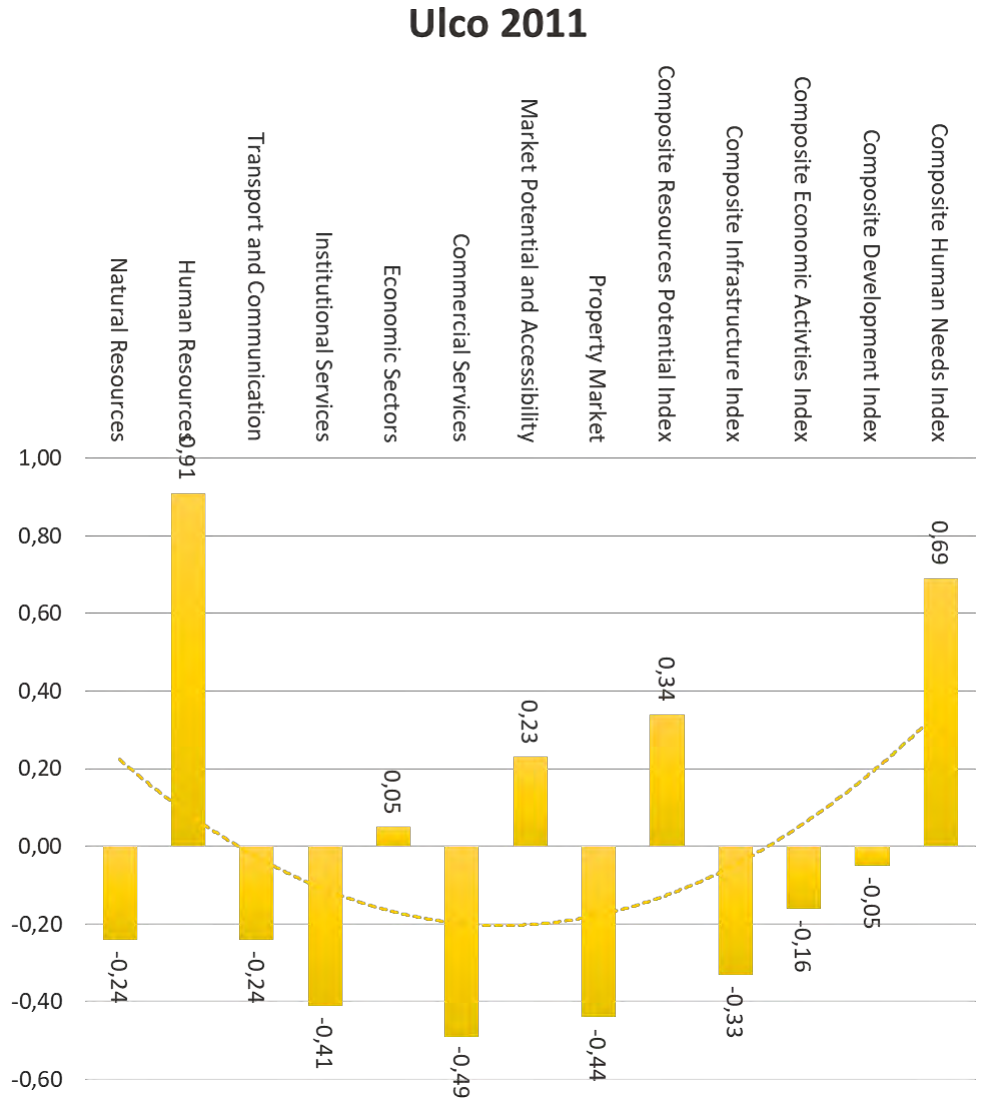
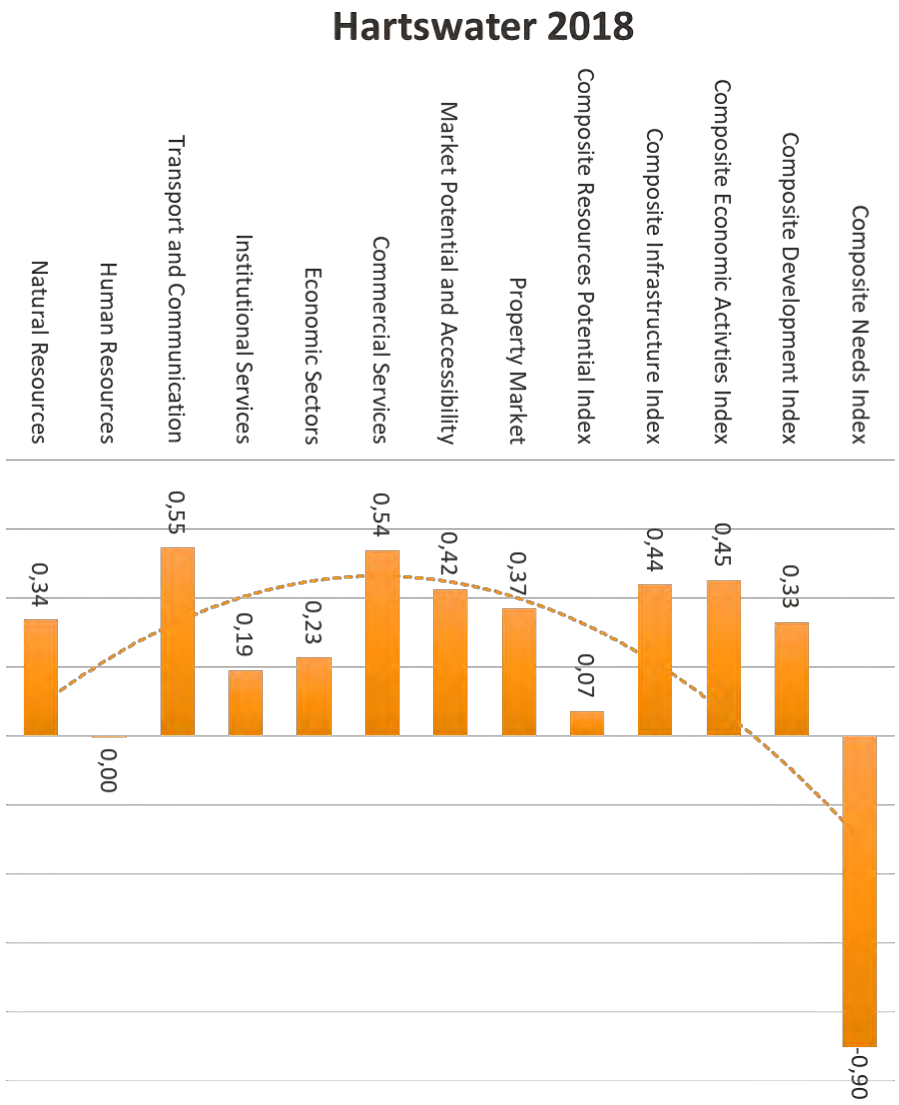
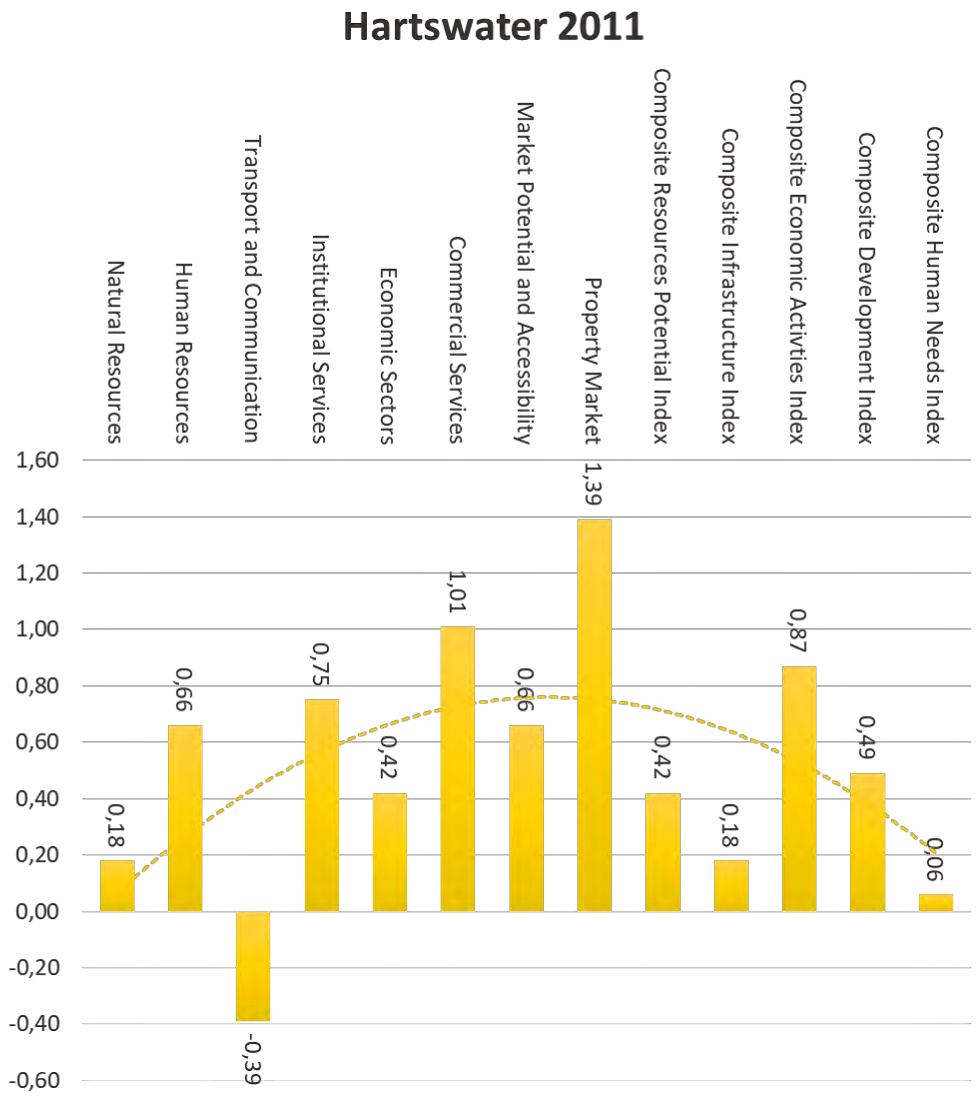
-0,80
-1,00

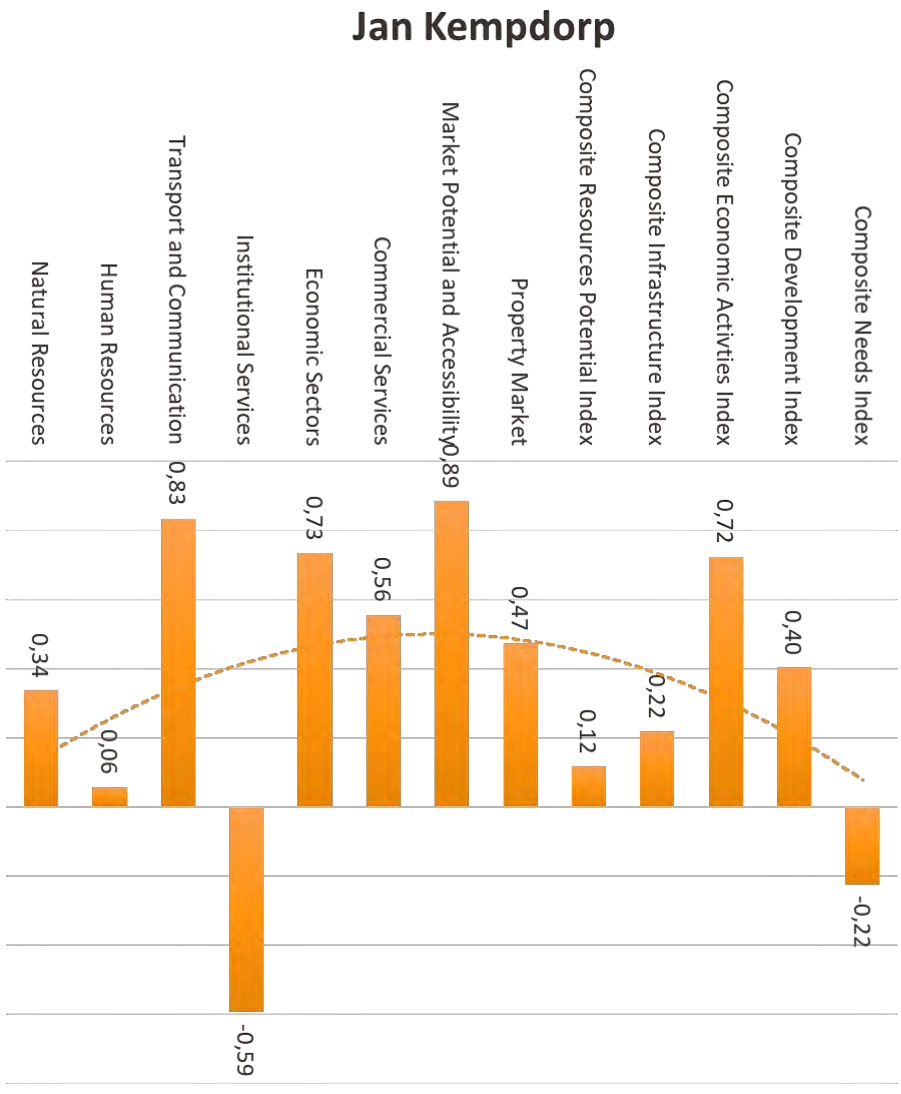

Ulco 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,24
0,91
-0,24
-0,41
0,05
-0,49
0,23
-0,44
0,34
-0,33
-0,16
-0,05
0,69
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60

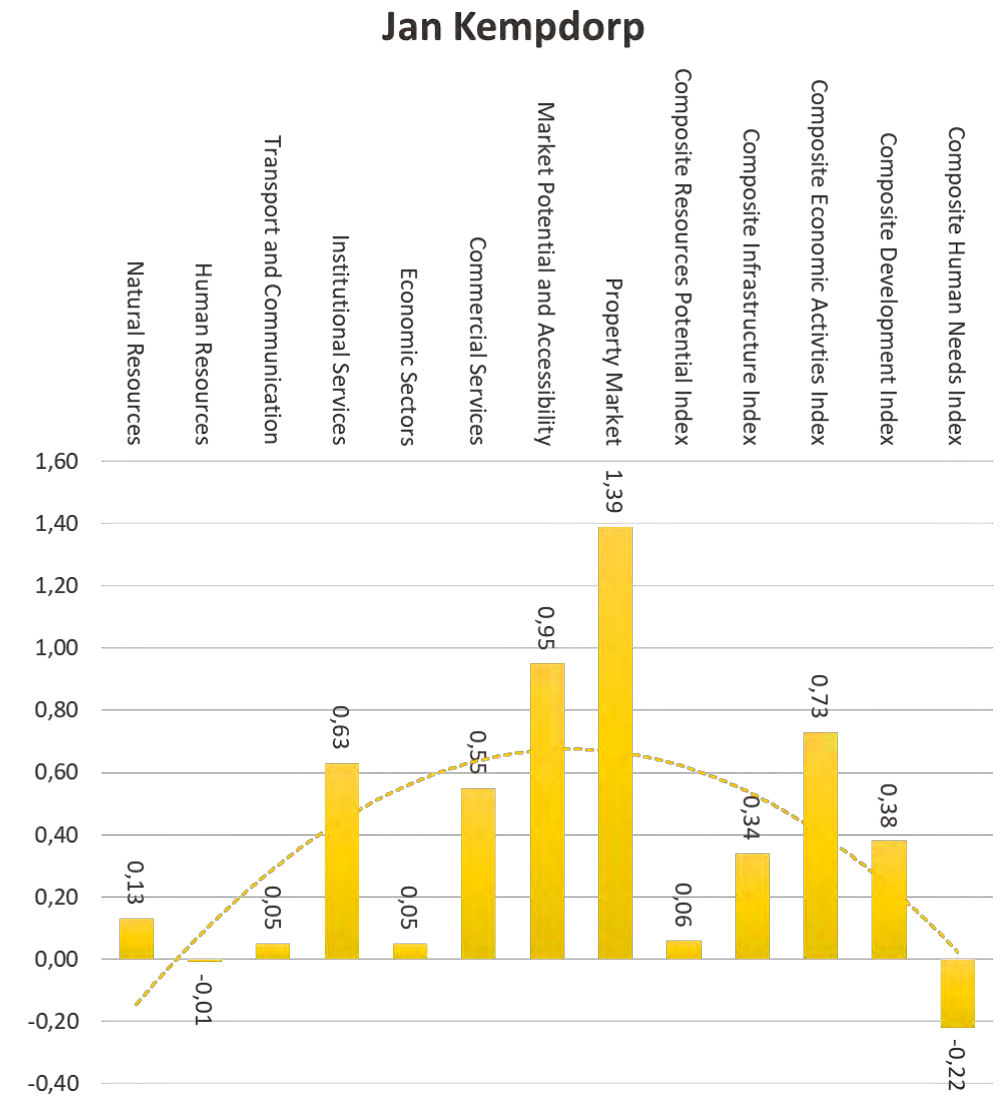
1.6 HARTSWATER



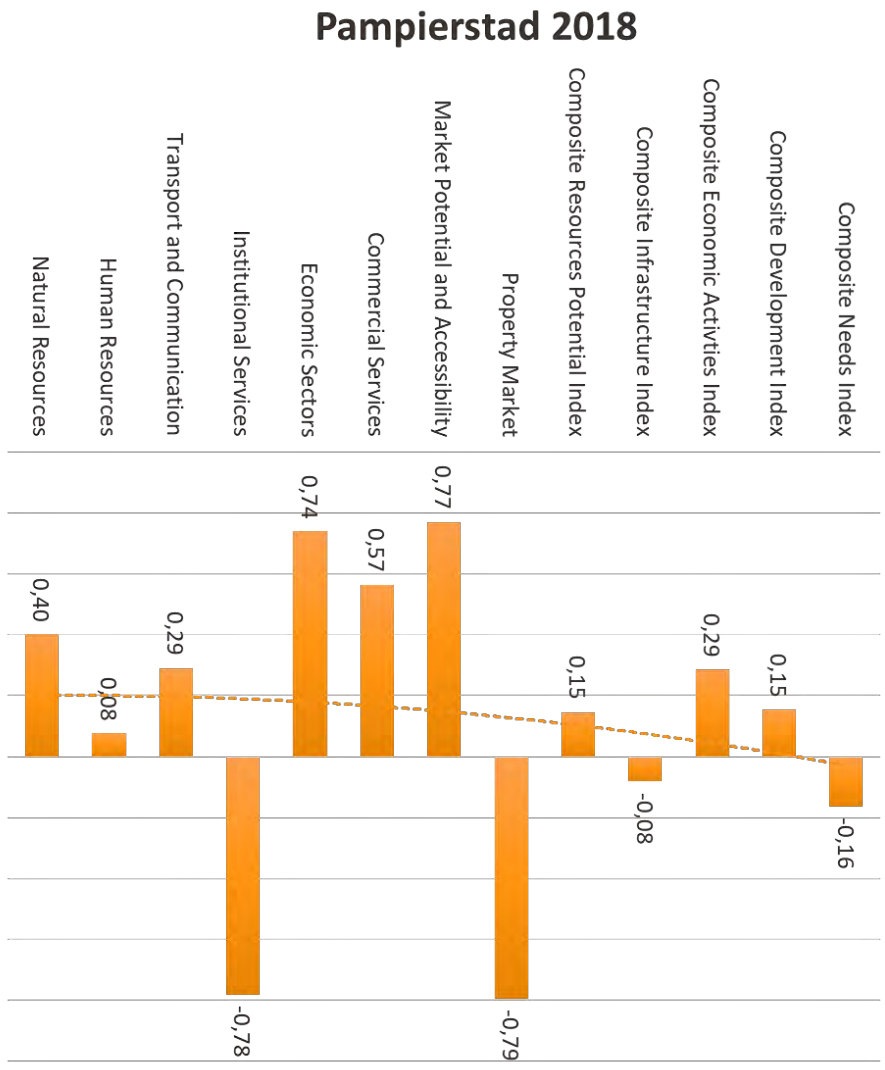


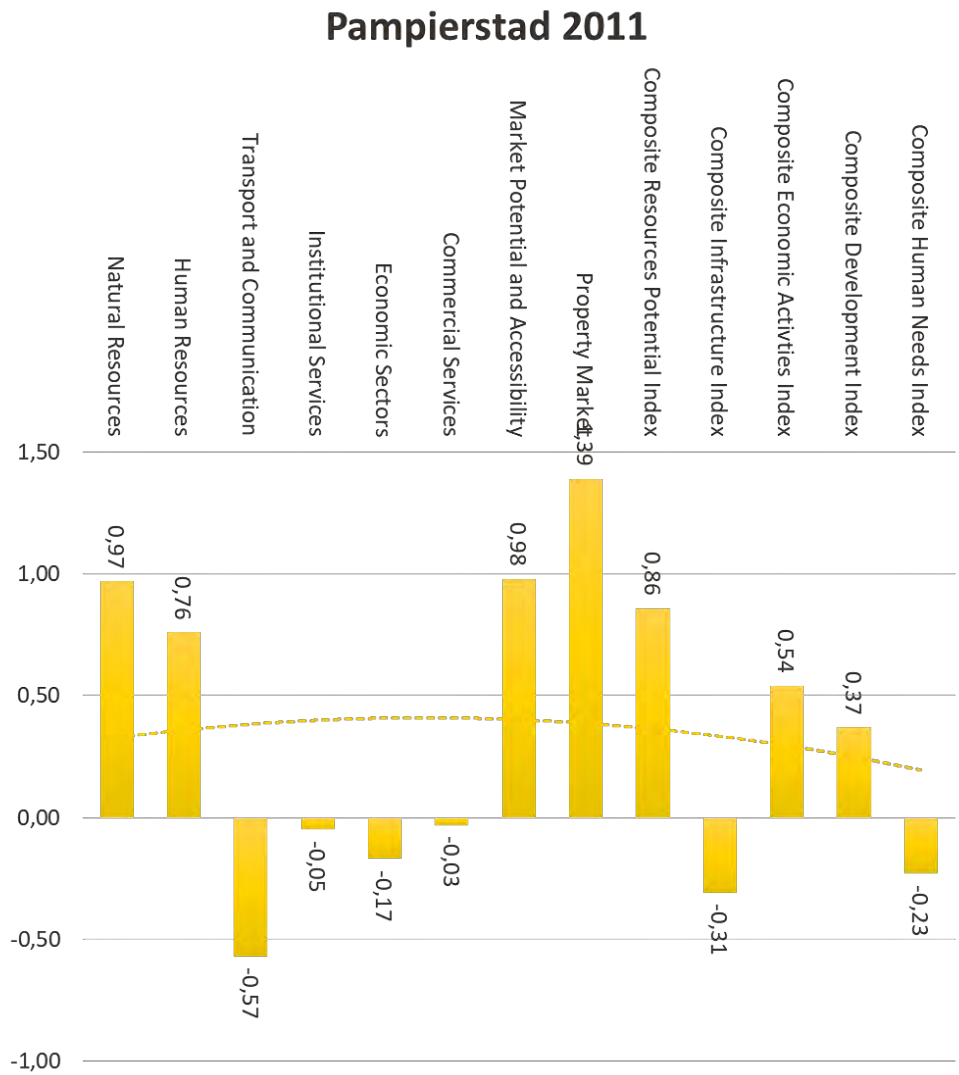
1.7 JAN KEMPDORP



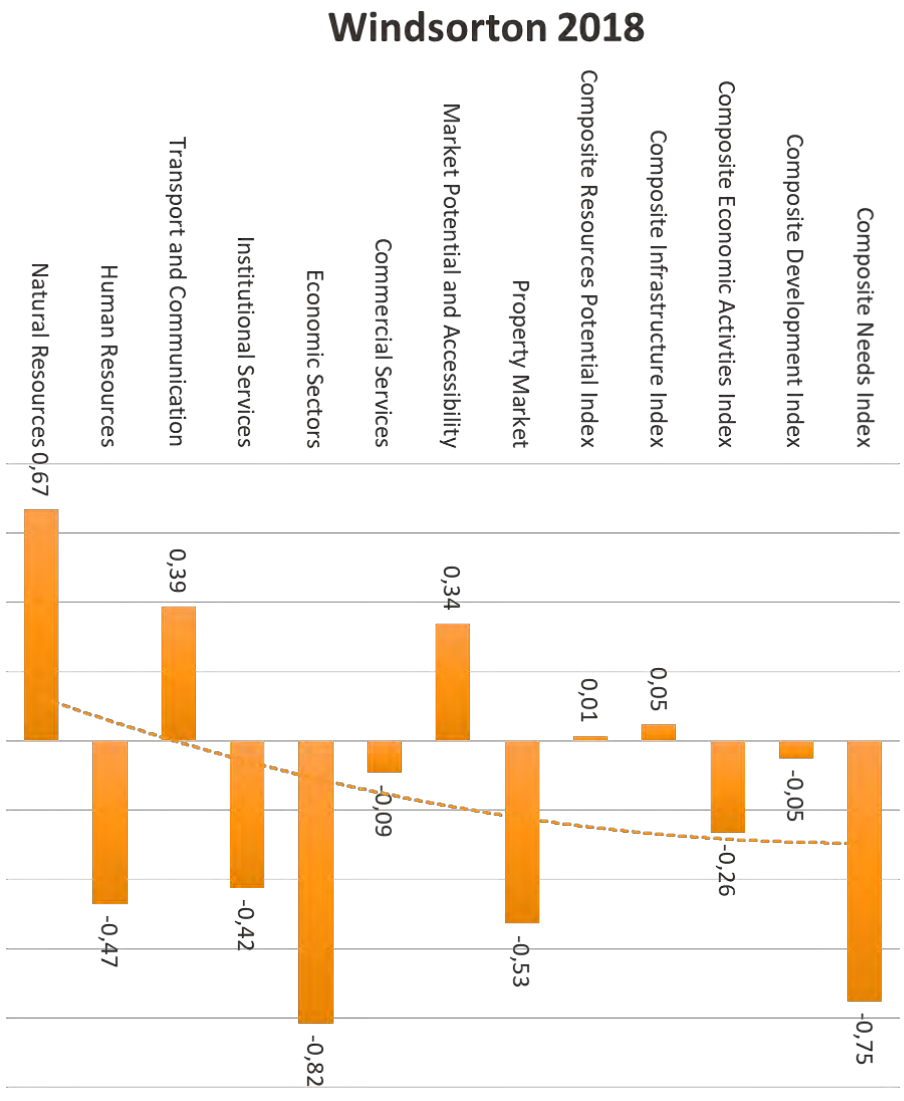


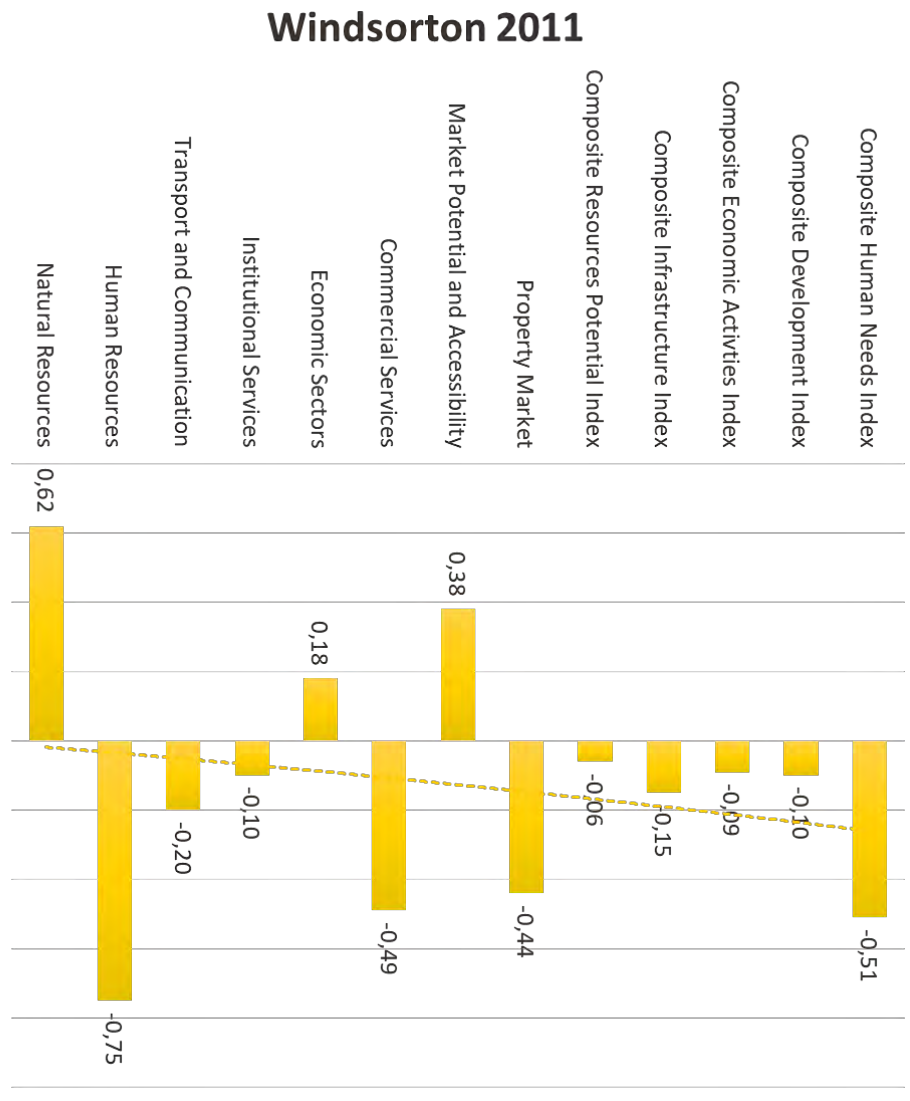
1.8 PAMPIERSTAD



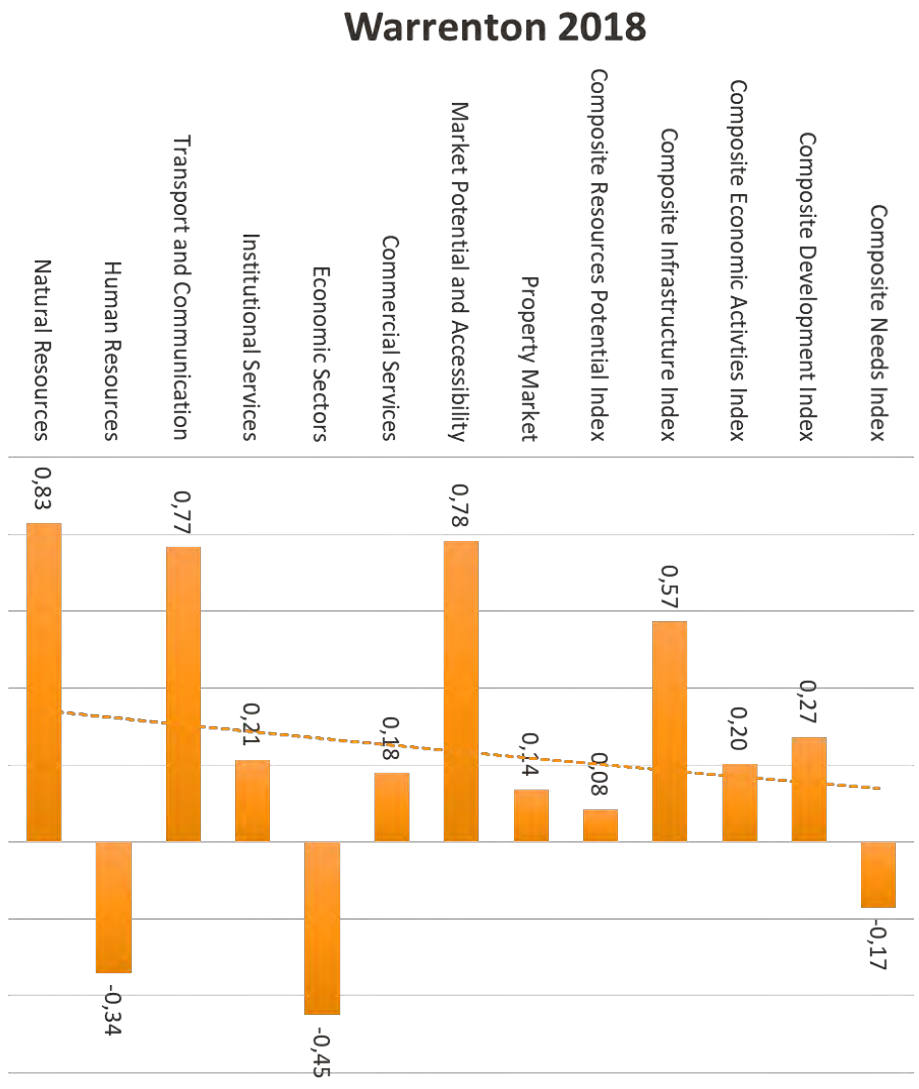


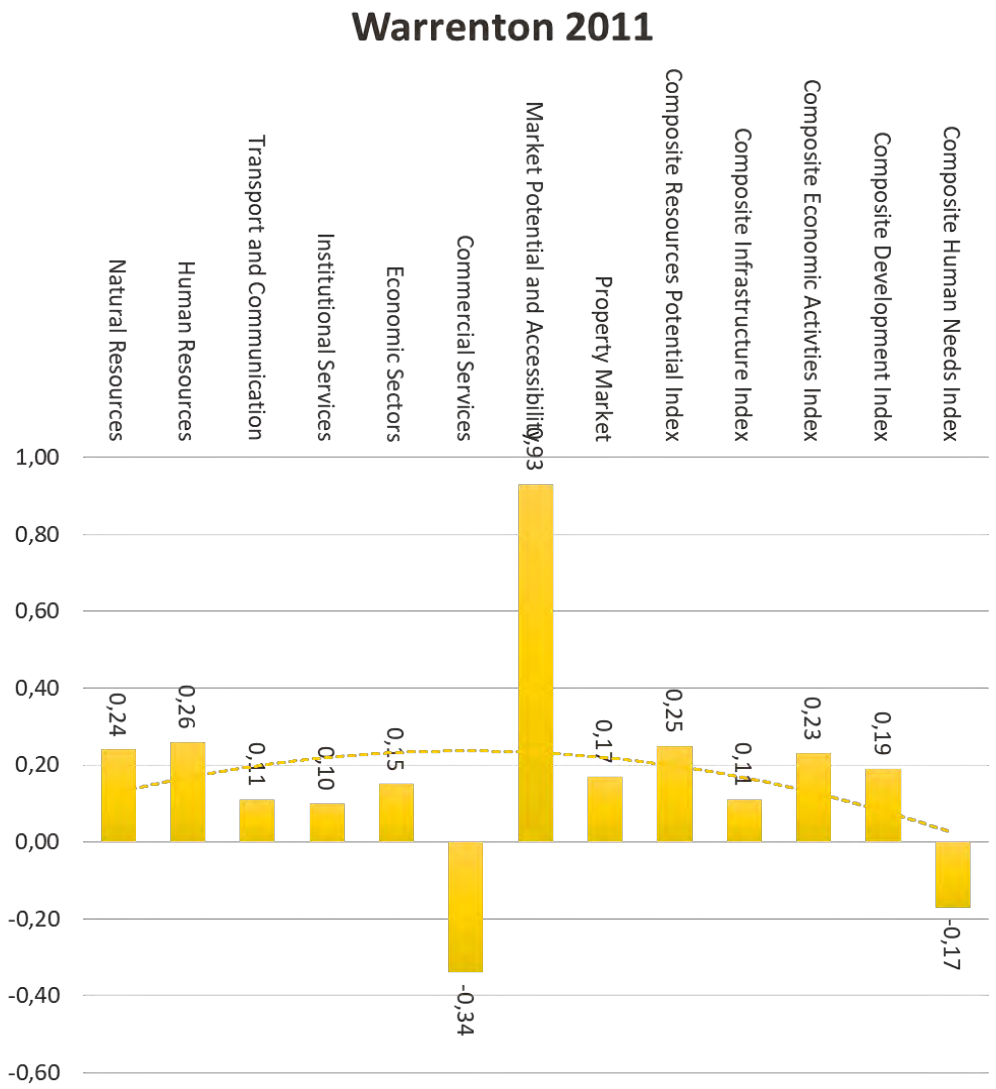
1.9 WINDSORTON





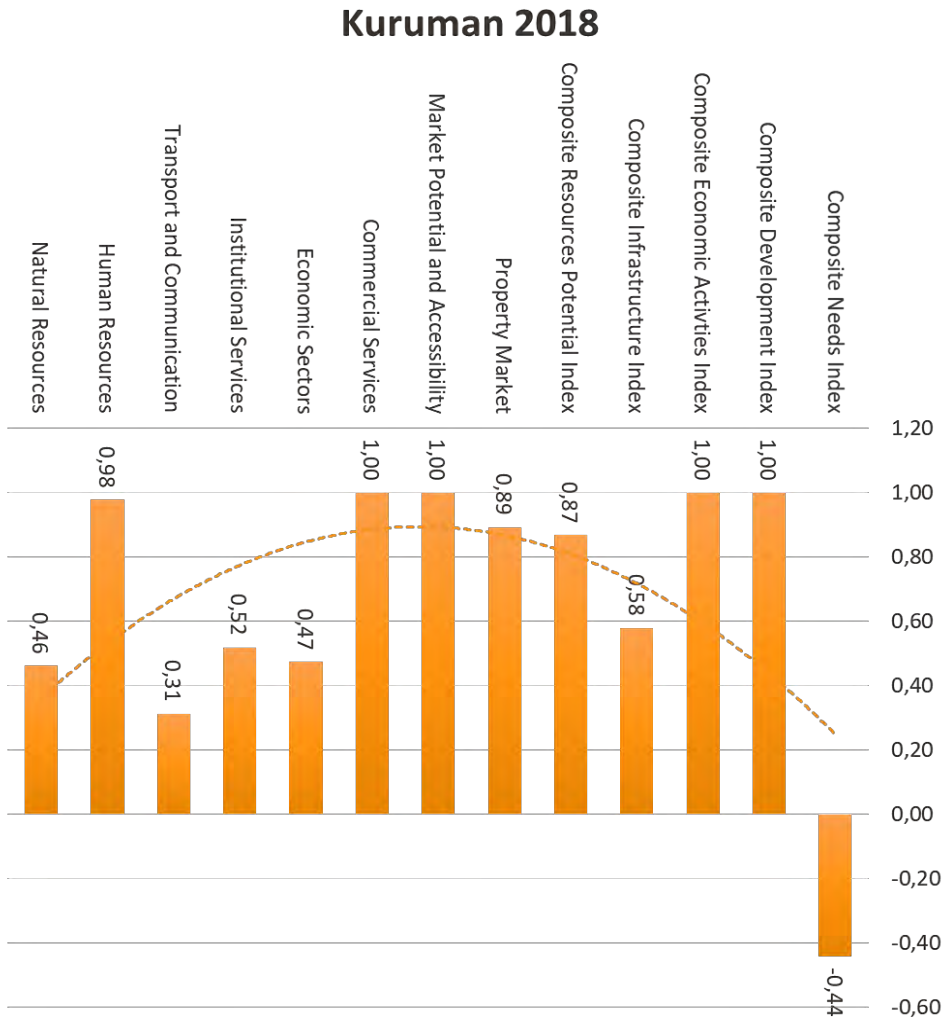
1.10 WARRENTON

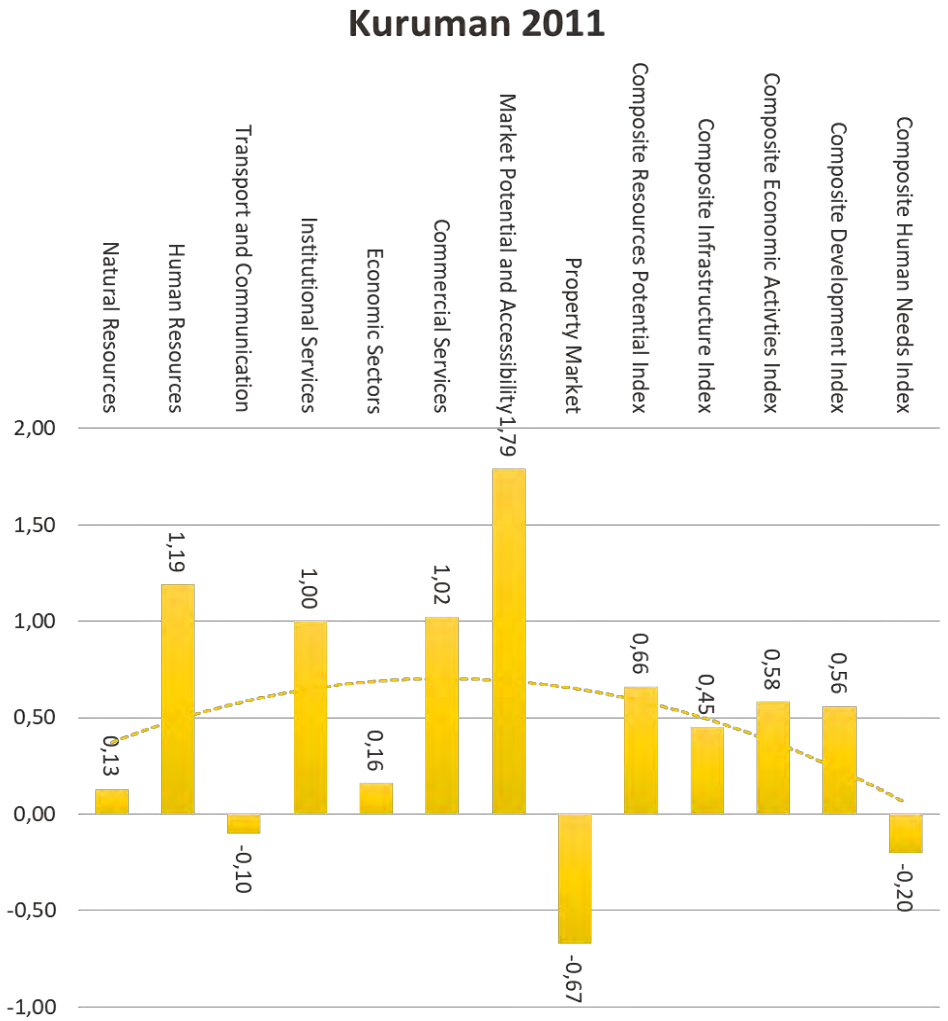




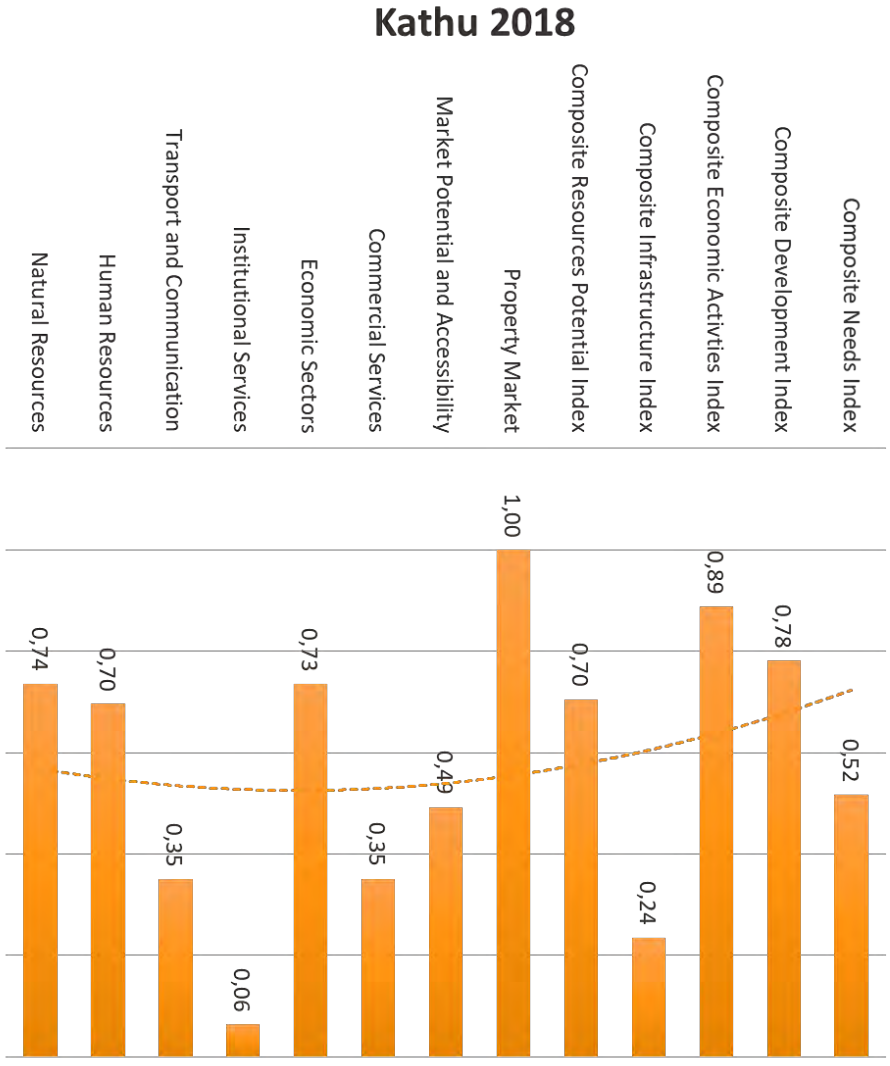
2 JOHN TAOLO GAETSEWE TOWN DEVELOPMENT PROFILES

2.1 KURUMAN





2.2 KATHU


Kathu 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
0,74
0,70
0,35
0,06
0,73
0,35
0,49
1,00
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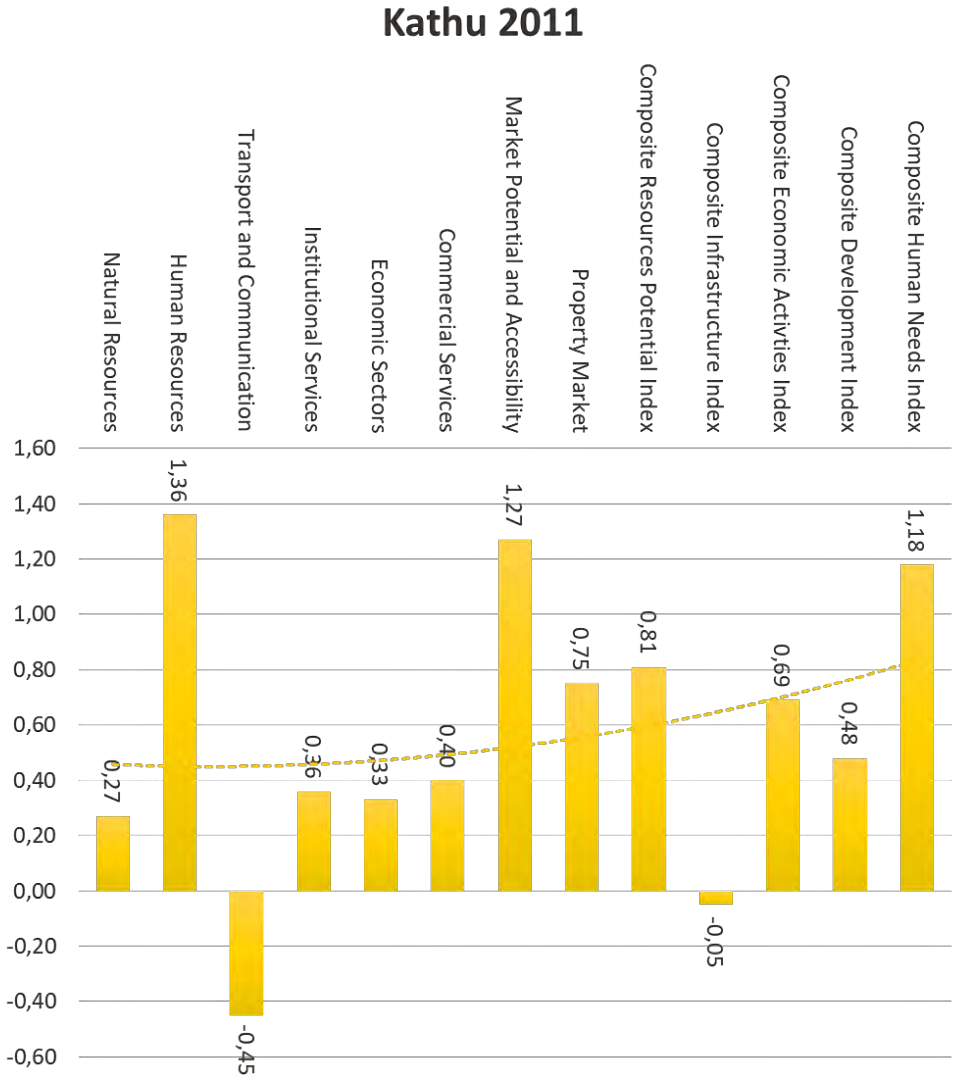
Kathu 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
0,27
1,36
-0,45
0,36
0,33
0,40
1,27
0,75
0,81
-0,05
0,69
0,48
1,18
1,60
1,40
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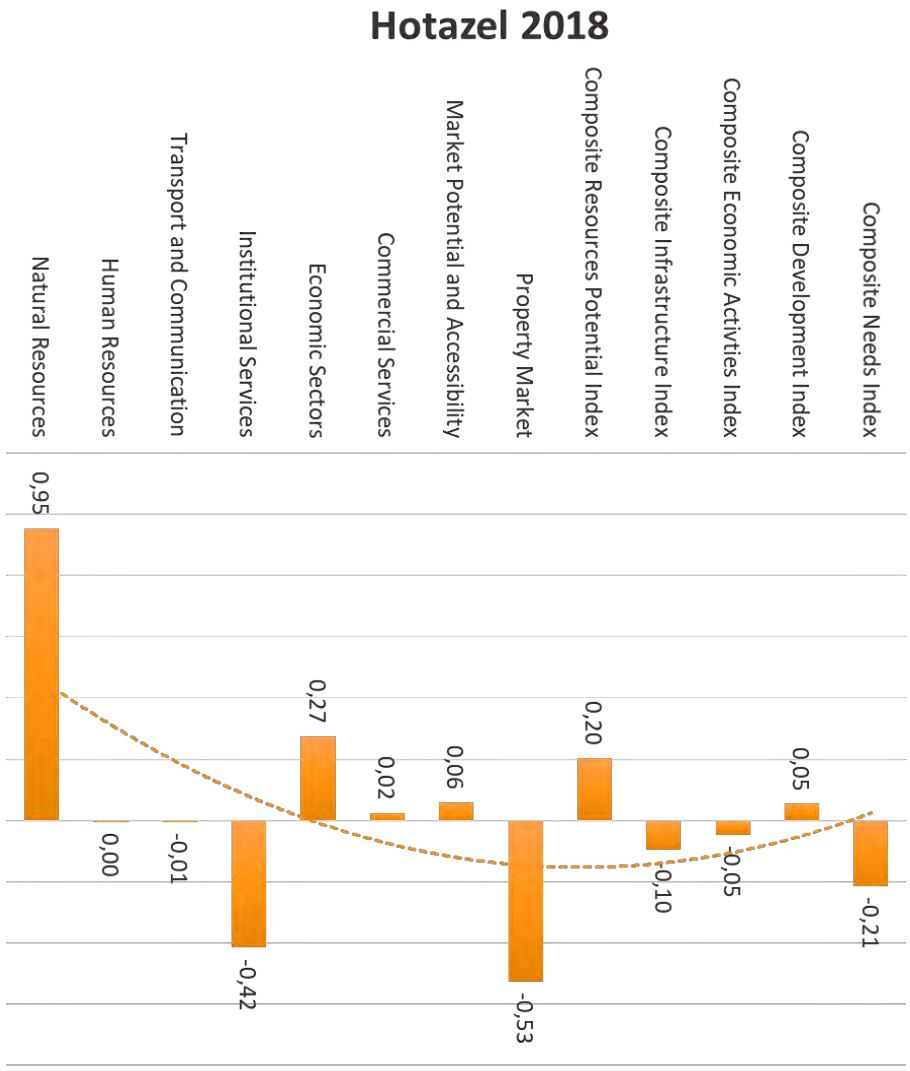
0,20
0,00
-0,20
-0,40
-0,60

2.3 HOTAZEL


Hotazel 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
0,95
0,00
-0,01
-0,42
0,27
0,02
0,06
-0,53
0,20
-0,10
-0,05
0,05
-0,21
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0,20
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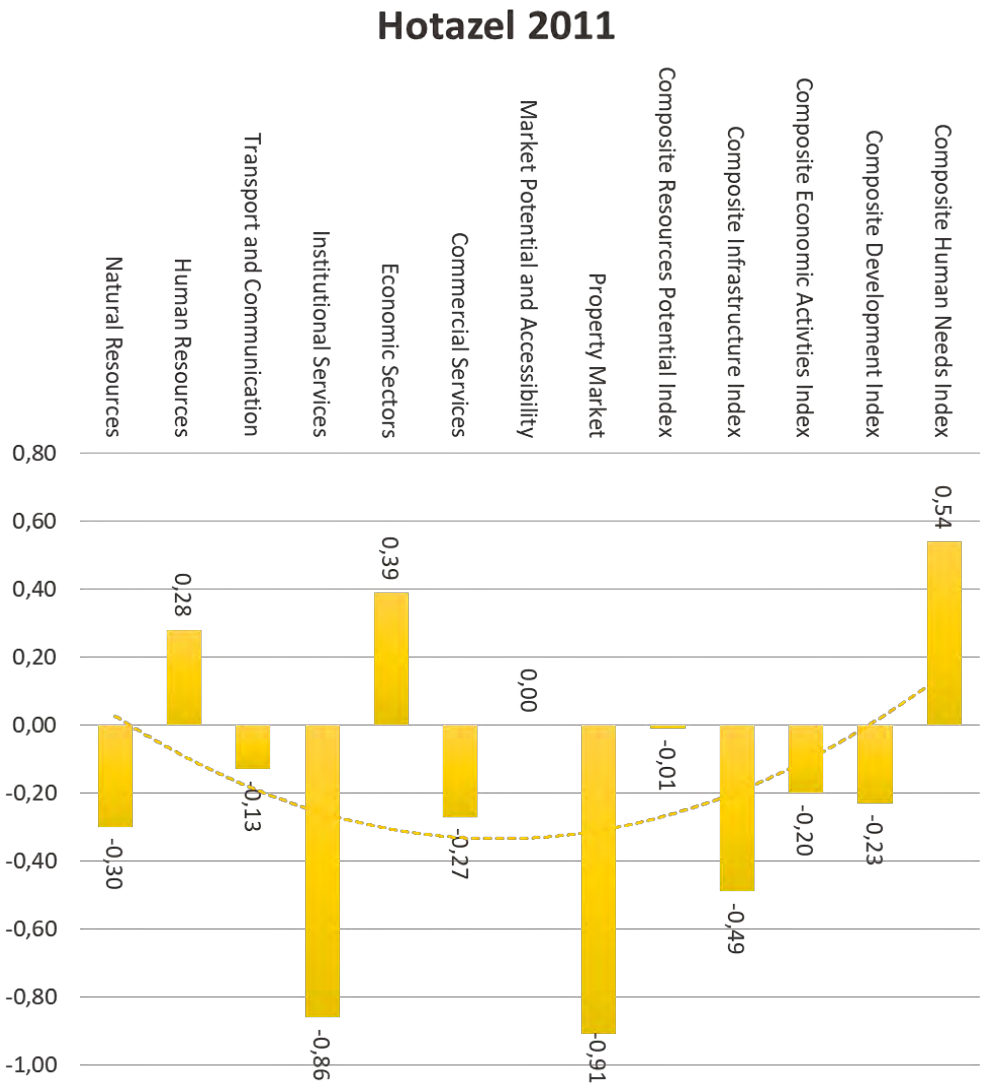
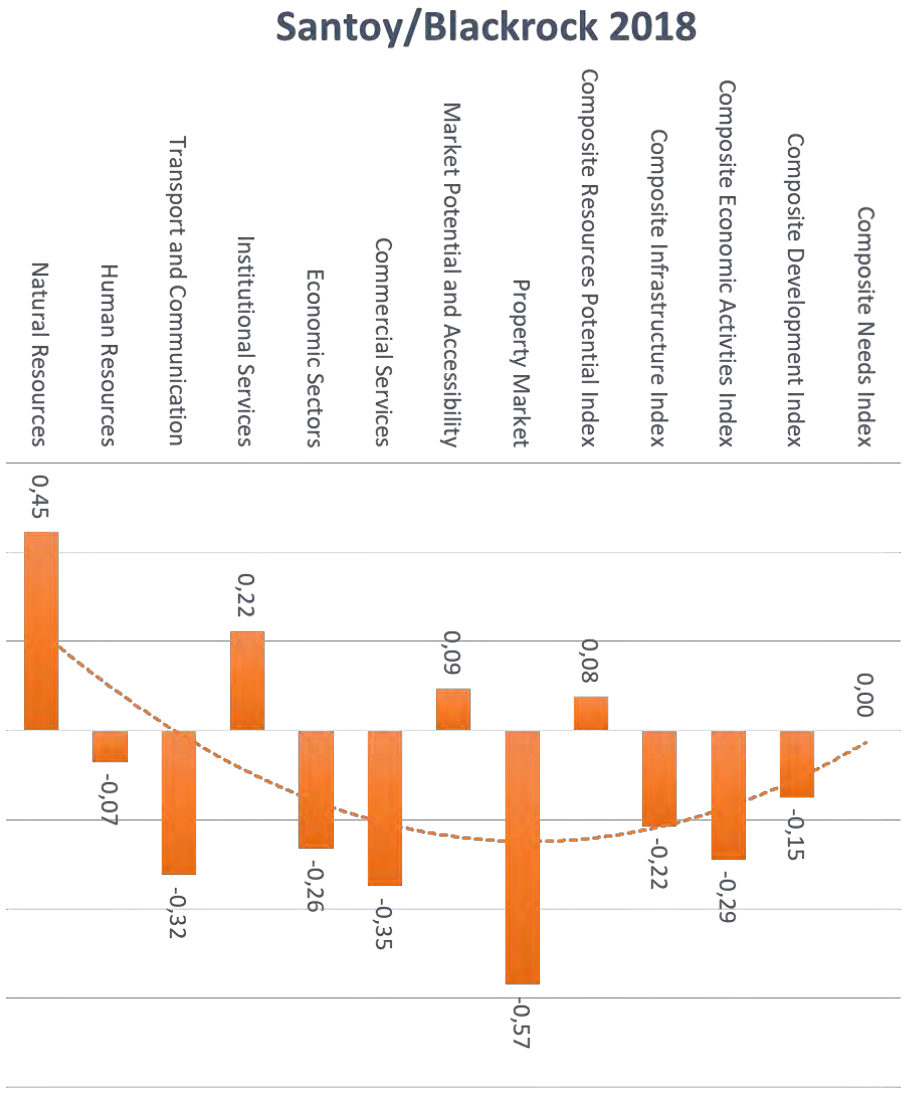
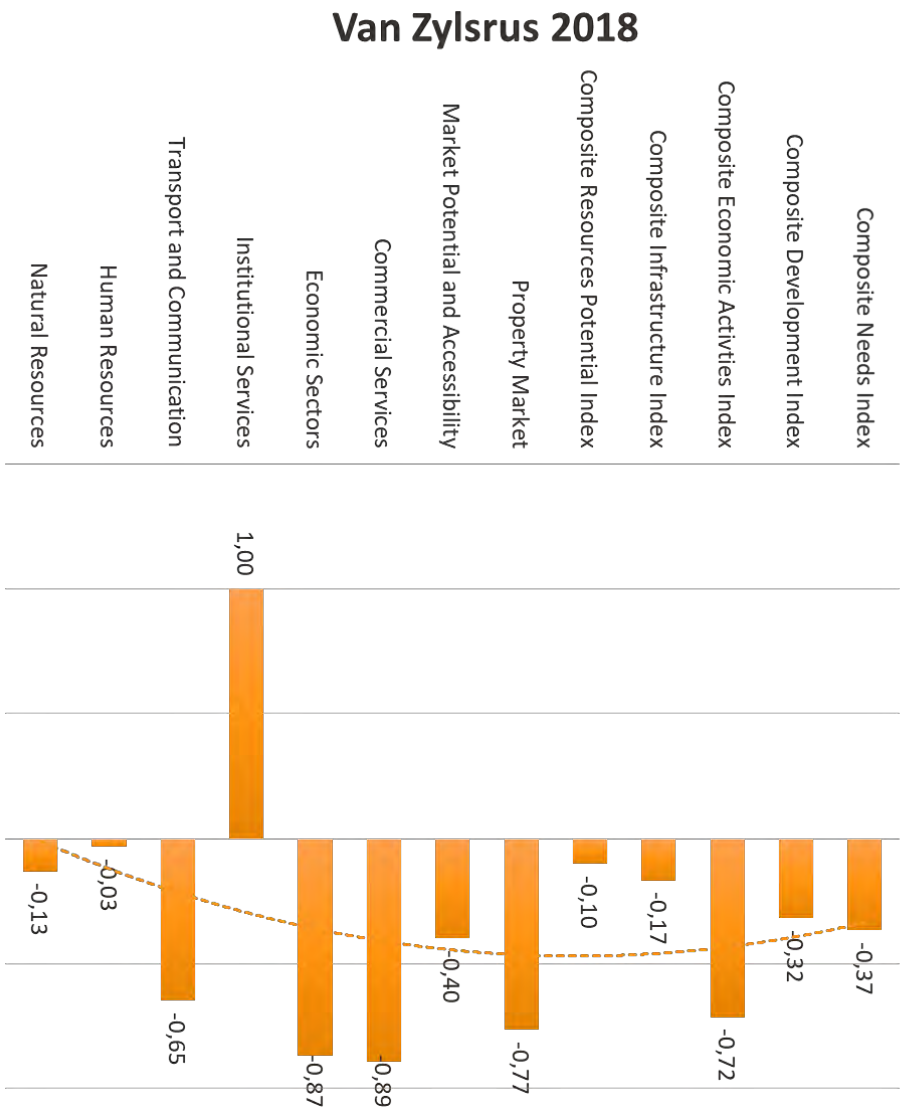
-0,20
-0,40
-0,60
-0,80


Hotazel 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,30
0,28
-0,13
-0,86
0,39
-0,27
0,00
-0,91
-0,01
-0,49
-0,20
-0,23
0,54
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00

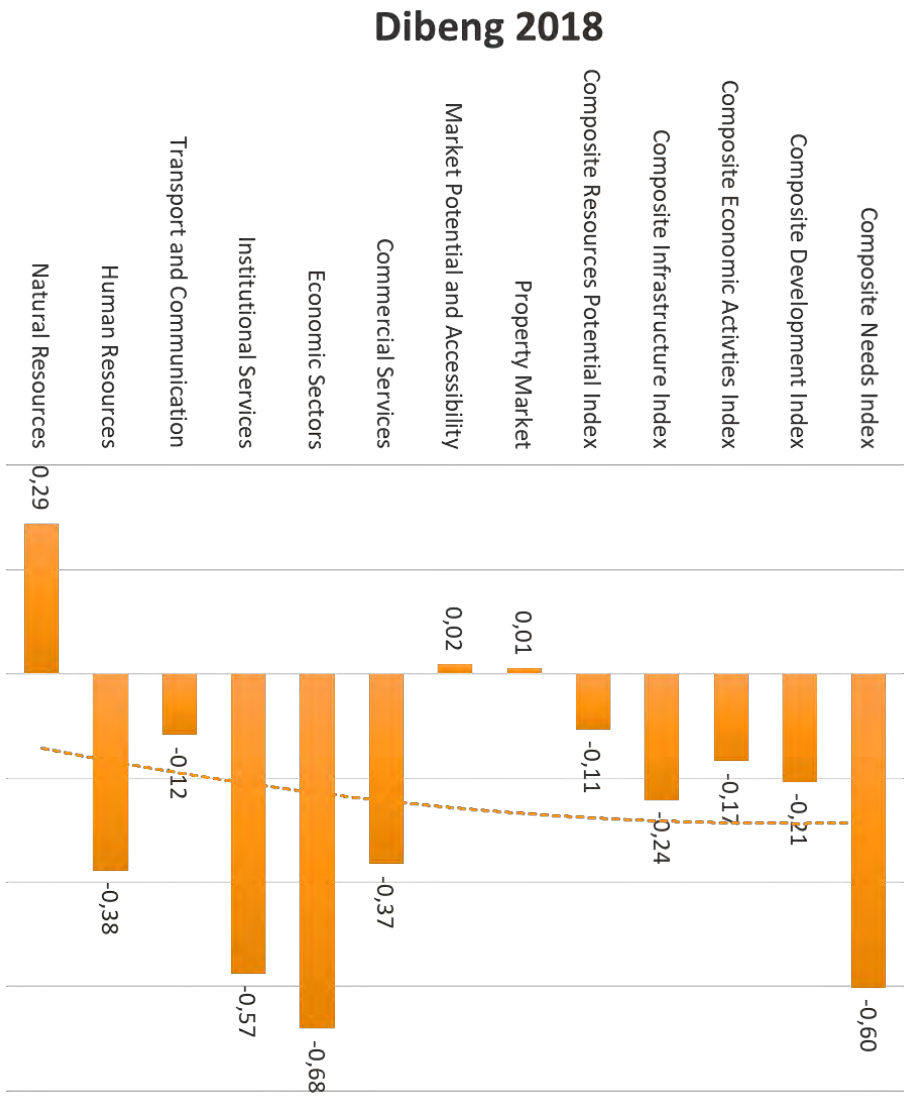
2.4 BLACKROCK/SANTOY



2.5 VAN ZYLSRUS



2.6 DIBENG


Dibeng 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
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-0,68
-0,37
0,02
0,01
-0,11
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-0,17
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-0,60
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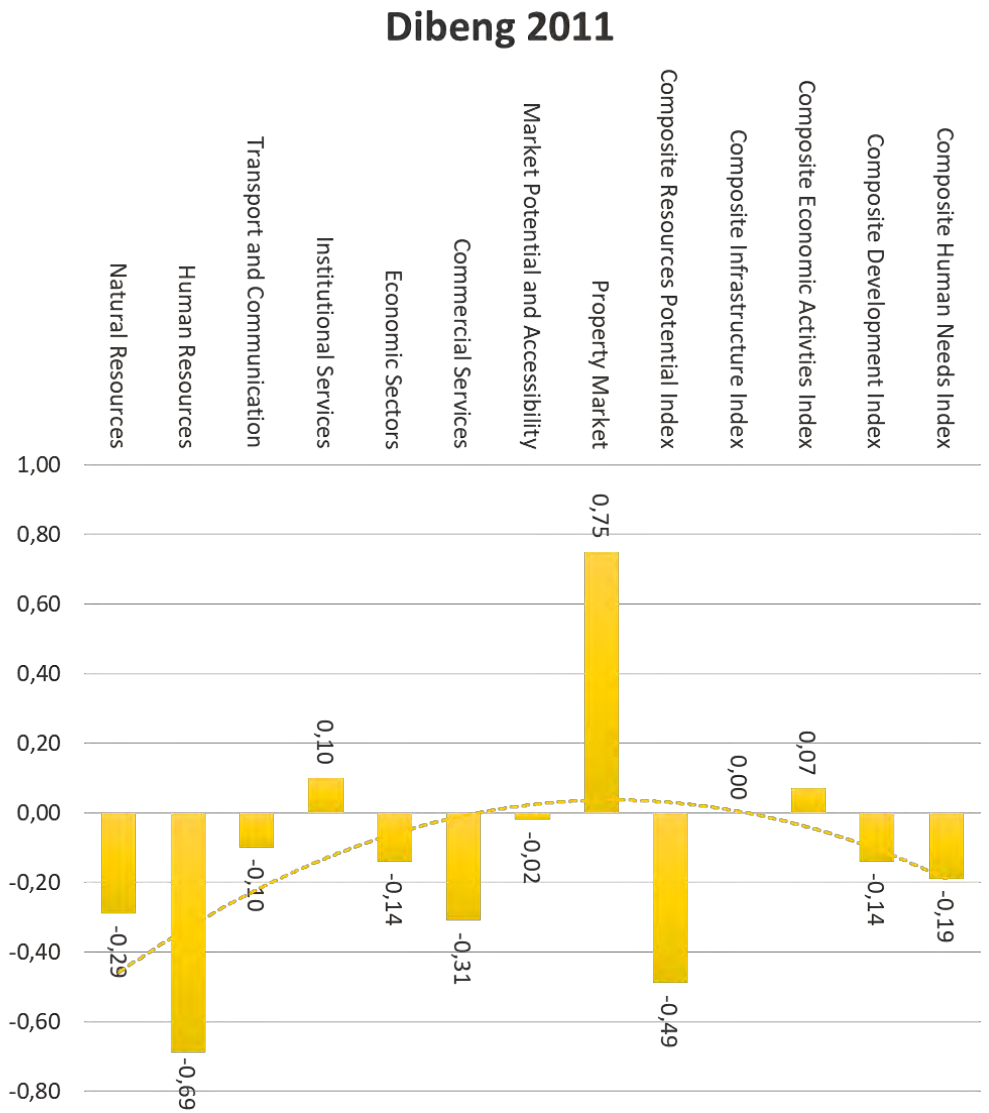
0,20
0,00
-0,20
-0,40
-0,60
-0,80


Dibeng 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,29
-0,69
-0,10
0,10
-0,14
-0,31
-0,02
0,75
-0,49
0,00
0,07
-0,14
-0,19
1,00
0,80
0,60
0,40
0,20
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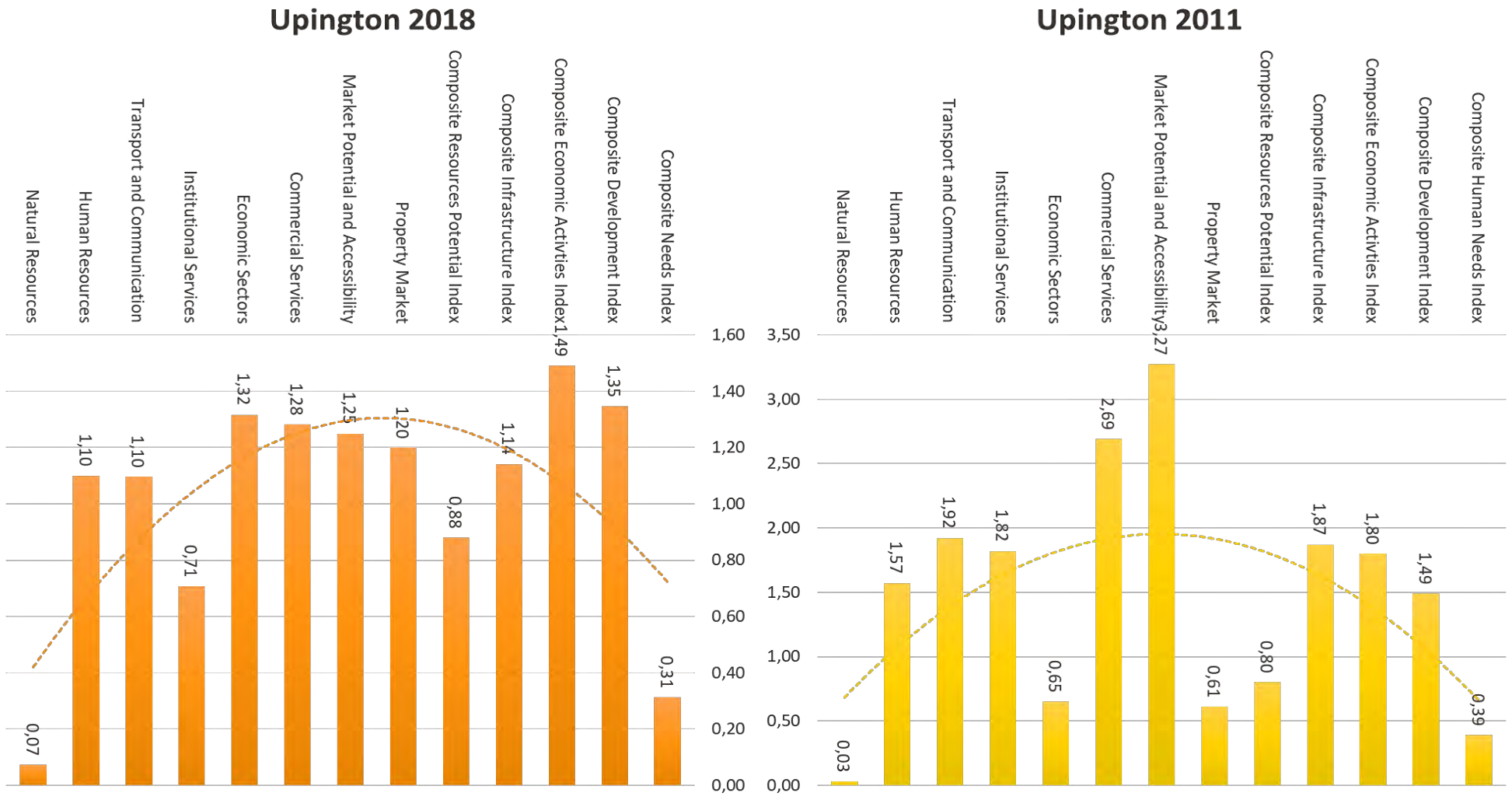
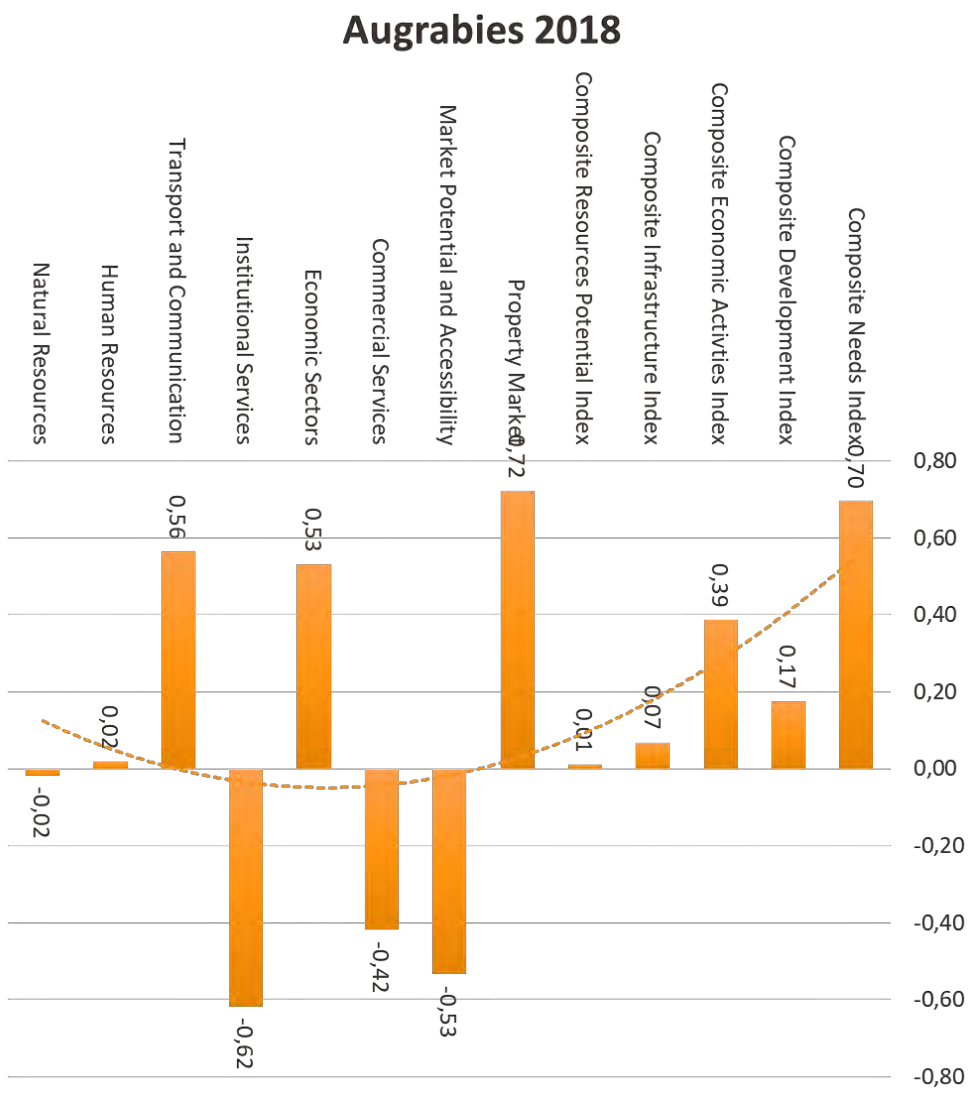
-0,60
-0,80

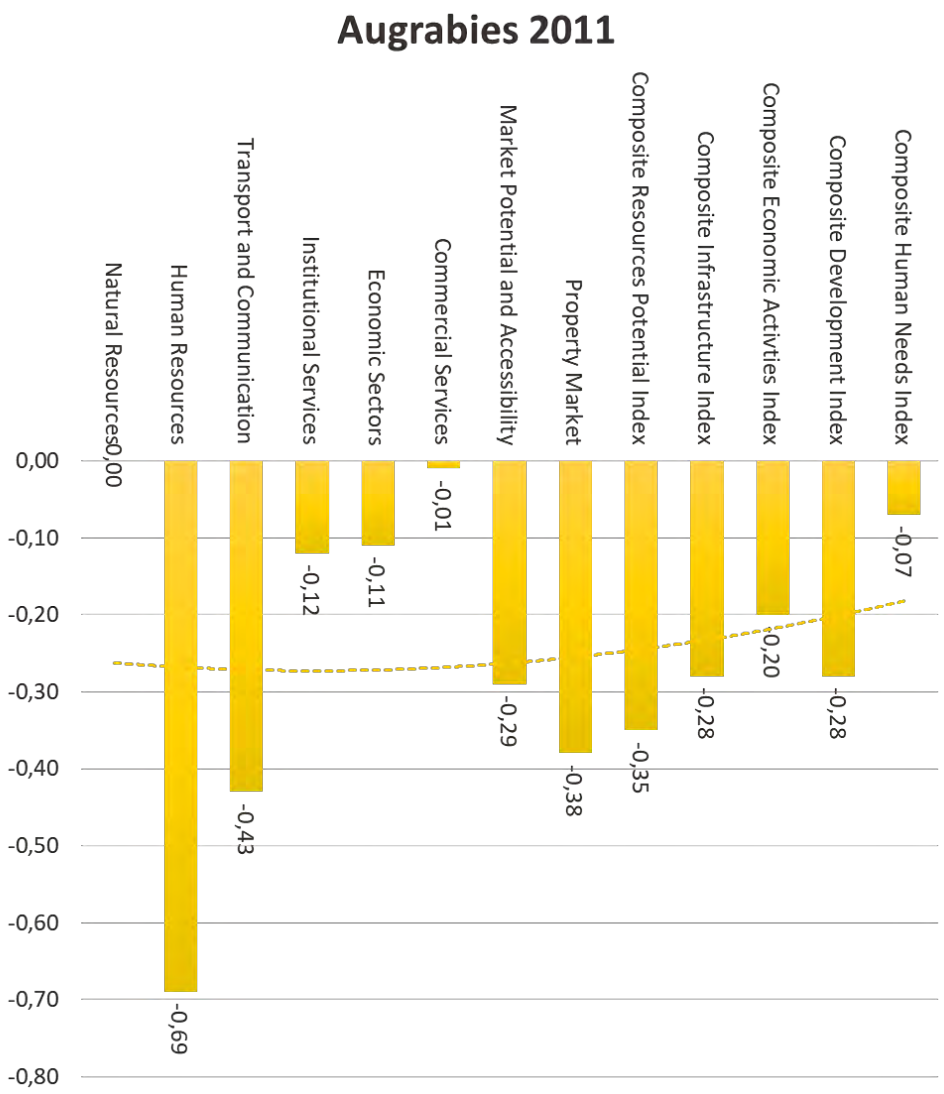
3 ZF MGCAWU TOWN DEVELOPMENT PROFILES

3.1 UPINGTON

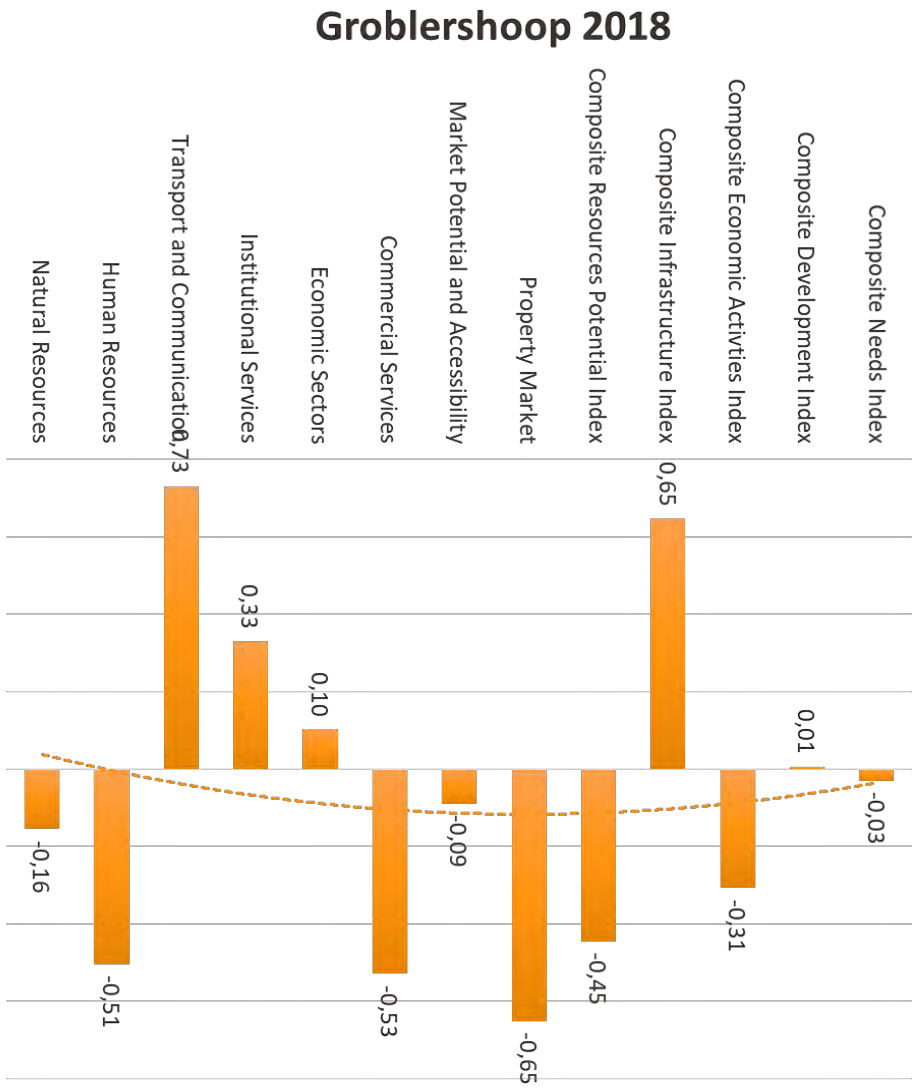


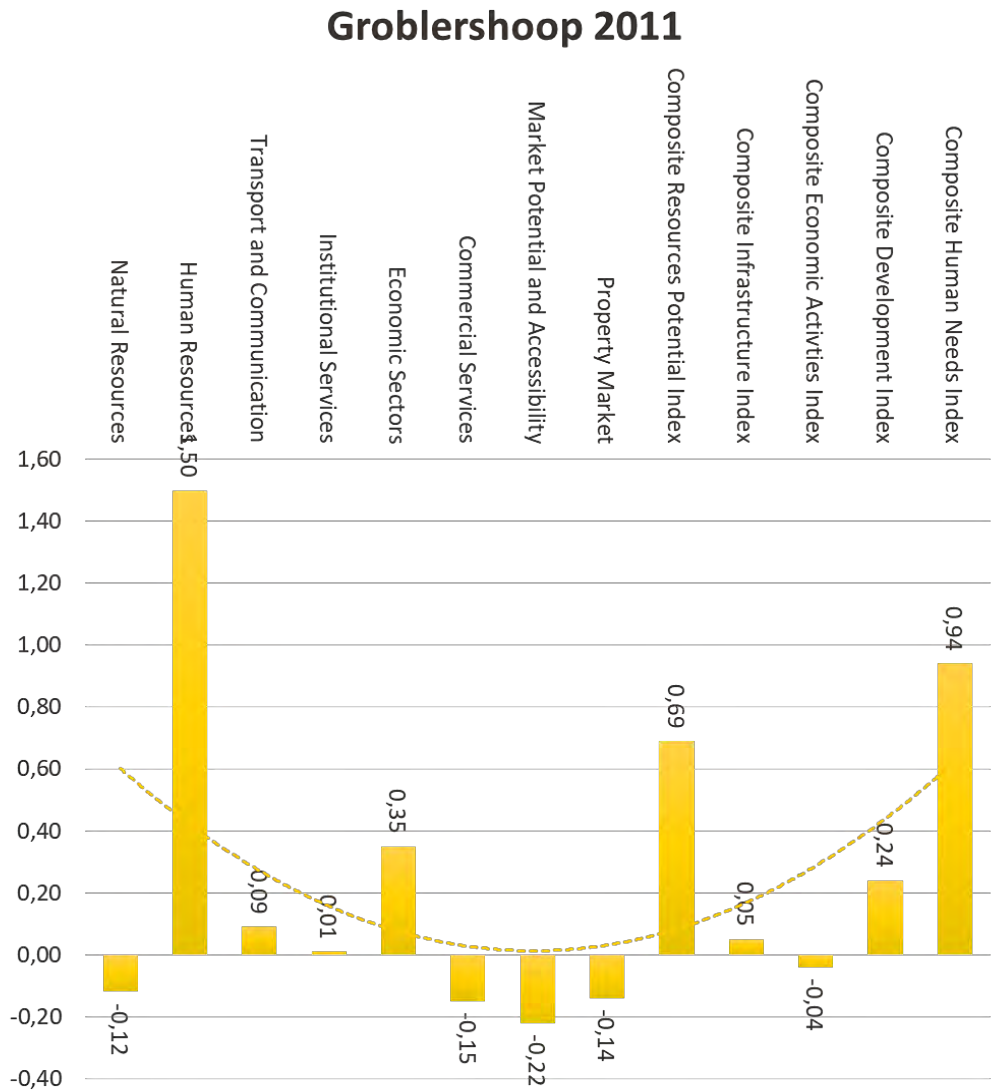
3.2 AUGRABIES



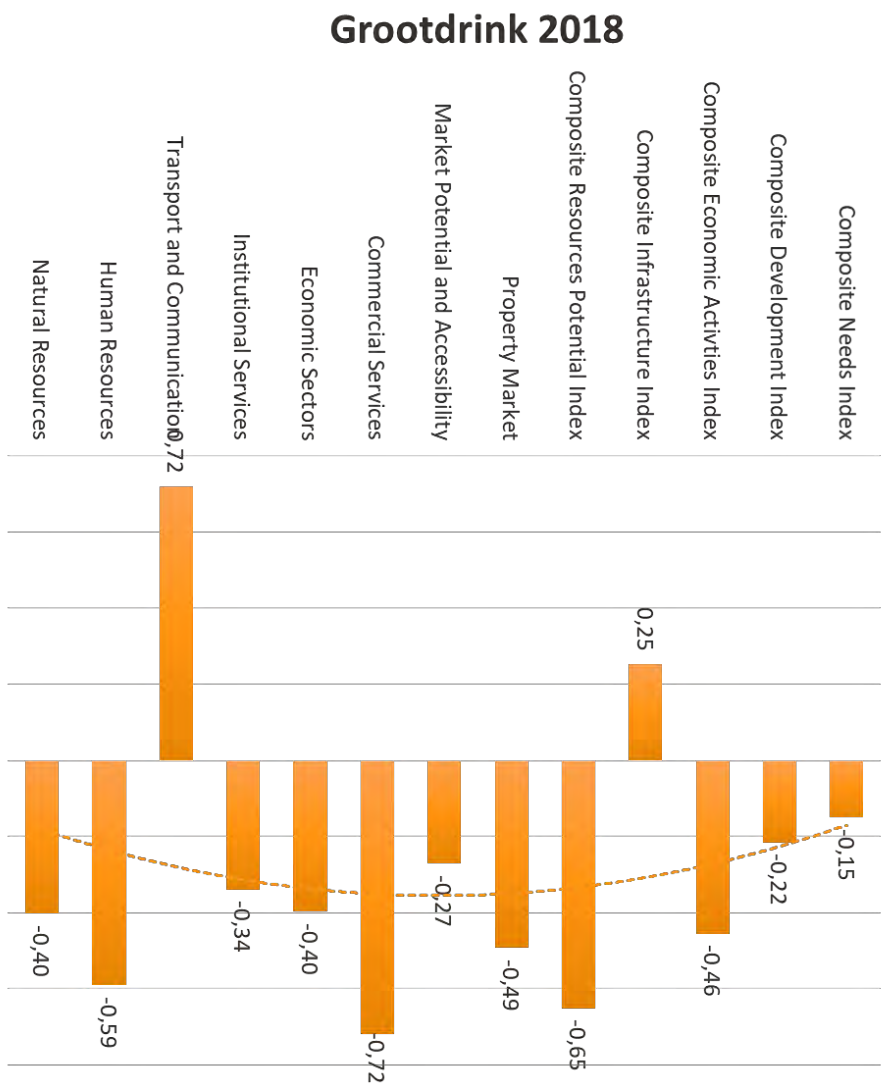


3.3 GROBLERSHOOP

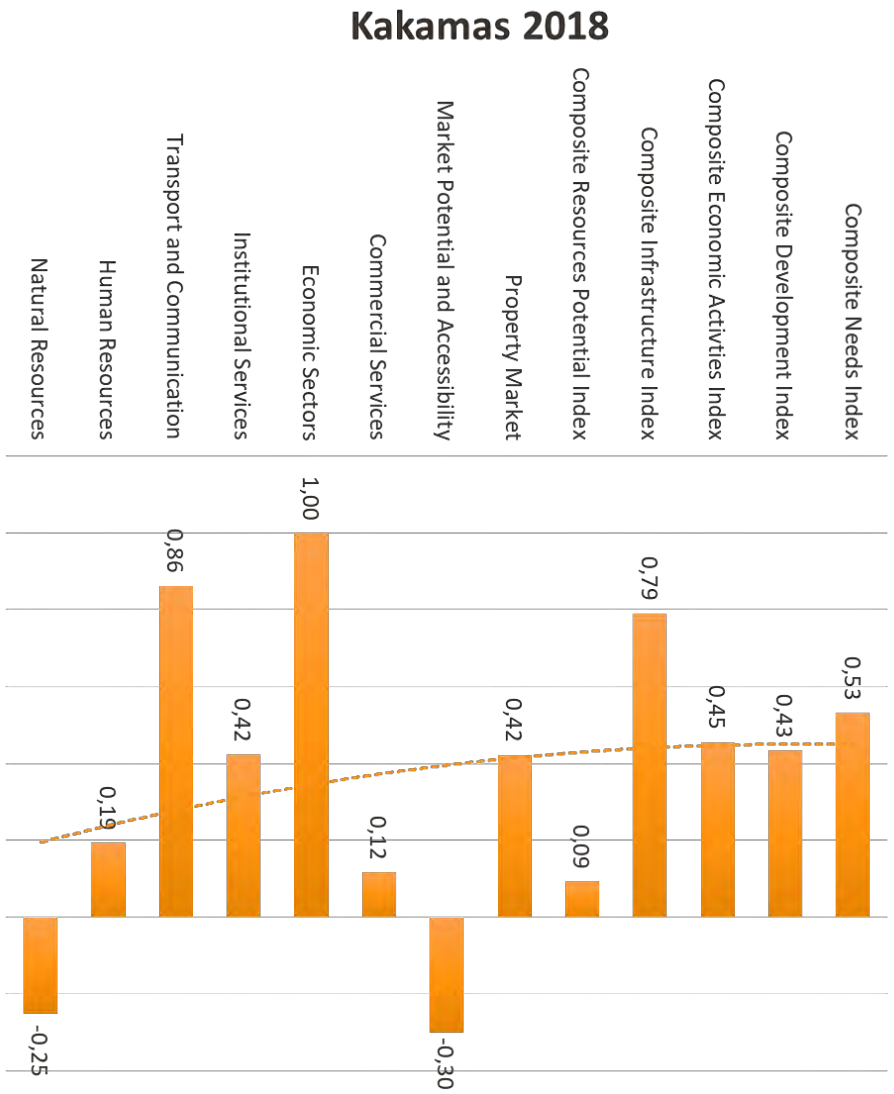




3.4 GROOTDRINK



3.5 KAKAMAS


Kakamas 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,25
0,19
0,86
0,42
1,00
0,12
-0,30
0,42
0,09
0,79
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1,20
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0,80
0,60
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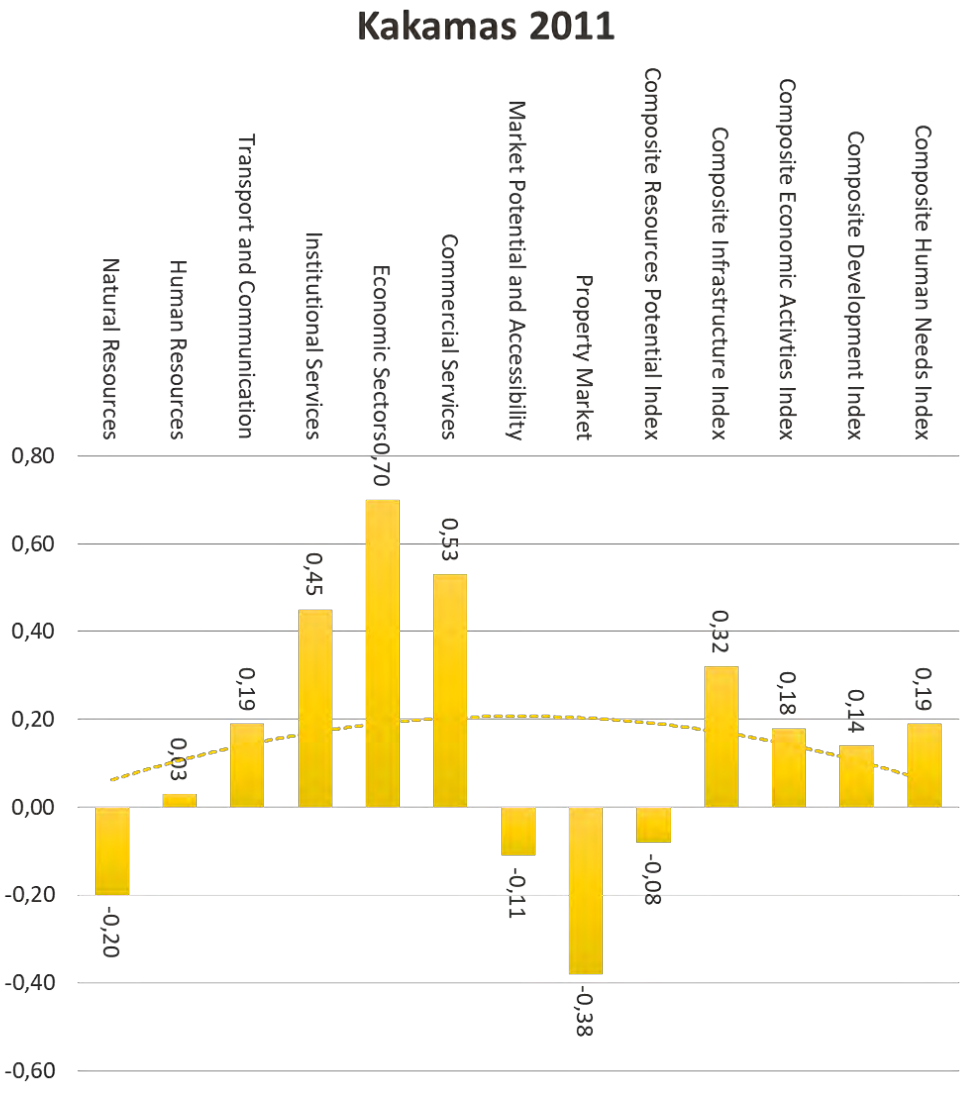
0,00
-0,20
-0,40


Kakamas 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,20
0,03
0,19
0,45
0,70
0,53
-0,11
-0,38
-0,08
0,32
0,18
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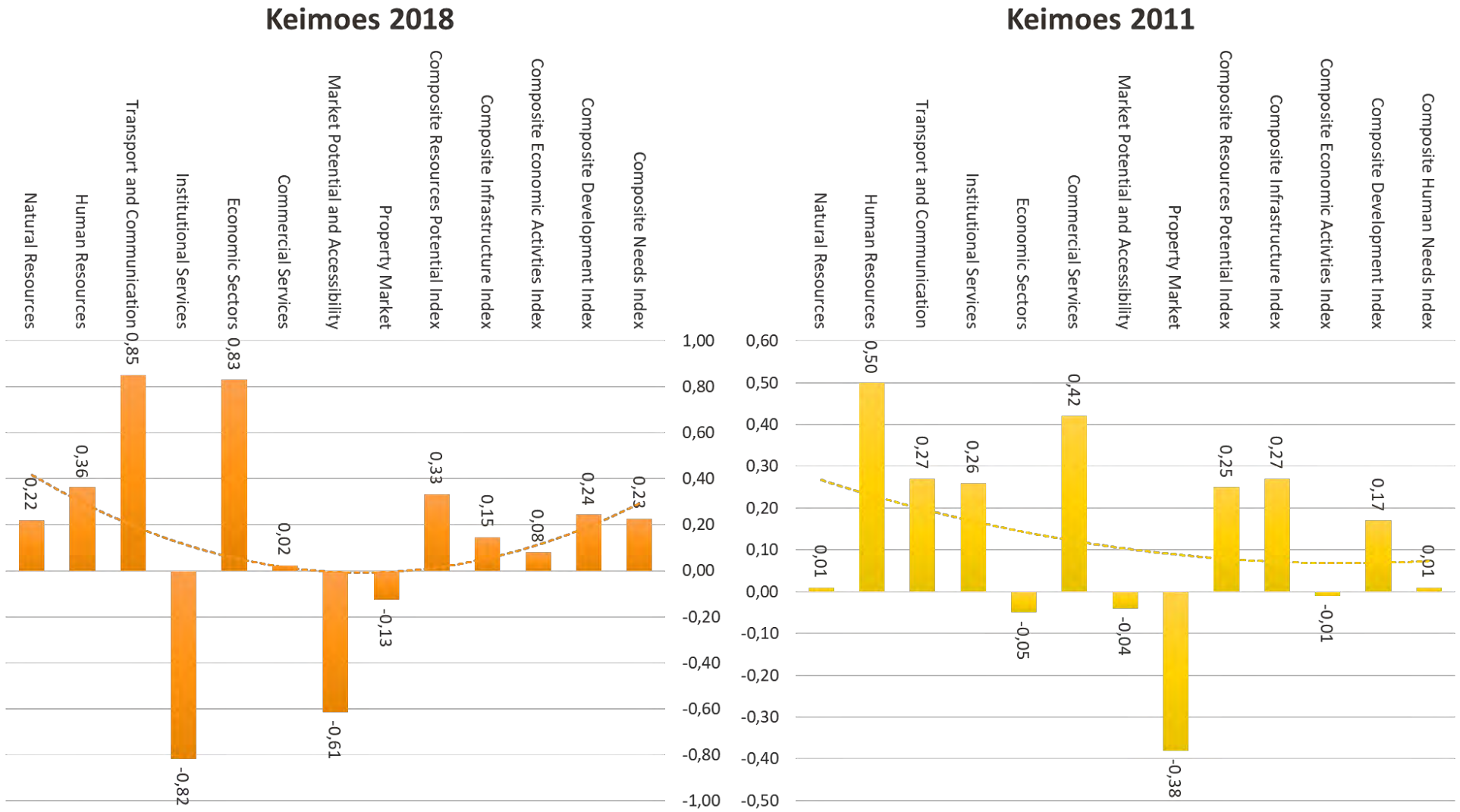
0,19
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60

3.6 KEIMOES


Keimoes 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
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0,36
0,85
-0,82
0,83
0,02
-0,61
-0,13
0,33
0,15
0,08
0,24
0,23
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00
Keimoes 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
0,01
0,50
0,27
0,26
-0,05
0,42
-0,04
-0,38
0,25
0,27
-0,01
0,17
0,01
0,60
0,50
0,40
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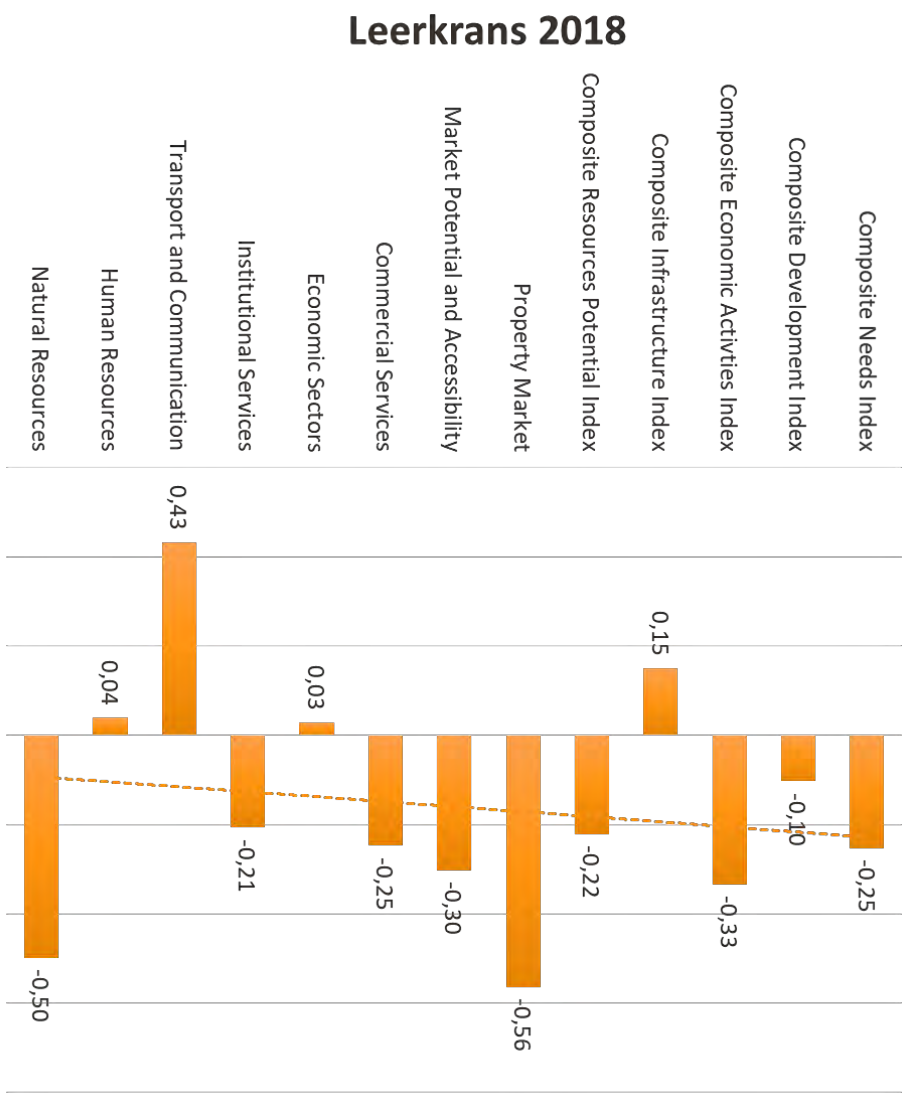
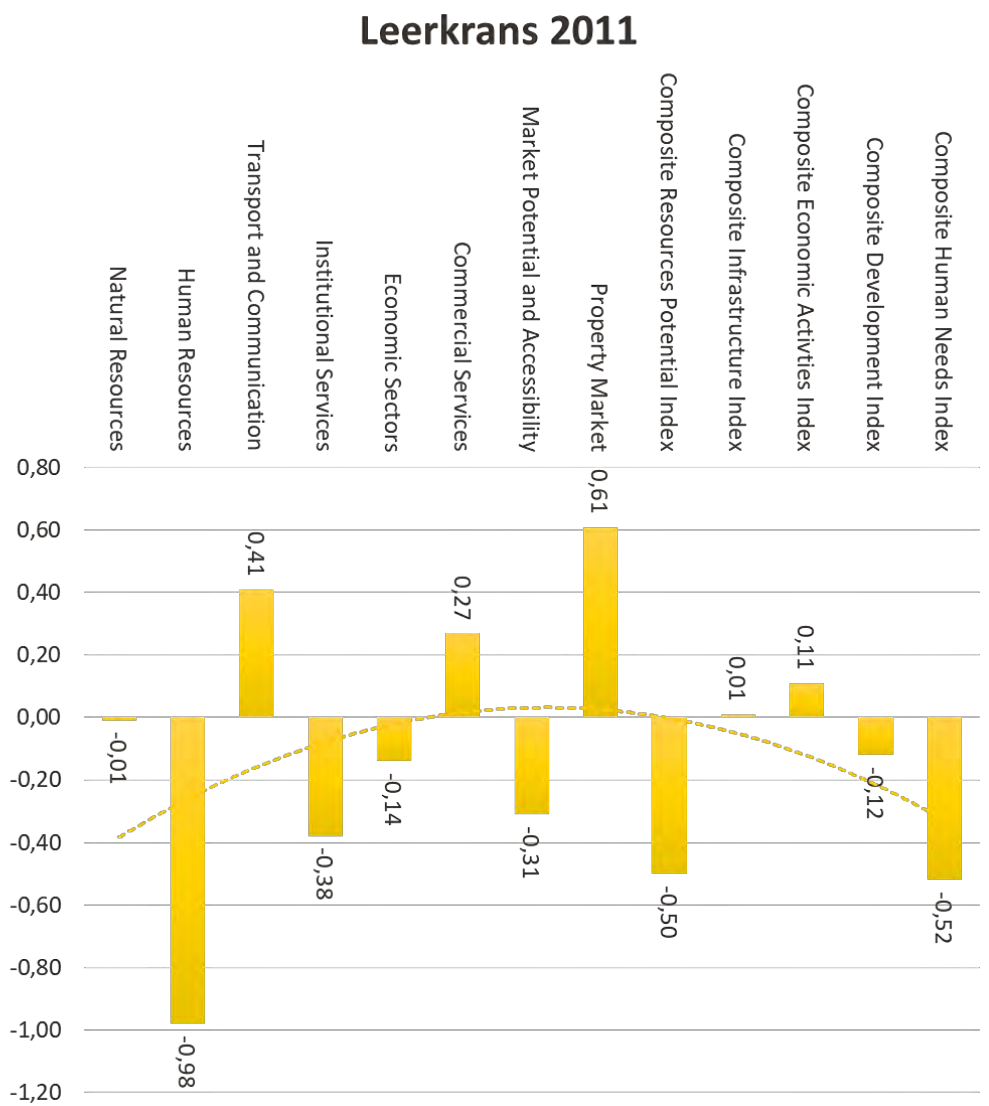
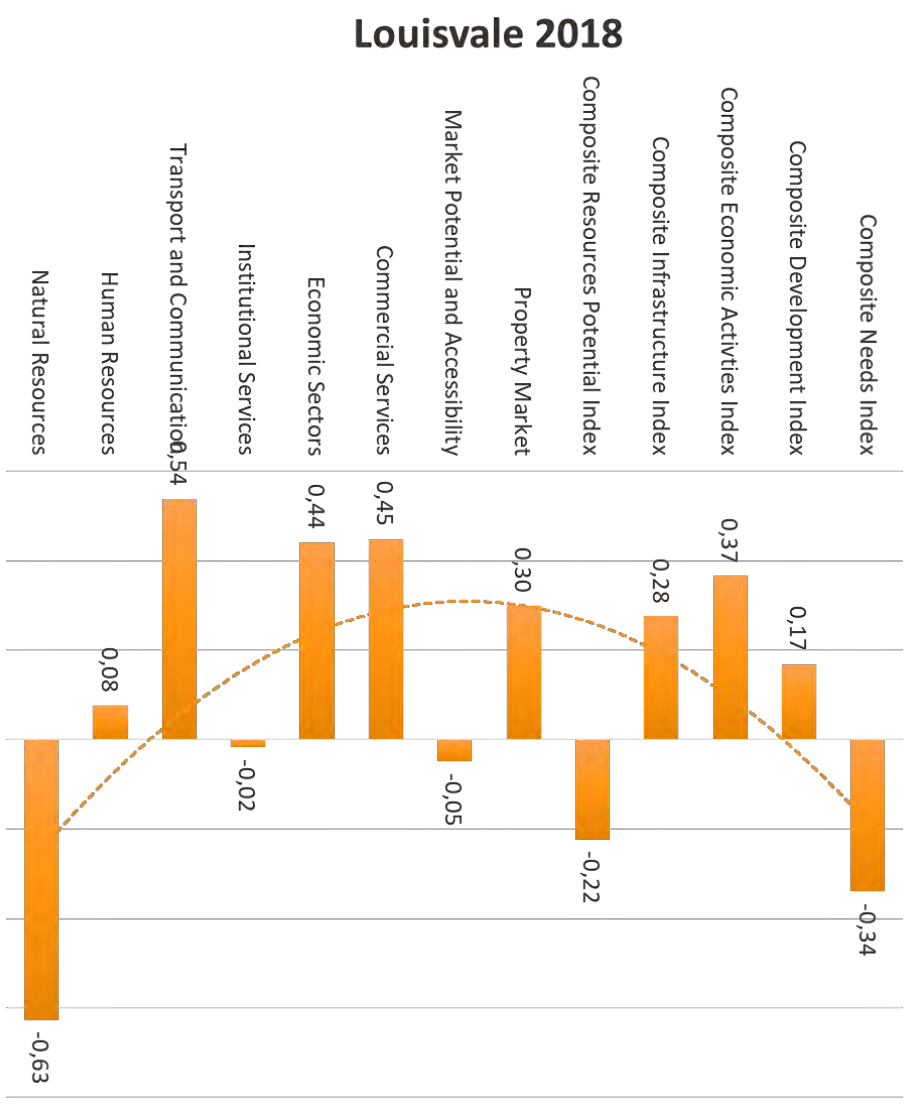
0,10
0,00
-0,10
-0,20
-0,30
-0,40
-0,50

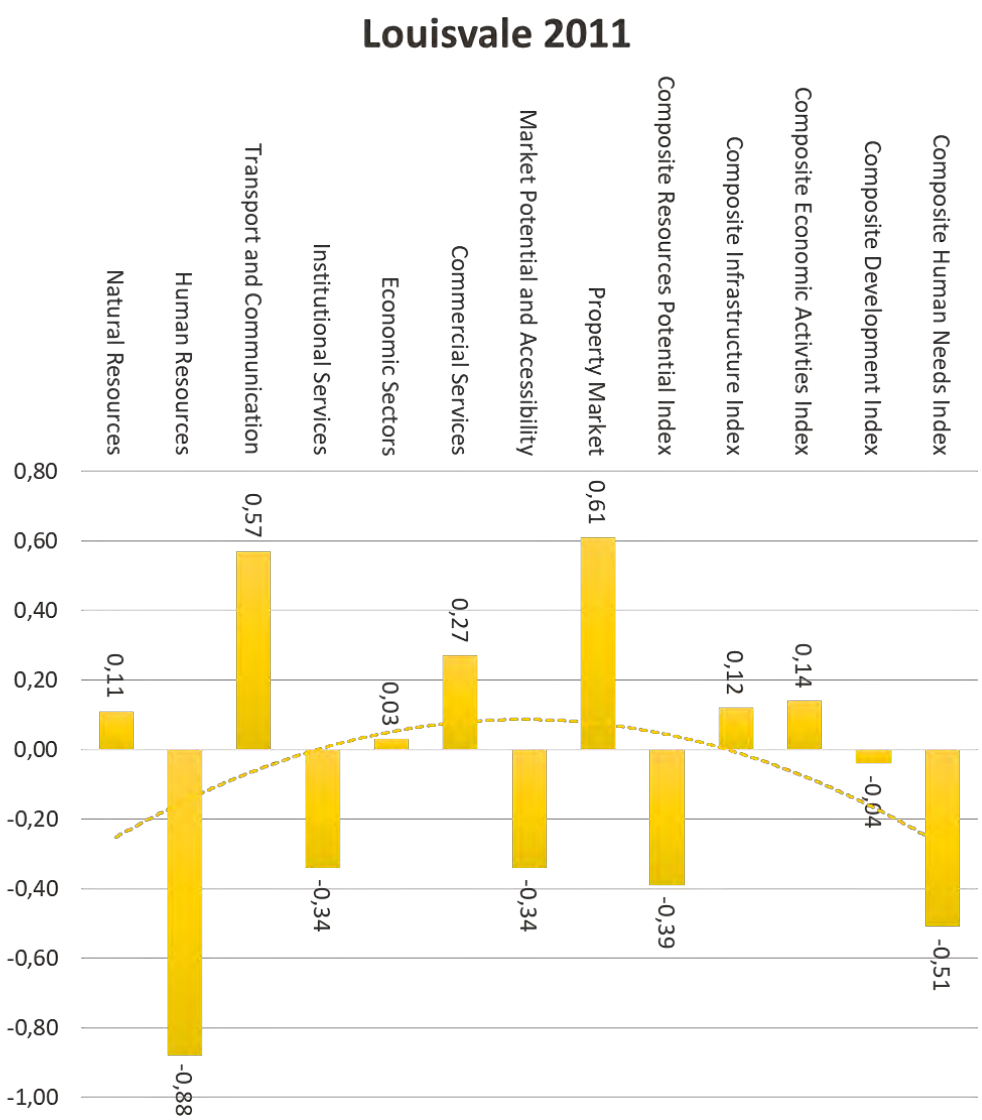
3.7 LEERKRANS



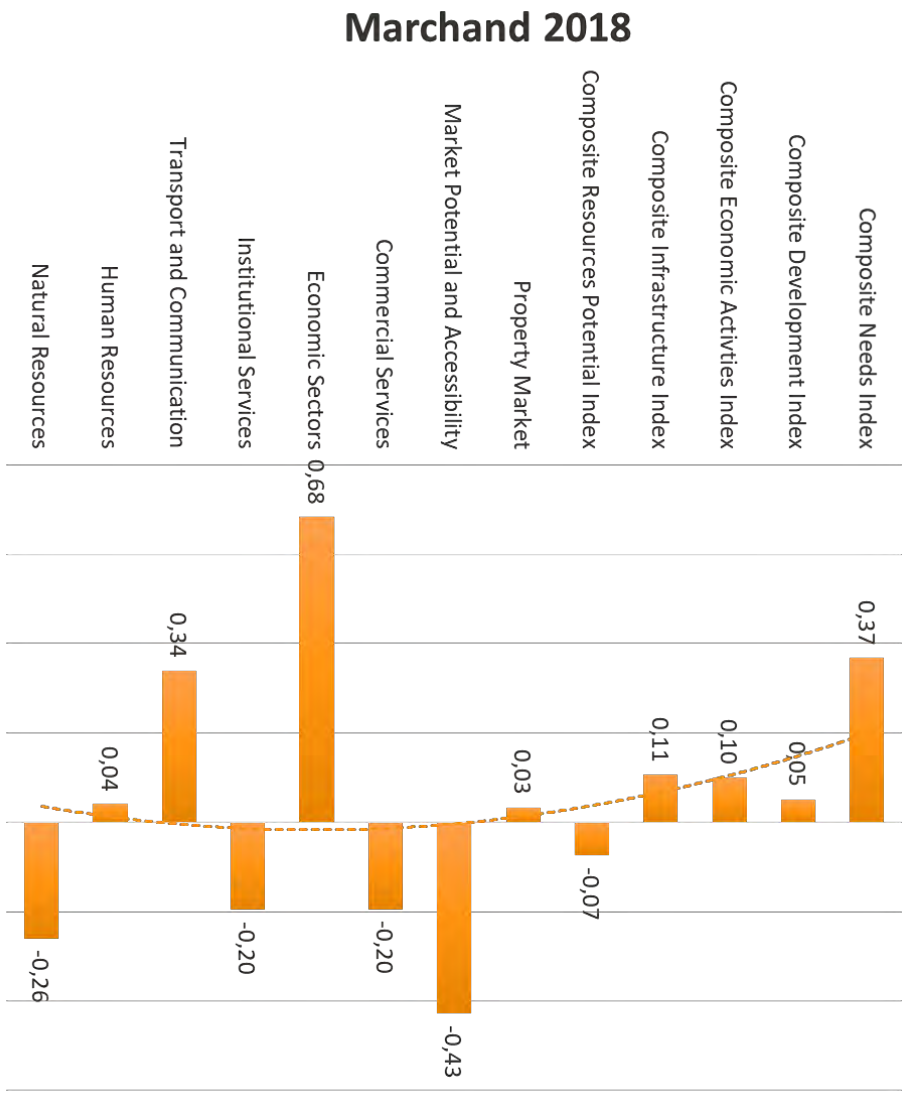


3.8 LOUISVALE





3.9 MARCHAND


Marchand 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,26
0,04
0,34
-0,20
0,68
-0,20
-0,43
0,03
-0,07
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0,10
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0,37
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0,60
0,40
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0,00
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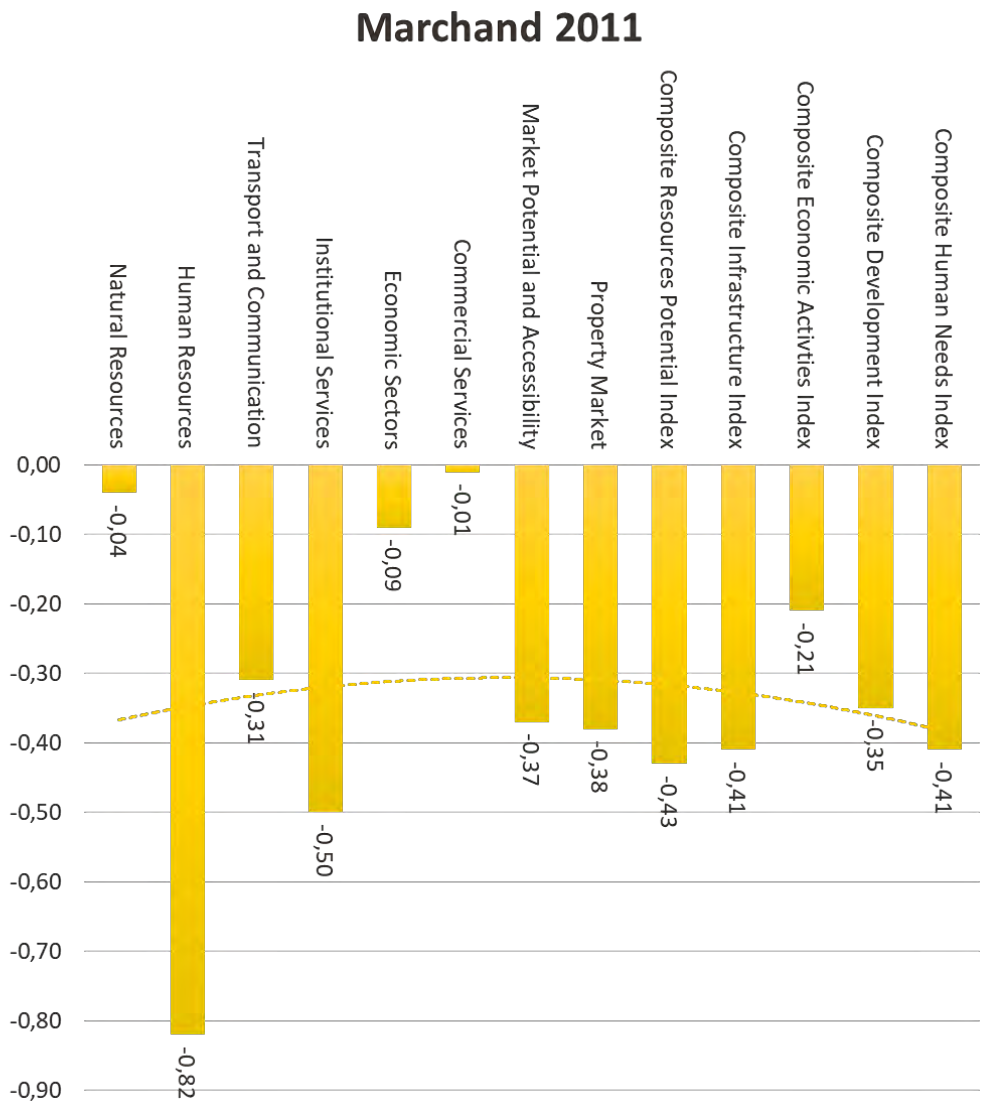
-0,60


Marchand 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,04
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-0,50
-0,09
-0,01
-0,37
-0,38
-0,43
-0,41
-0,21
-0,35
-0,41
0,00
-0,10
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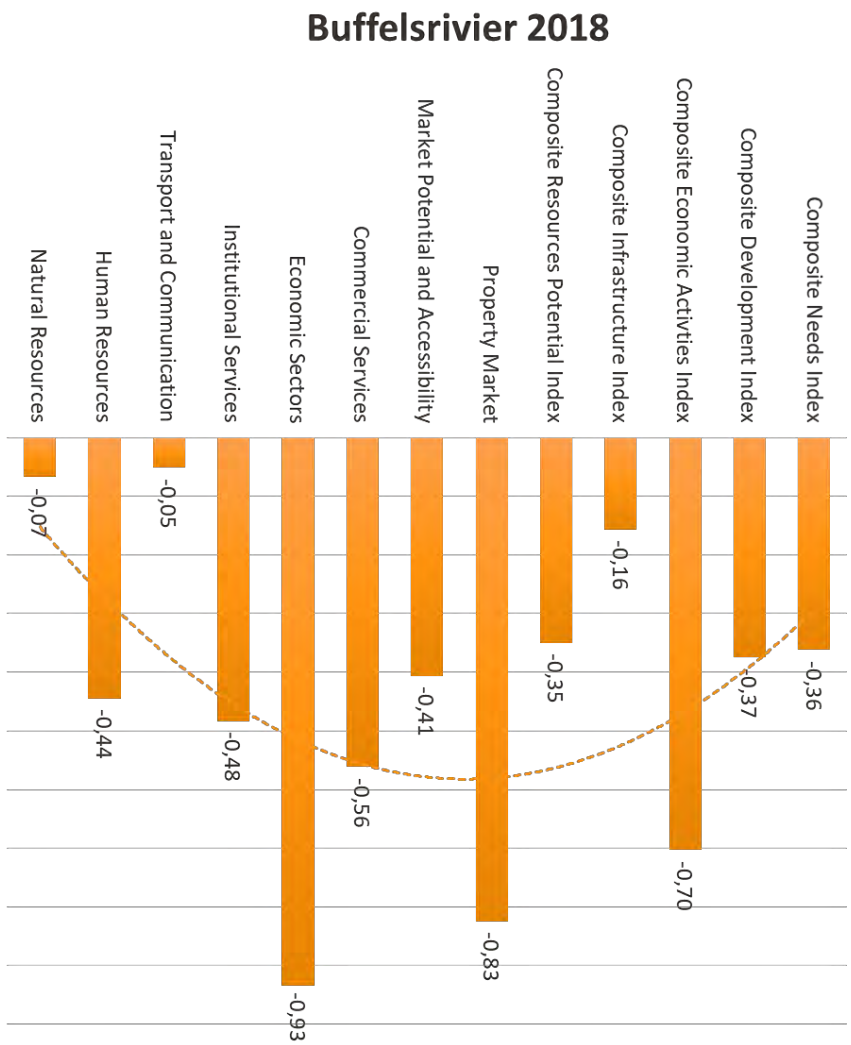
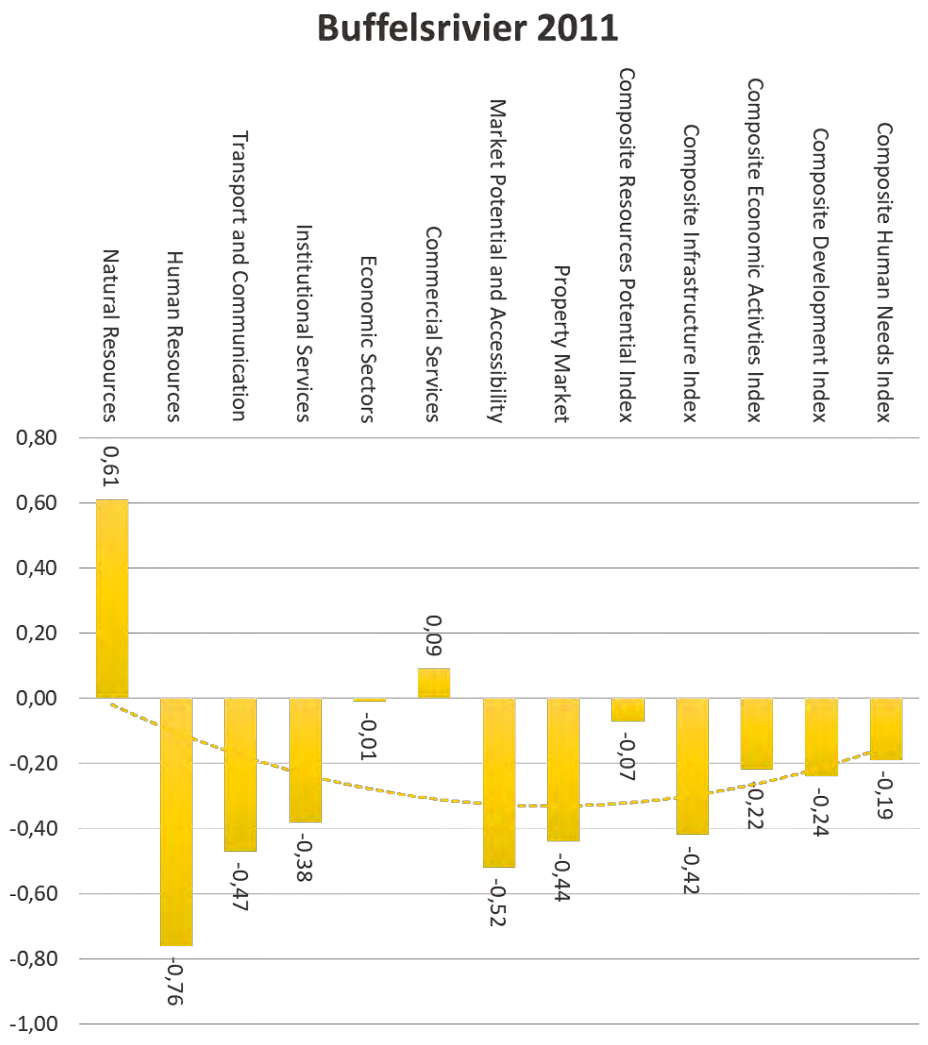
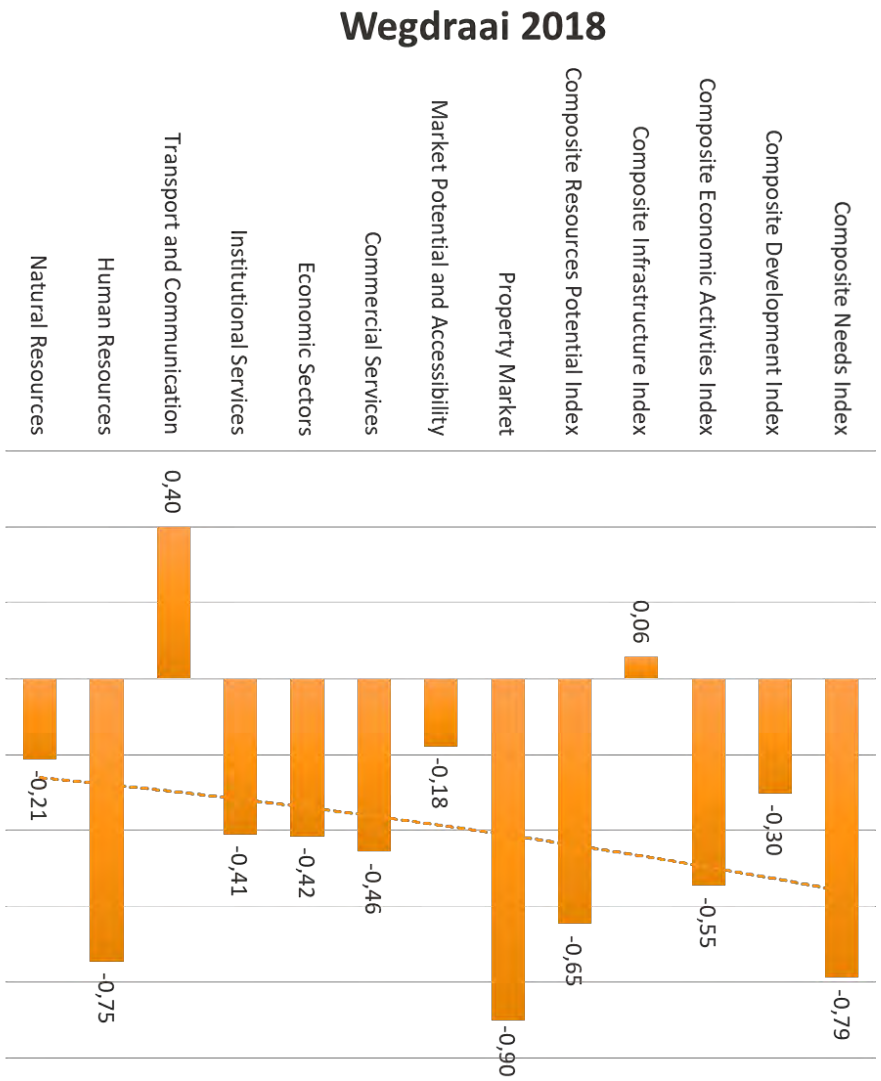
-0,80
-0,90

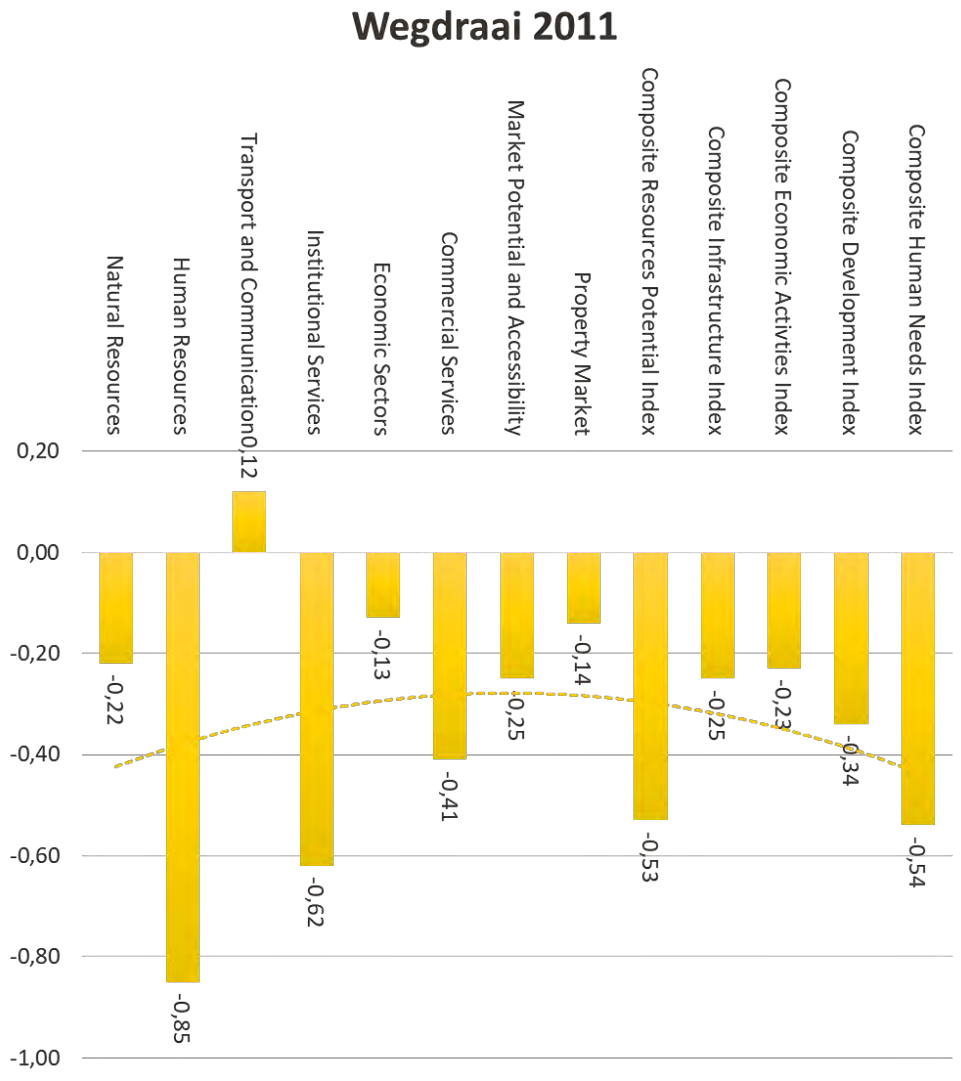
3.10 BUFFLESRIVIER



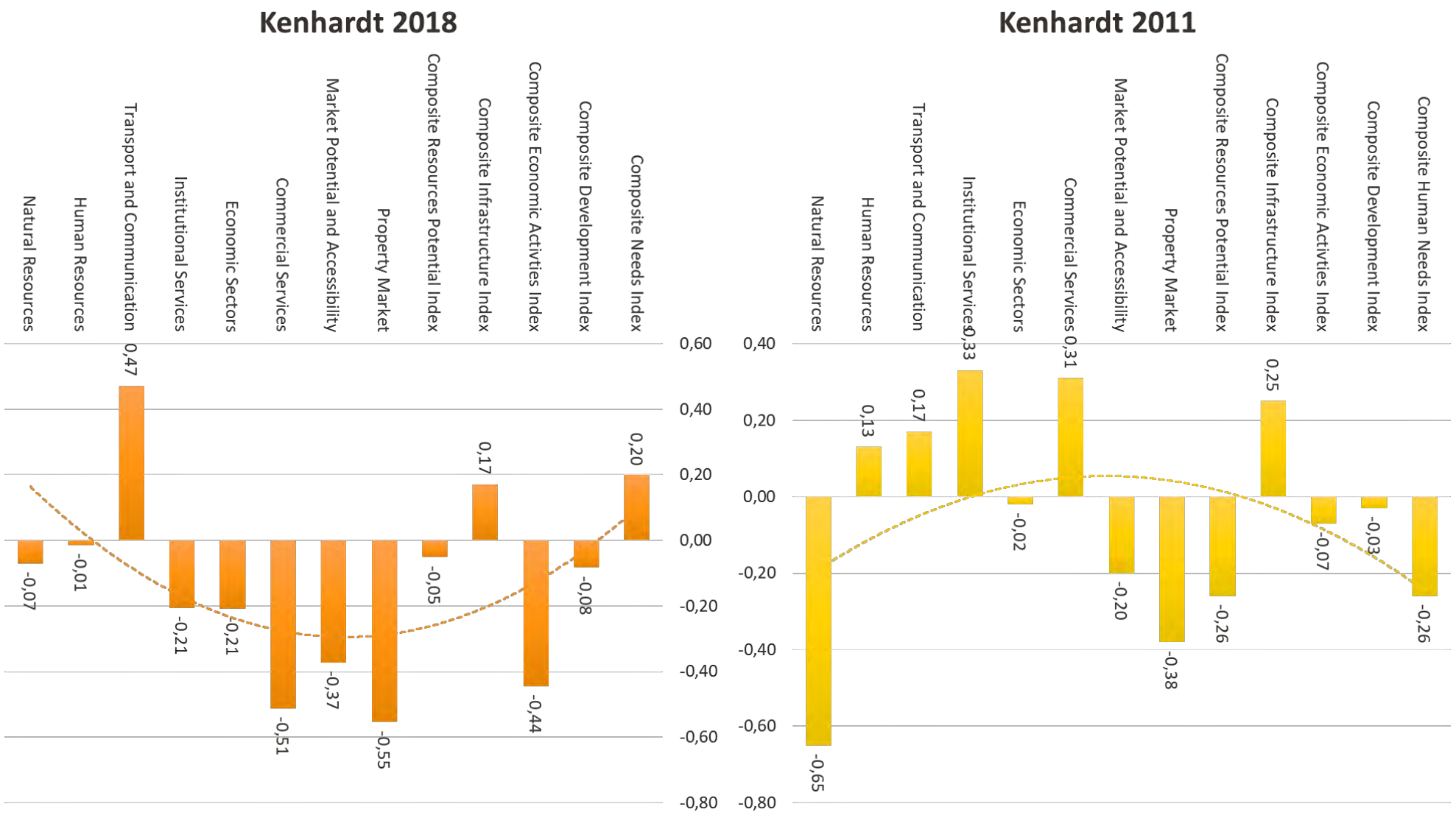


3.11 WEGDRAAI

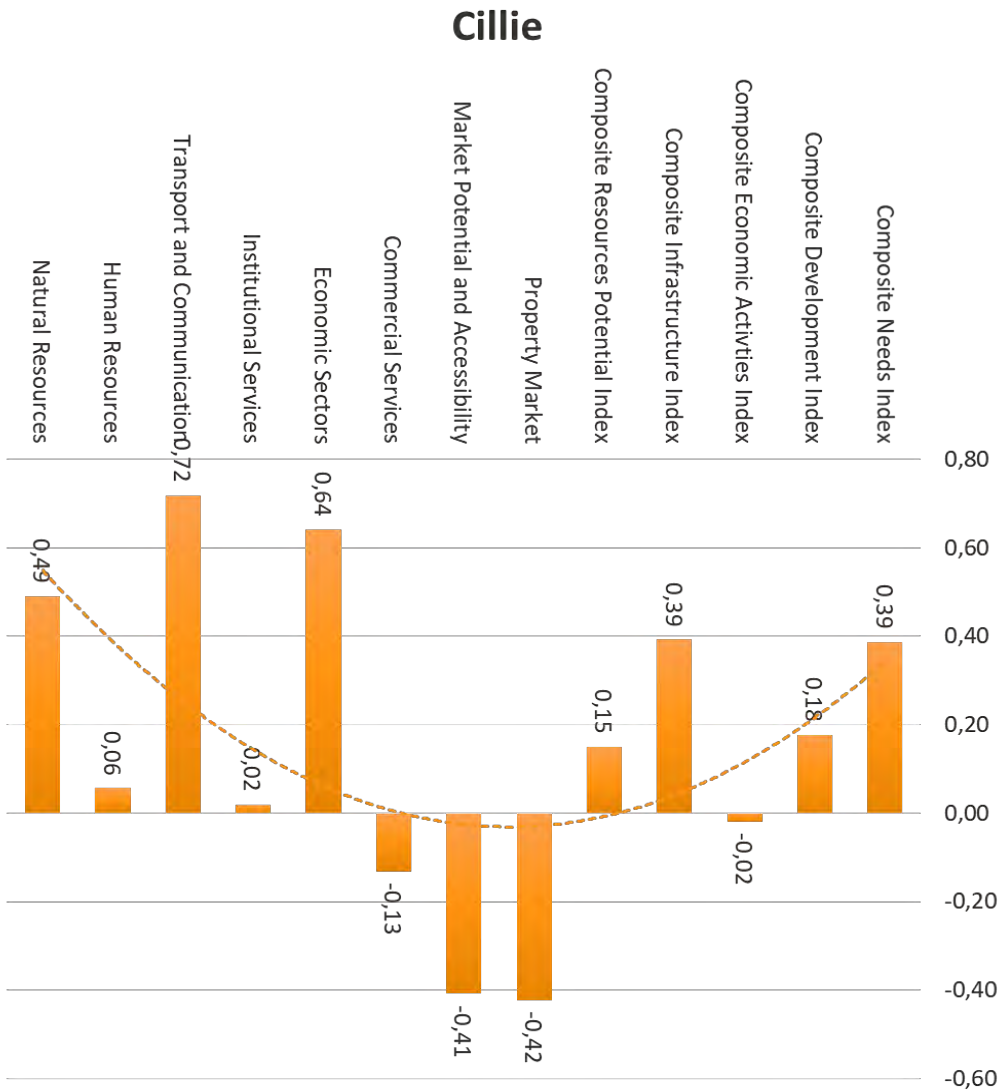




3.12 KENHARDT



3.13 CILLIE


Cillie
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
0,49
0,06
0,72
0,02
0,64
-0,13
-0,41
-0,42
0,15
0,39
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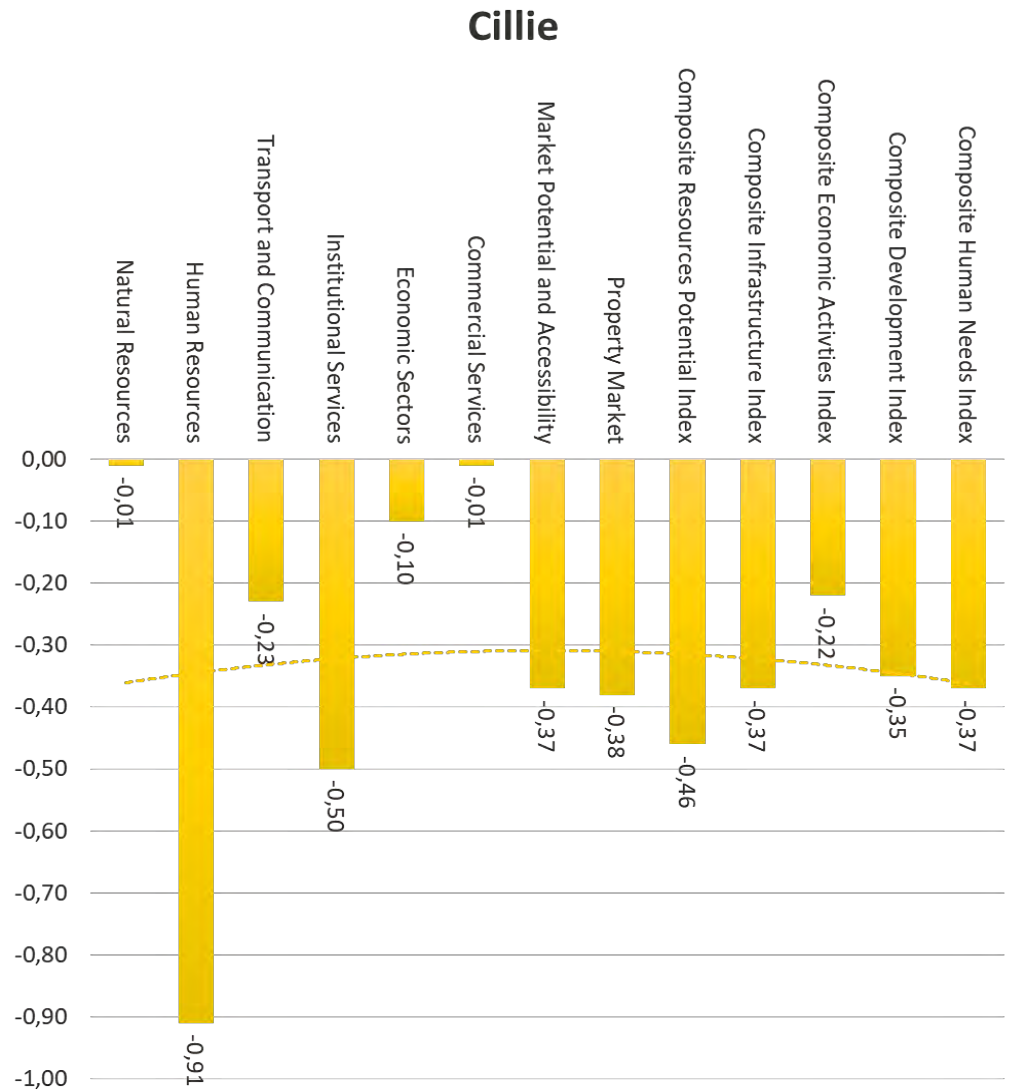
Cillie
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
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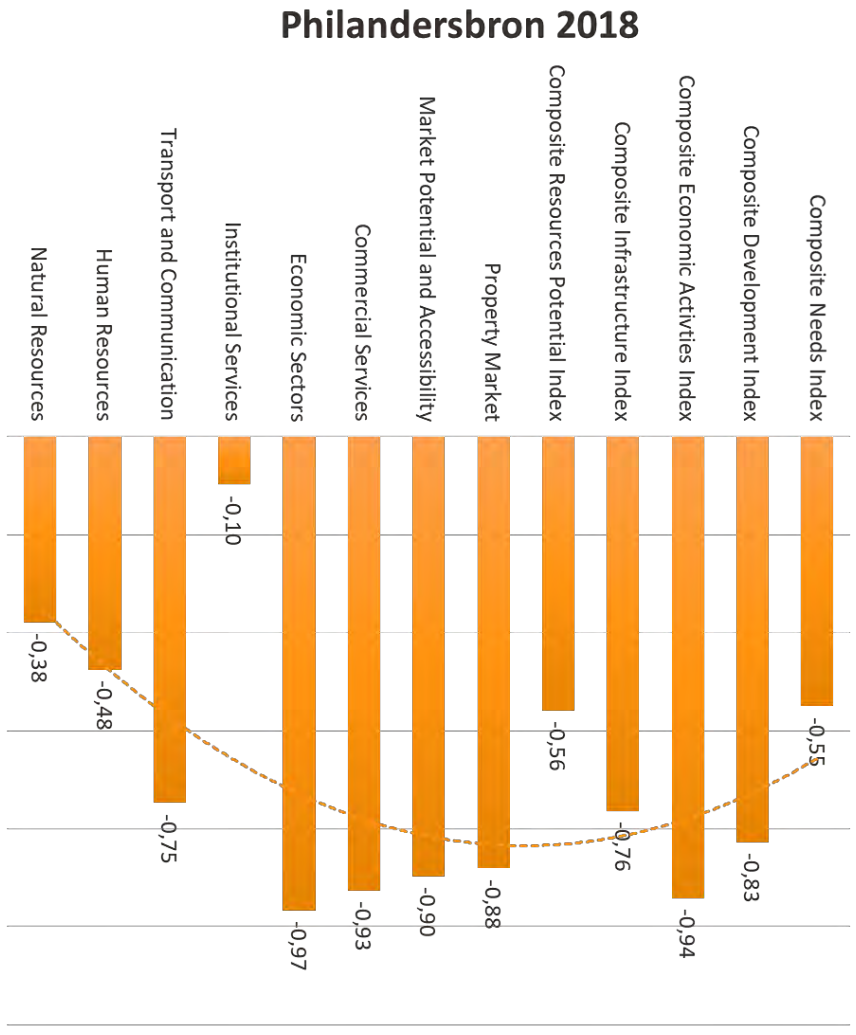
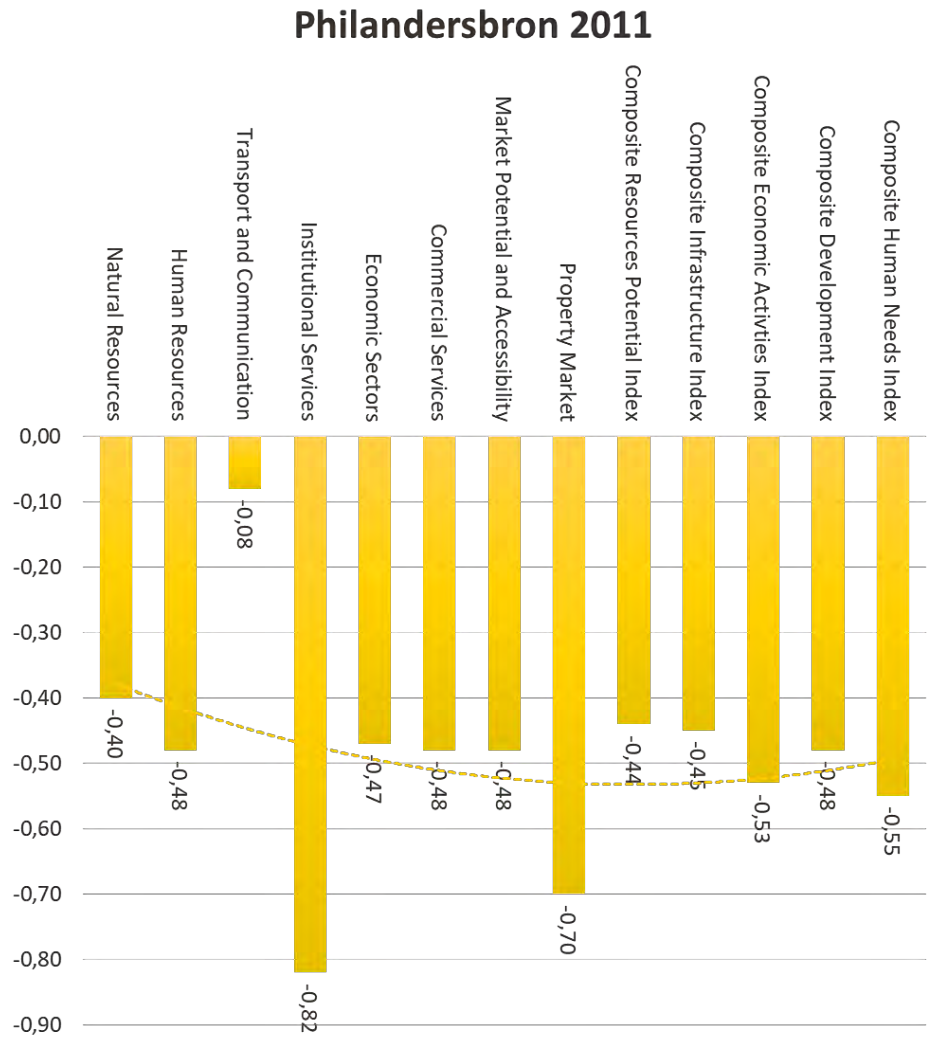
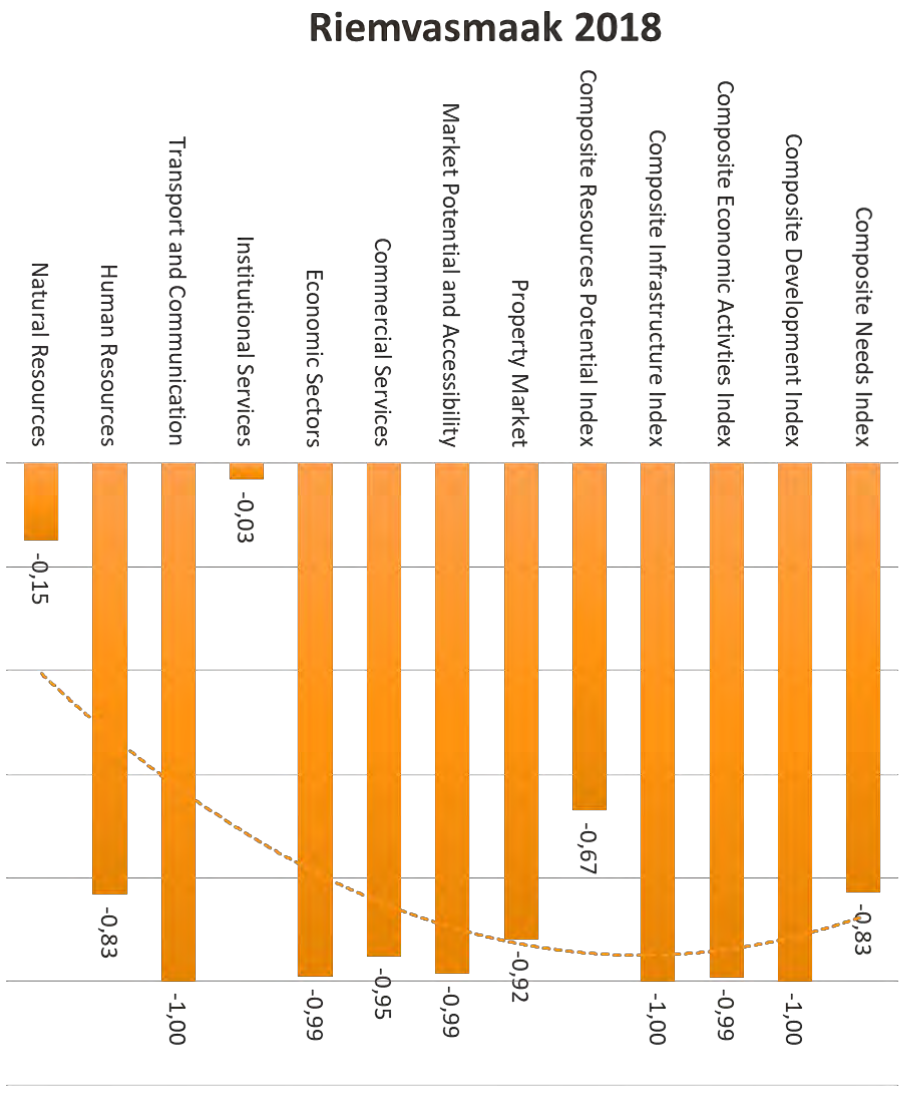
3.14 PHILANDERSBRON

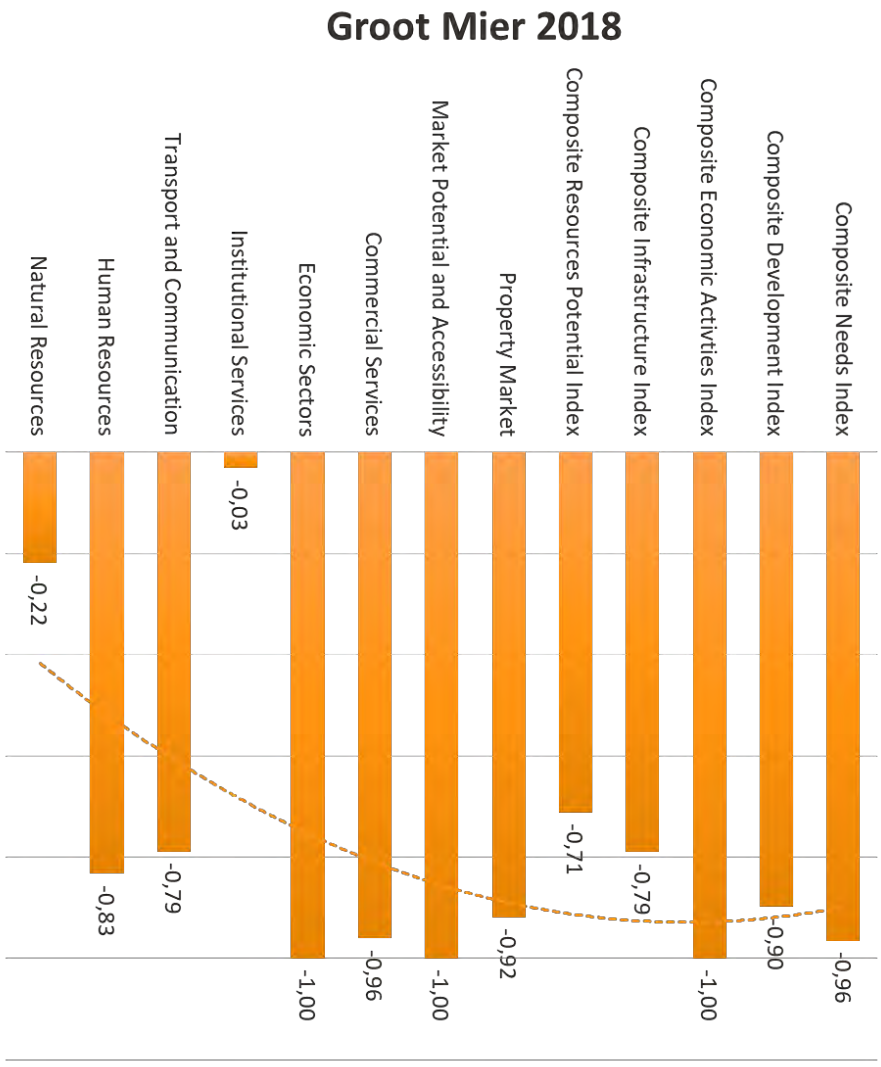


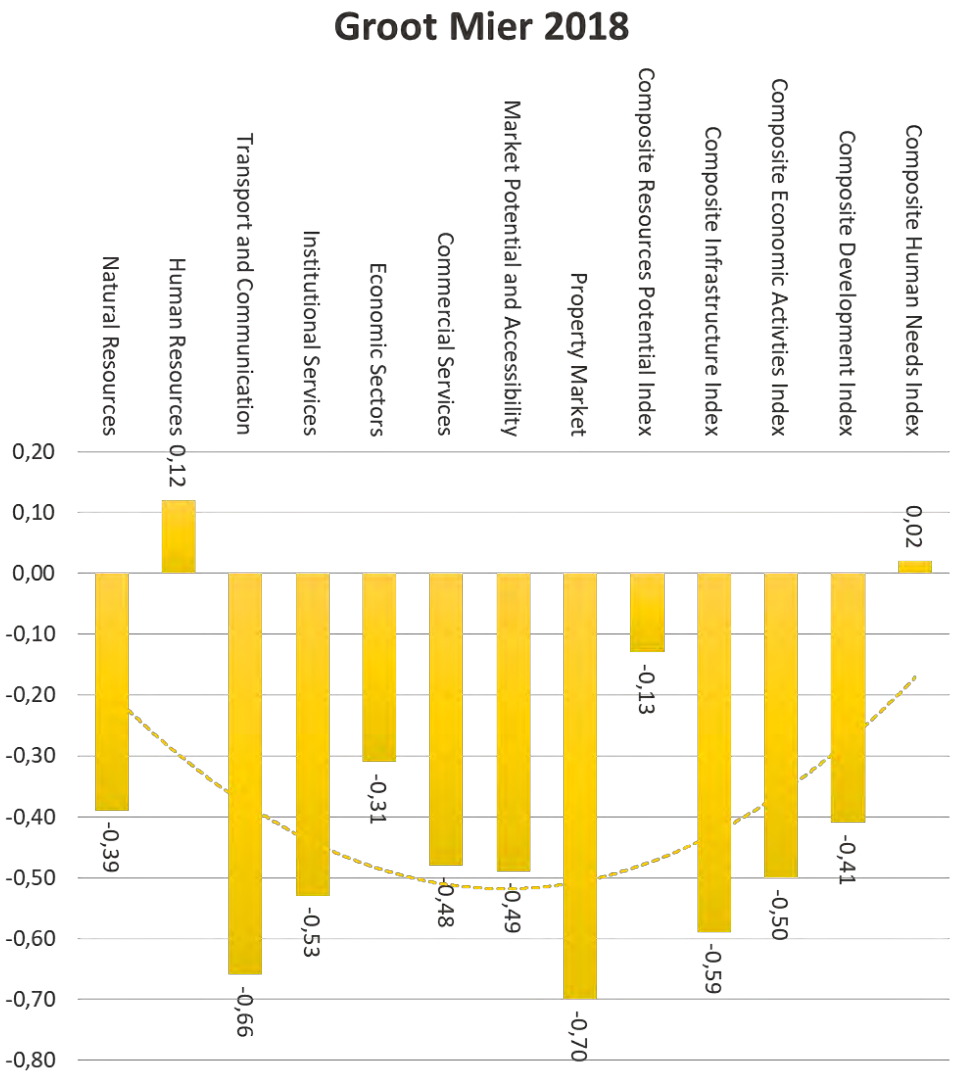


3.15 RIEMVASMAAK

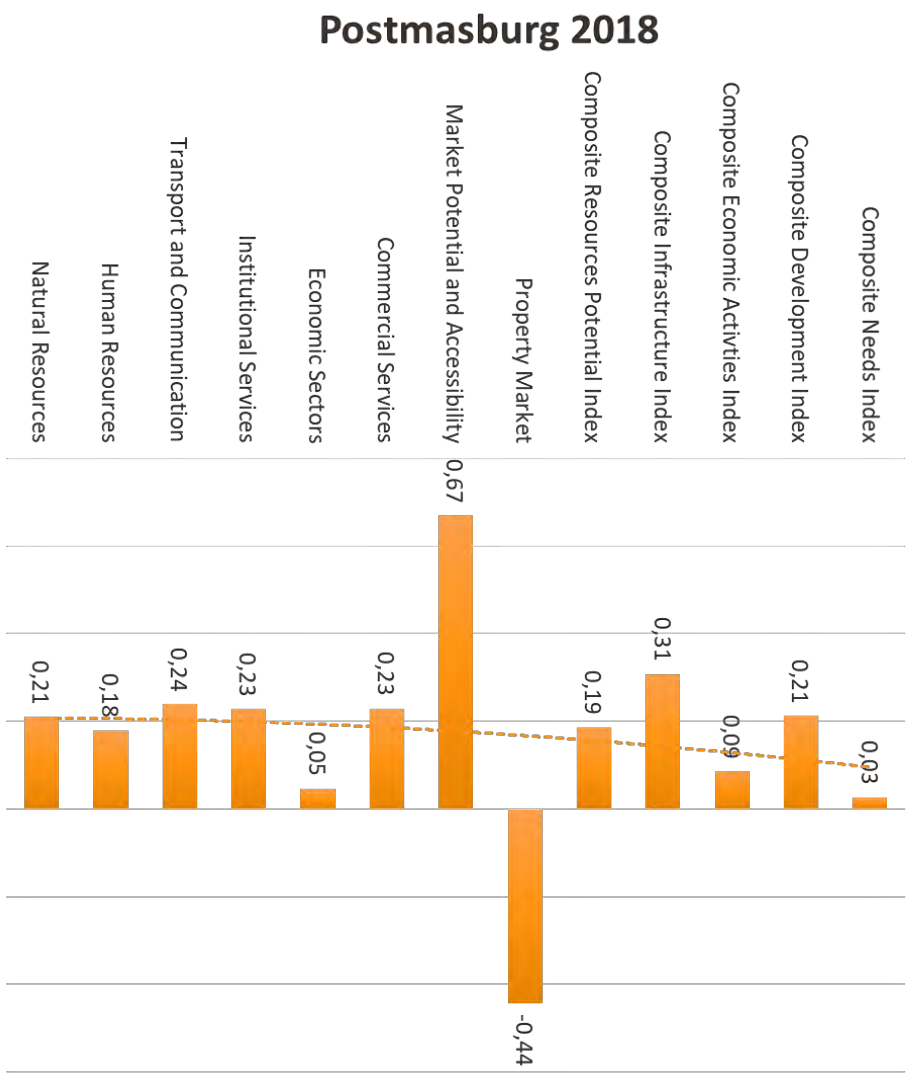


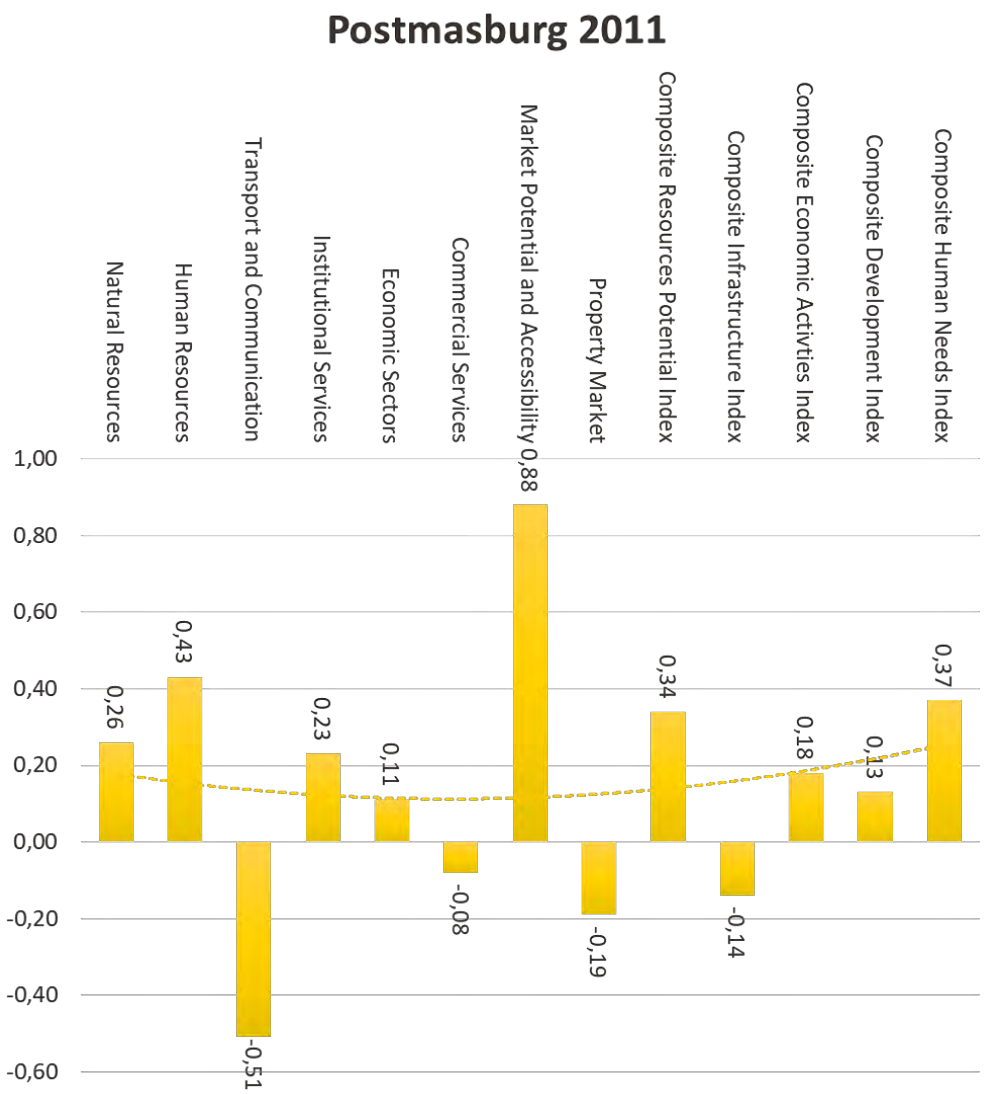
3.16 GROOT MIER



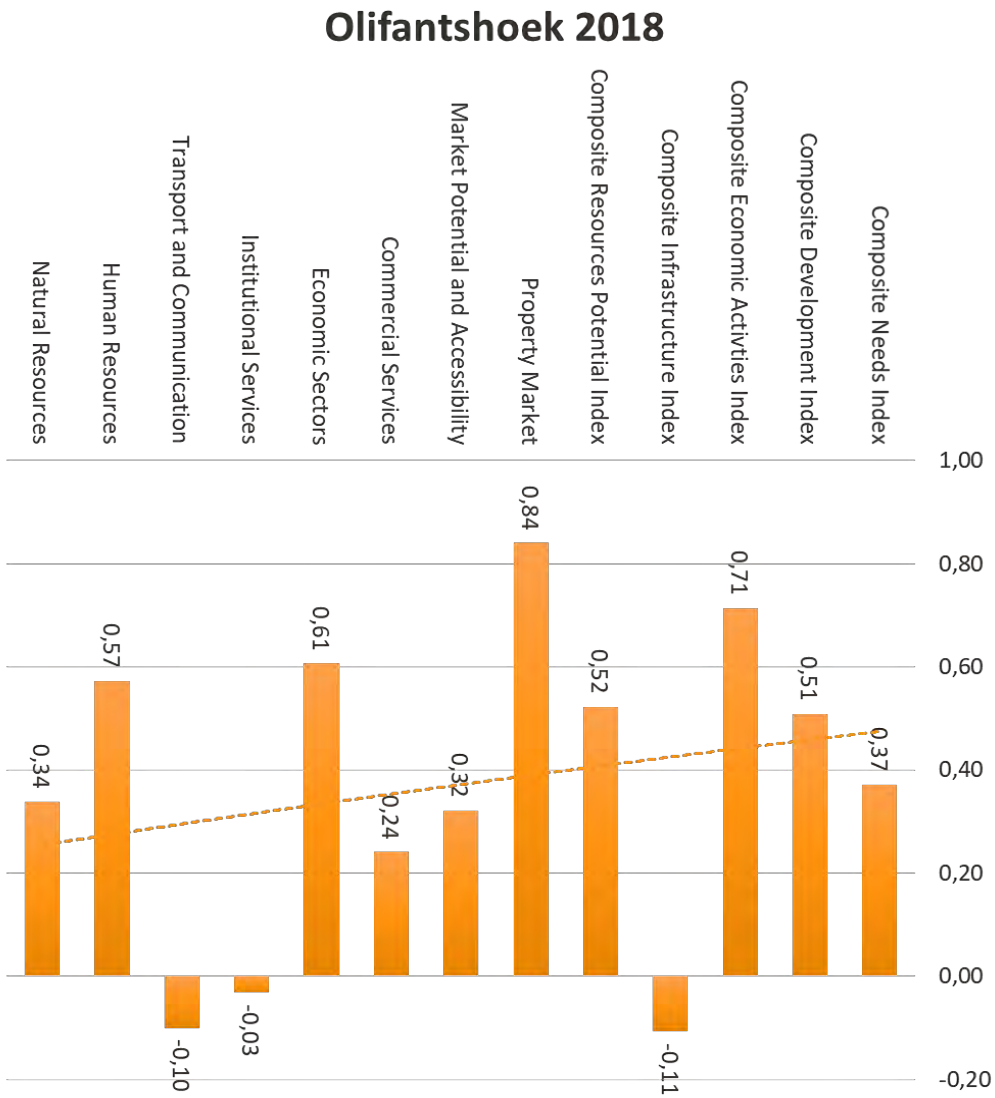


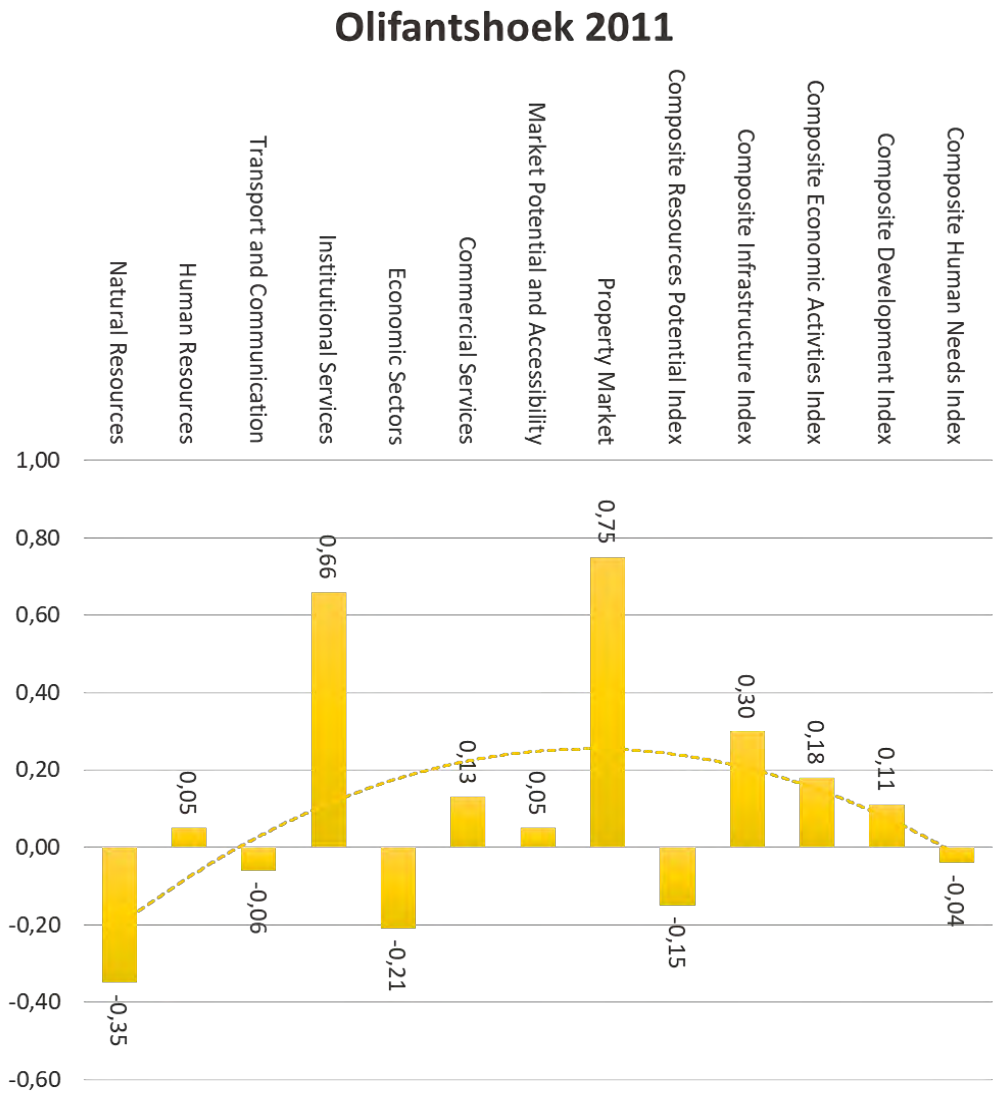
3.17 POSTMASBURG



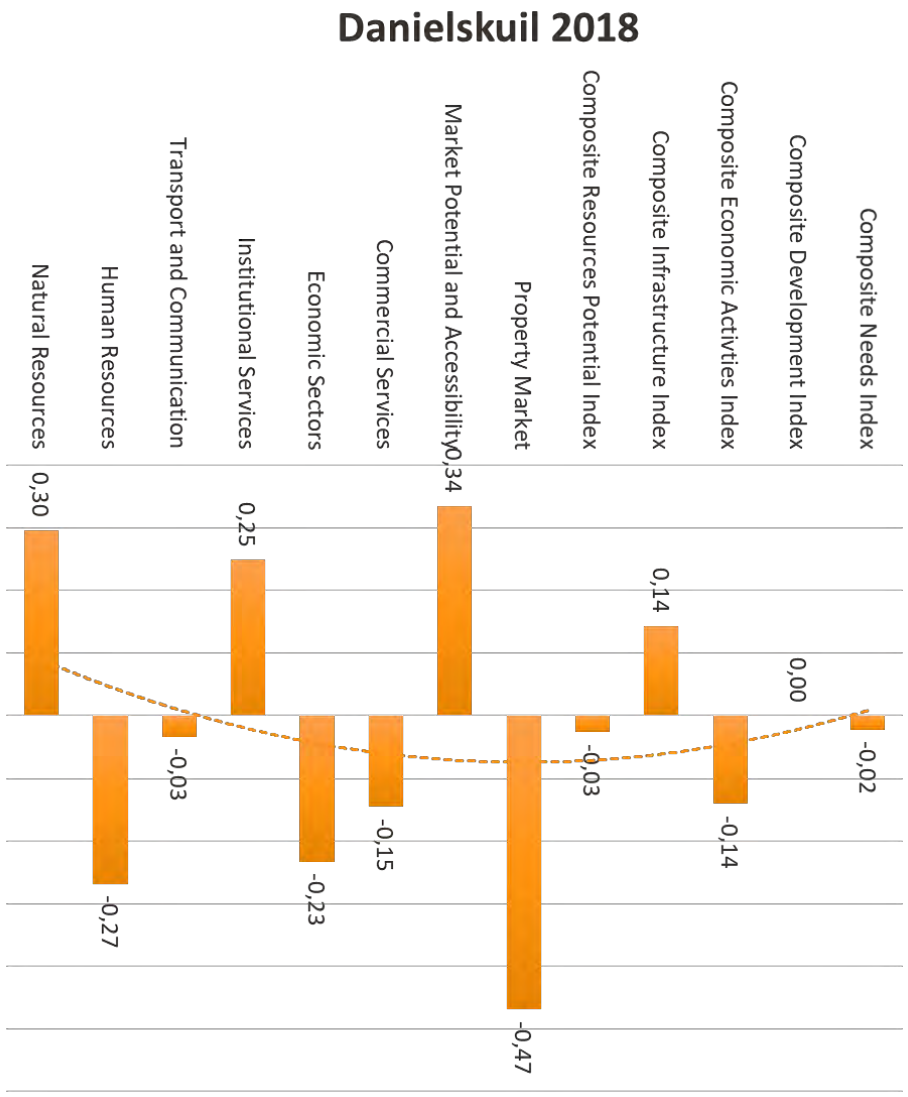


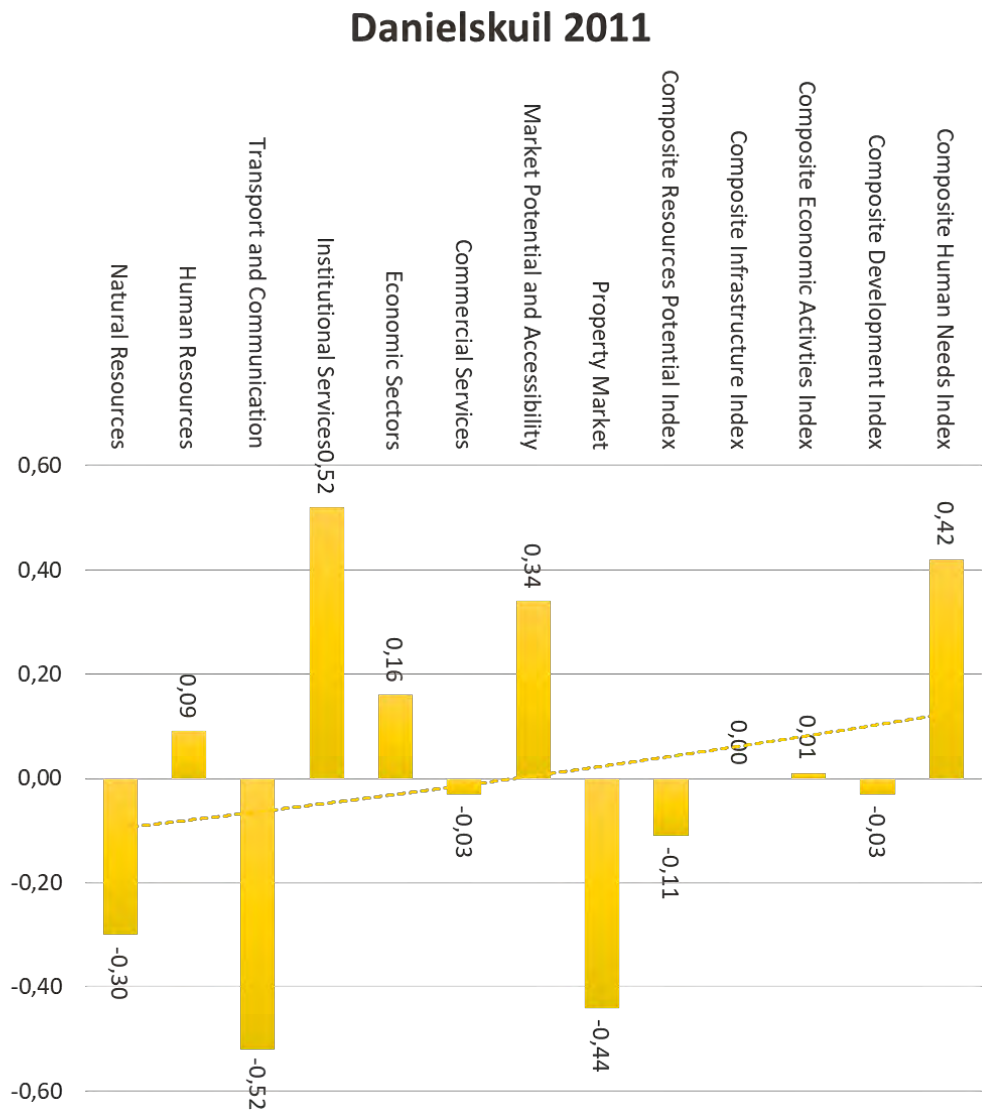
3.18 OLIFANTSHOEK



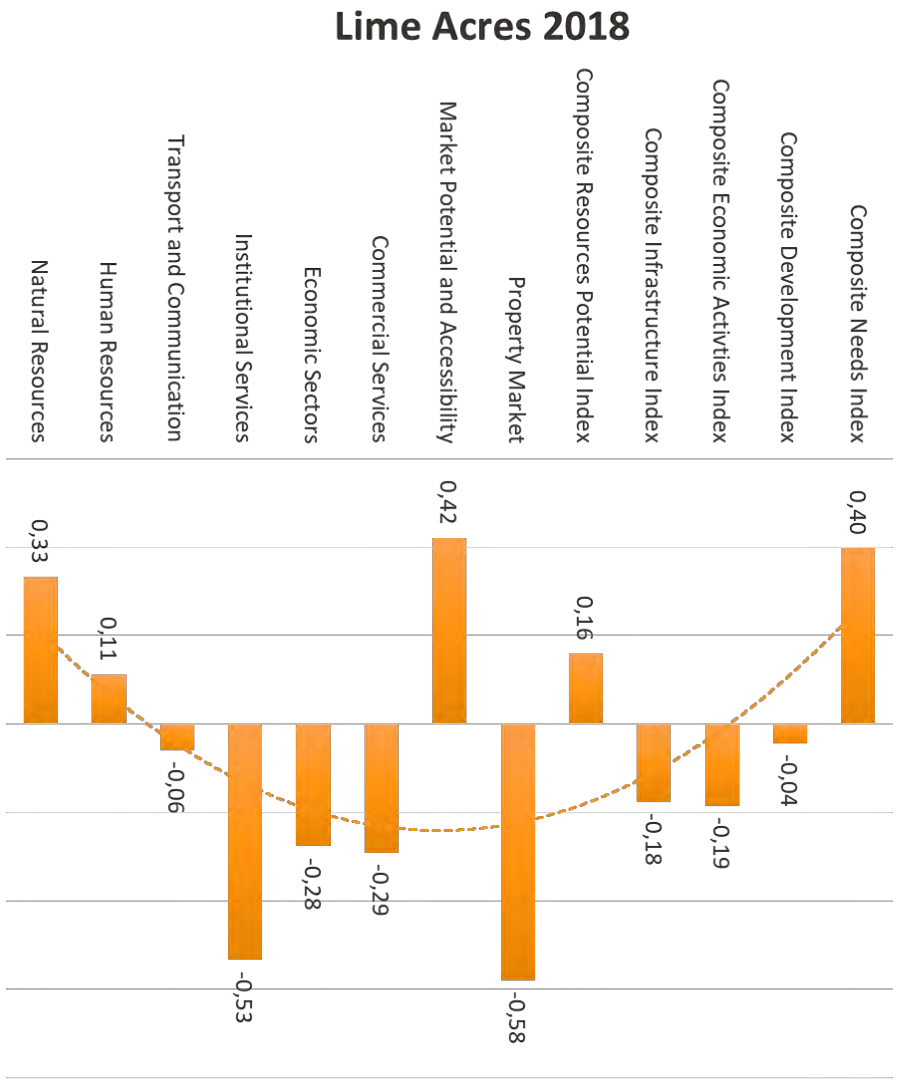


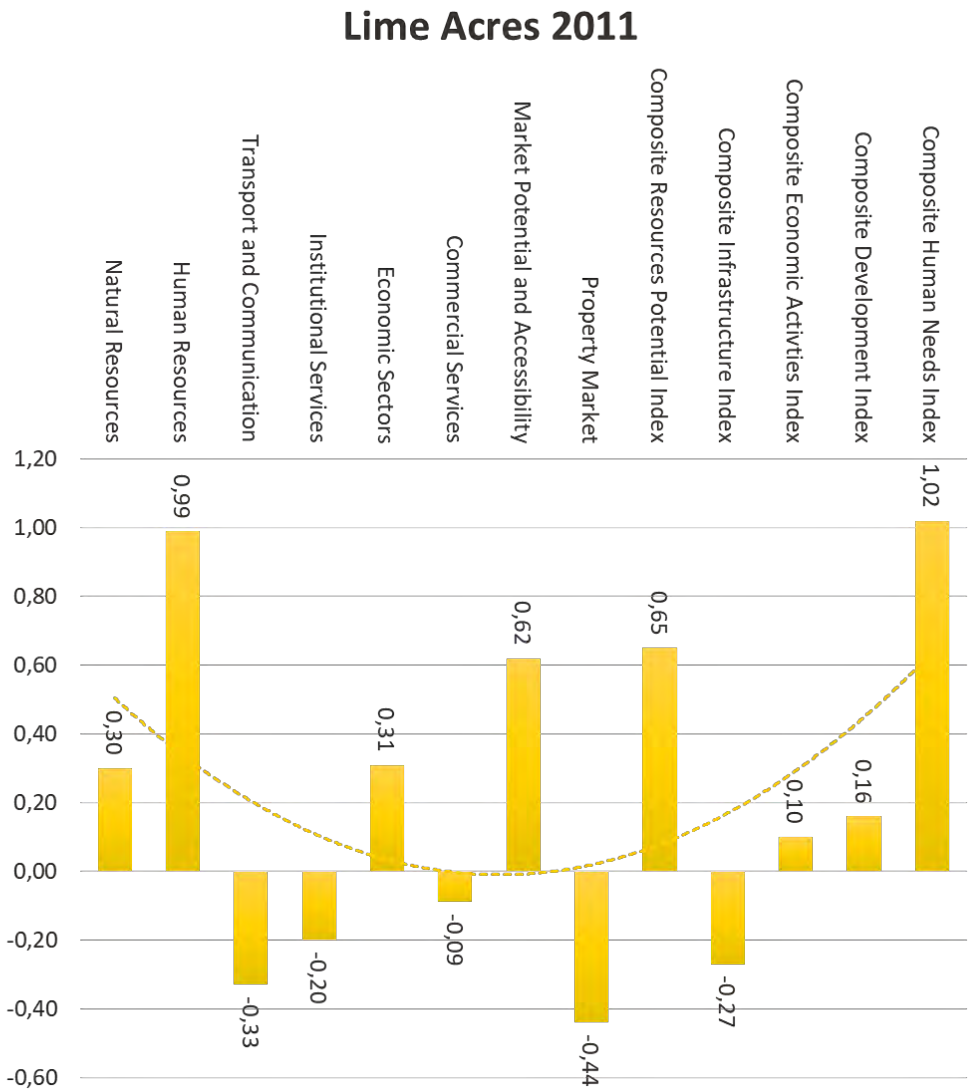
3.19 DANIELSKUIL





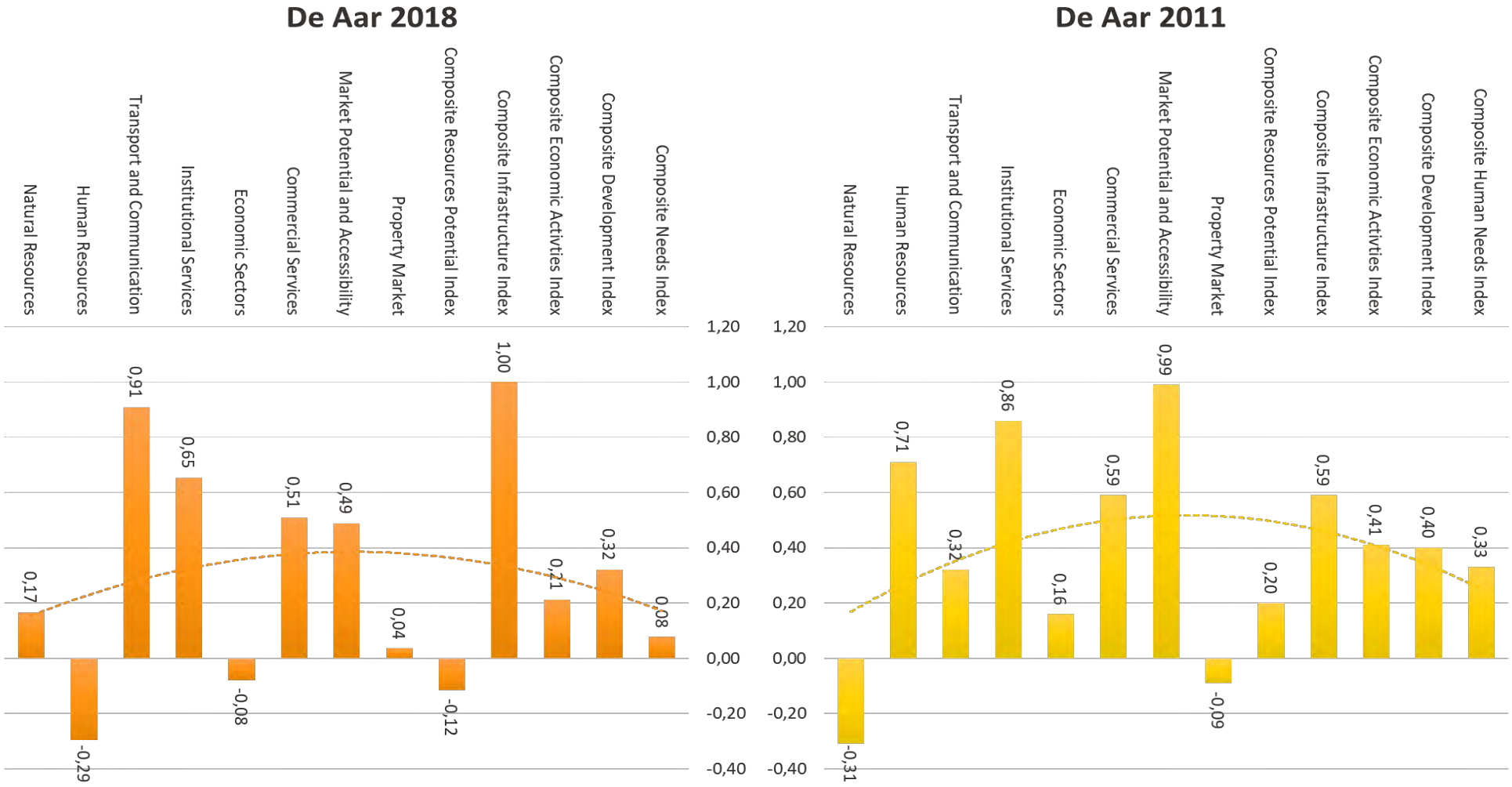
3.20 LIME ACRES



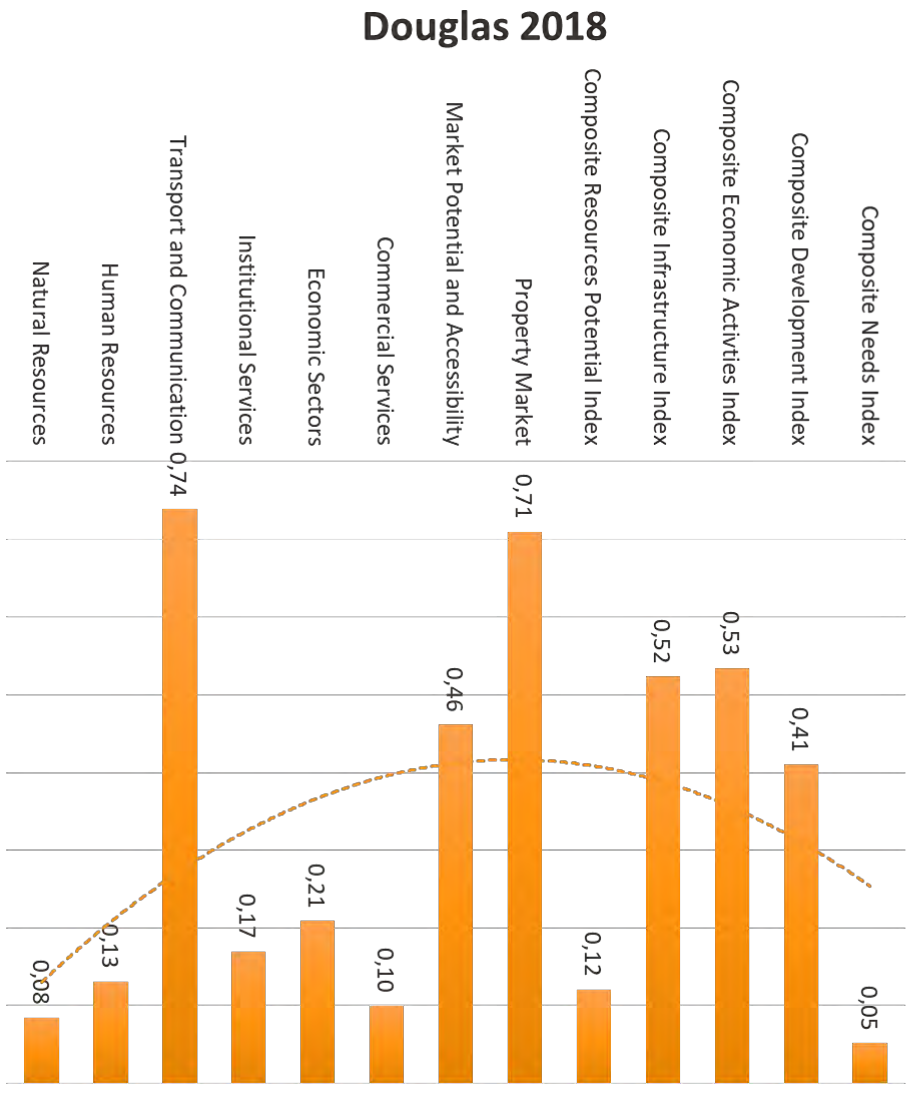


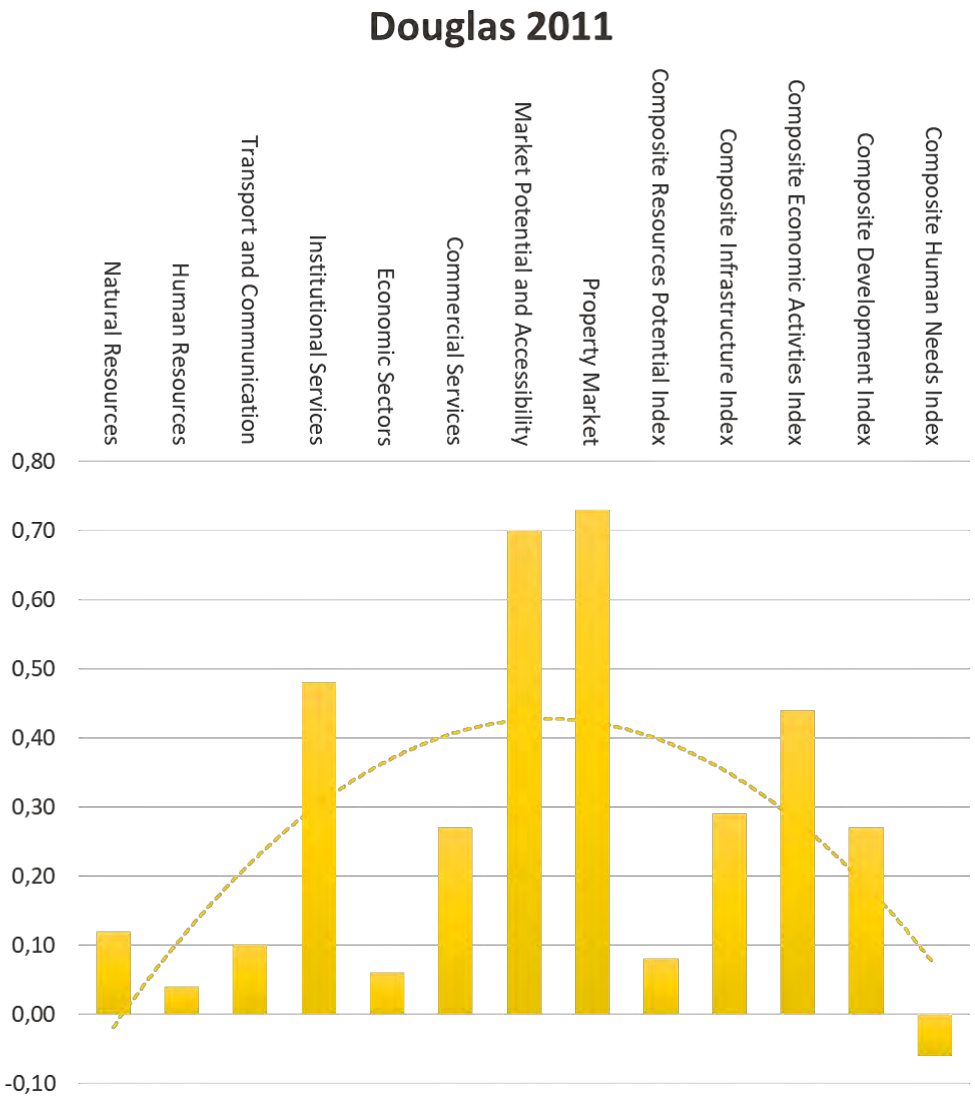
4 PIXLEY KA SEME

4.1 DE AAR

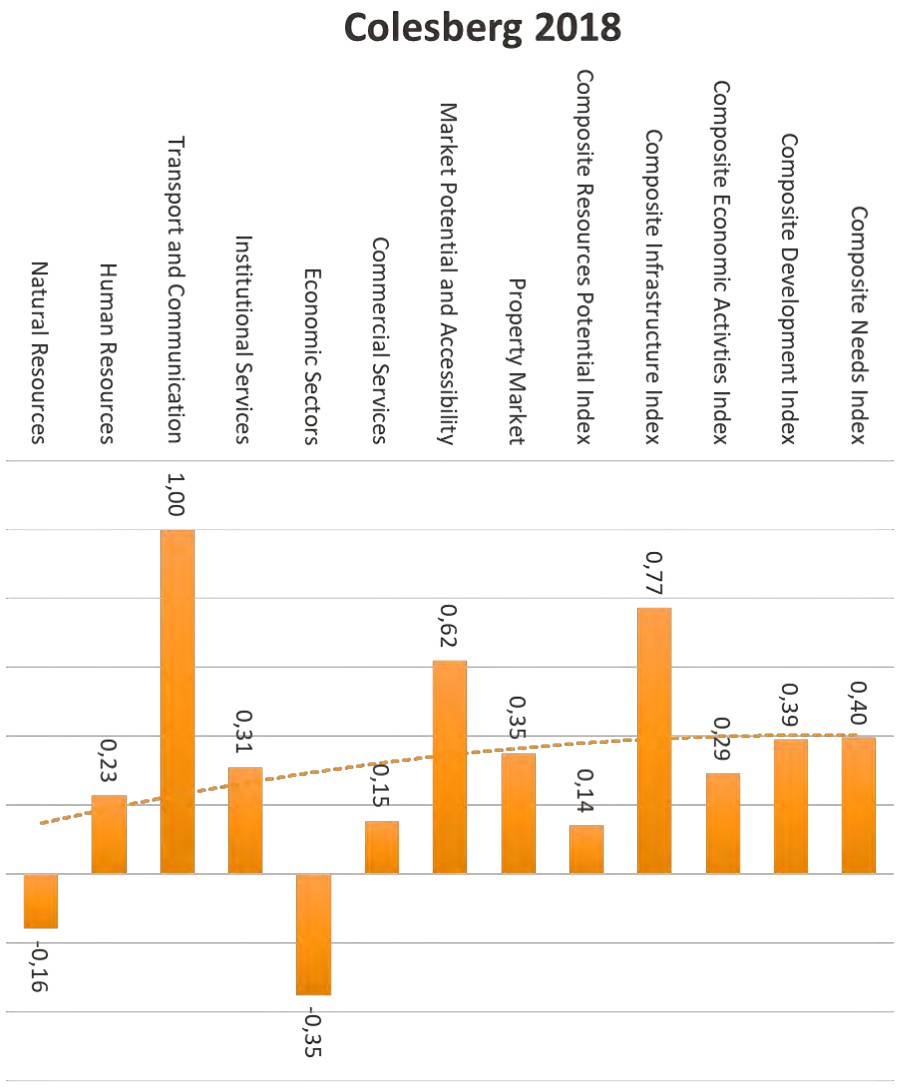


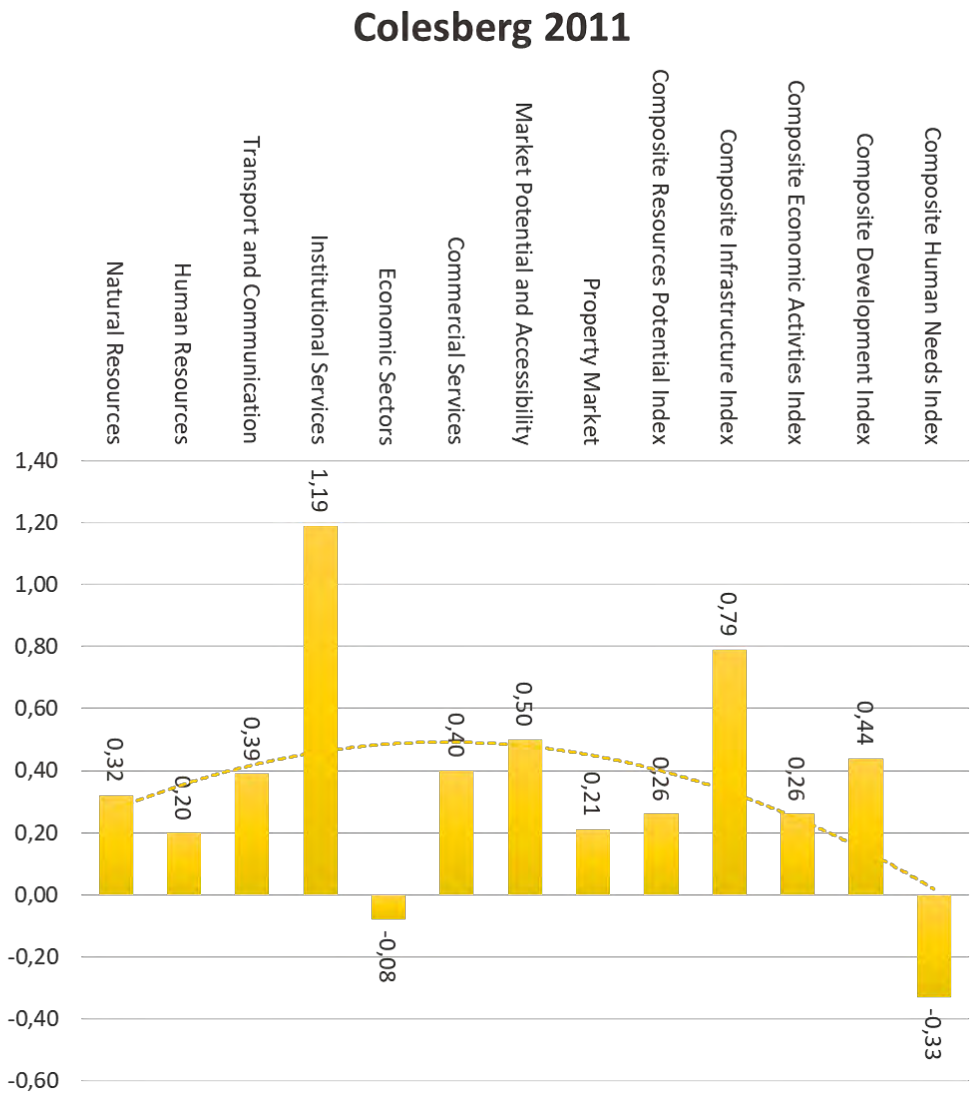
4.2 DOUGLAS


Douglas 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
0,08
0,13
0,74
0,17
0,21
0,10
0,46
0,71
0,12
0,52
0,53
0,41
0,05
0,80
0,70
0,60
0,50
0,40
0,30
0,20
0,10
0,00

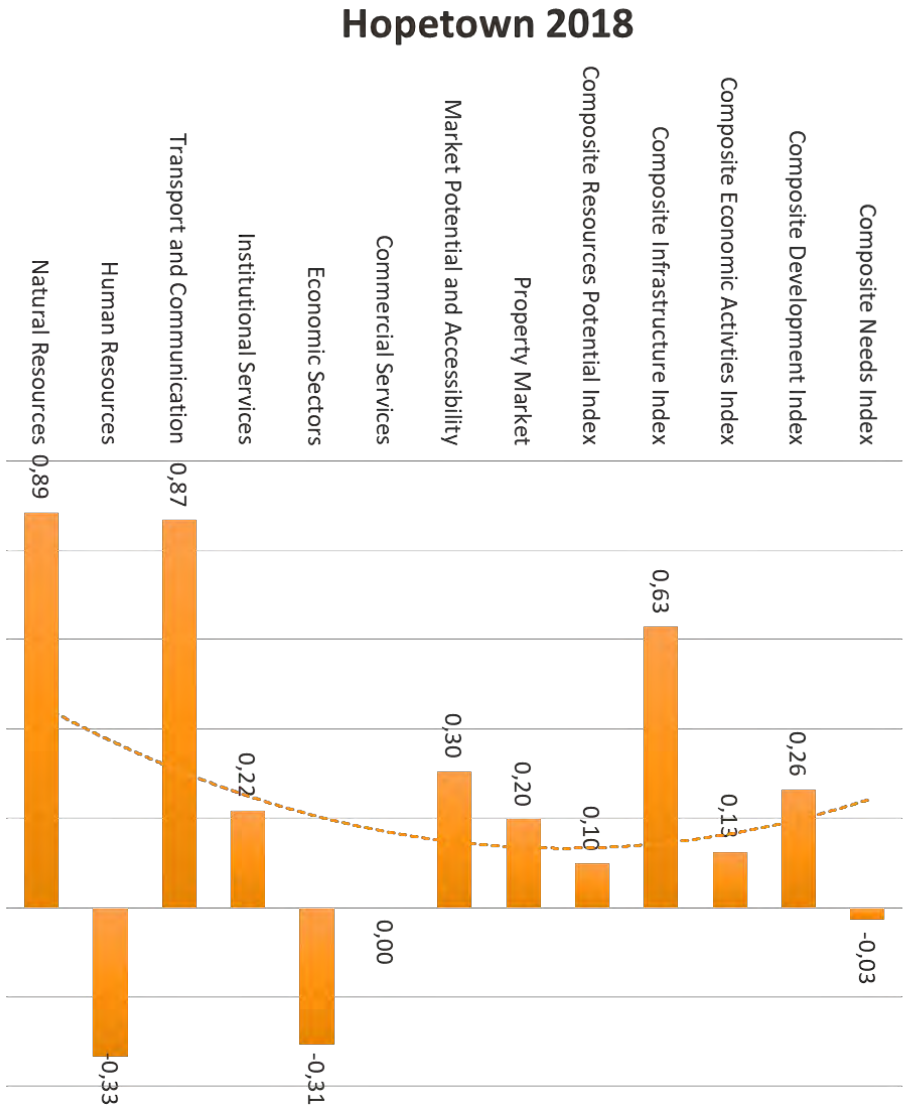

Douglas 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
0,80
0,70
0,60
0,50
0,40
0,30
0,20
0,10
0,00
-0,10

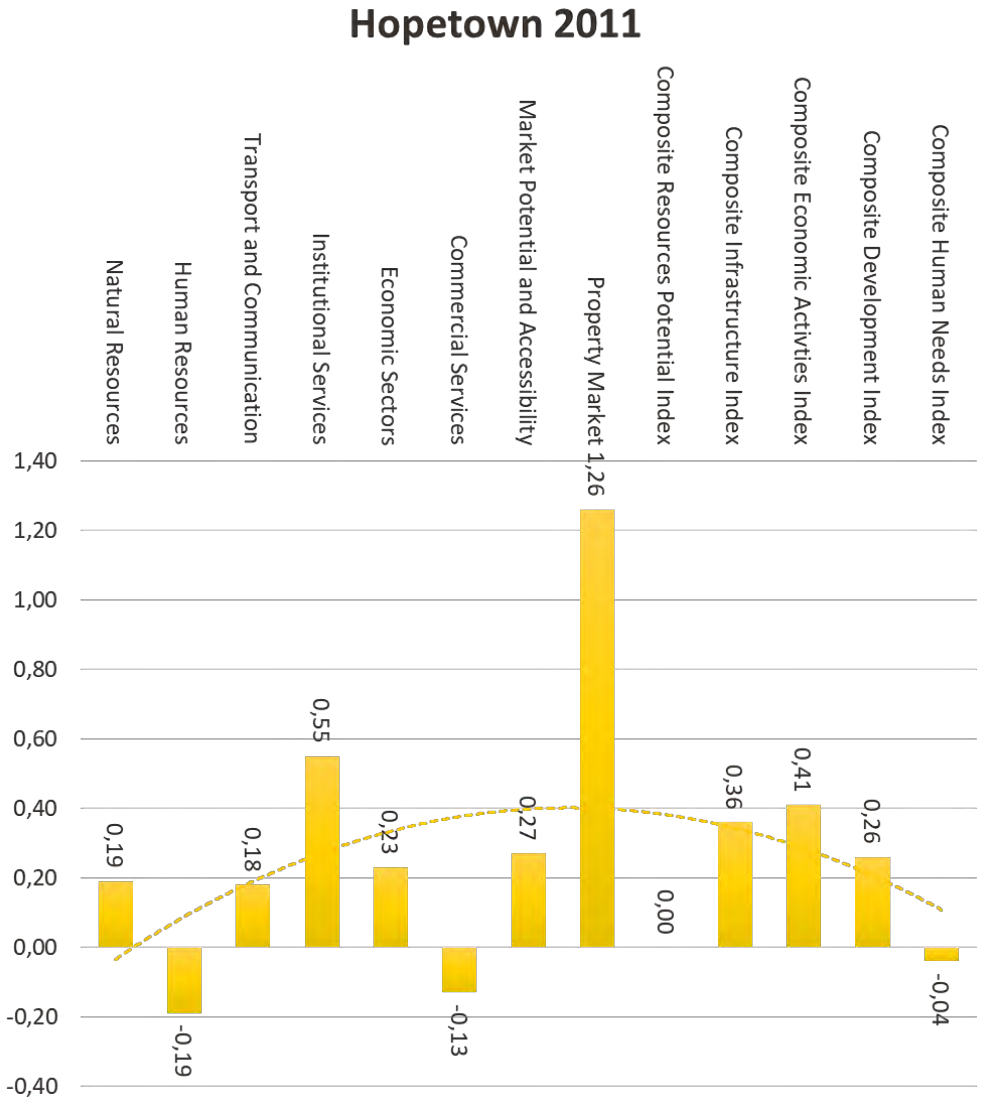
4.3 COLESBERG



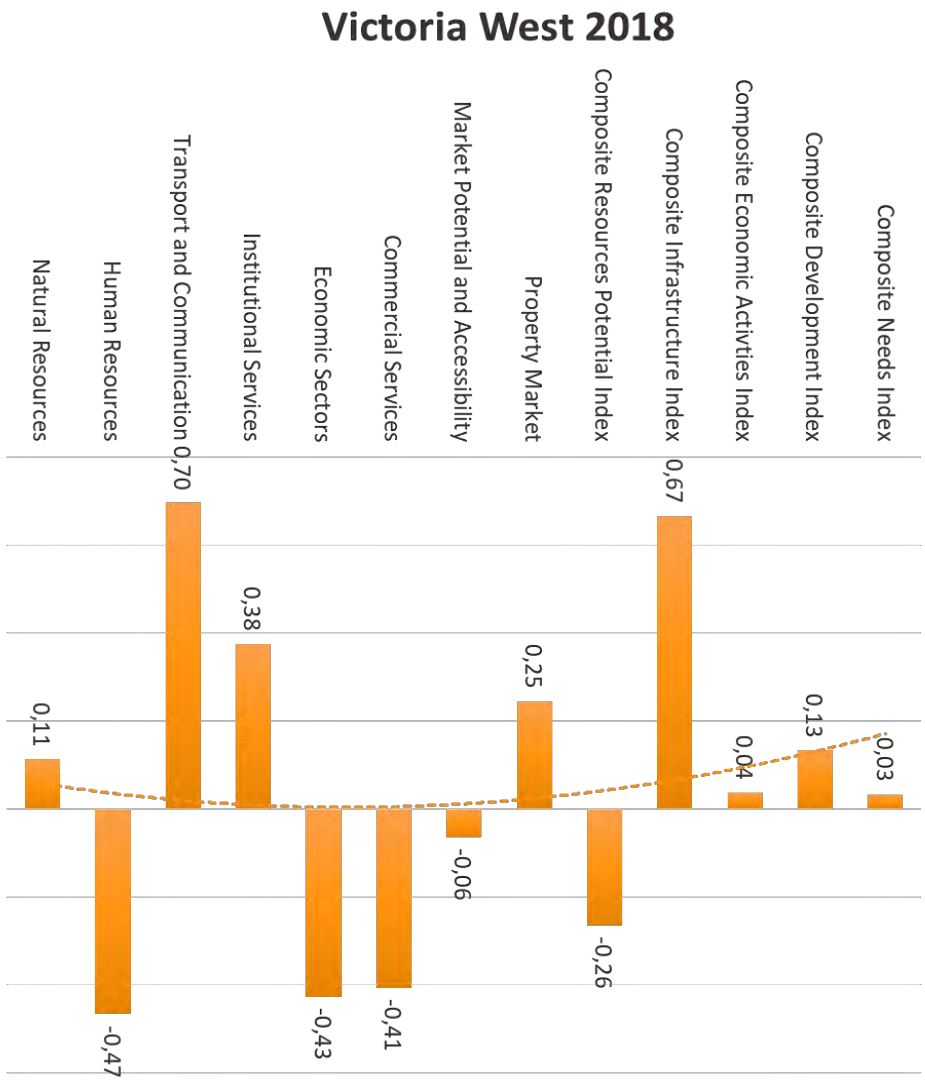


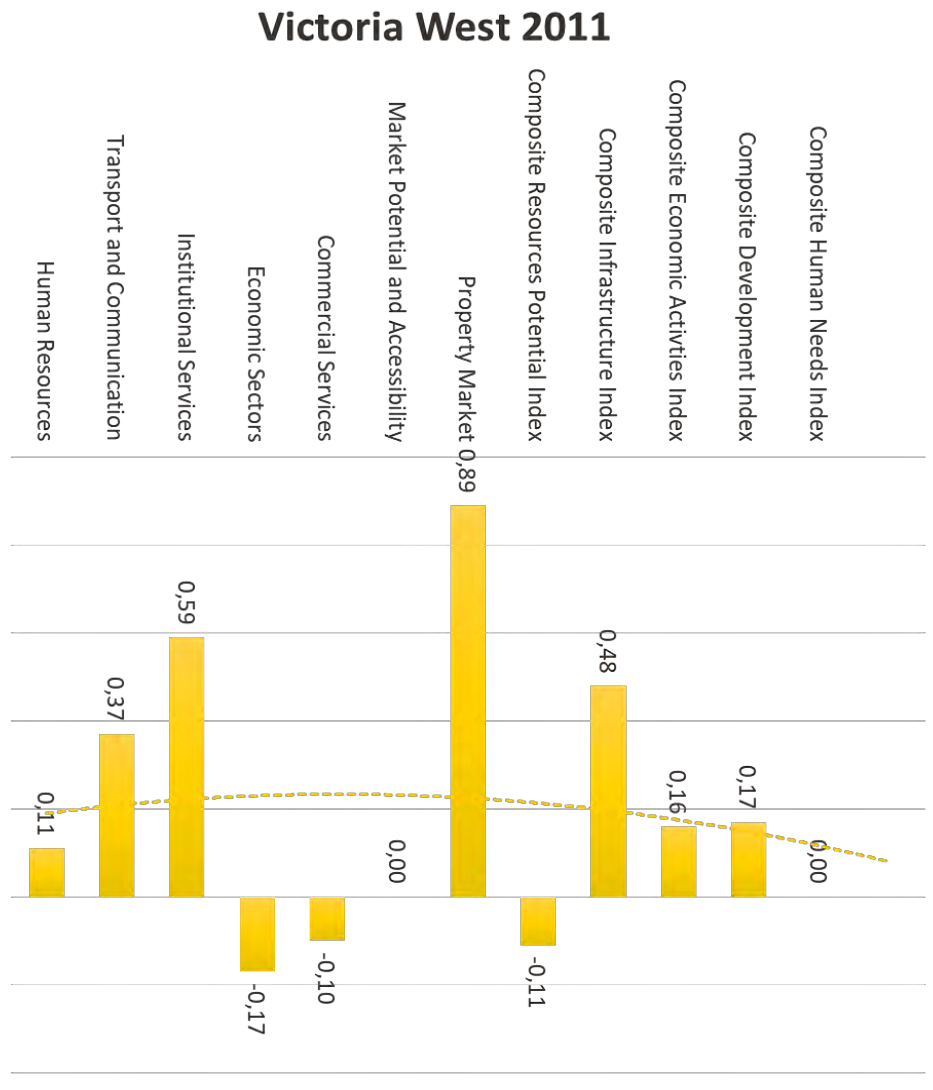
4.4 HOPETOWN


Hopetown 2018
Natural Resources 0,89
Human Resources -0,33
Transport and Communication 0,87
Institutional Services 0,22
Economic Sectors -0,31
Commercial Services 0,00
Market Potential and Accessibility 0,30
Property Market 0,20
Composite Resources Potential Index 0,10
Composite Infrastructure Index 0,63
Composite Economic Activties Index 0,13
Composite Development Index 0,26
Composite Needs Index -0,03
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40

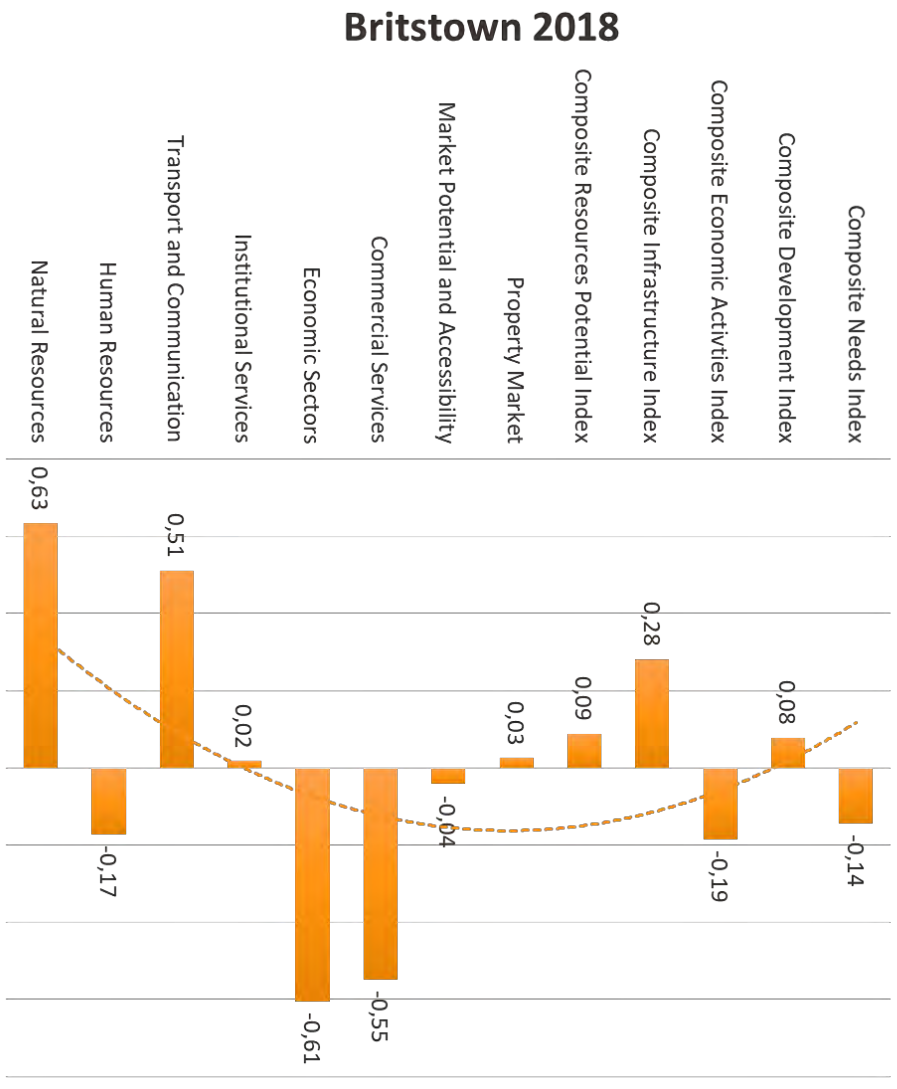

Hopetown 2011
Natural Resources 0,19
Human Resources -0,19
Transport and Communication 0,18
Institutional Services 0,55
Economic Sectors 0,23
Commercial Services -0,13
Market Potential and Accessibility 0,27
Property Market 1,26
Composite Resources Potential Index 0,00
Composite Infrastructure Index 0,36
Composite Economic Activties Index 0,41
Composite Development Index 0,26
Composite Human Needs Index -0,04
1,40
1,20
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40

4.5 VICTORIA WEST

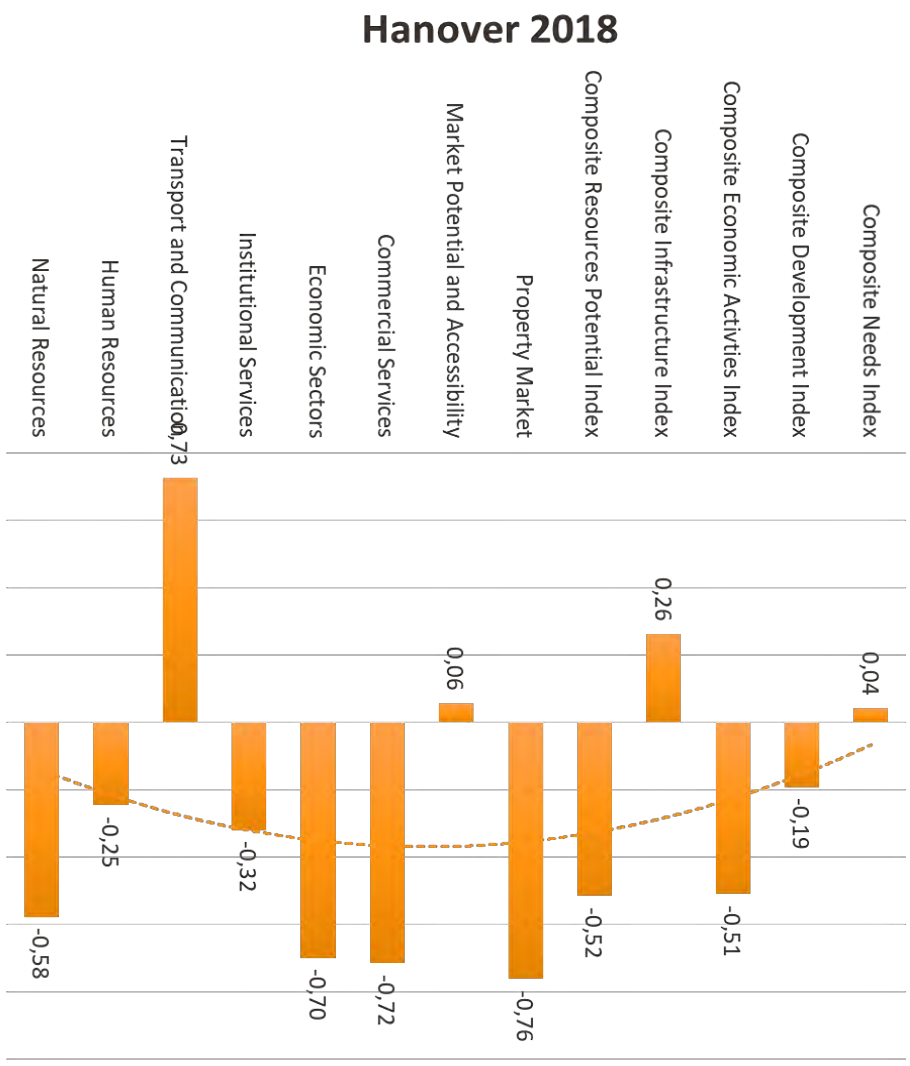


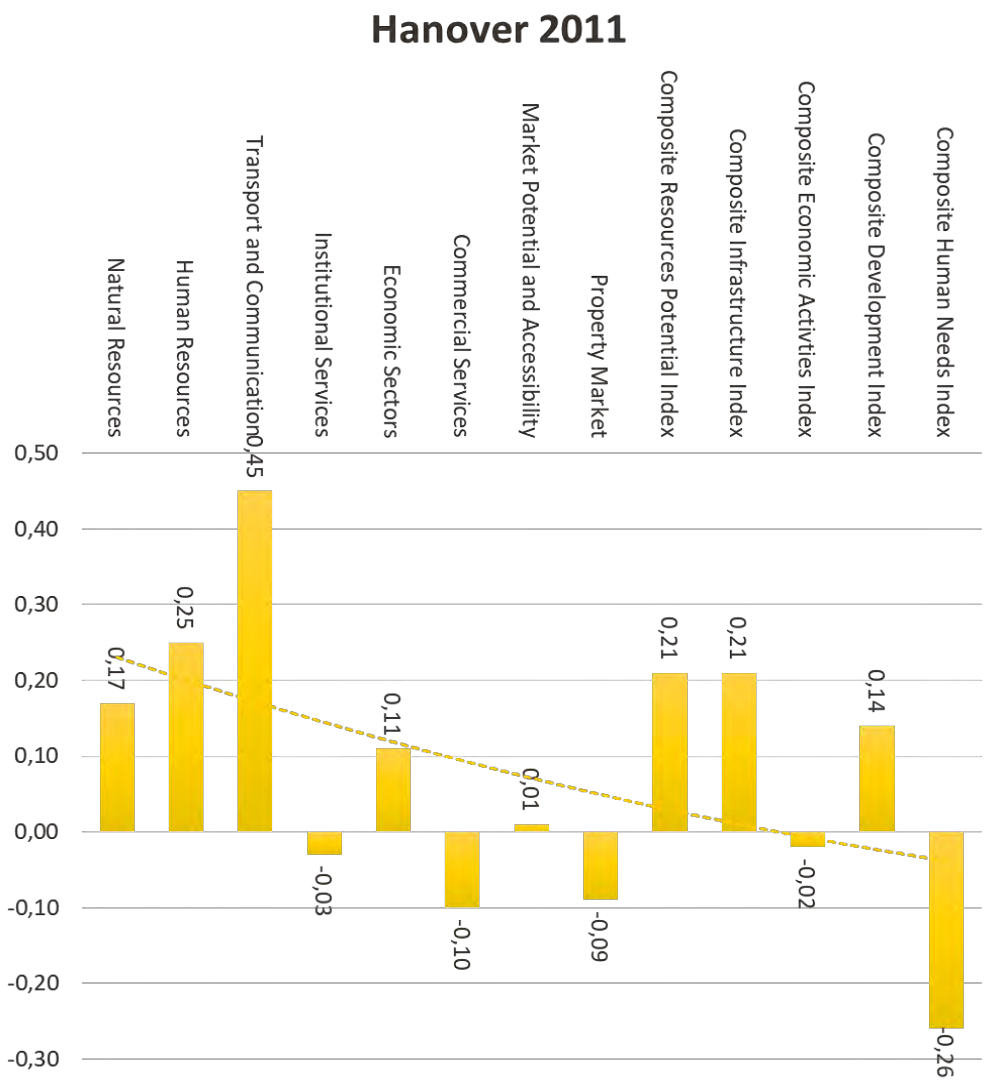


4.6 BRITSTOWN

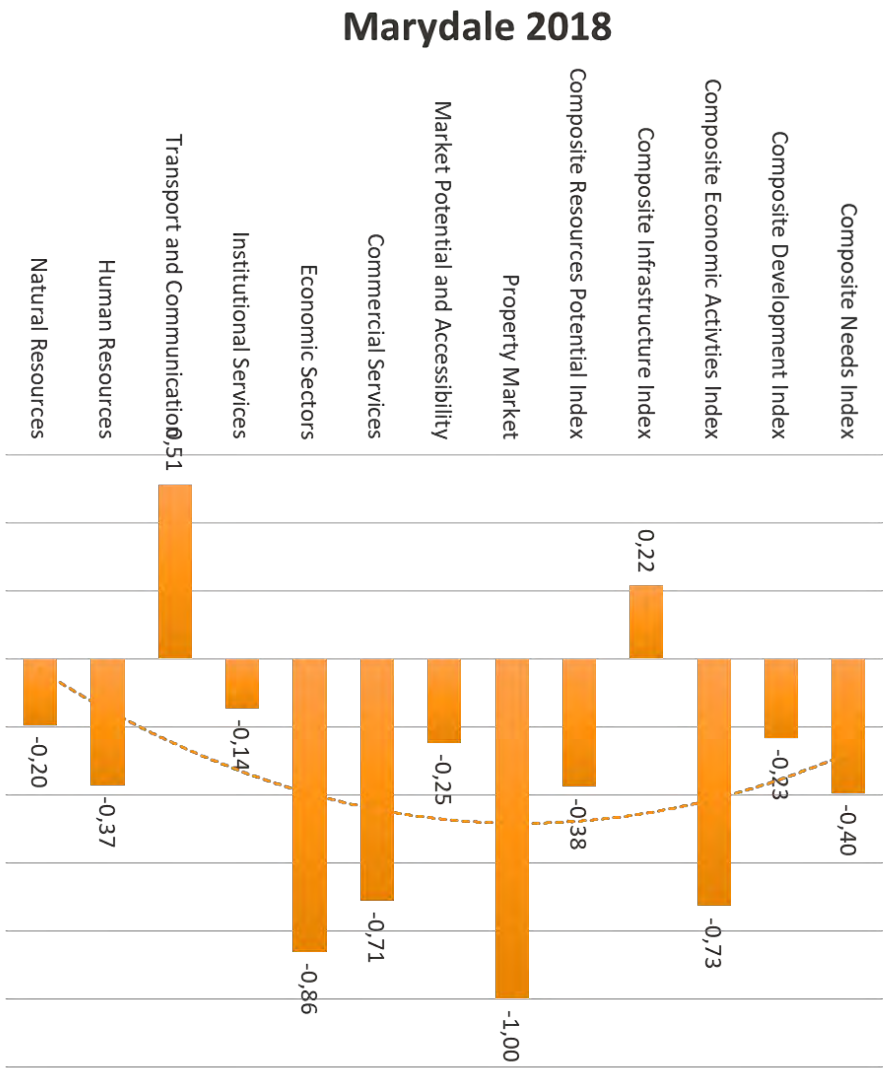


4.7 HANOVER


Hanover 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,58
-0,25
0,73
-0,32
-0,70
-0,72
0,06
-0,76
-0,52
0,26
-0,51
-0,19
0,04
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00

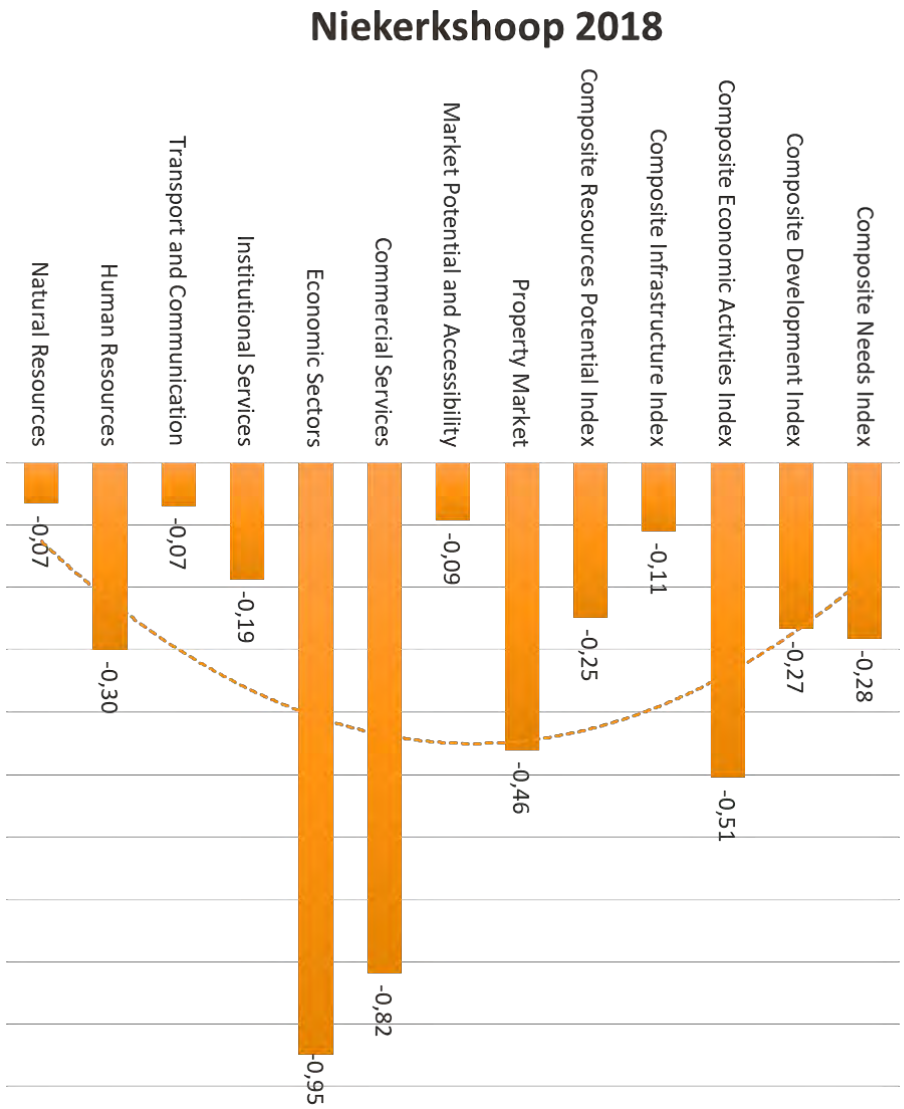

Hanover 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
0,17
0,25
0,45
-0,03
0,11
-0,10
0,01
-0,09
0,21
0,21
-0,02
0,14
-0,26
0,50
0,40
0,30
0,20
0,10
0,00
-0,10
-0,20
-0,30

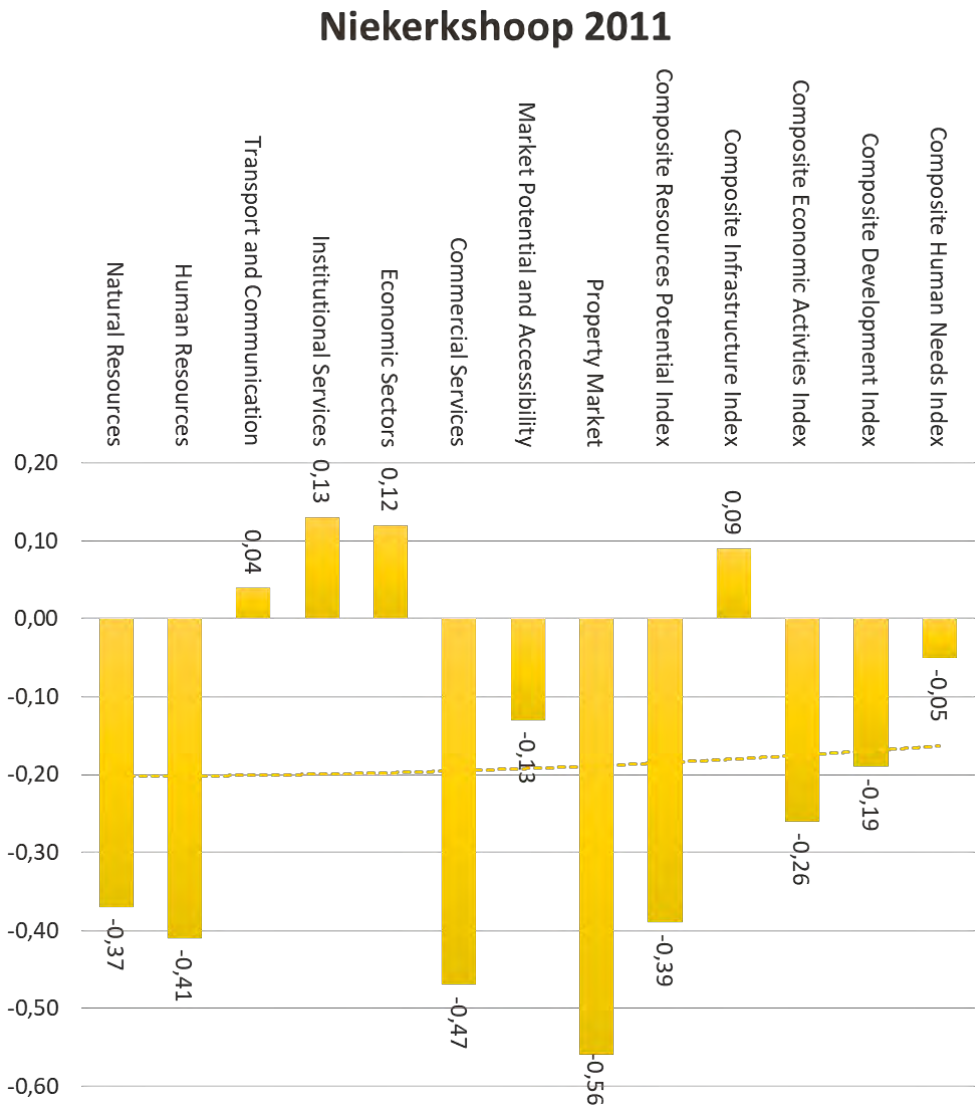
4.8 MARYDALE


Marydale 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,20
-0,37
0,51
-0,14
-0,86
-0,71
-0,25
-1,00
-0,38
0,22
-0,73
-0,23
-0,40
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00
-1,20

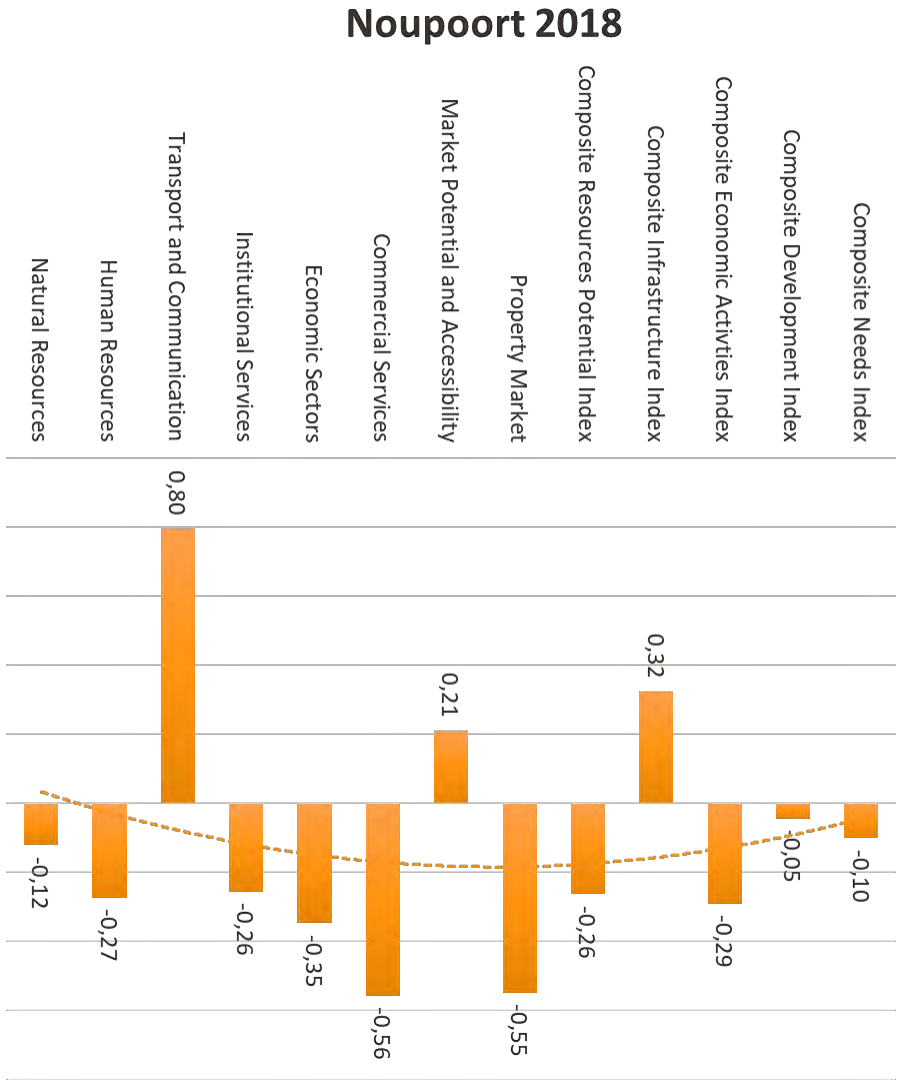

Marydale 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,47
0,03
-0,17
0,03
-0,10
-0,38
-0,20
-0,56
-0,22
-0,07
-0,31
-0,20
-0,39
0,10
0,00
-0,10
-0,20
-0,30
-0,40
-0,50
-0,60

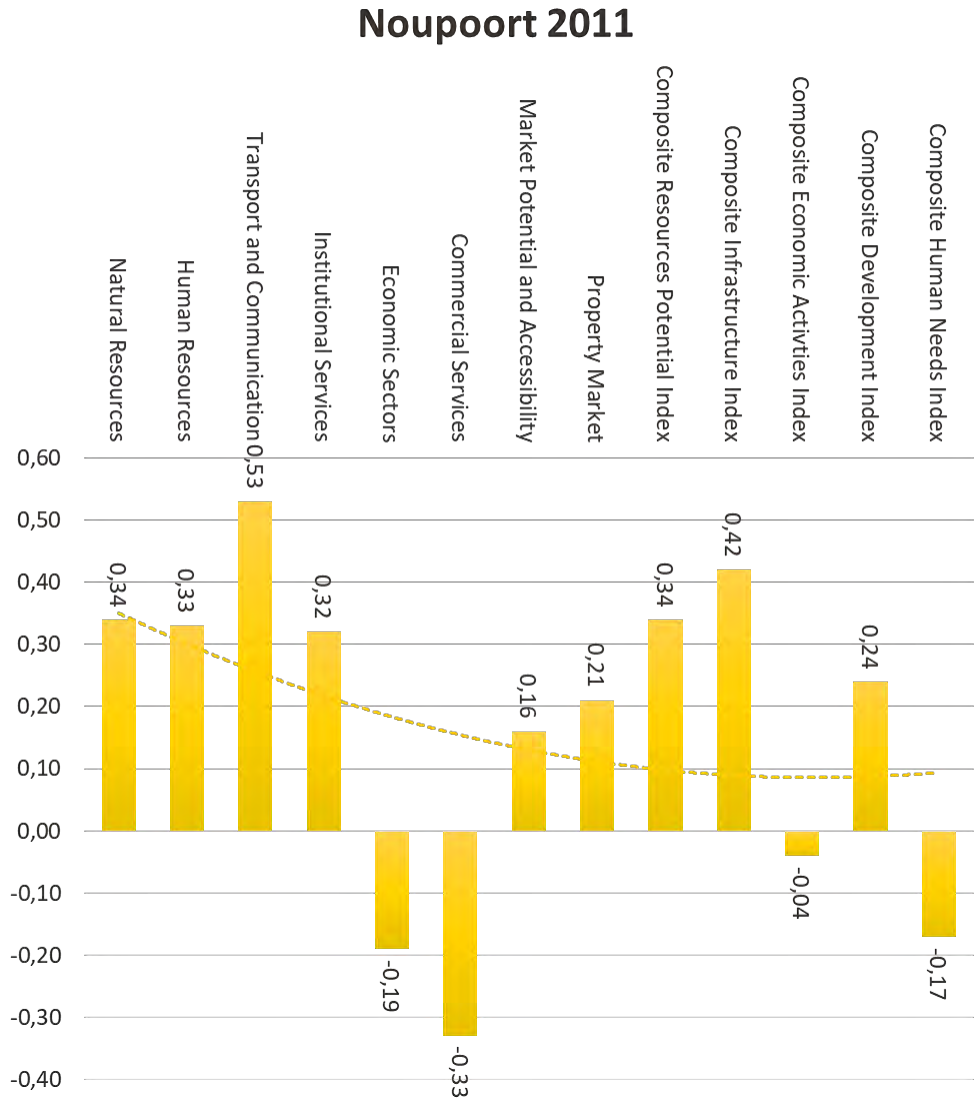
4.9 NIEKERKSHOOP





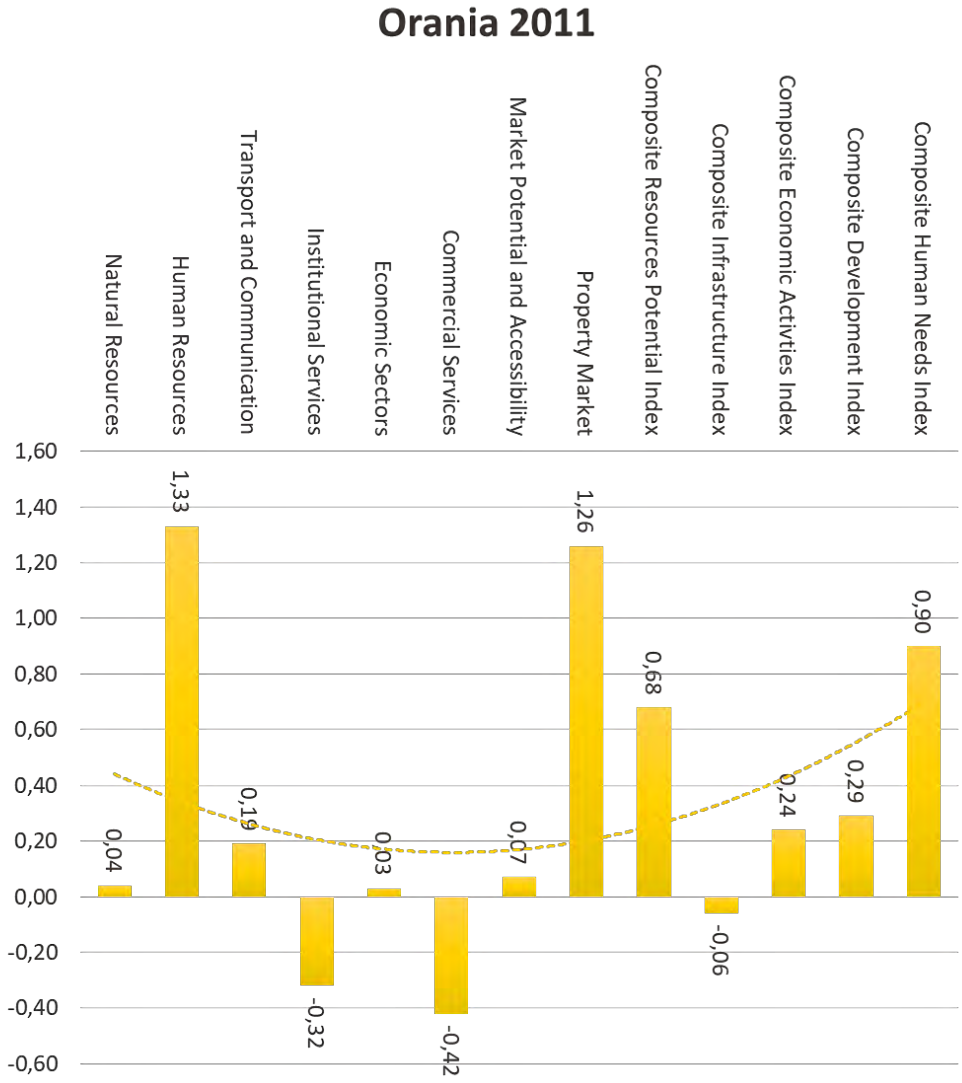
4.10 NOUPOORT



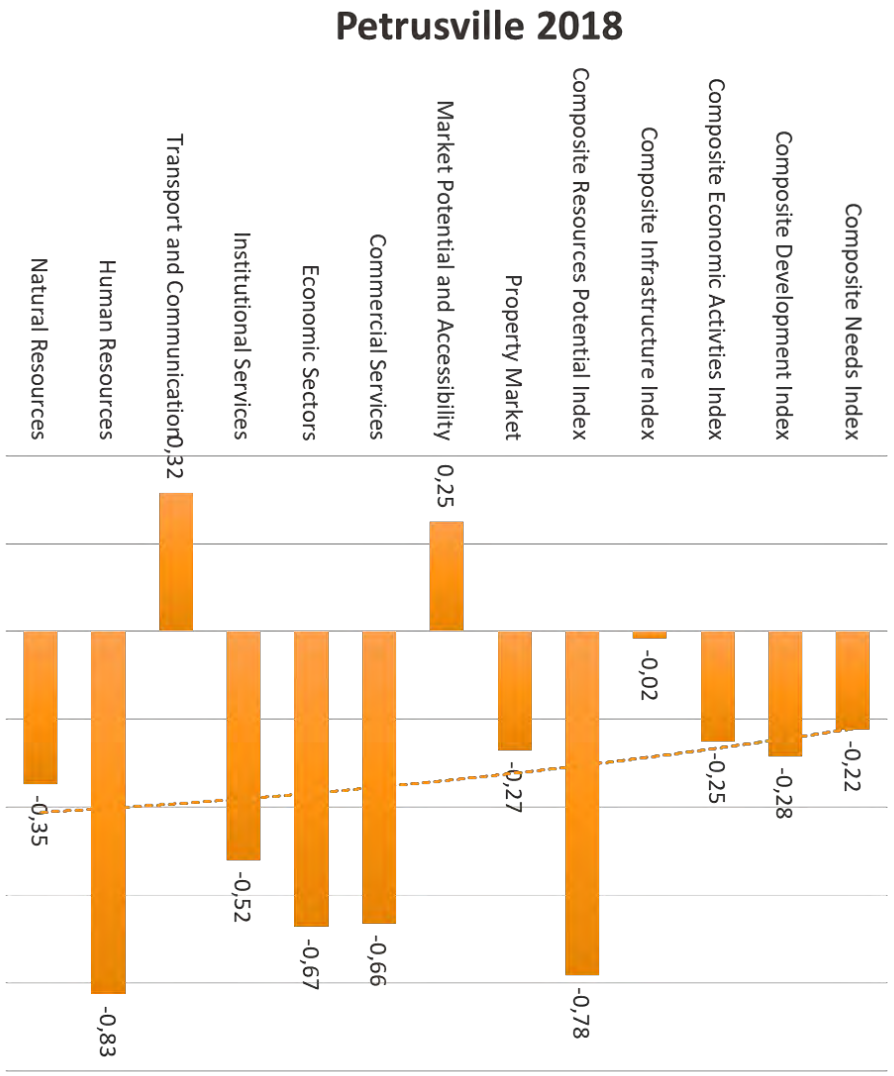


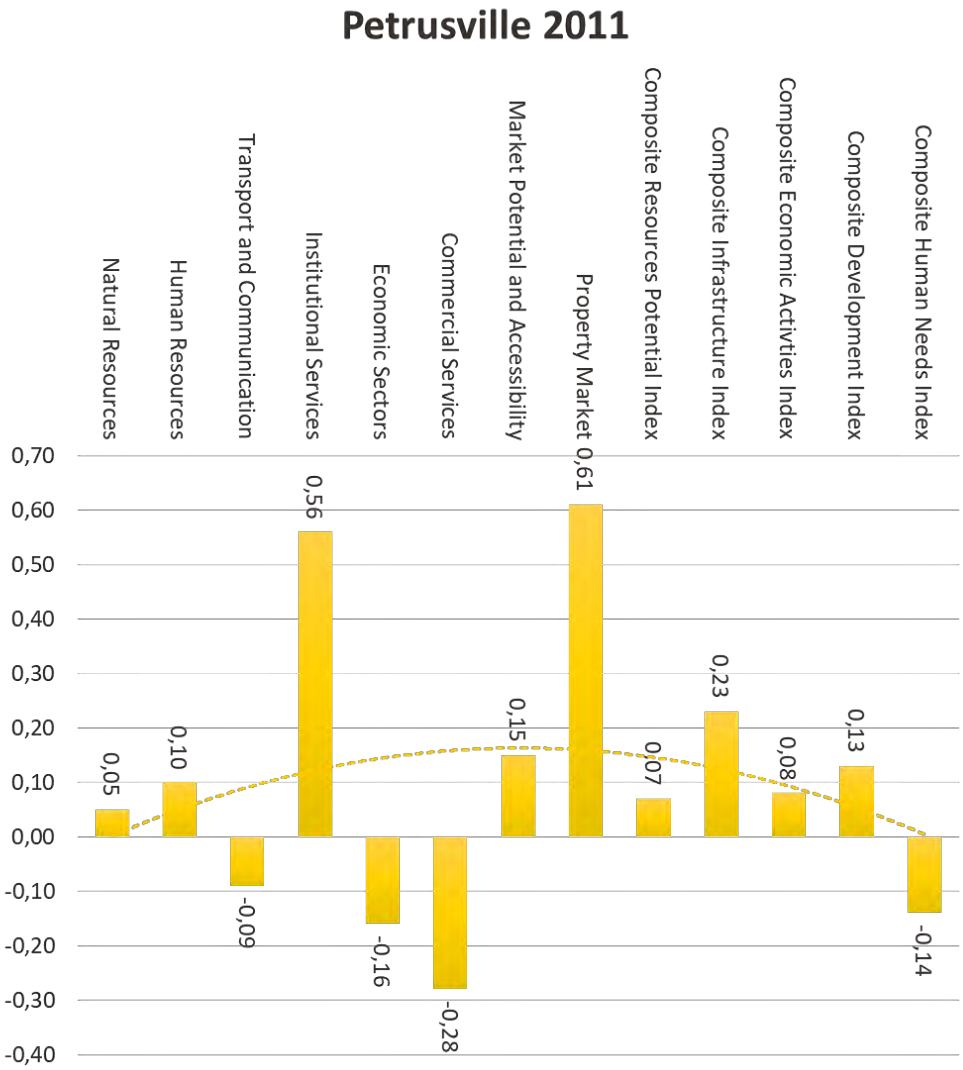
4.11 ORANIA


Orania 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
0,50
0,11
0,55
-0,33
-0,50
-0,84
0,21
0,57
0,19
0,17
0,21
0,23
0,83
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00

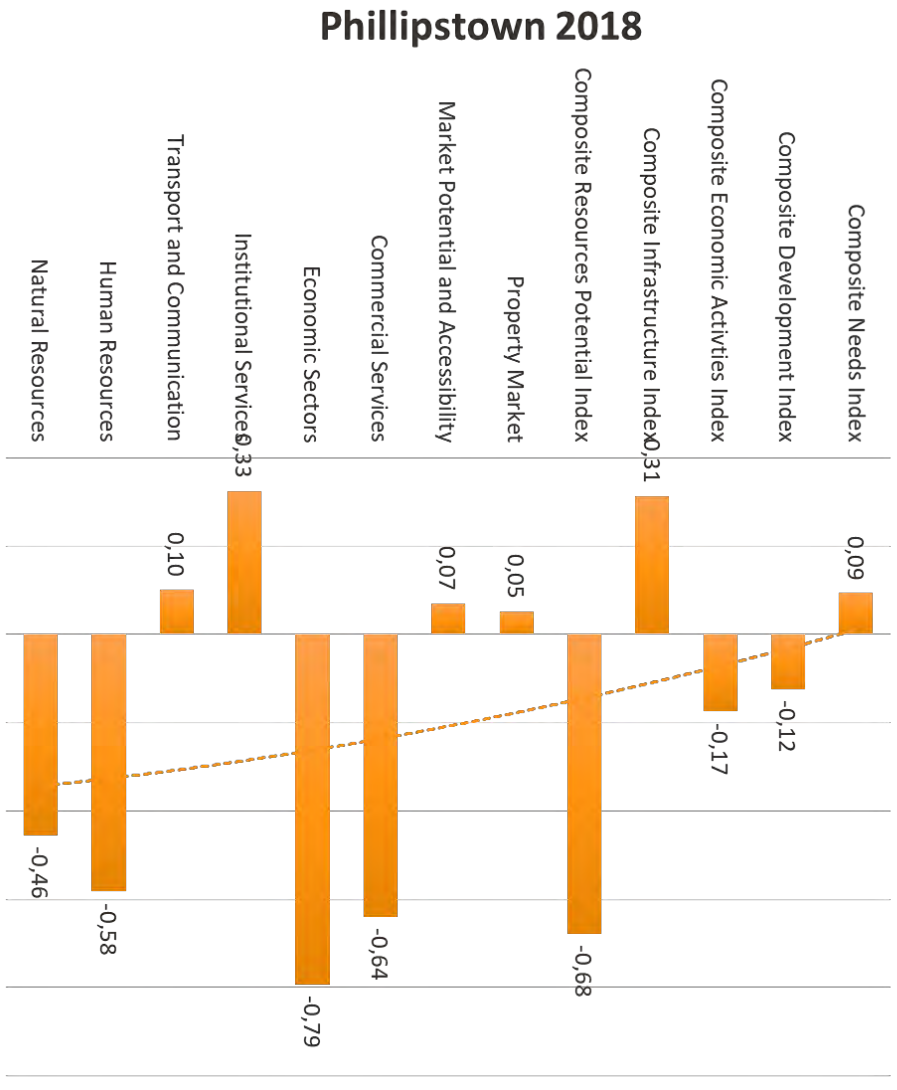

Orania 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
0,04
1,33
0,19
-0,32
0,03
-0,42
0,07
1,26
0,68
-0,06
0,24
0,29
0,90
1,60
1,40
1,20
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60

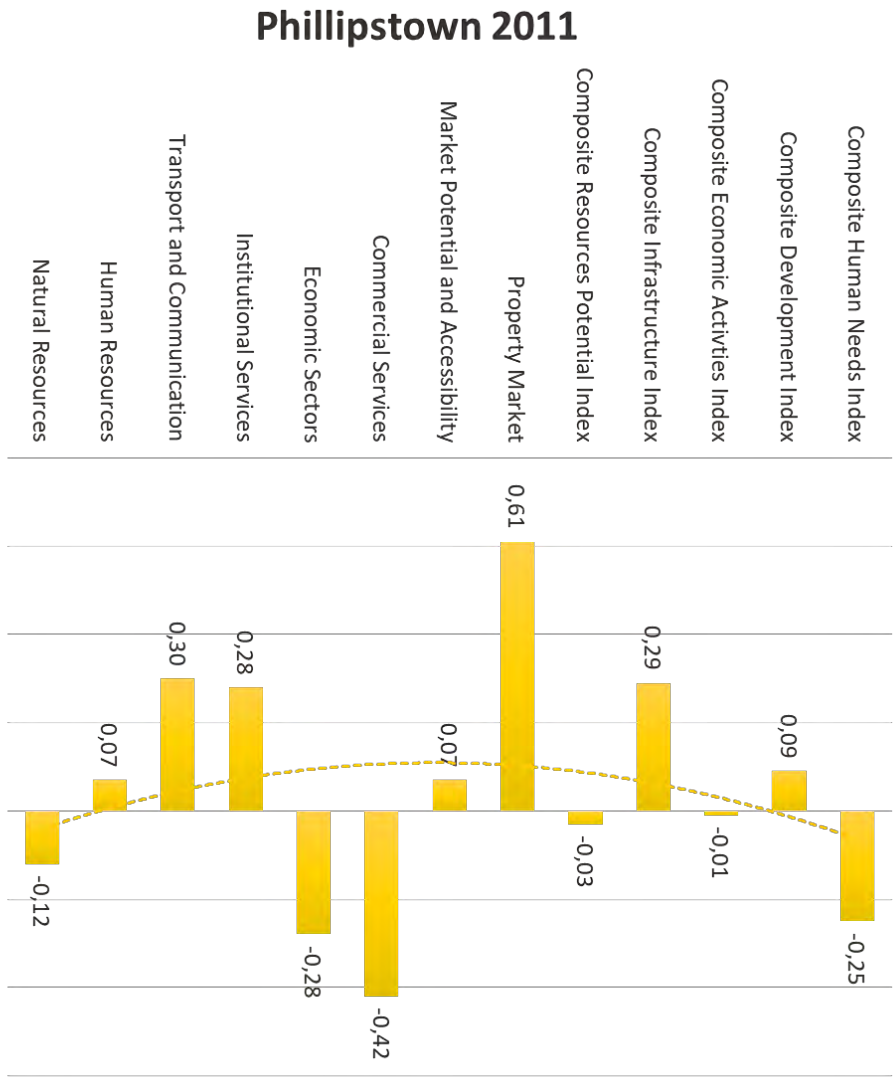
4.12 PETRUSVILLE



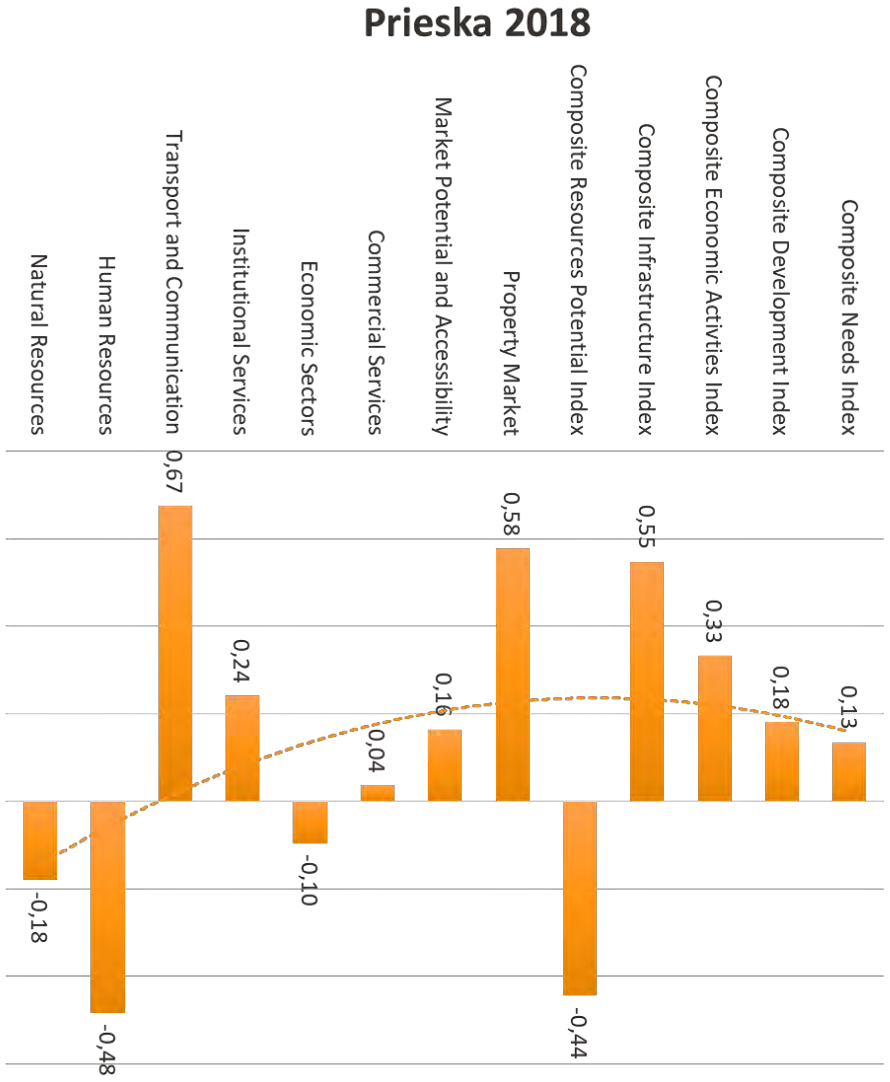


4.13 PHILLIPSTOWN





4.14 PRIESKA


Prieska 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,18
-0,48
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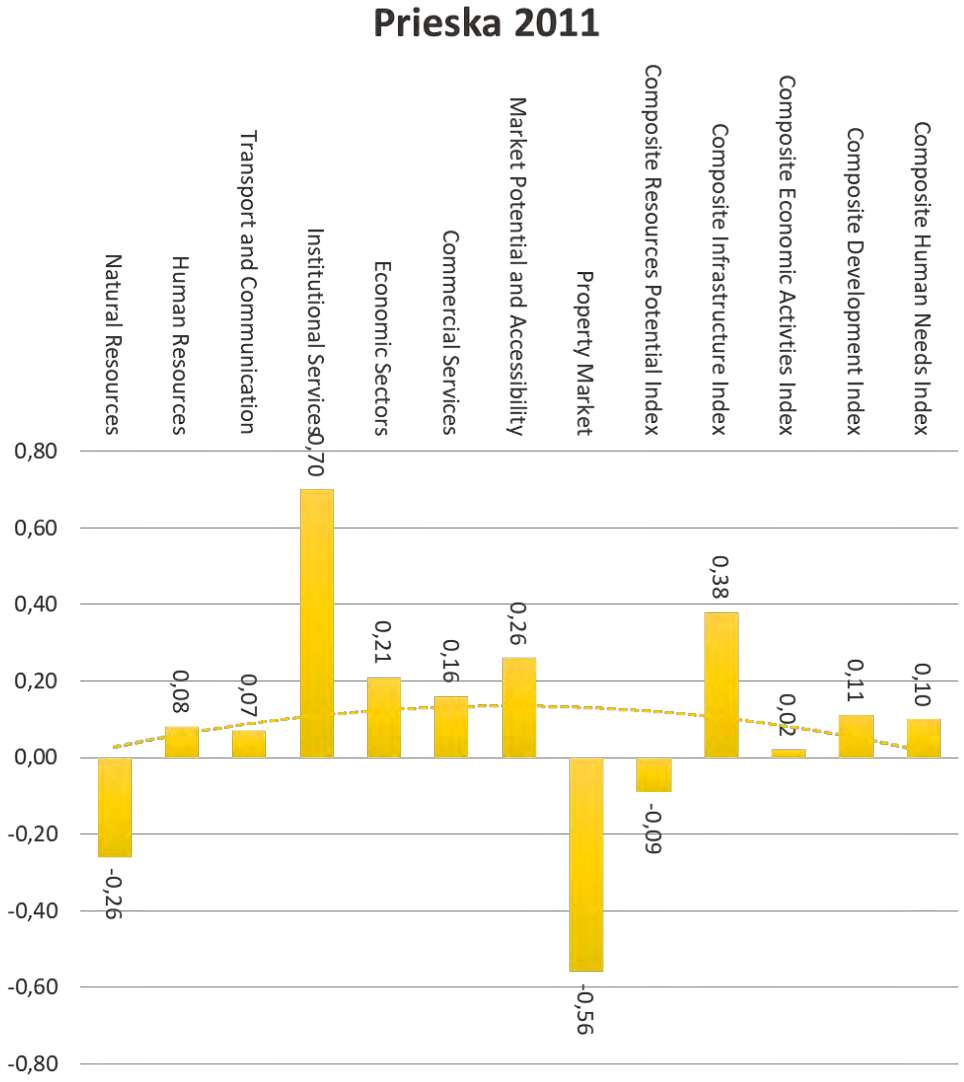
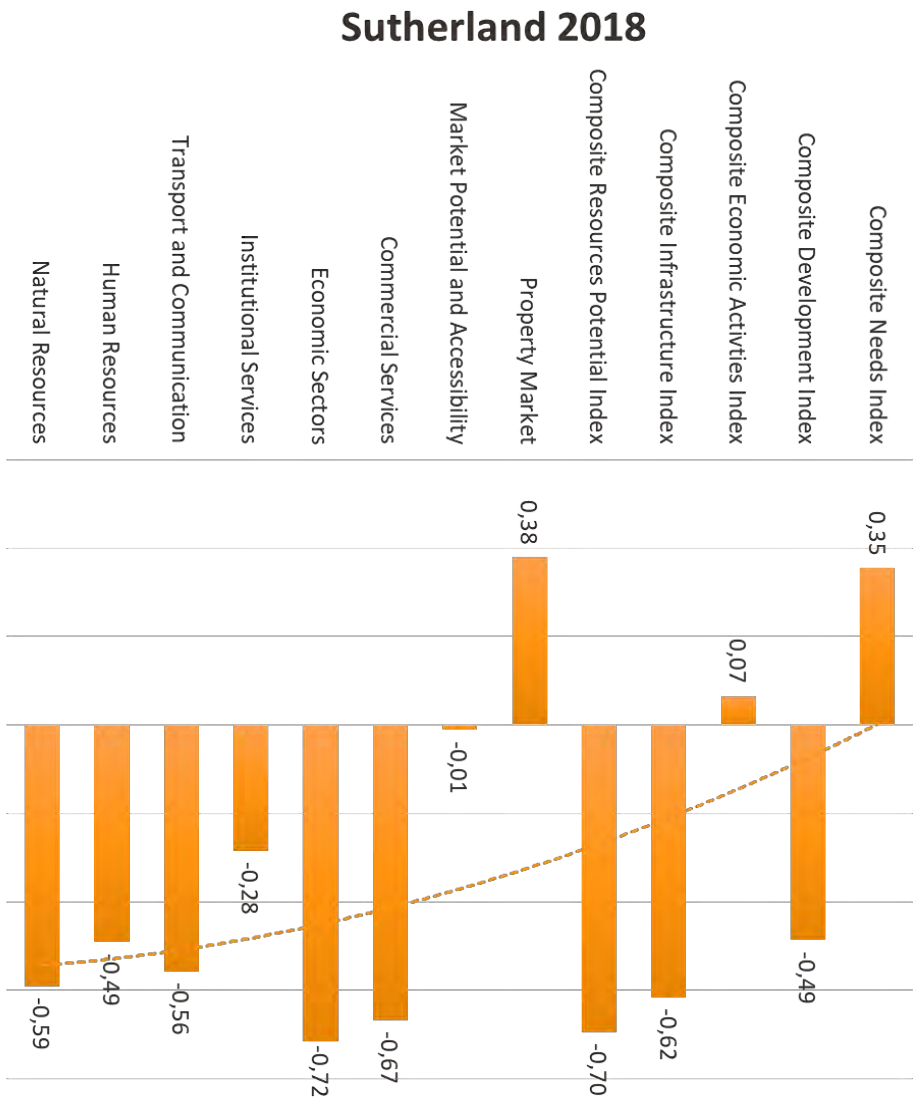
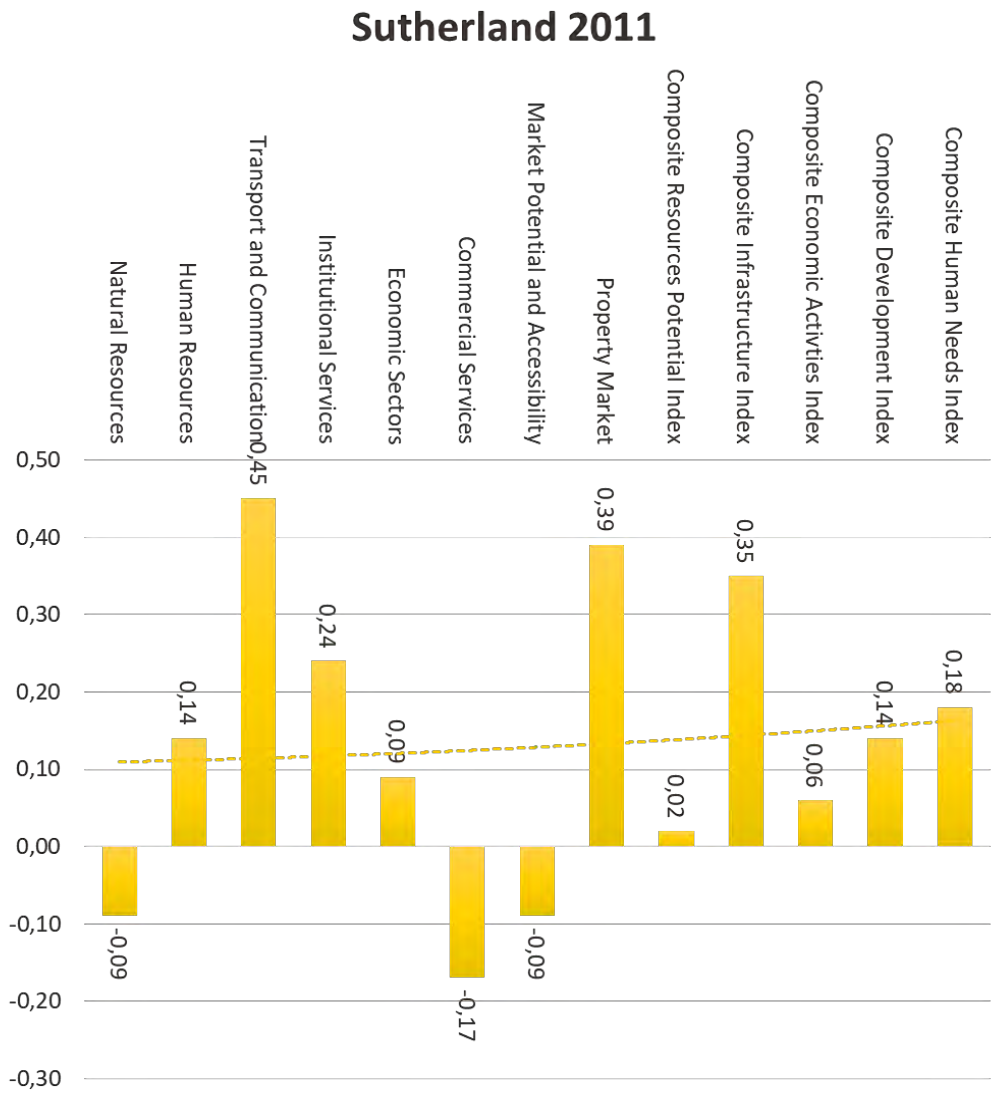
-0,10
0,04
0,16
0,58
-0,44
0,55
0,33
0,18
0,13
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60

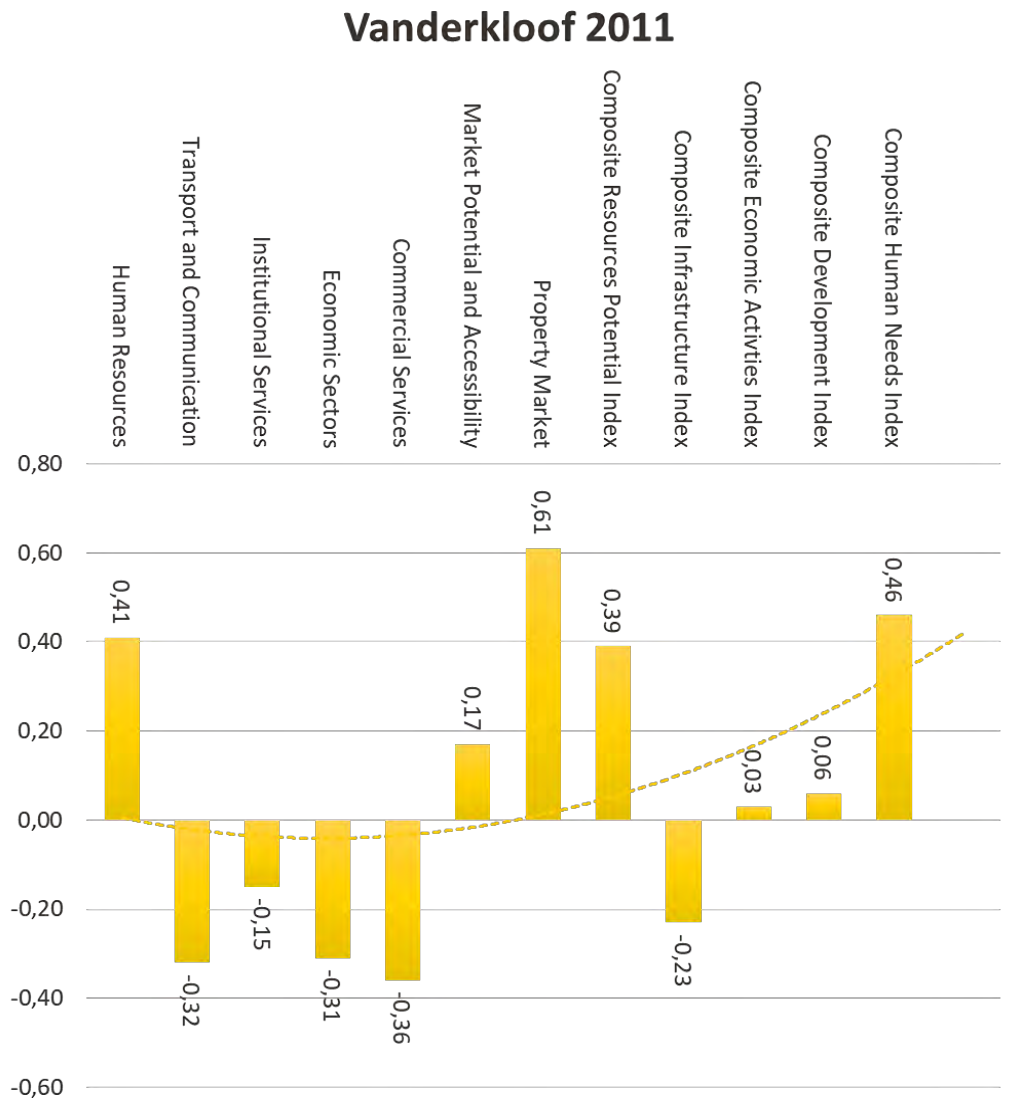

Prieska 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,26
0,08
0,07
0,70
0,21
0,16
0,26
-0,56
-0,09
0,38
0,02
0,11
0,10
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80

4.15 SUTHERLAND

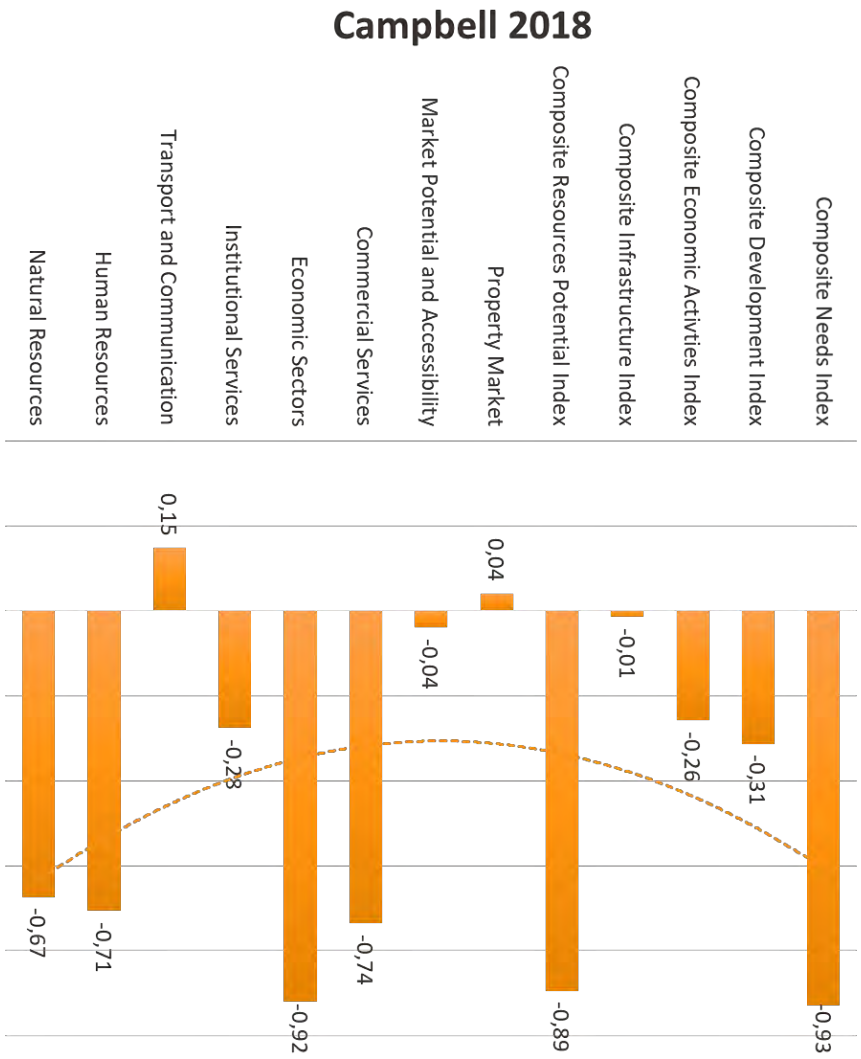


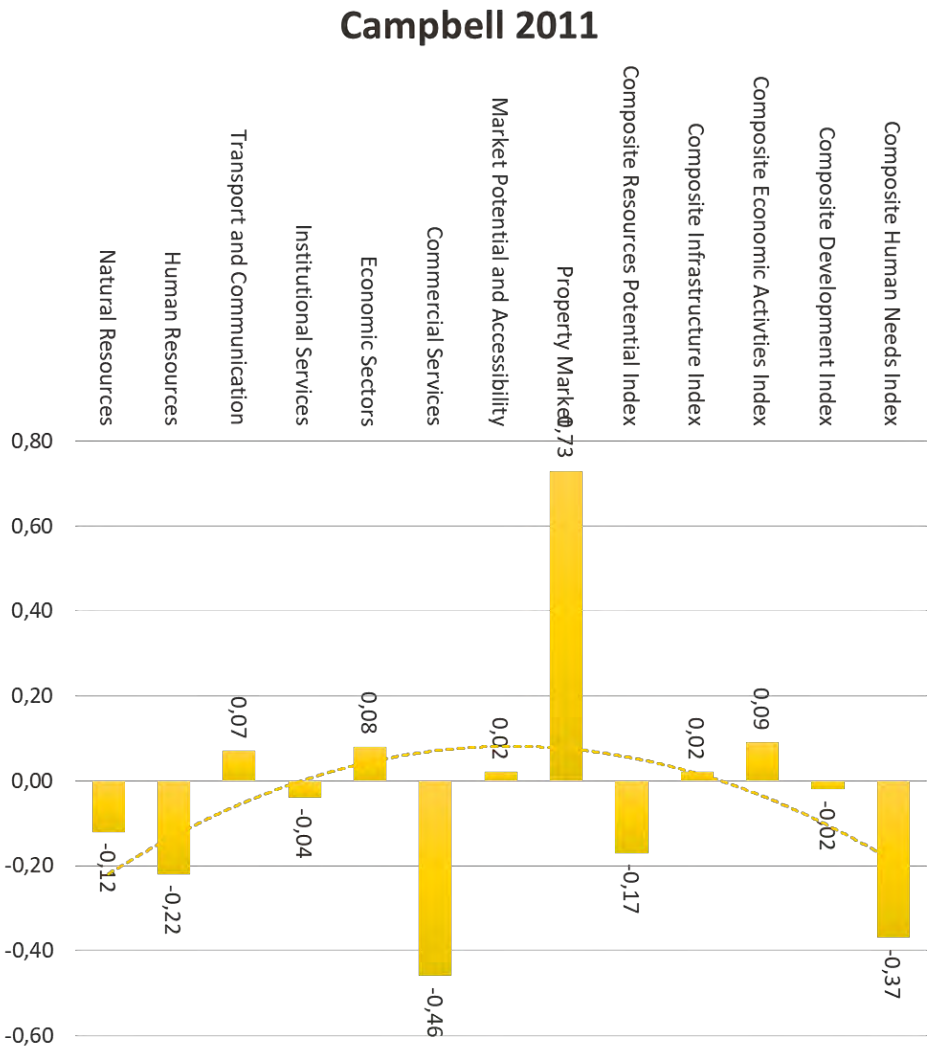


4.16 VANDERKLOOF

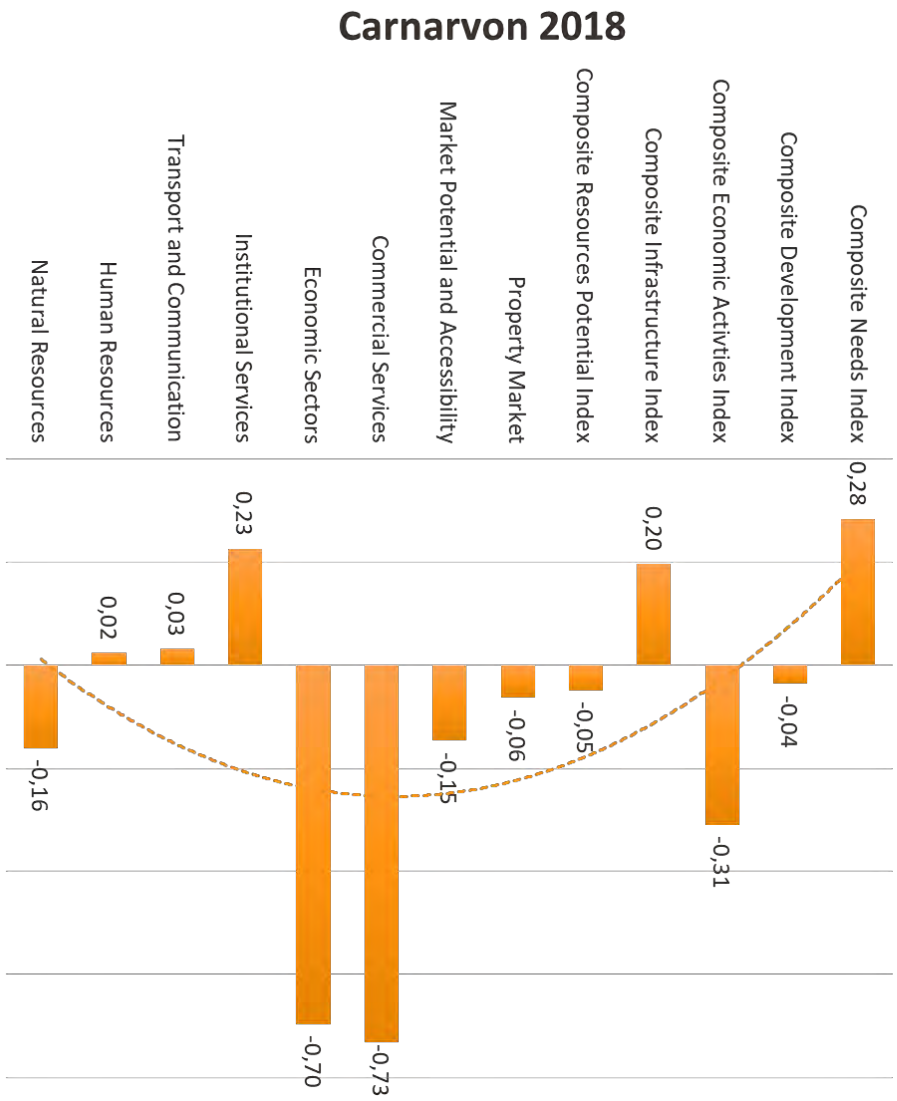


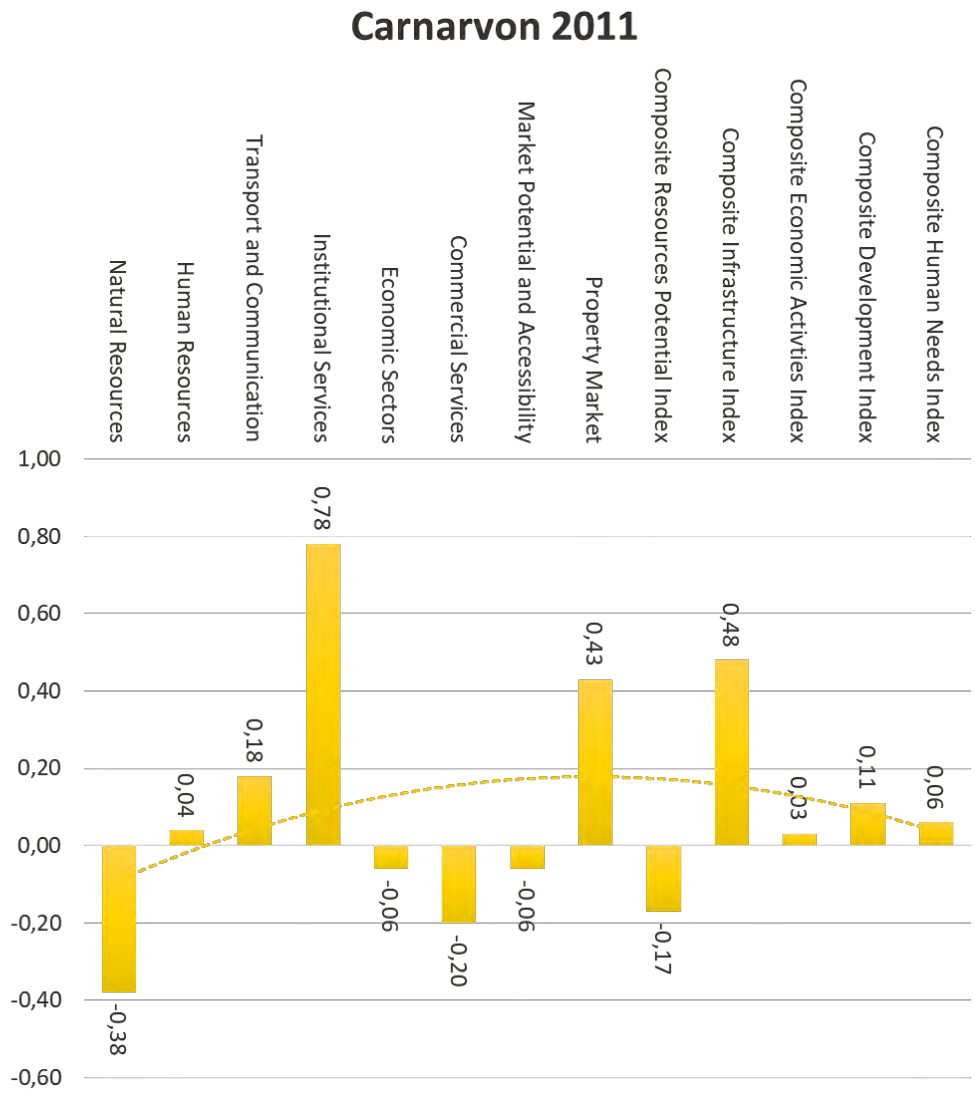
4.17 CAMPBELL



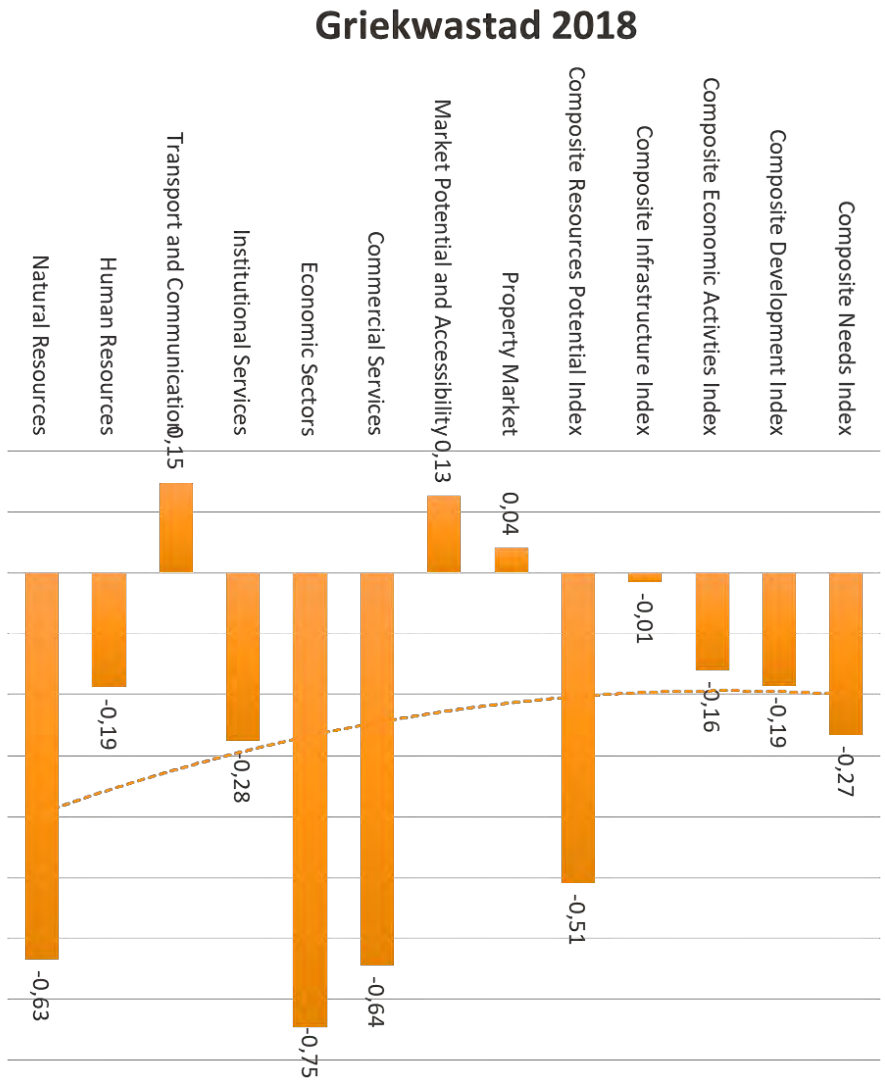


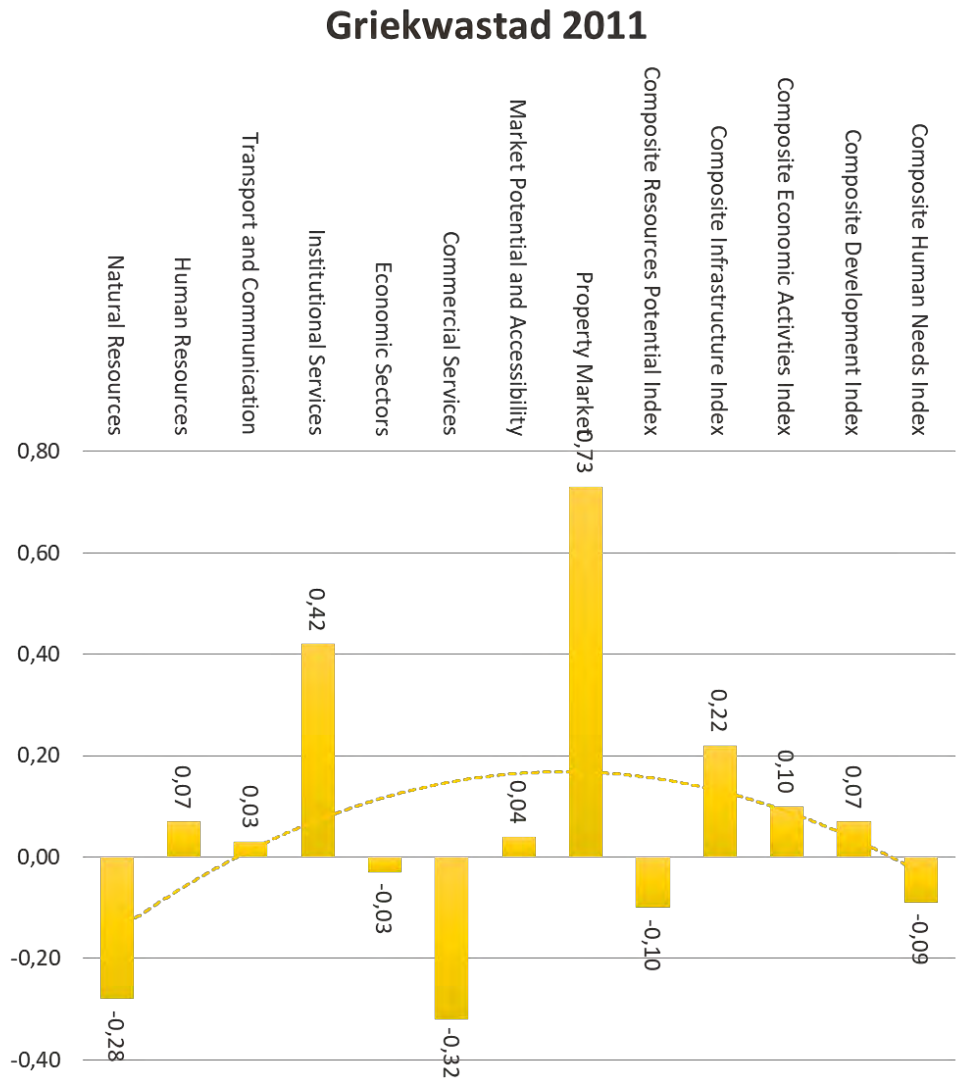
4.18 CARNARVON



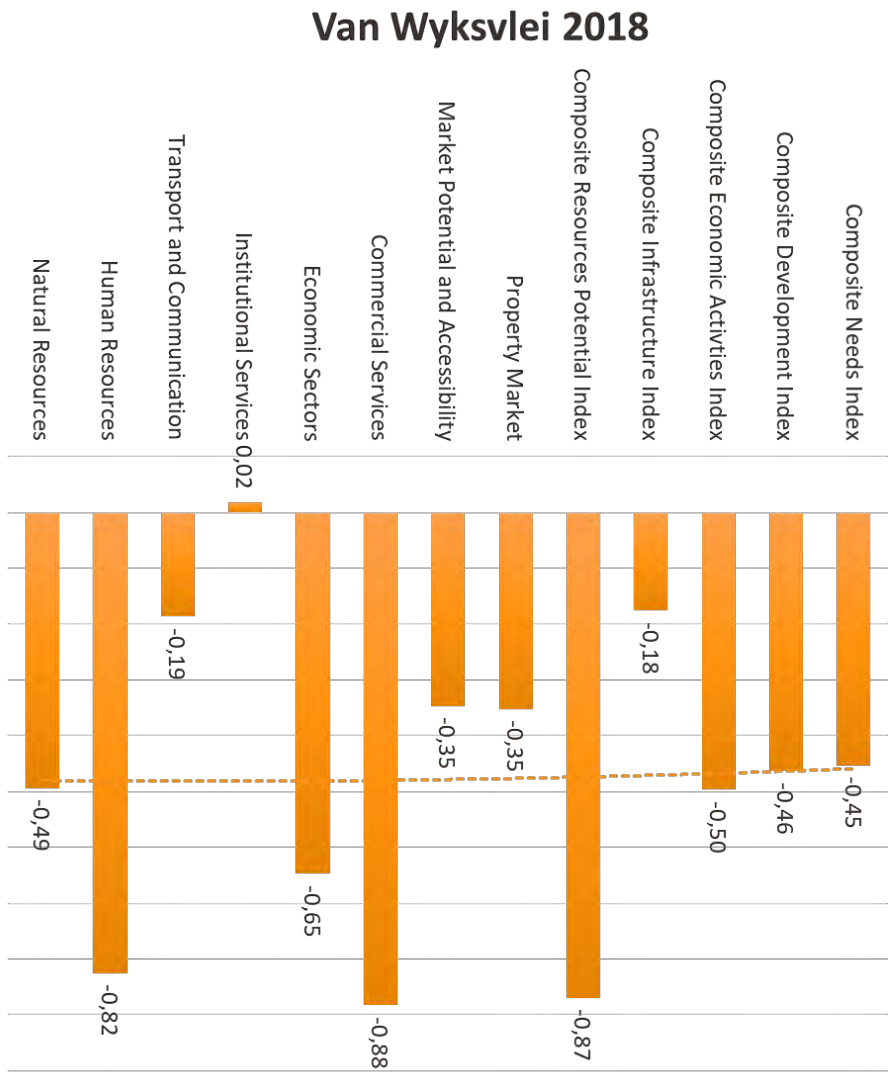


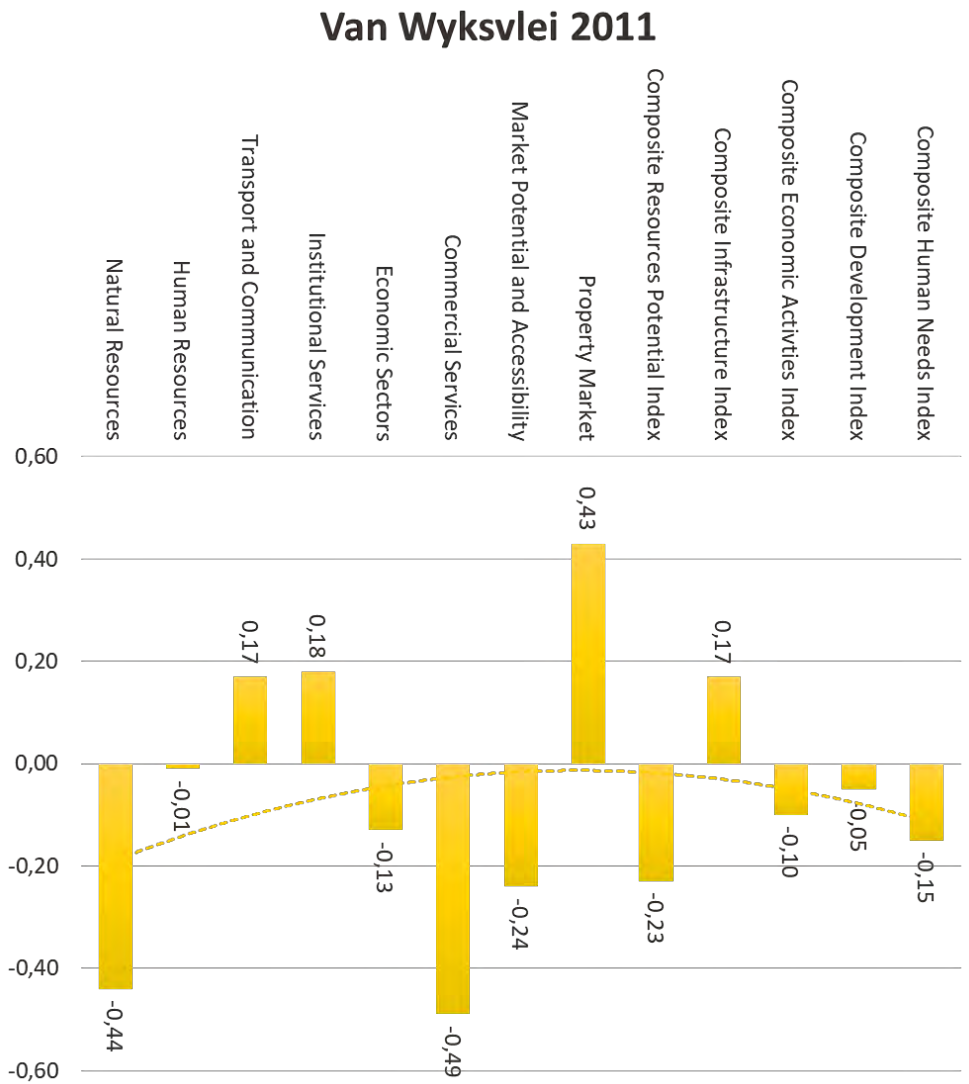
4.19 GRIEKWASTAD



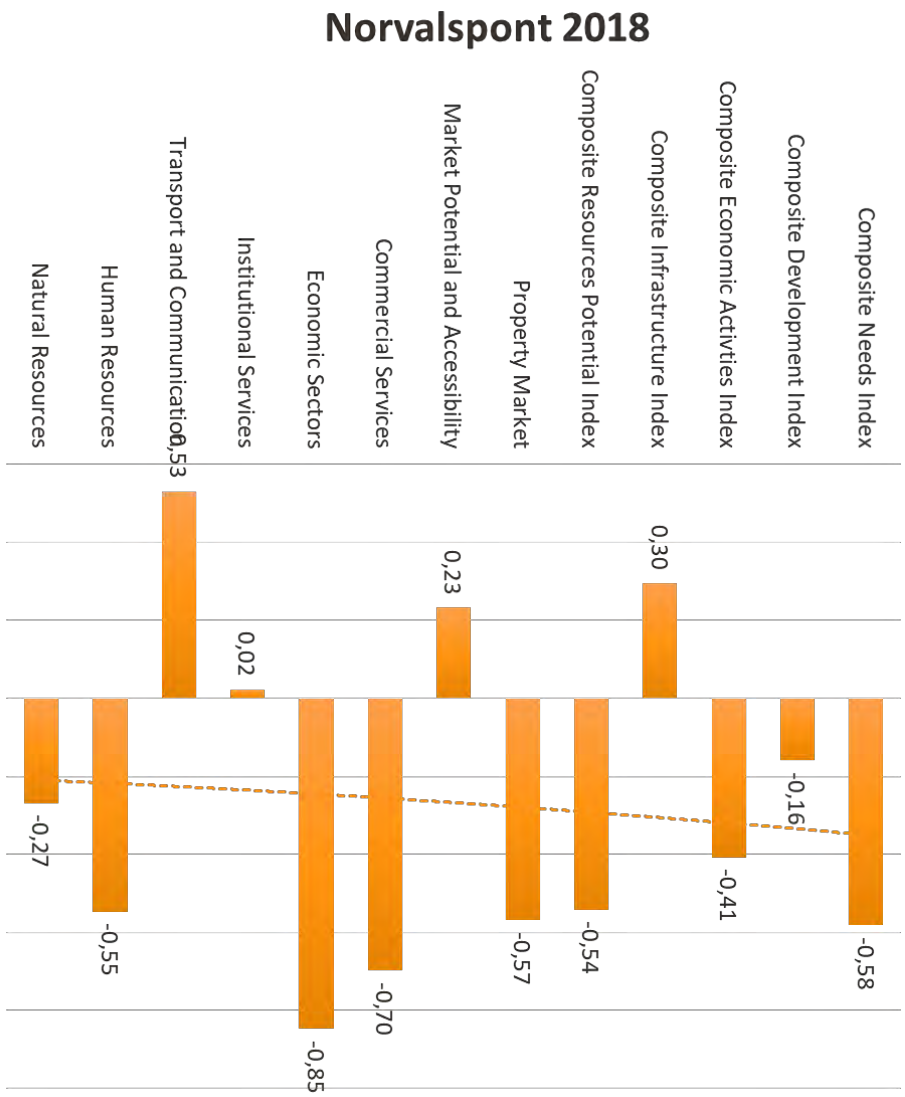


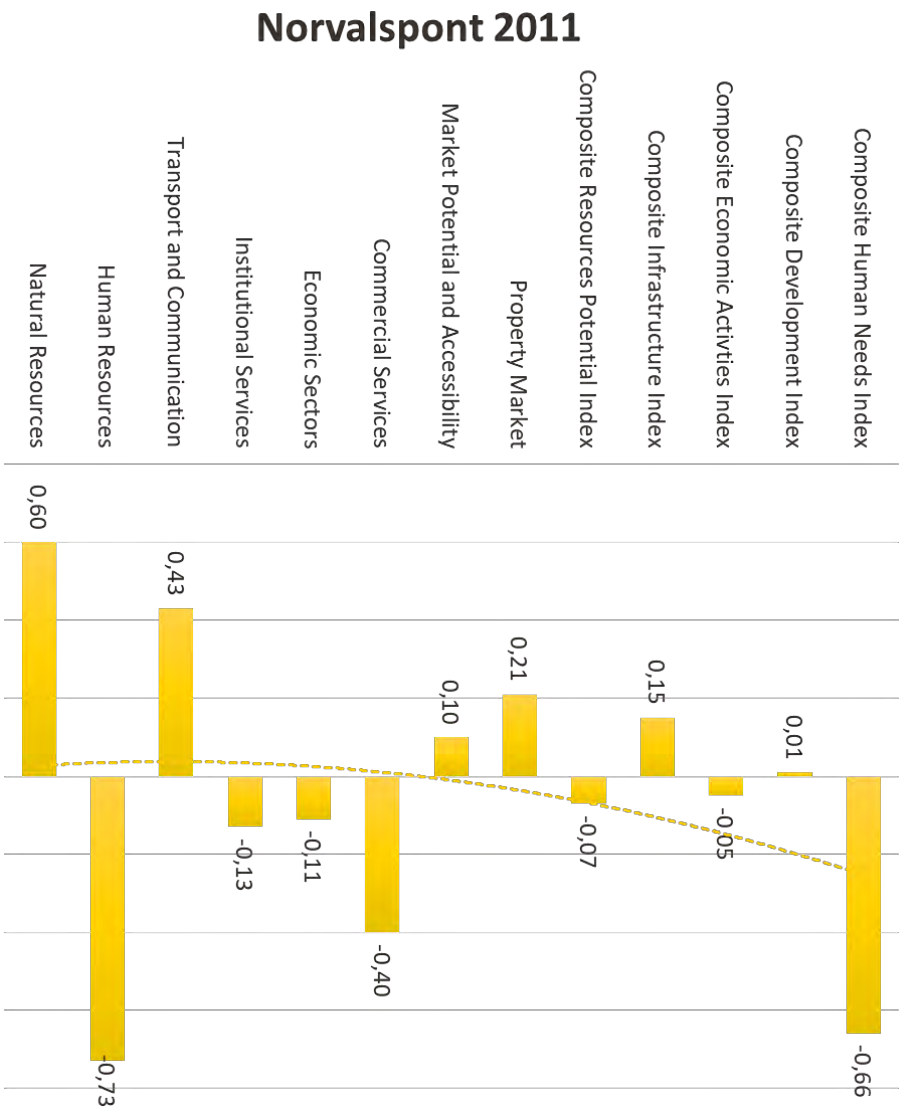
4.20 VAN WYKSVLEI





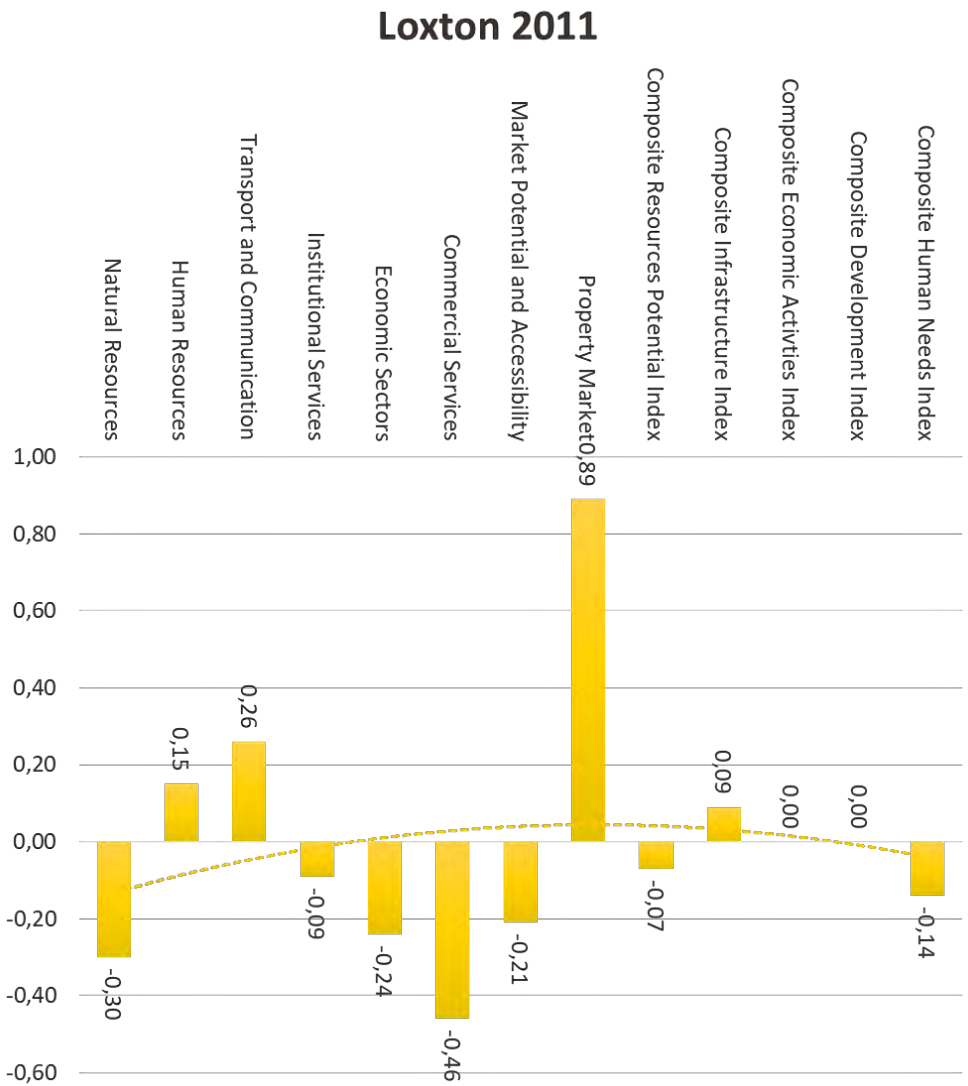
4.21 NORVALSPONT



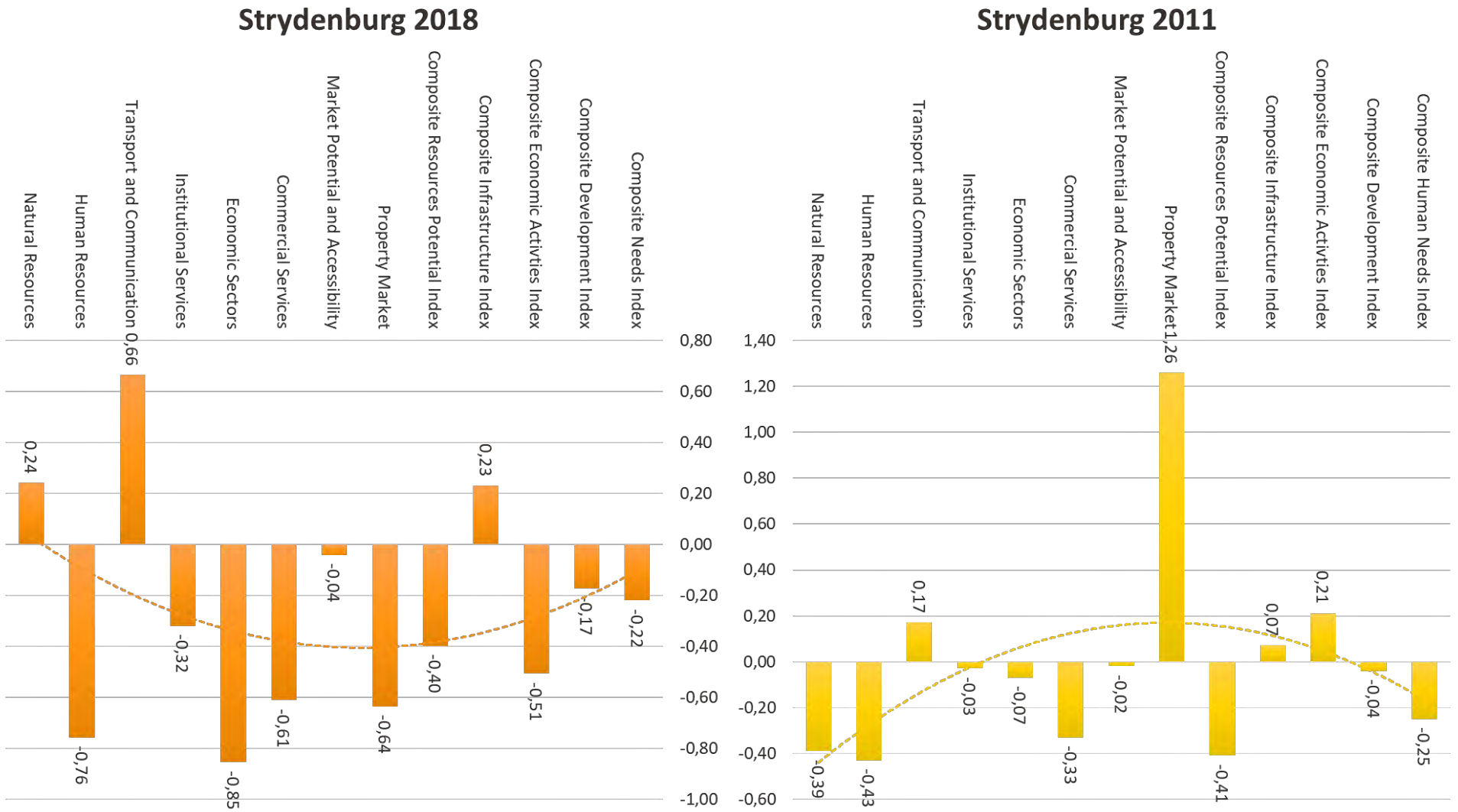


4.22 LOXTON

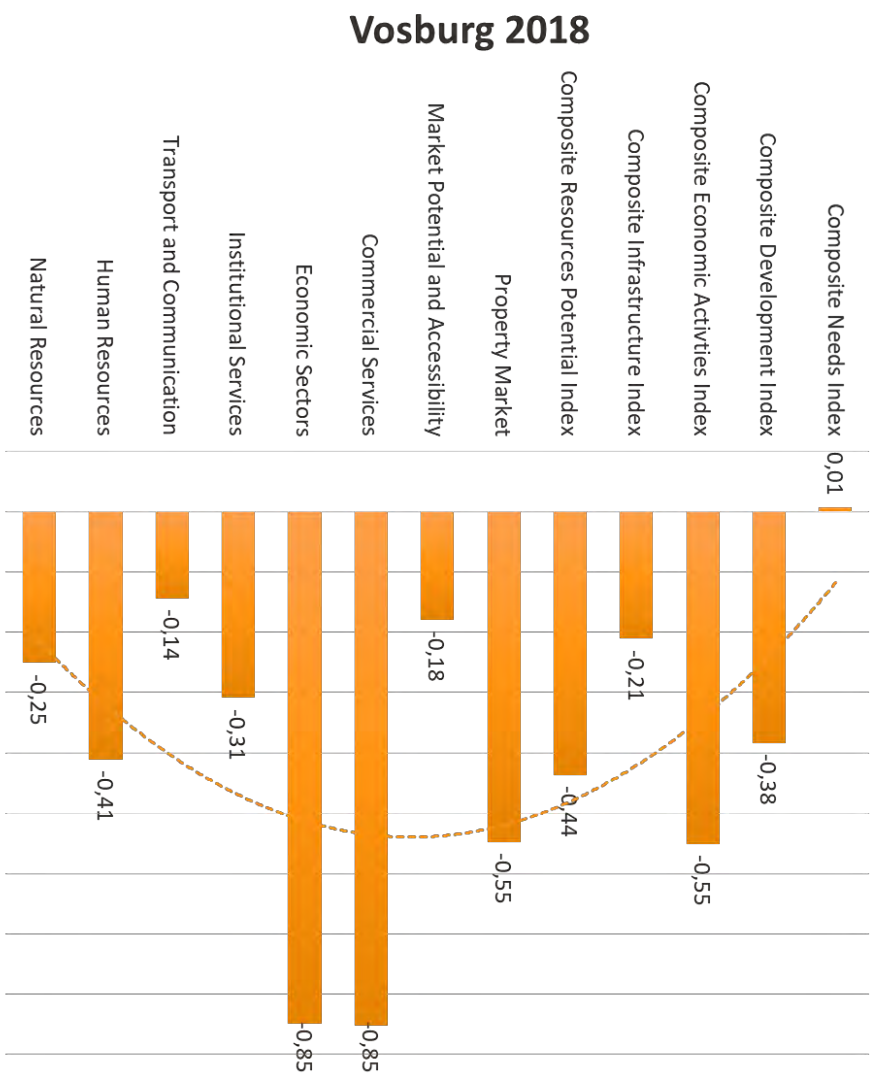

Loxton 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,73
-0,41
-0,03
-0,43
-0,86
-0,85
-0,33
-0,66
-0,72
-0,13
-0,64
-0,44
0,30
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00

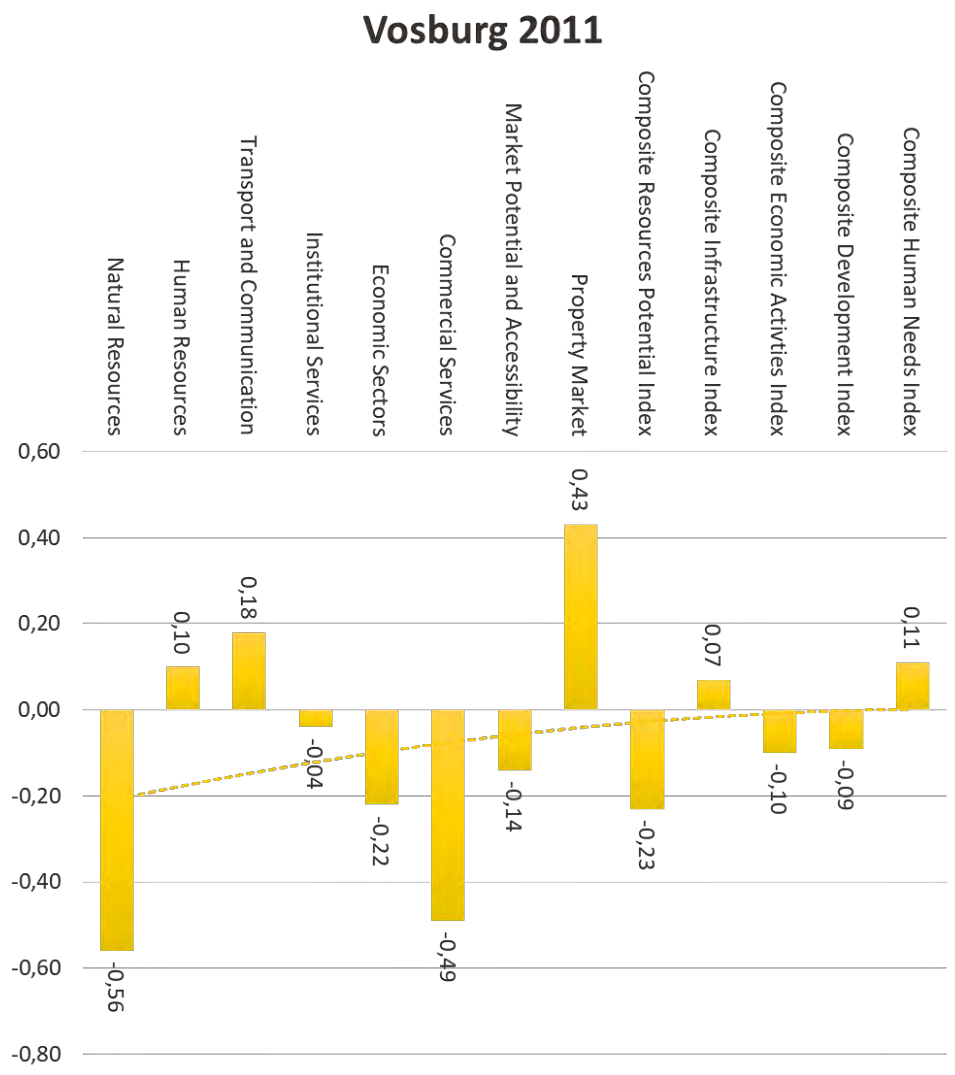

Loxton 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,30
0,15
0,26
-0,09
-0,24
-0,46
-0,21
0,89
-0,07
0,09
0,00
0,00
-0,14
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60

4.23 STRYDENBURG



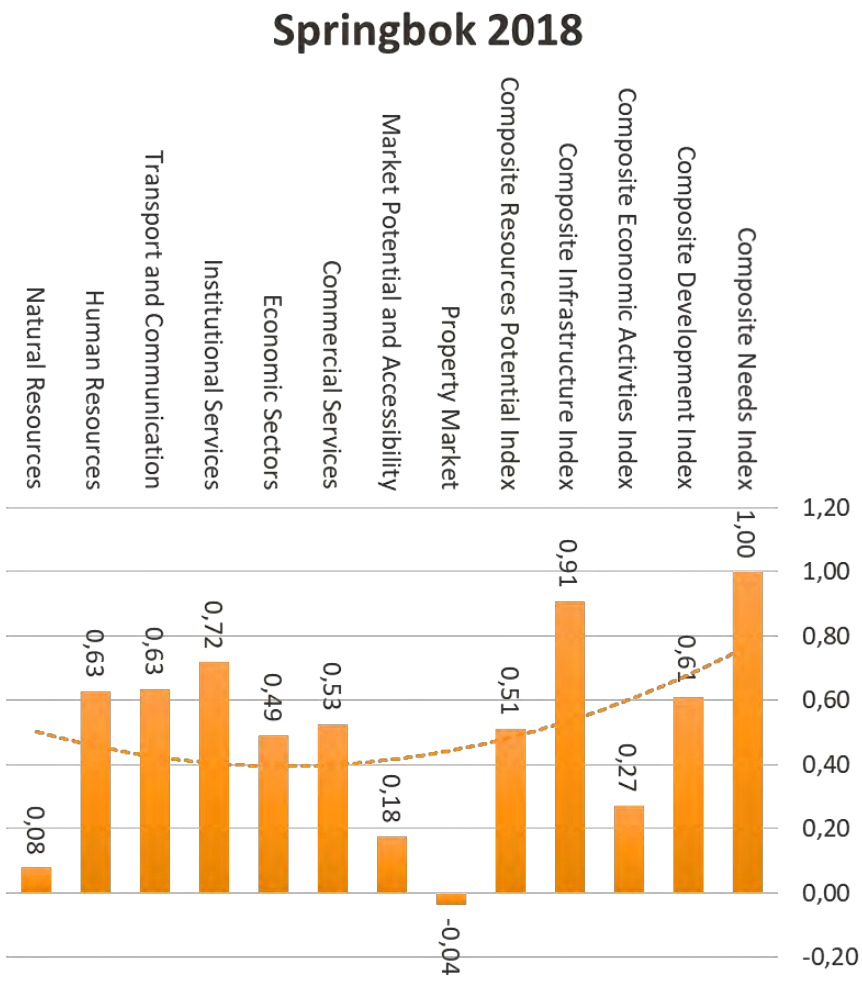
4.24 VOSBURG

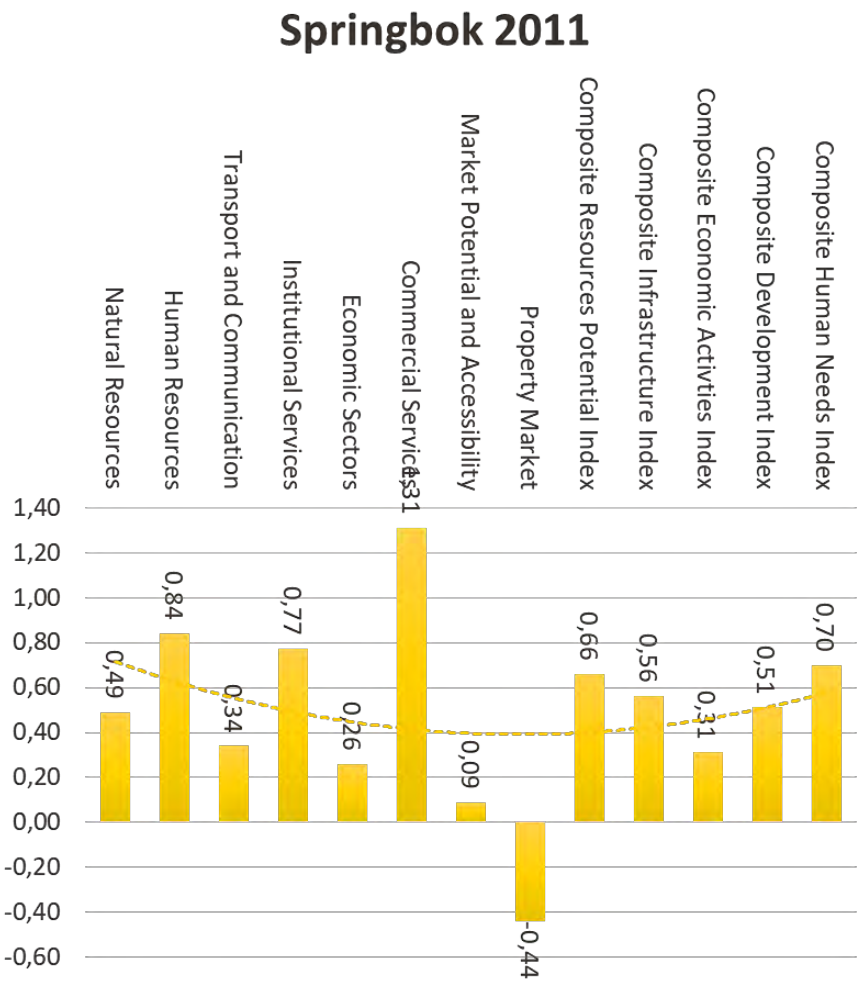

Vosburg 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,25
-0,41
-0,14
-0,31
-0,85
-0,85
-0,18
-0,55
-0,44
-0,21
-0,55
-0,38
0,01
0,10
0,00
-0,10
-0,20
-0,30
-0,40
-0,50
-0,60
-0,70
-0,80
-0,90


Vosburg 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,56
0,10
0,18
-0,04
-0,22
-0,49
-0,14
0,43
-0,23
0,07
-0,10
-0,09
0,11
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80

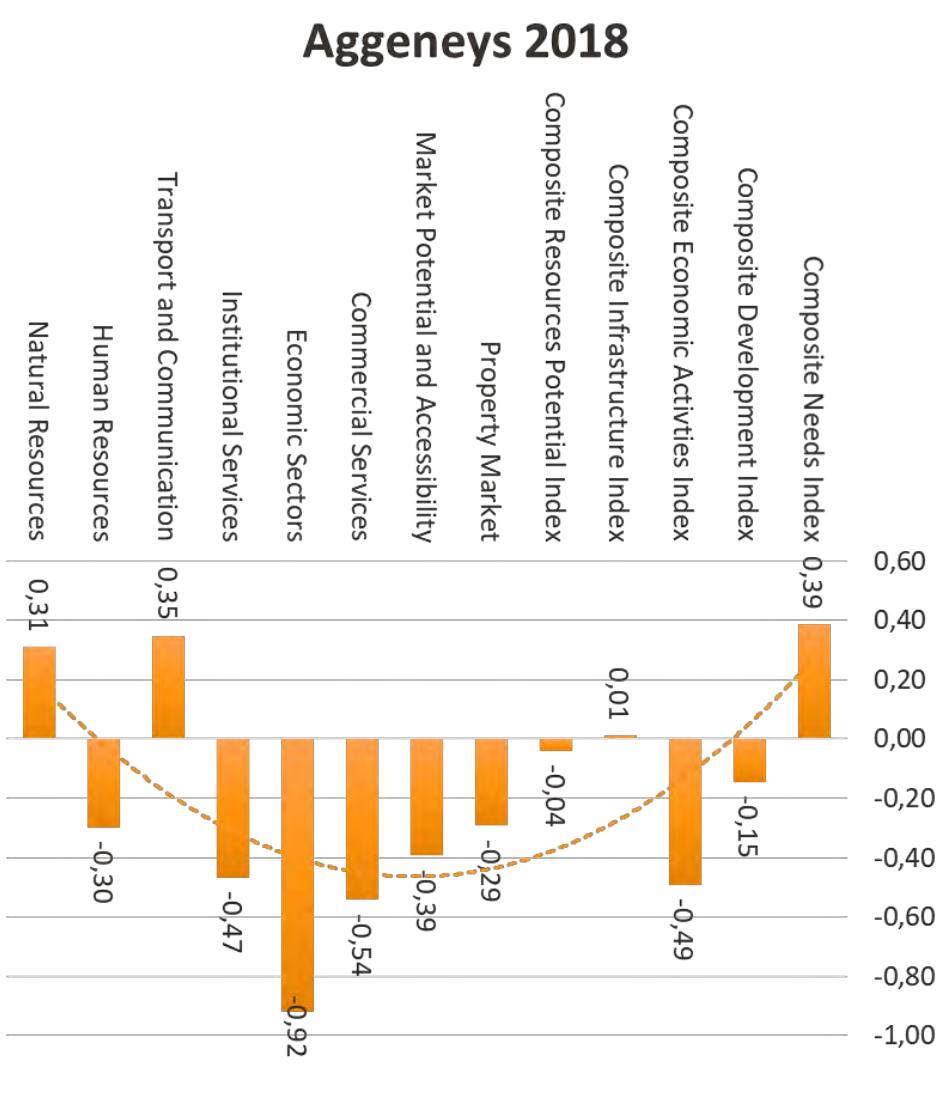
5 NAMAKWA TOWN DEVELOPMENT PROFILES

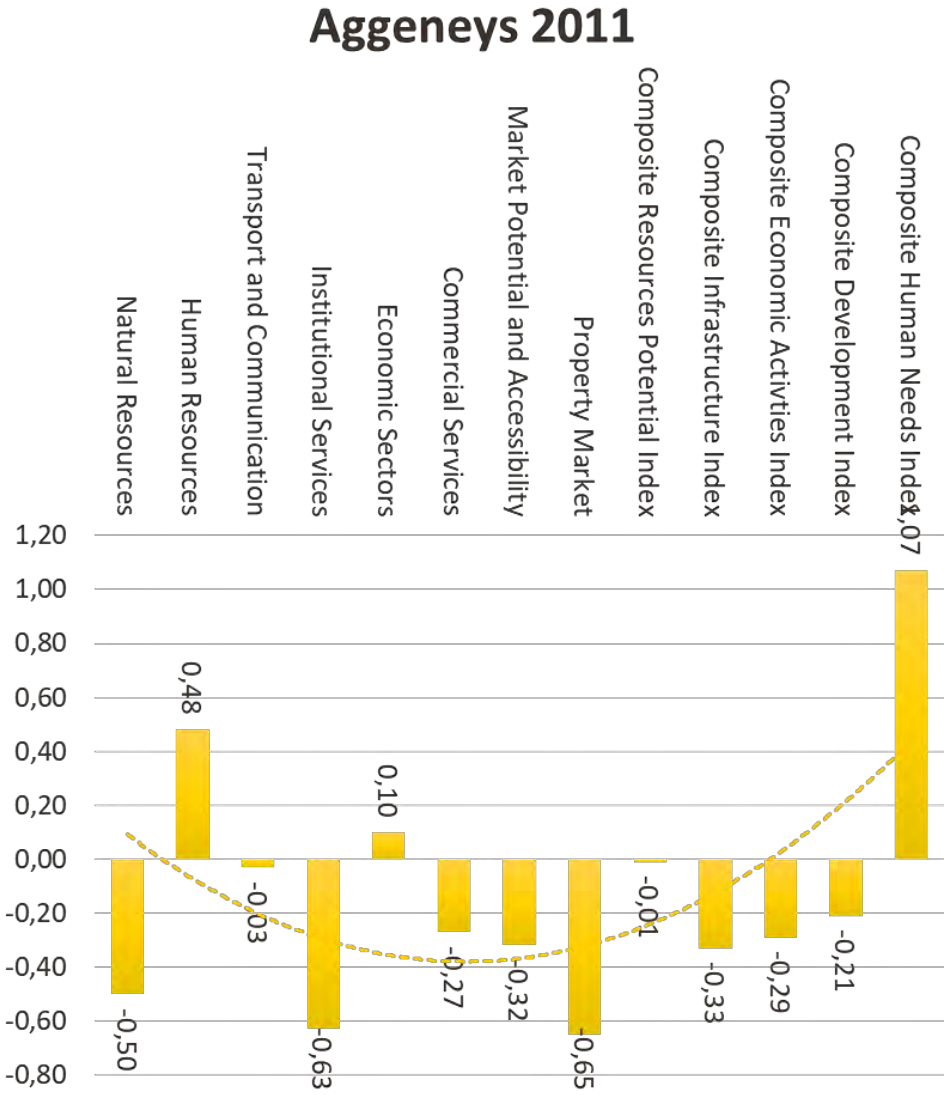
5.1 SPRINGBOK



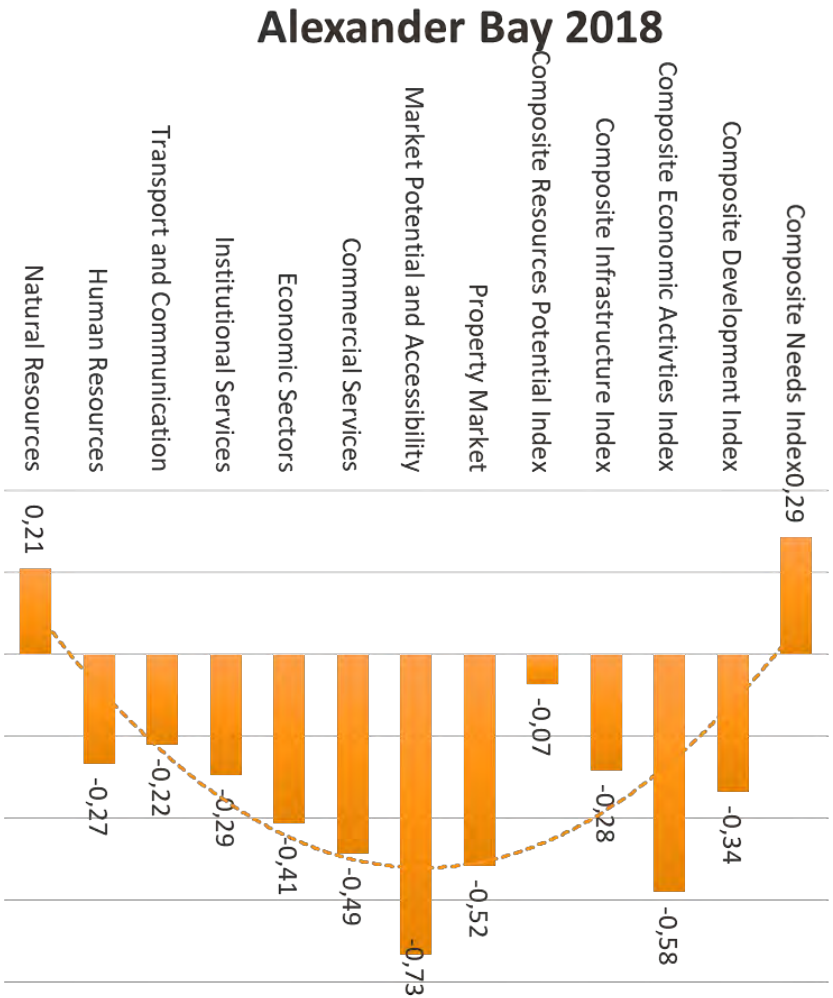


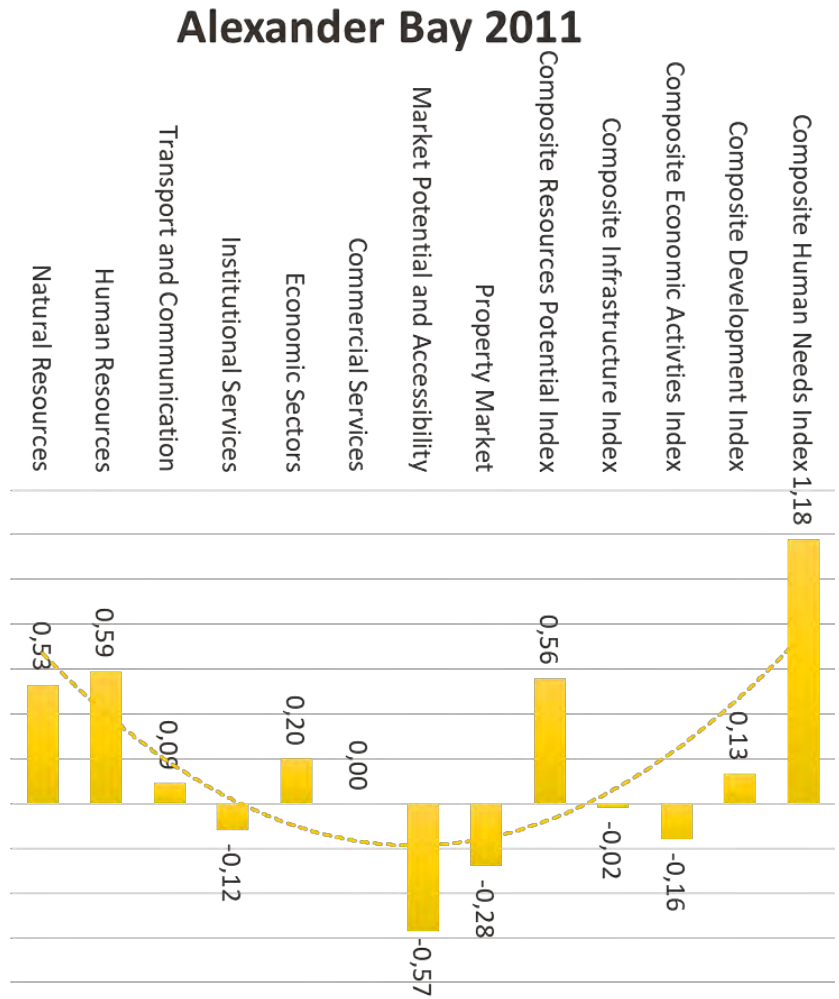
5.2 AGGENEYS


Aggeneys 2018
Natural Resources 0,31
Human Resources -0,30
Transport and Communication 0,35
Institutional Services -0,47
Economic Sectors -0,92
Commercial Services -0,54
Market Potential and Accessibility -0,39
Property Market -0,29
Composite Resources Potential Index -0,04
Composite Infrastructure Index 0,01
Composite Economic Activties Index -0,49
Composite Development Index -0,15
Composite Needs Index 0,39
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00

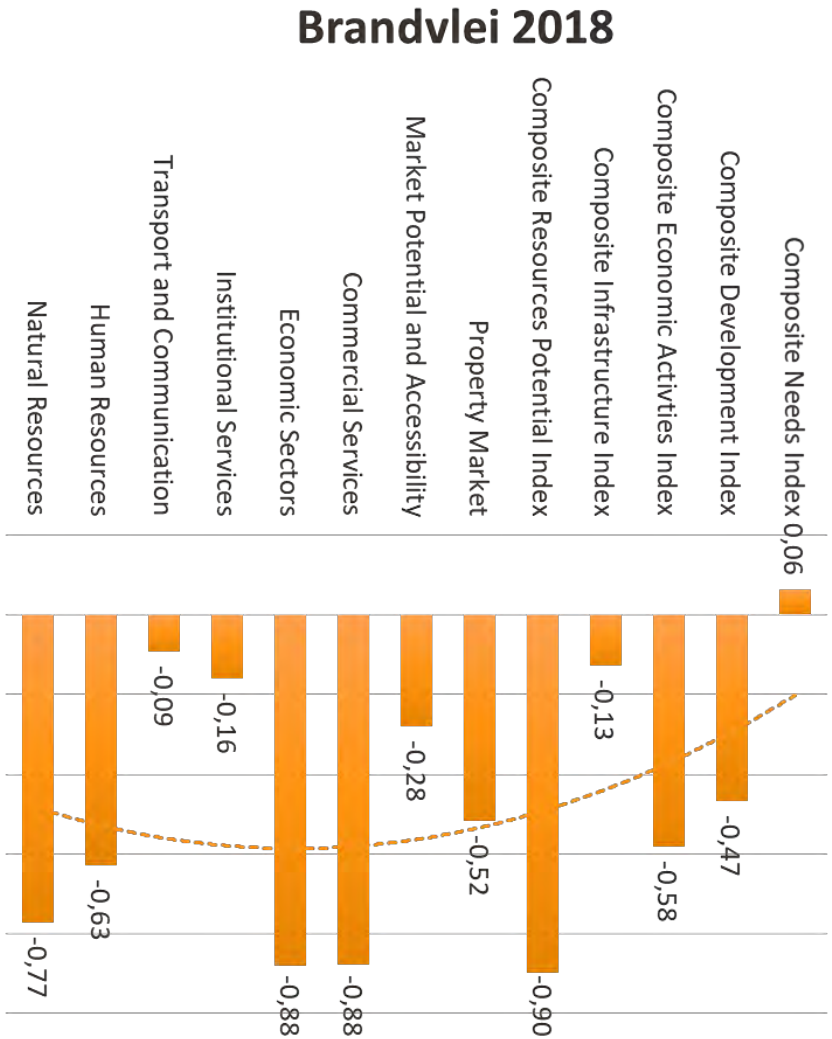

Aggeneys 2011
Natural Resources -0,50
Human Resources 0,48
Transport and Communication -0,03
Institutional Services -0,63
Economic Sectors 0,10
Commercial Services -0,27
Market Potential and Accessibility -0,32
Property Market -0,65
Composite Resources Potential Index -0,01
Composite Infrastructure Index -0,33
Composite Economic Activties Index -0,29
Composite Development Index -0,21
Composite Human Needs Index 1,07
1,20
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80

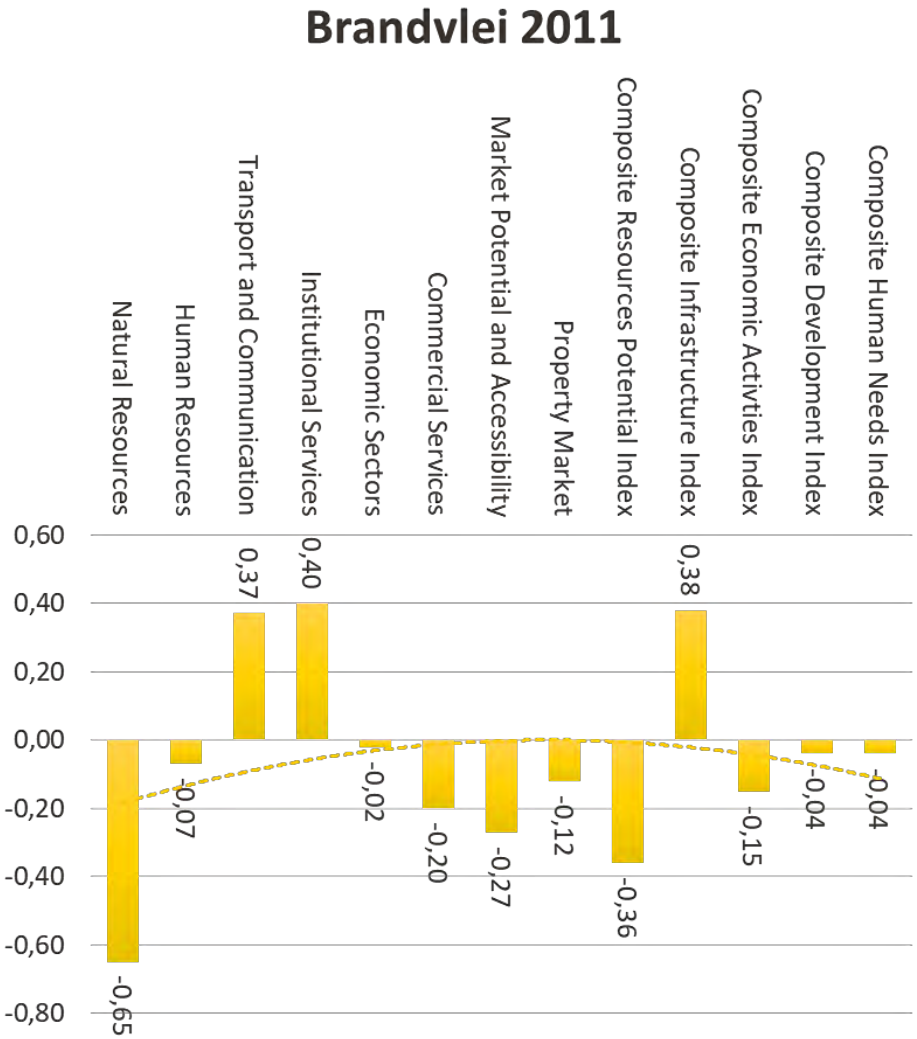
5.3 ALEXANDER BAY



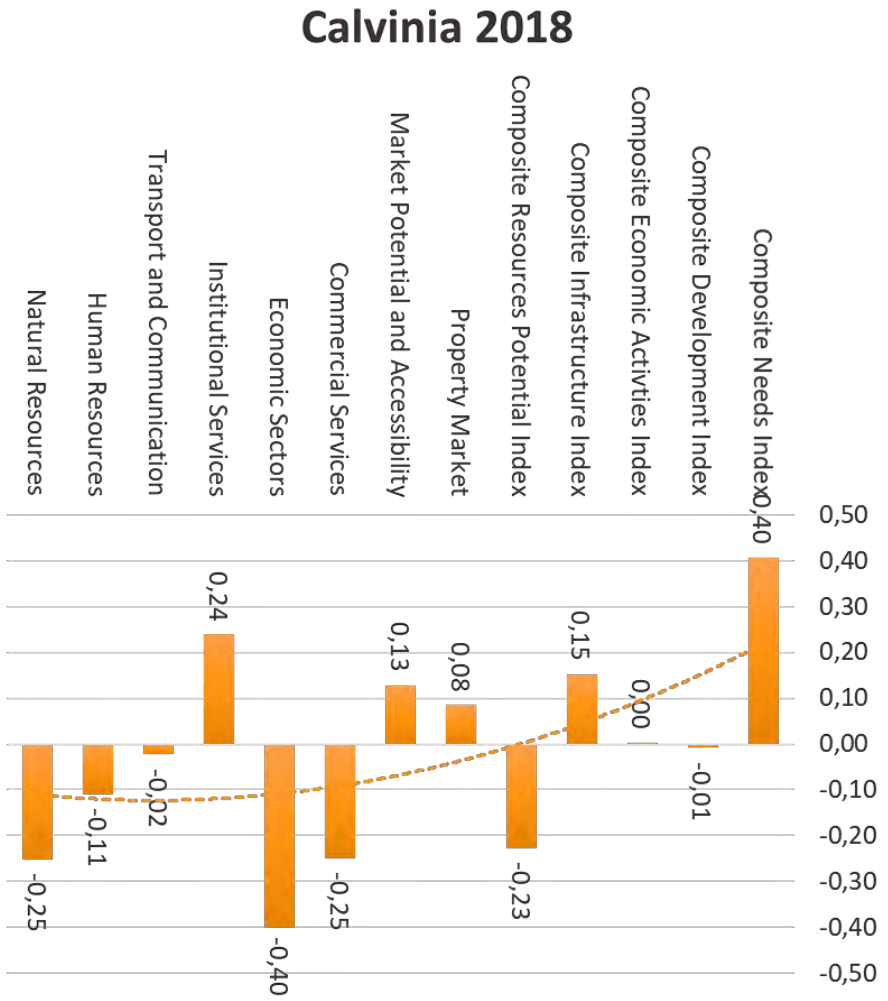


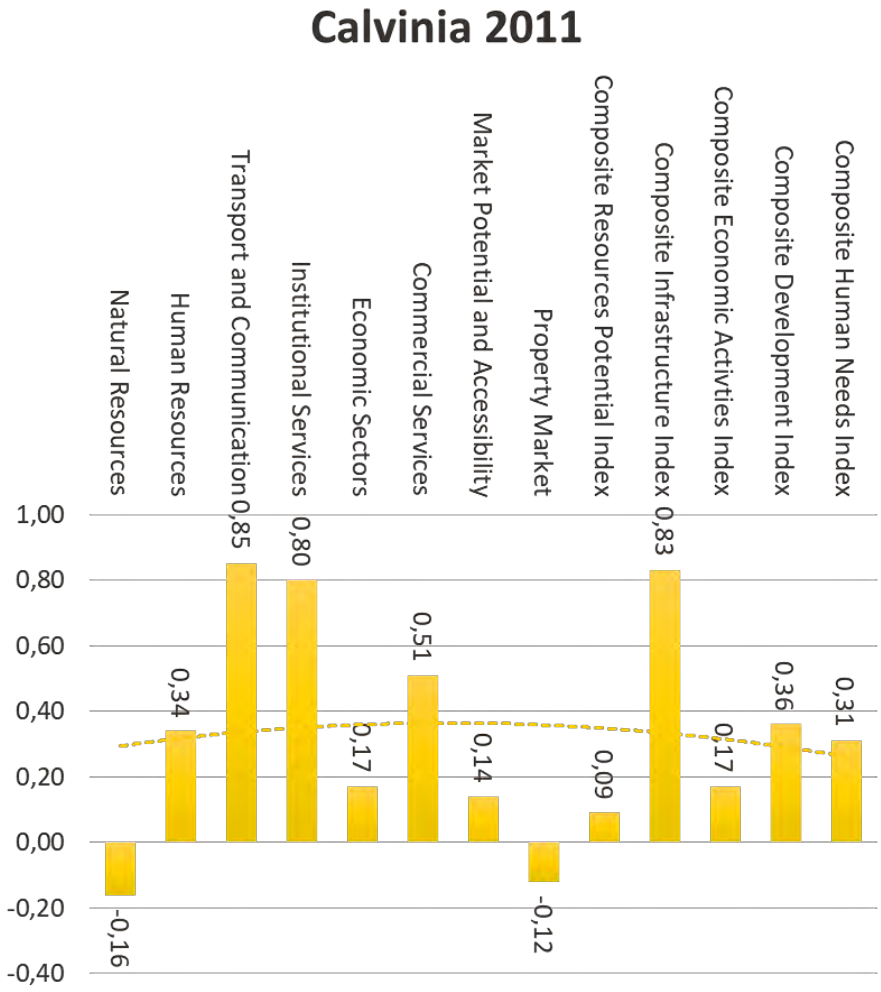
5.4 BRANDVLEI



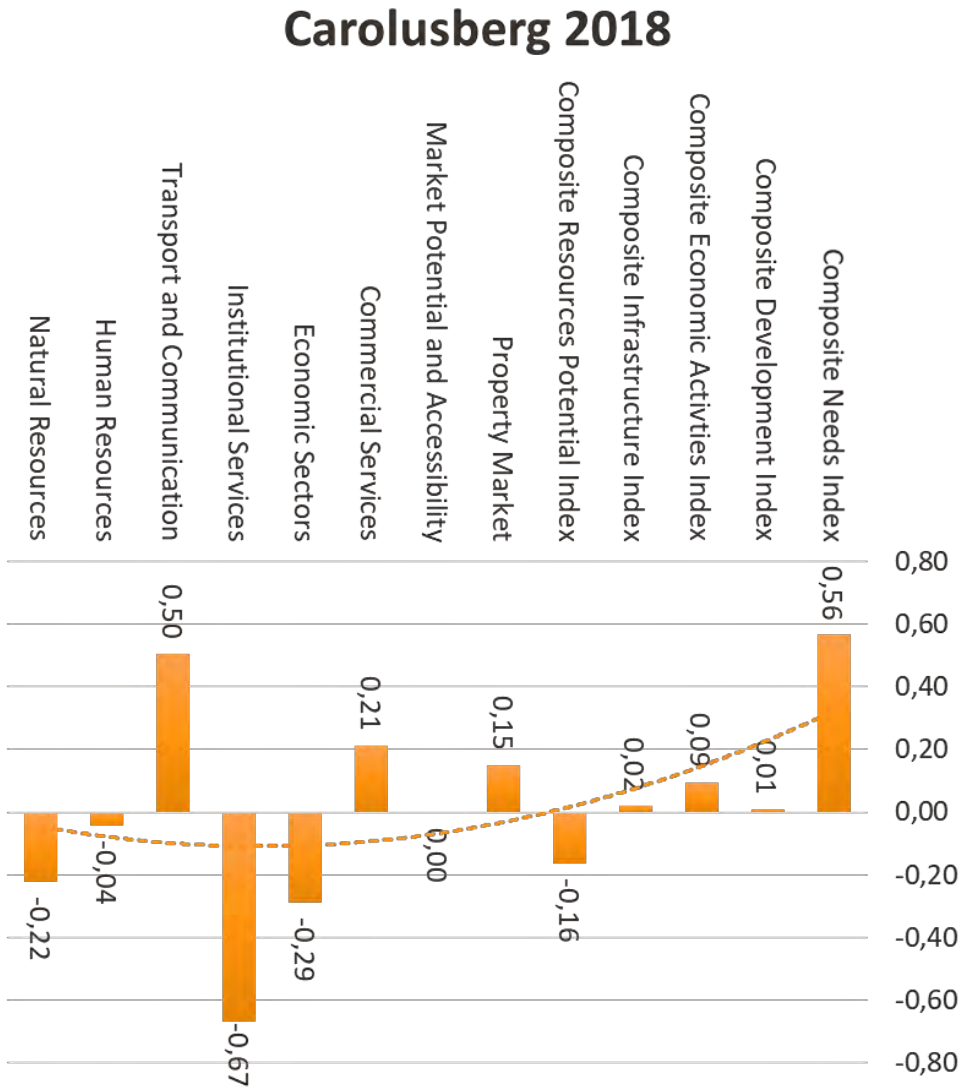


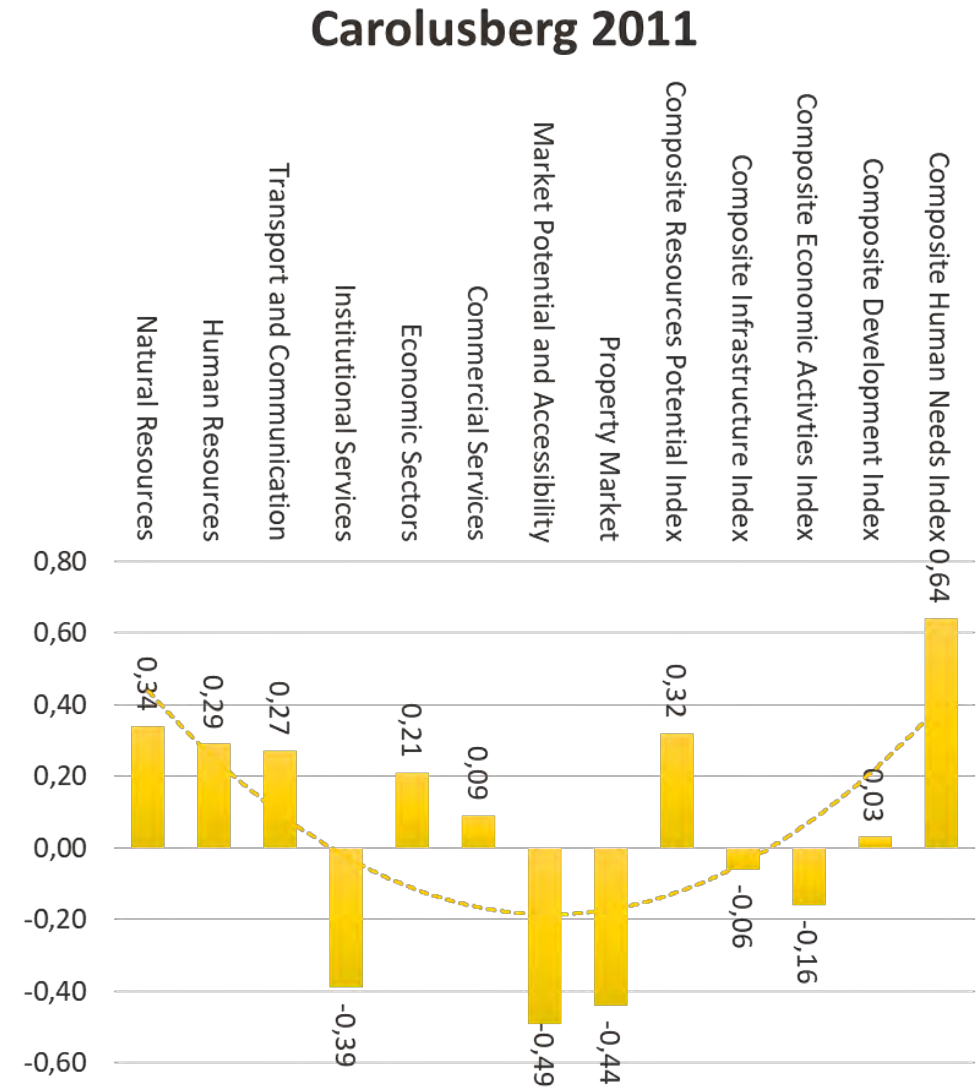
5.5 CALVINIA


Calvinia 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,25
-0,11
-0,02
0,24
-0,40
-0,25
0,13
0,08
-0,23
0,15
0,00
-0,01
0,40
0,50
0,40
0,30
0,20
0,10
0,00
-0,10
-0,20
-0,30
-0,40
-0,50

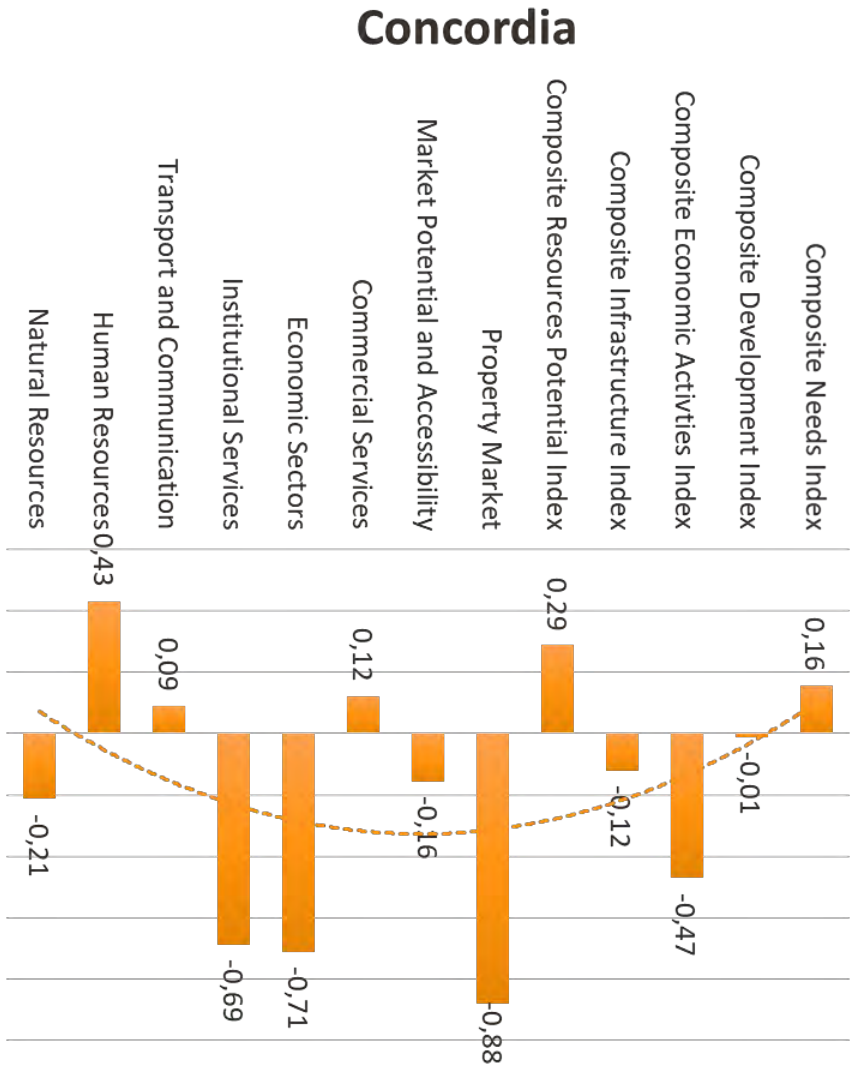

Calvinia 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,16
0,34
0,85
0,80
0,17
0,51
0,14
-0,12
0,09
0,83
0,17
0,36
0,31
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40

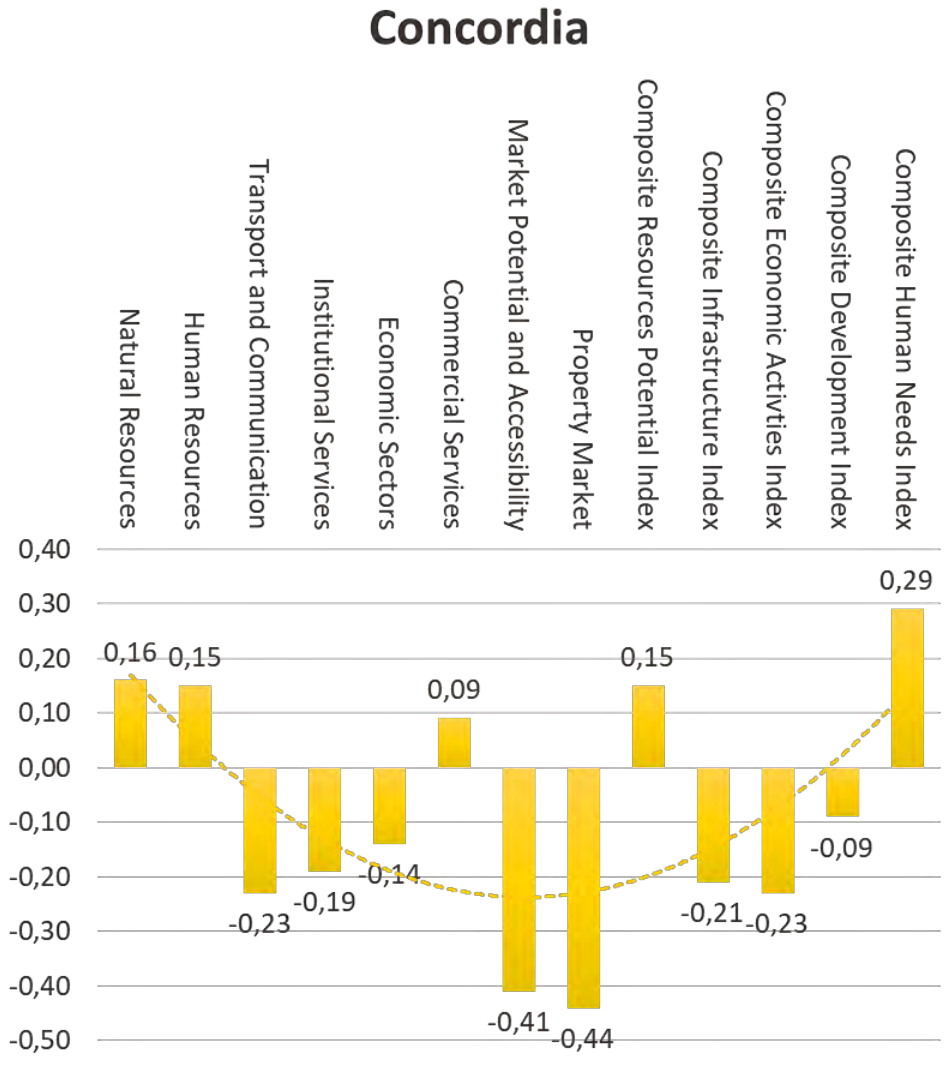
5.6 CAROLUSBERG



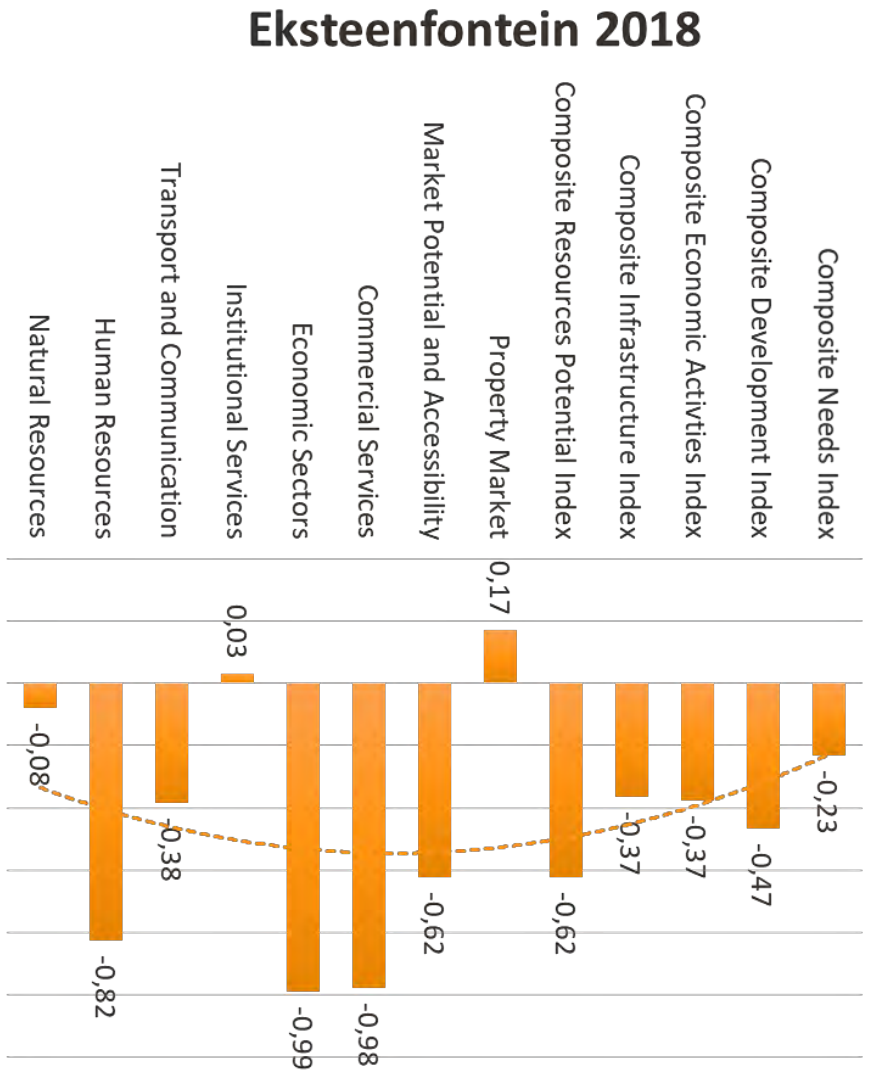


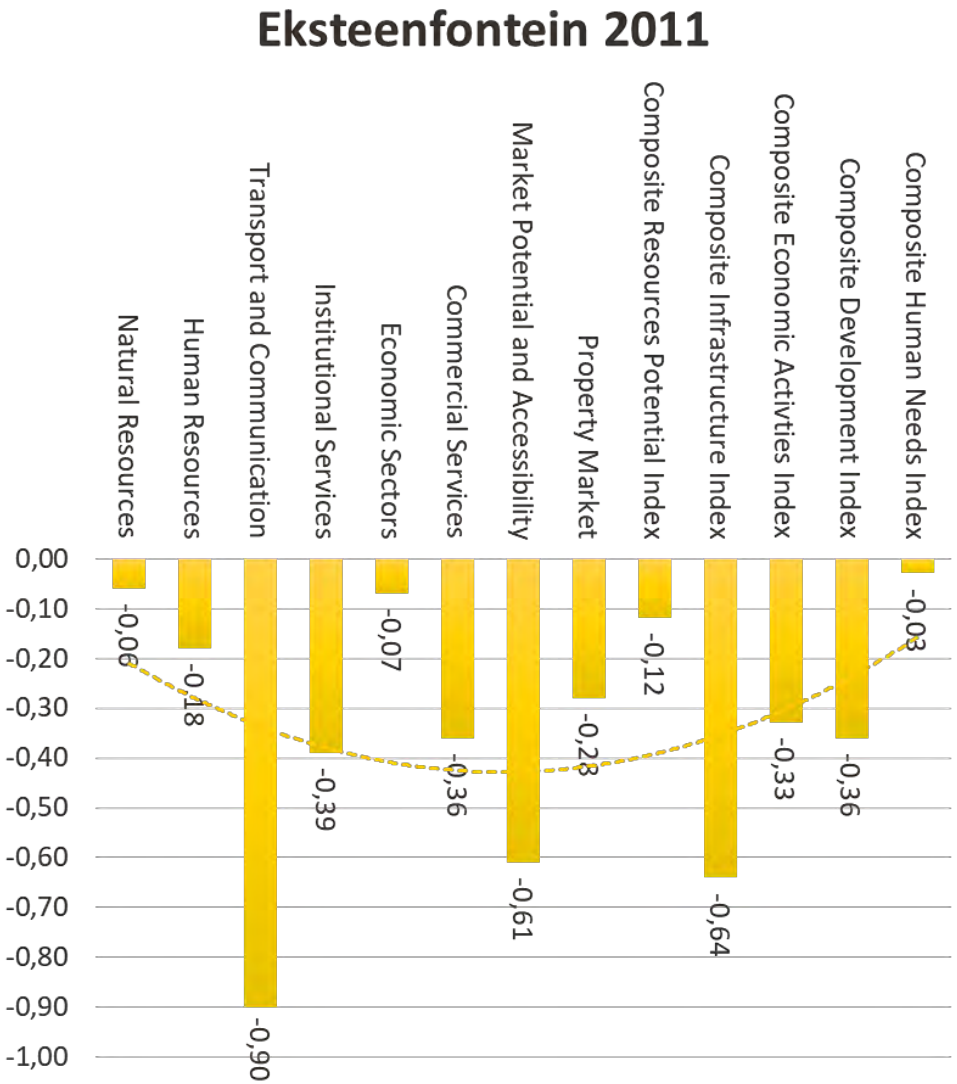
5.7 CONCORDIA



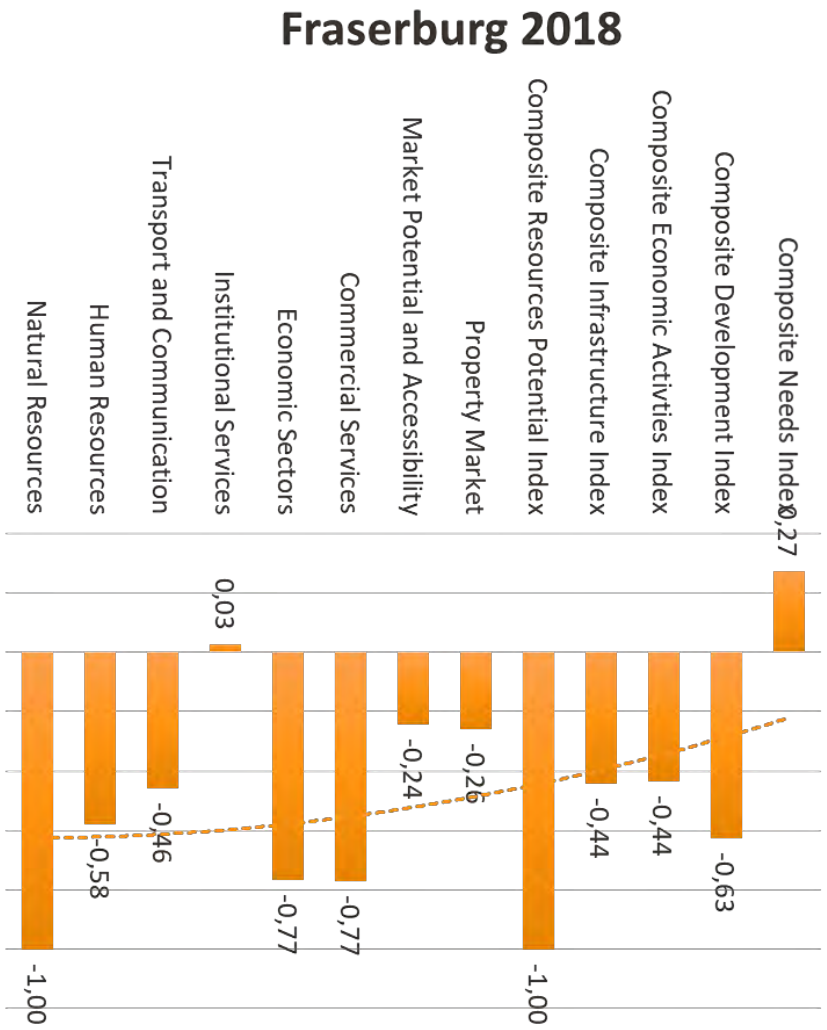


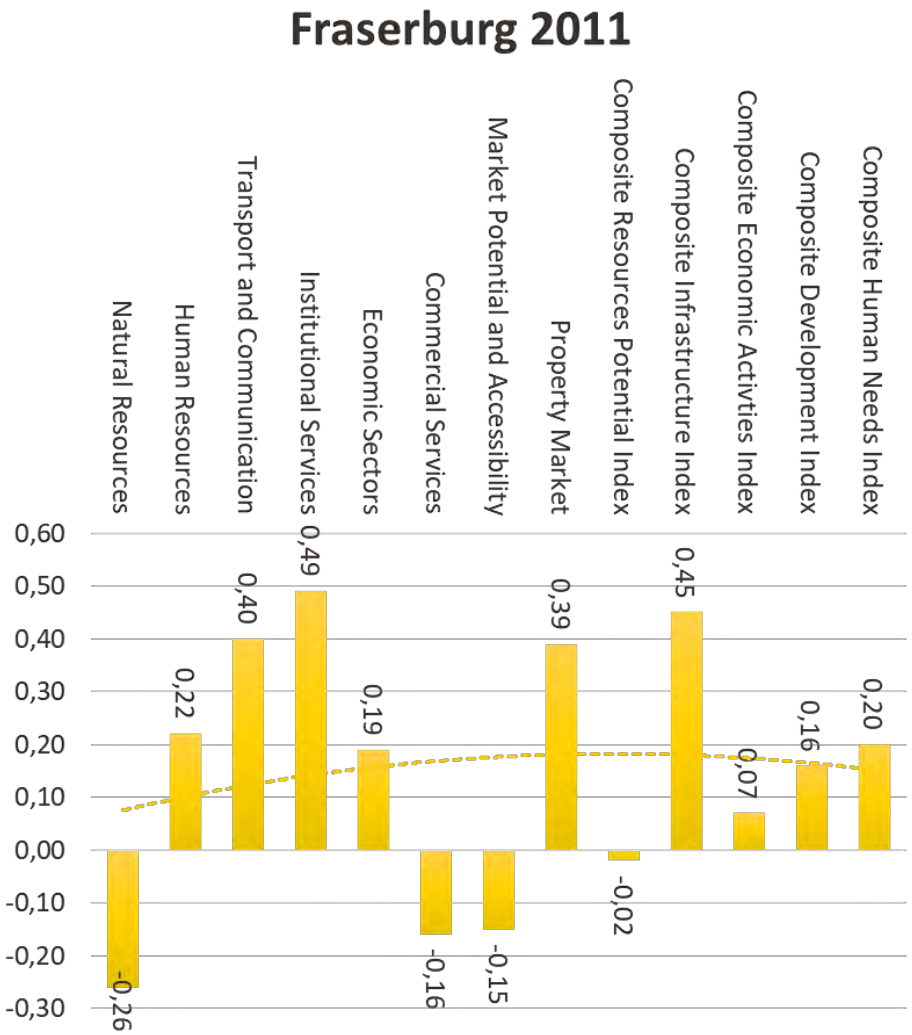
5.8 EKSTEENFONTEIN



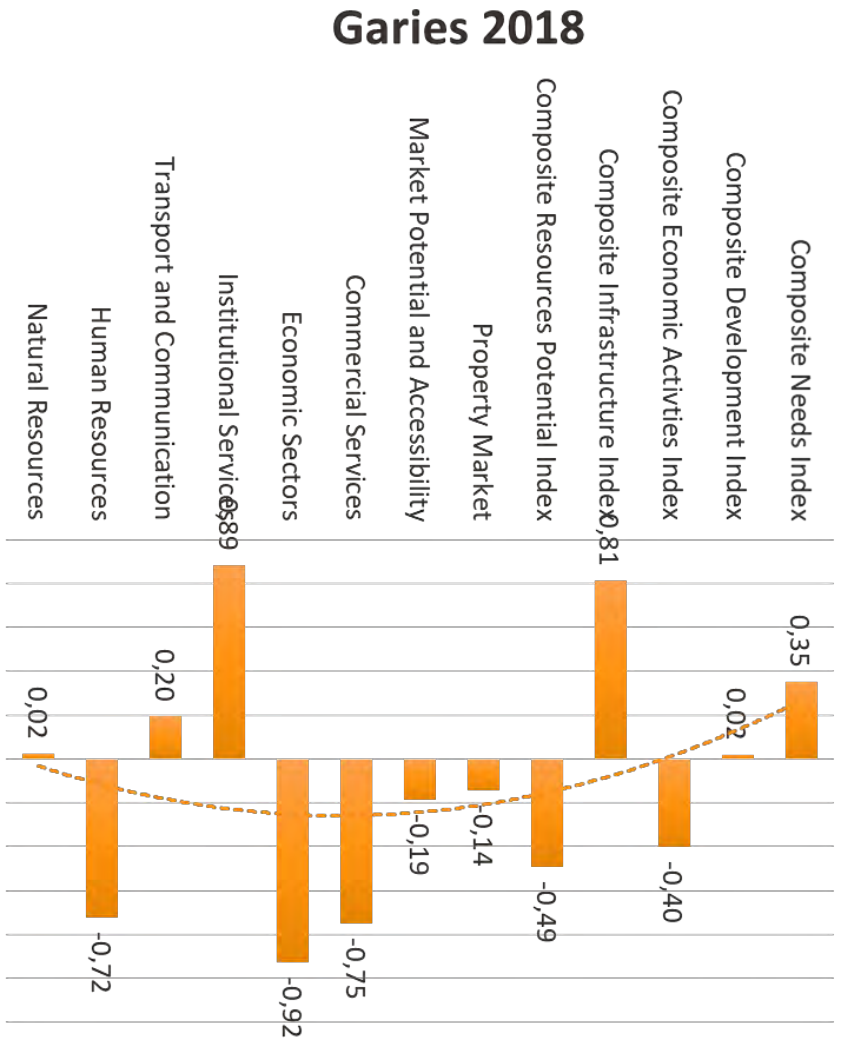


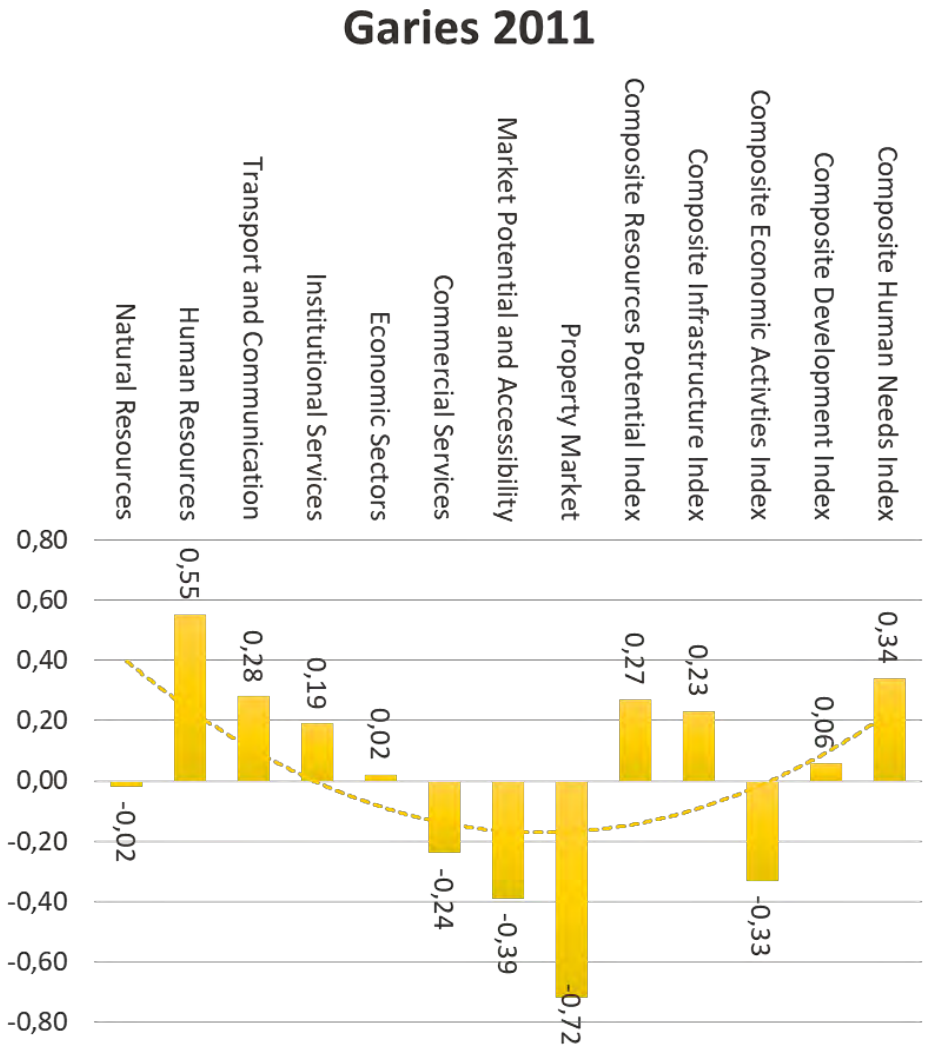
5.9 FRASERBURG



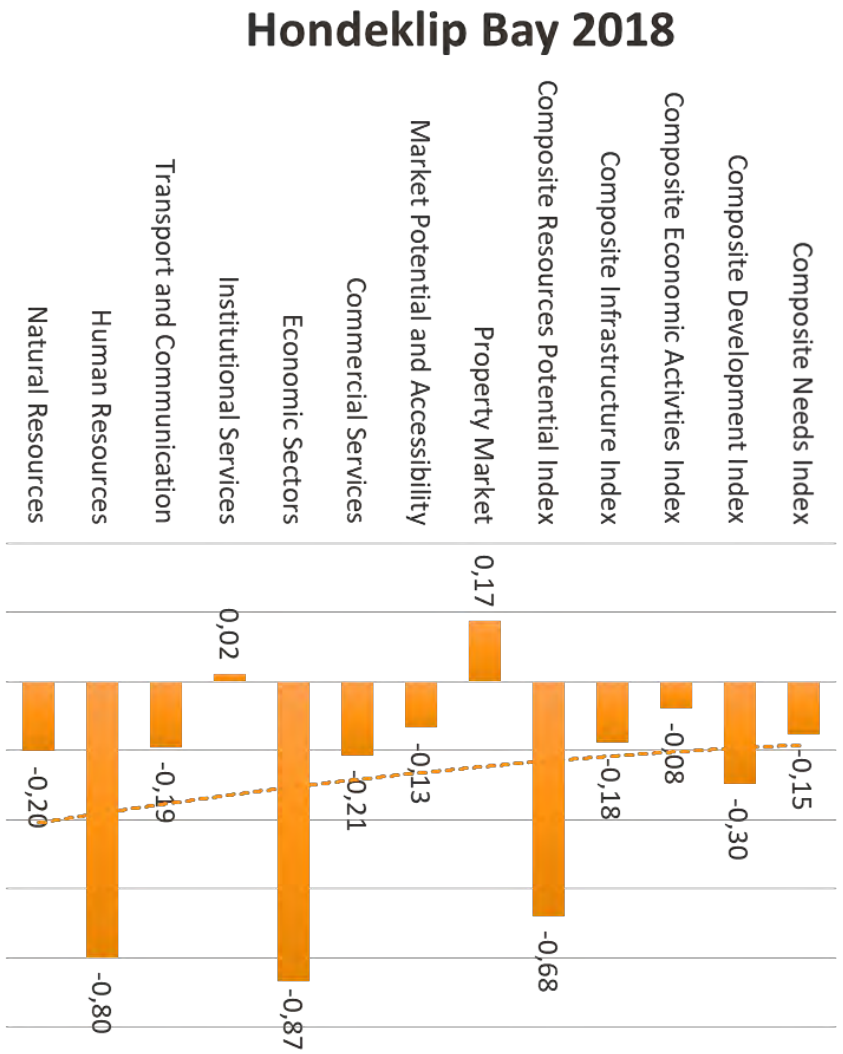


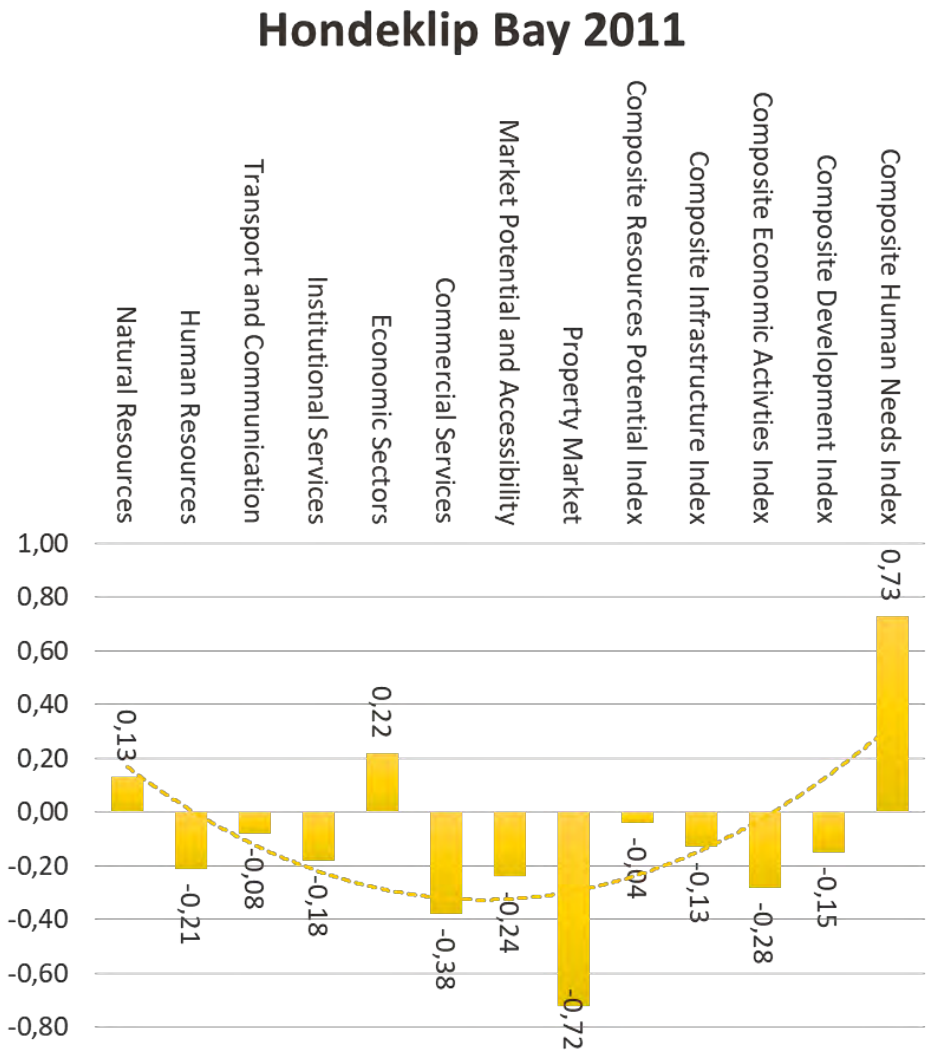
5.10 GARIES


Garies 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
0,02
-0,72
0,20
0,89
-0,92
-0,75
-0,19
-0,14
-0,49
0,81
-0,40
0,02
0,35
1,00
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00
-1,20

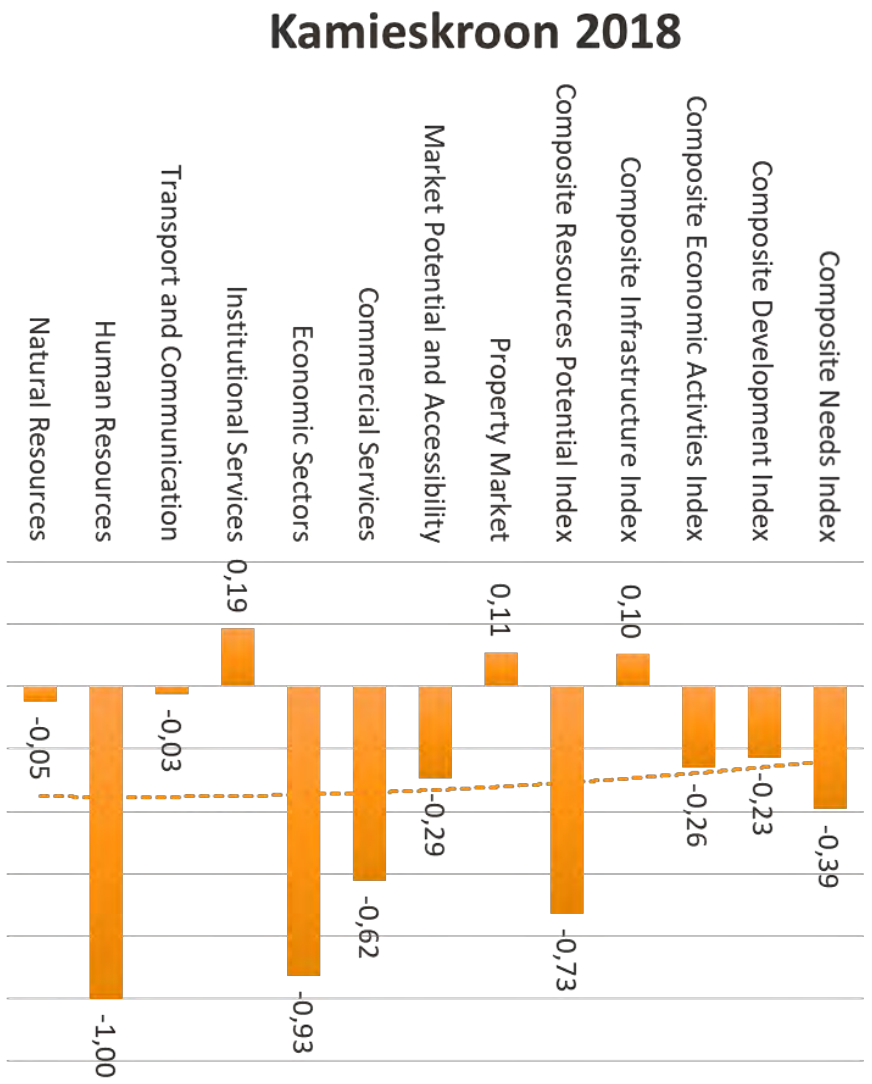

Garies 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,02
0,55
0,28
0,19
0,02
-0,24
-0,39
-0,72
0,27
0,23
-0,33
0,06
0,34
0,80
0,60
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80

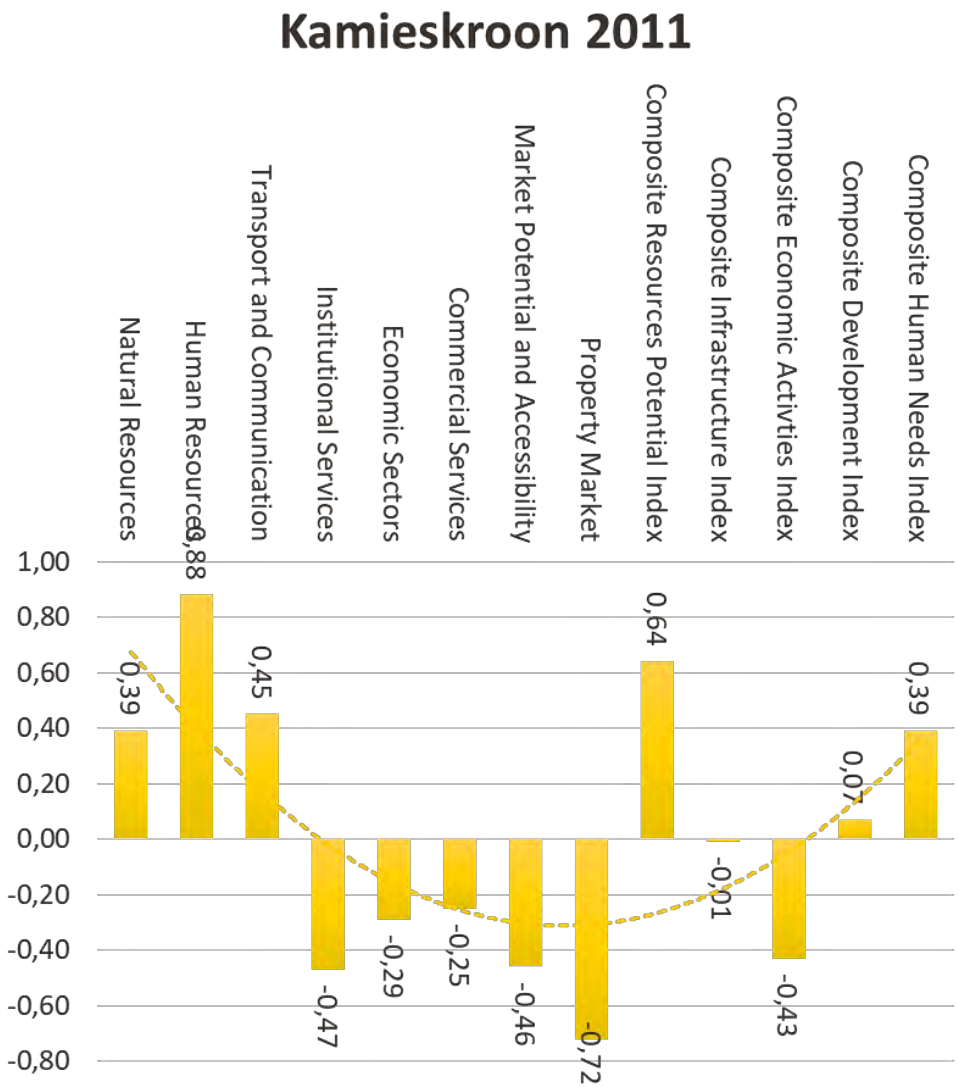
5.11 HONDEKLIP BAY



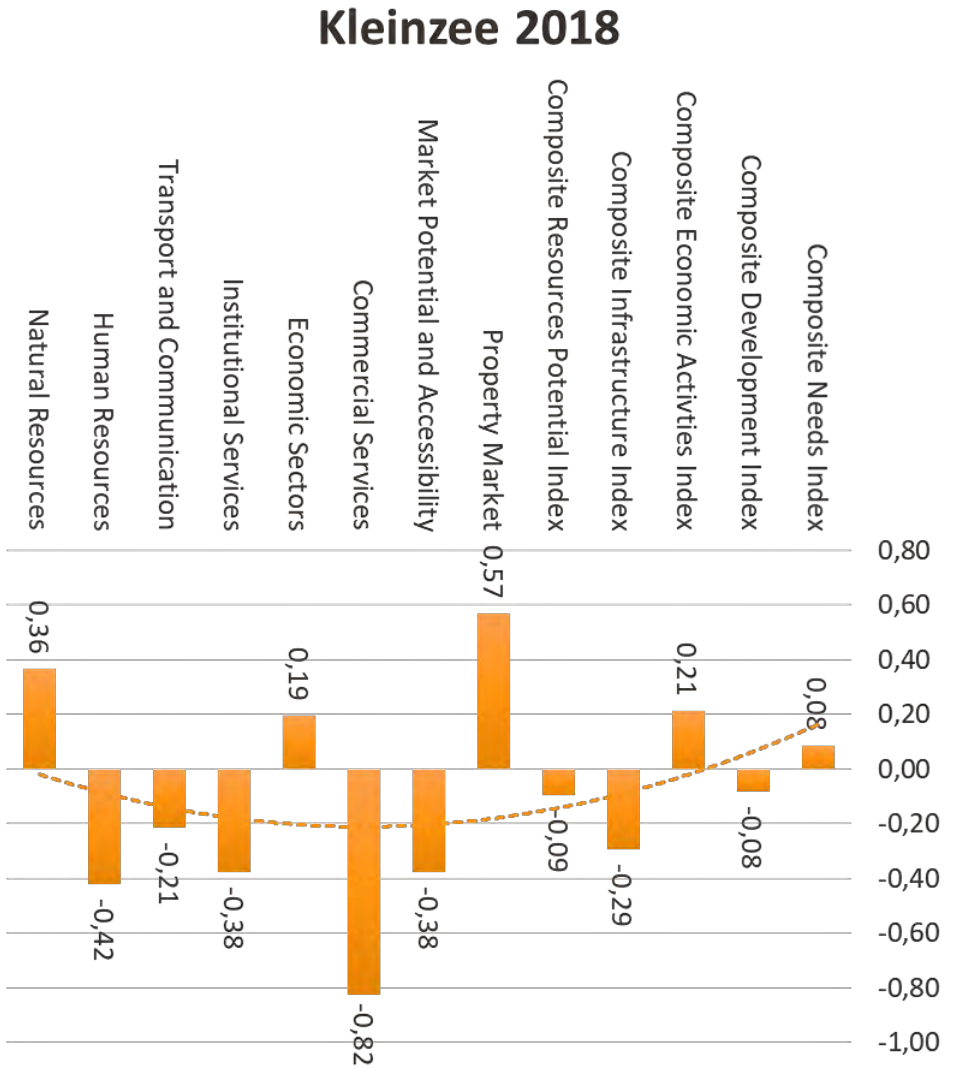


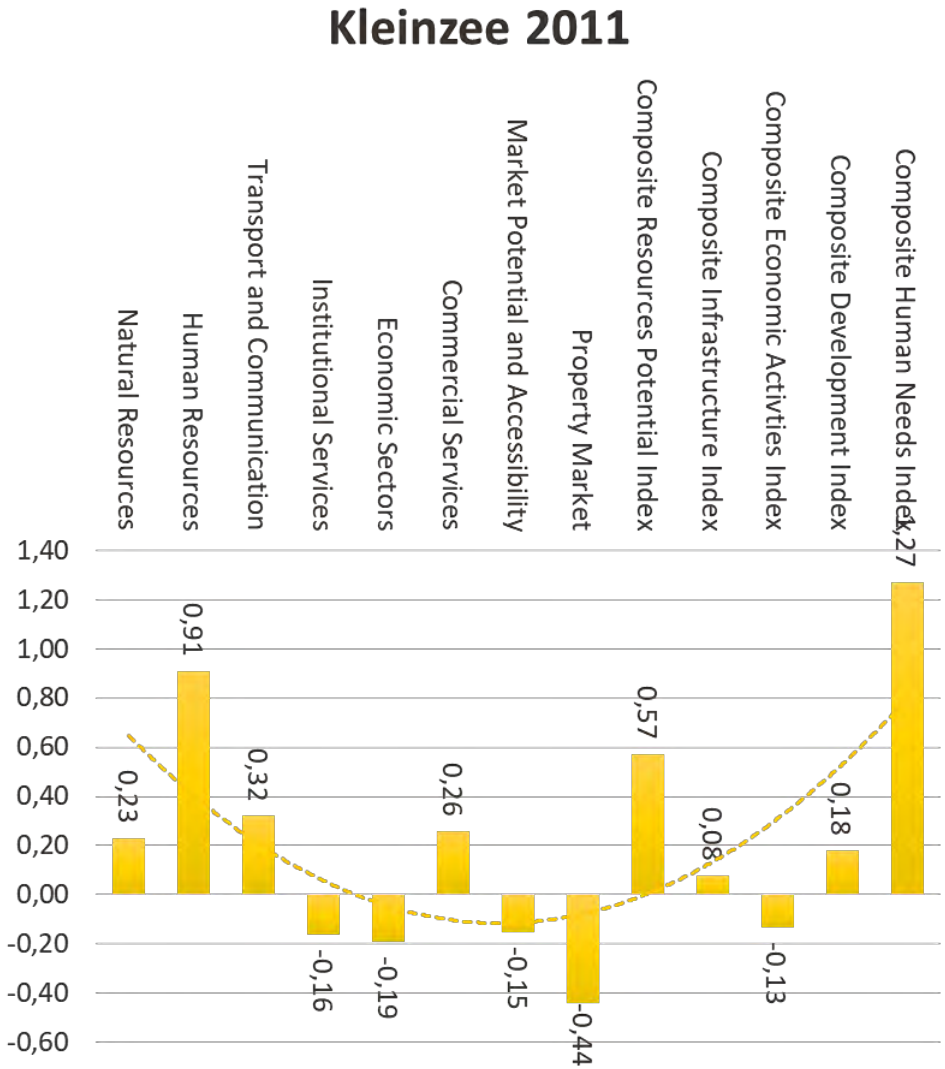
5.12 KAMIESKROON



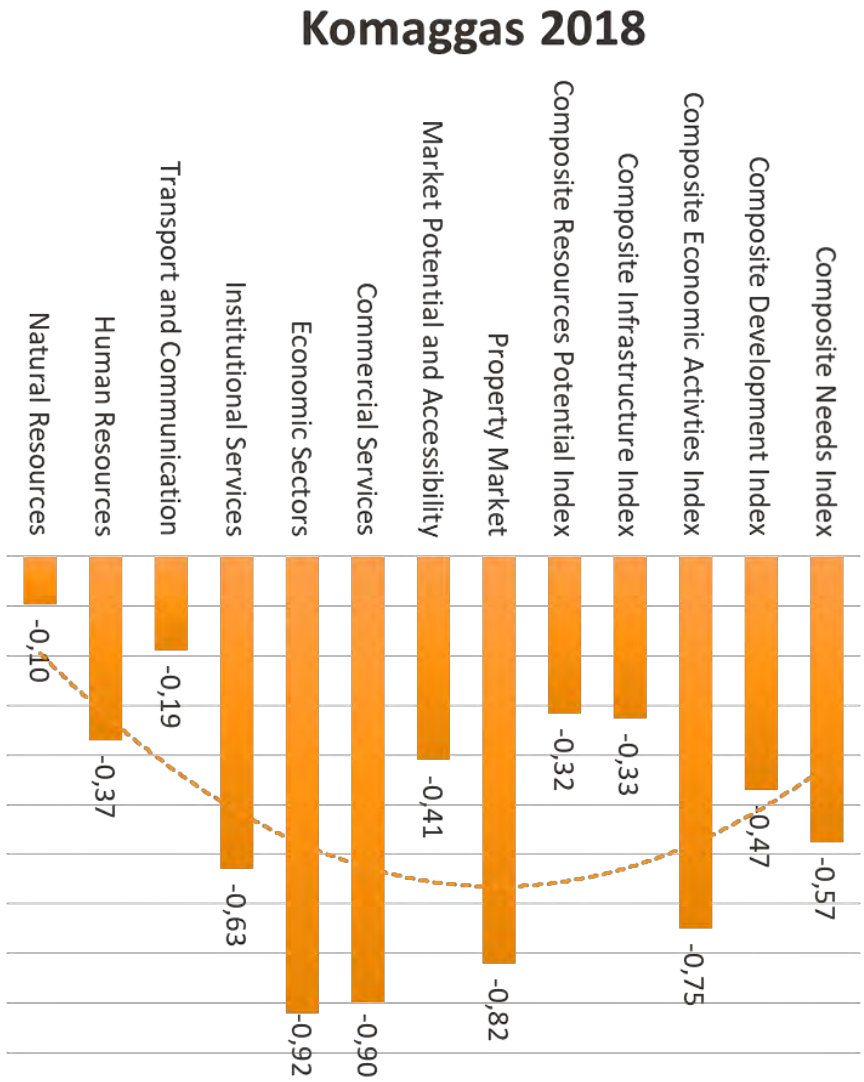


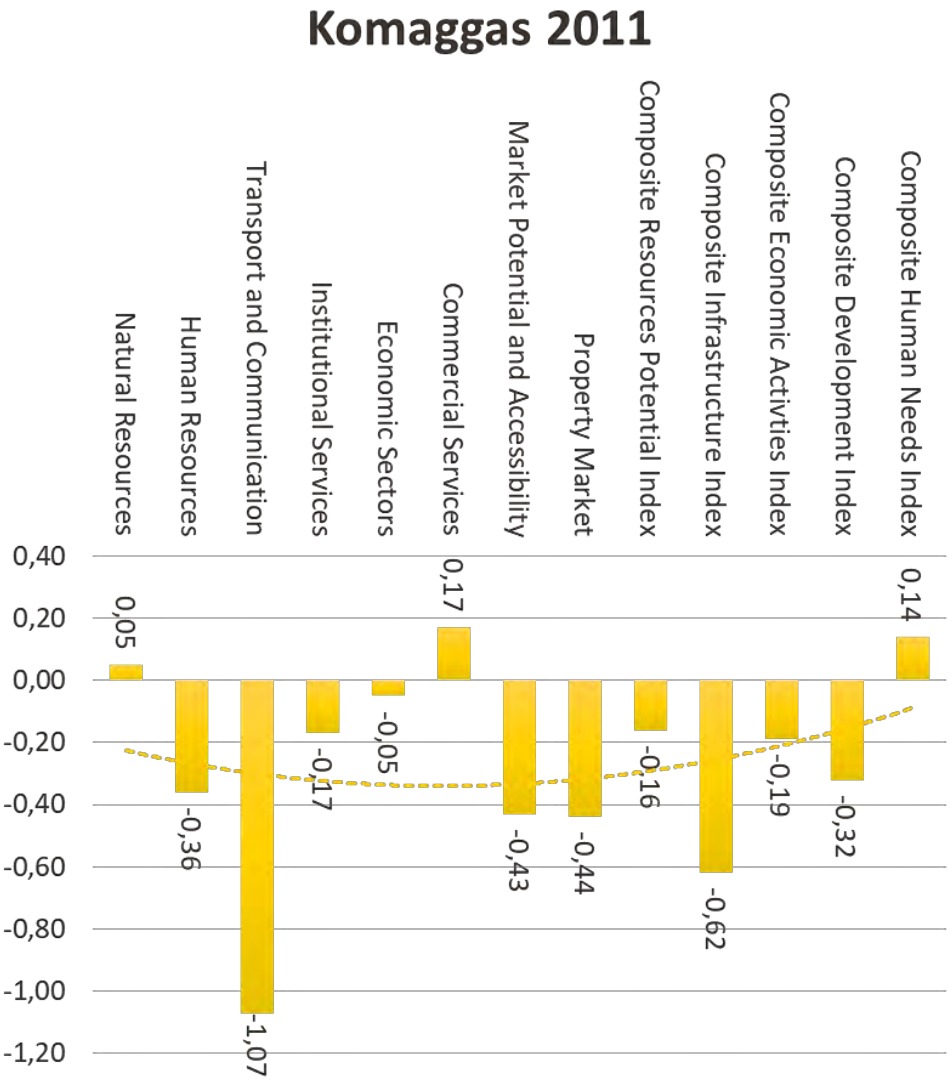
5.13 KLEINZEE



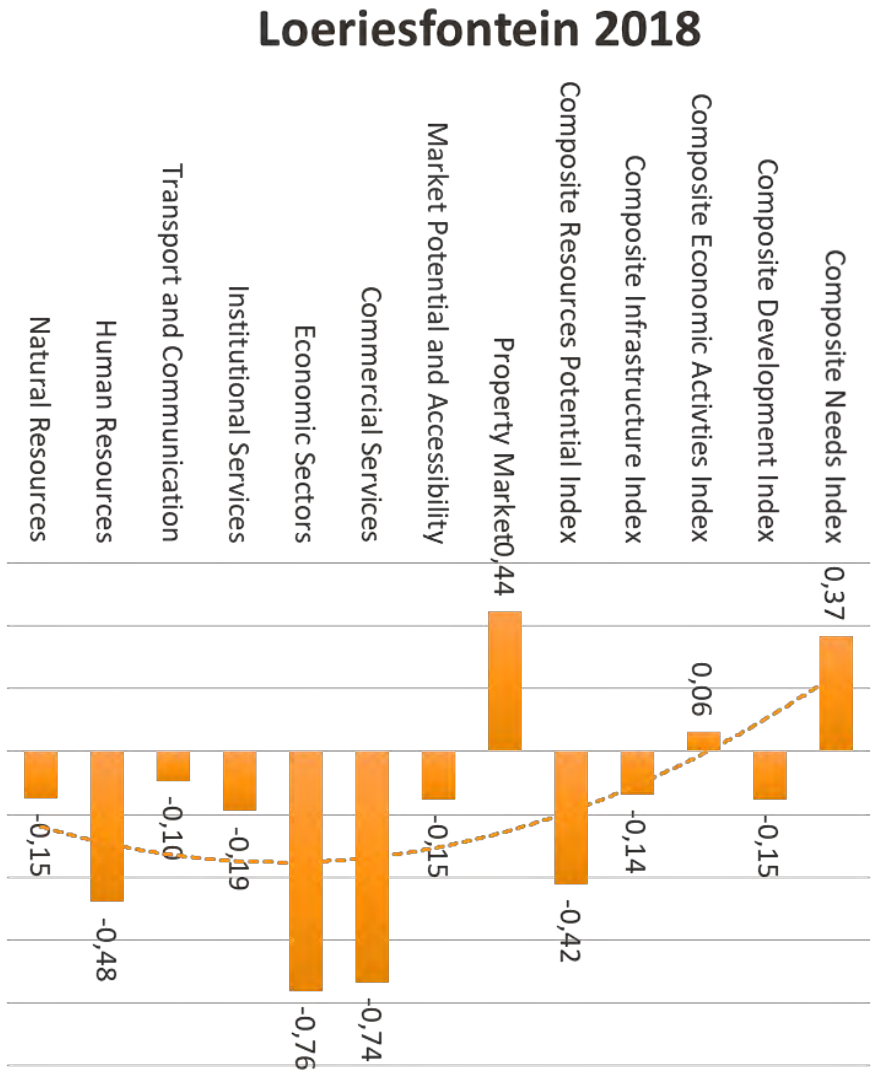


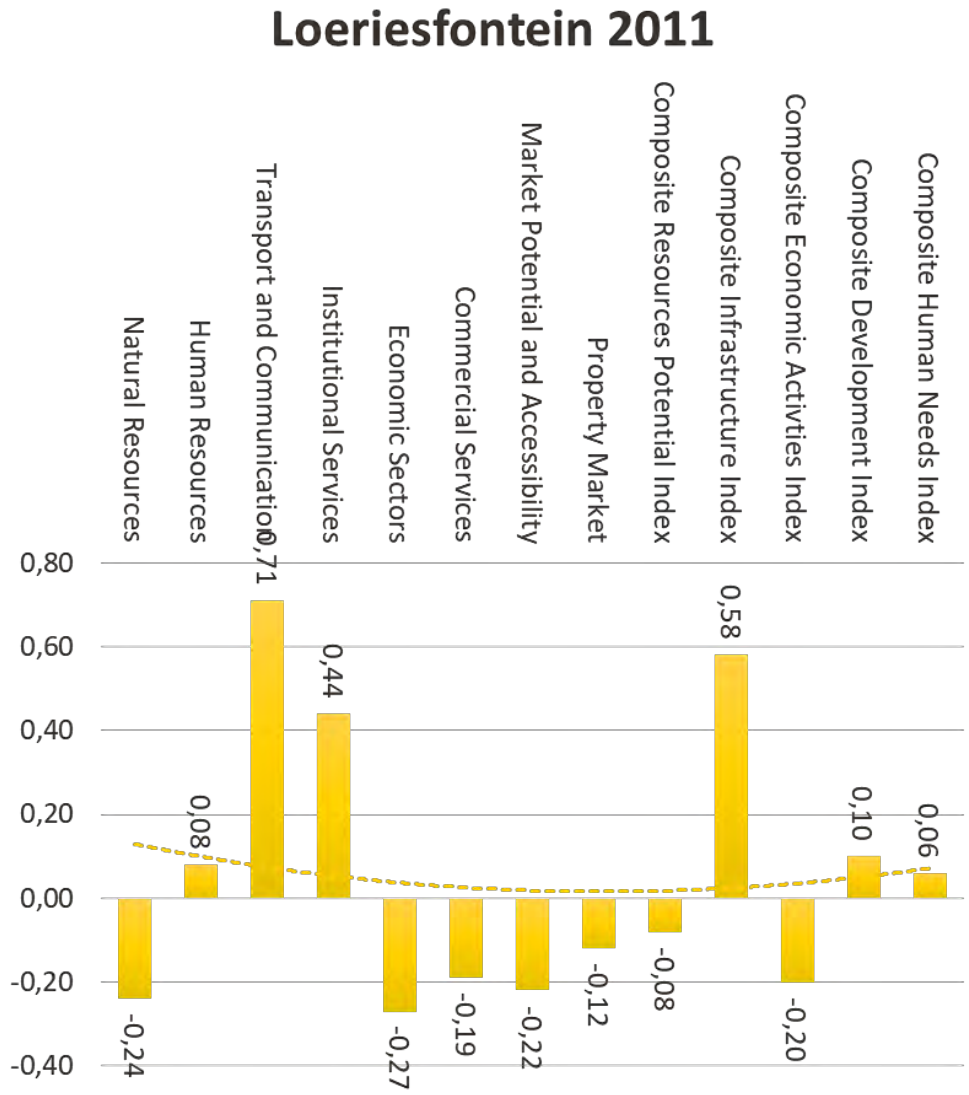
5.14 KOMAGGAS



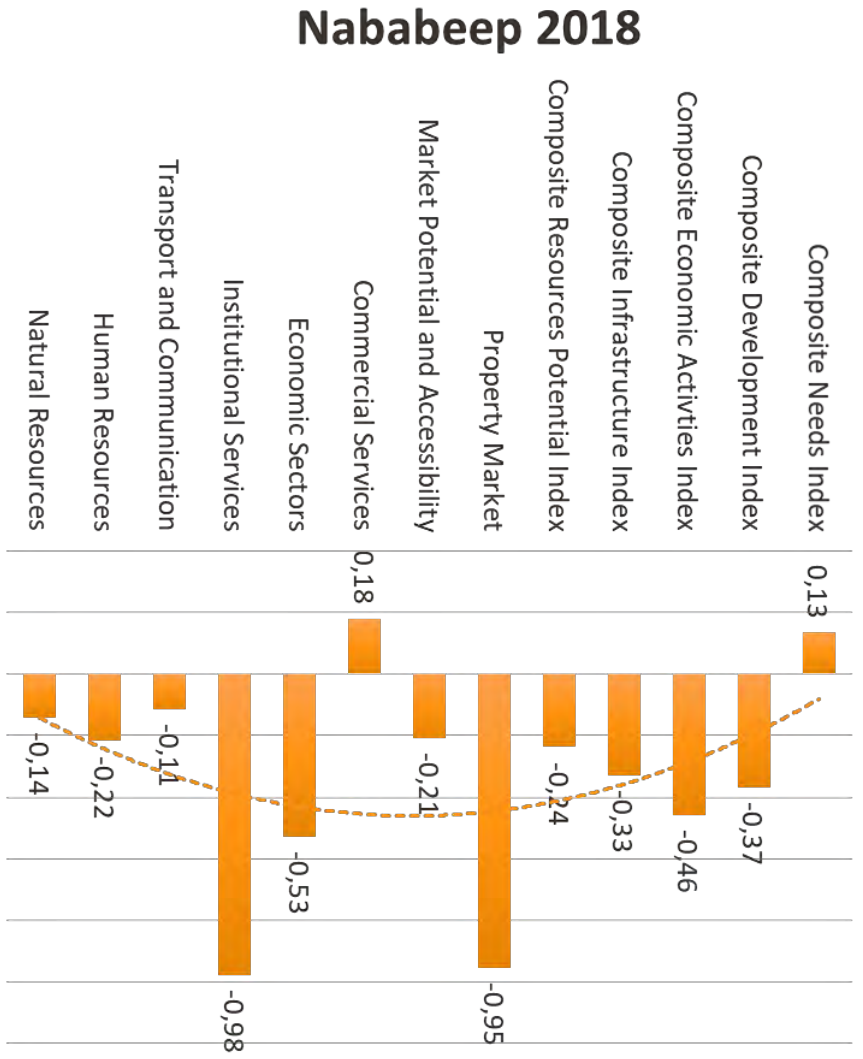


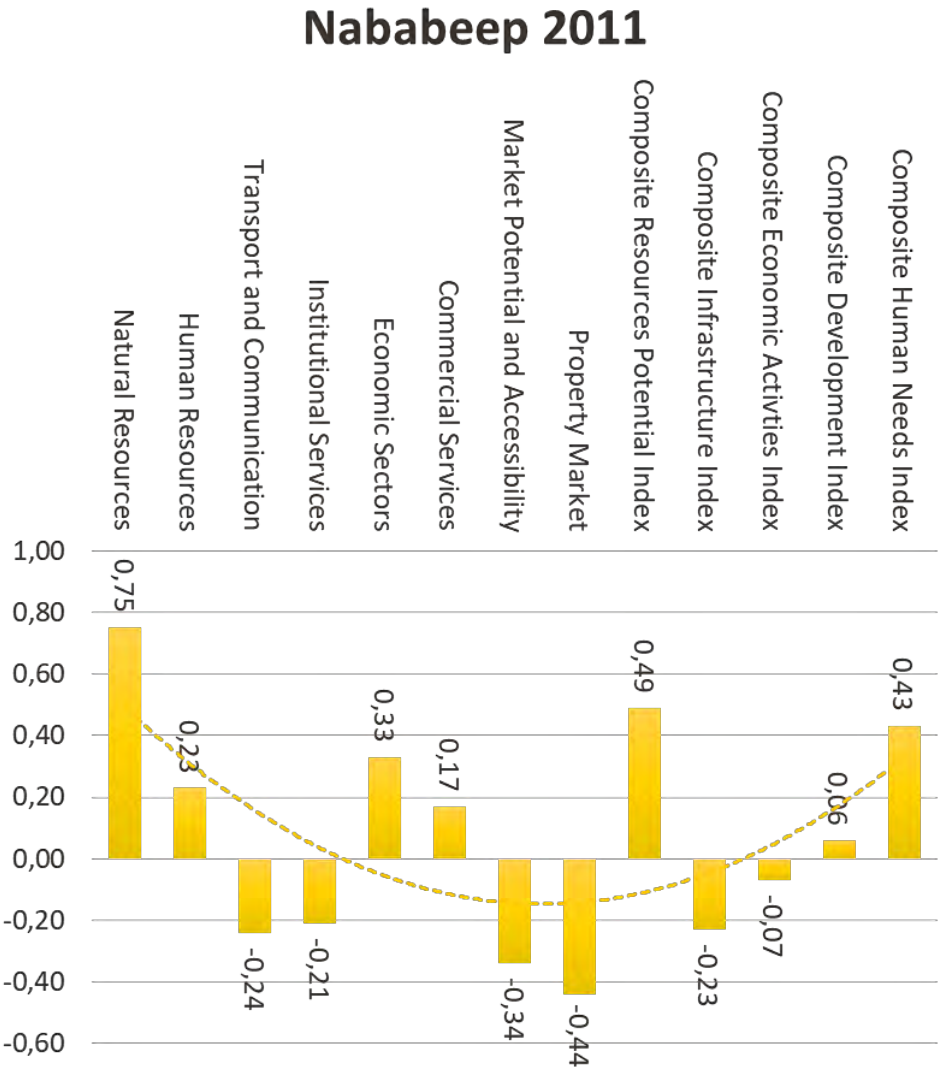
5.15 LOERIESFONTEIN



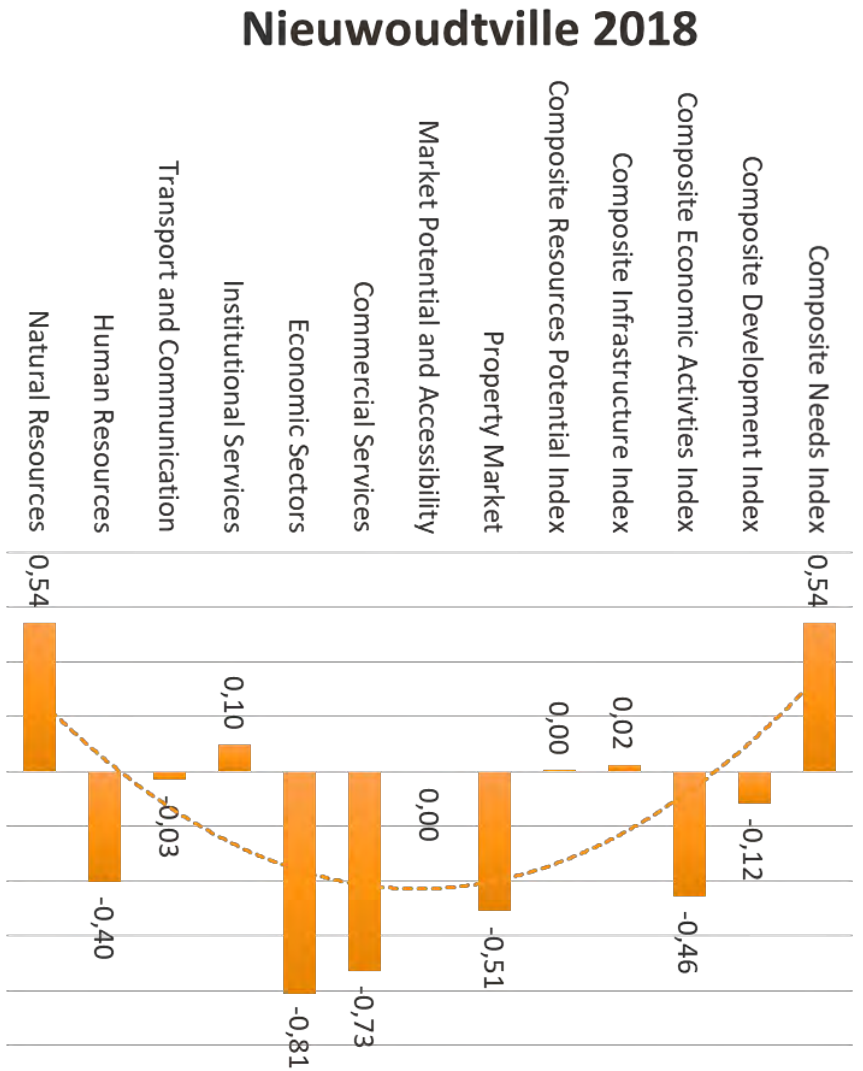


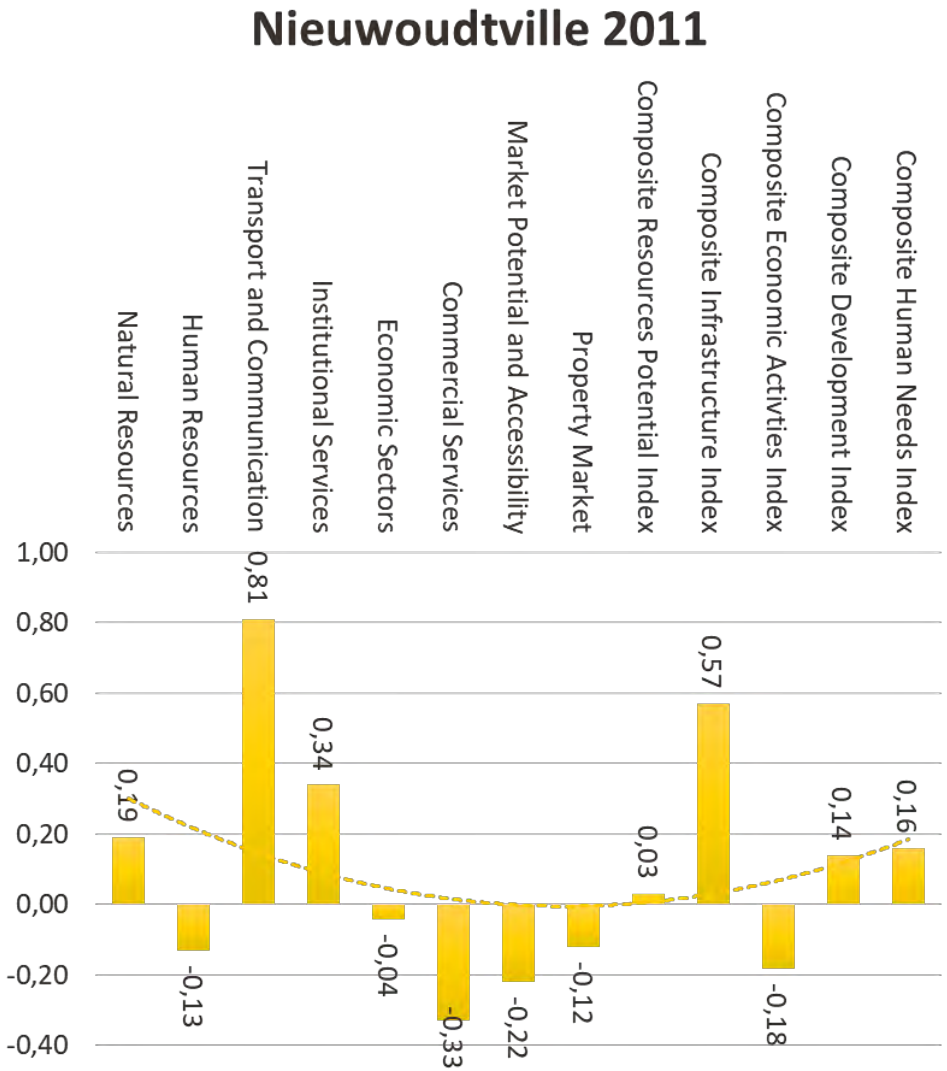
5.16 NABABEEP



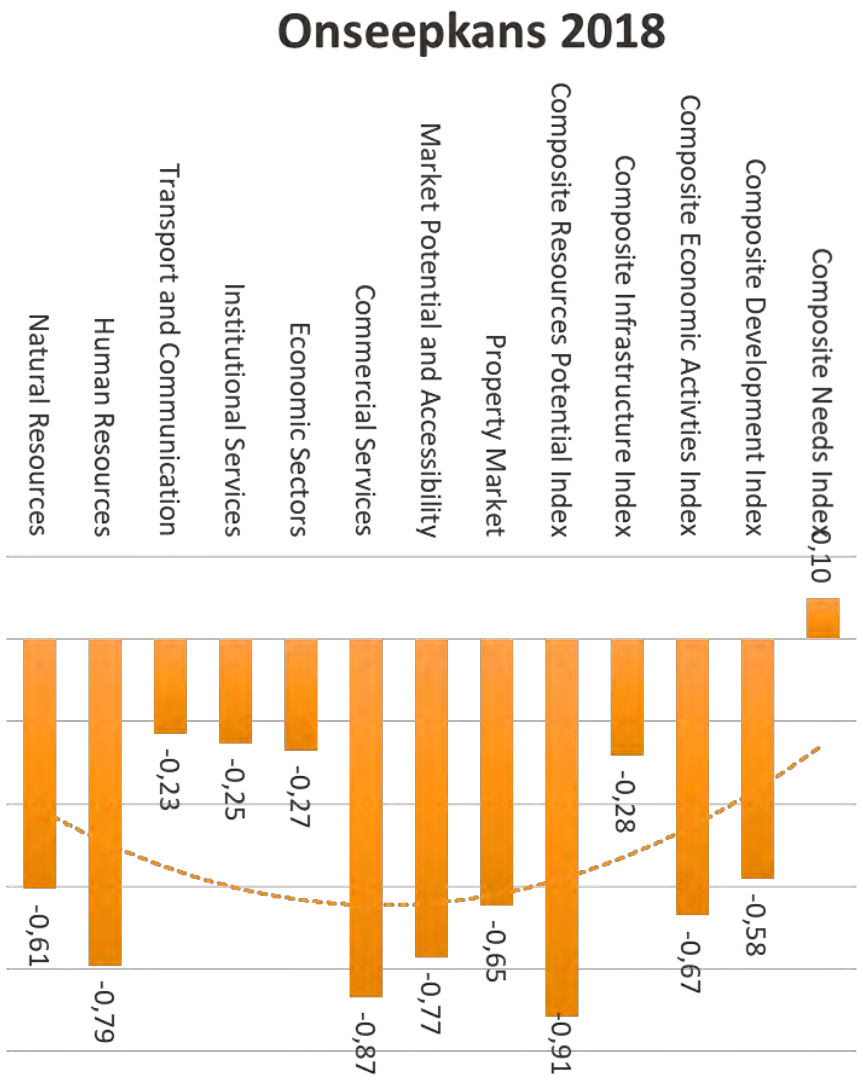


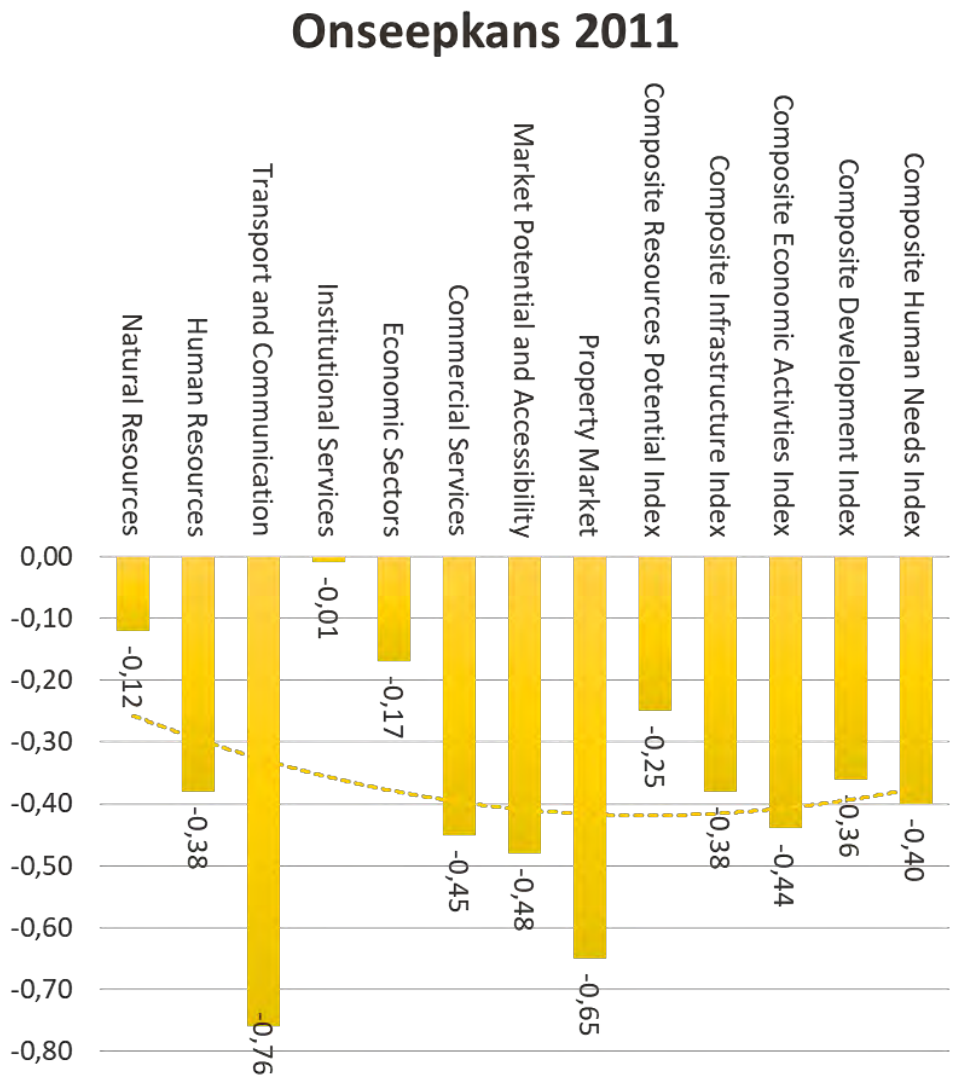
5.17 NIEUWOUDTVILLE



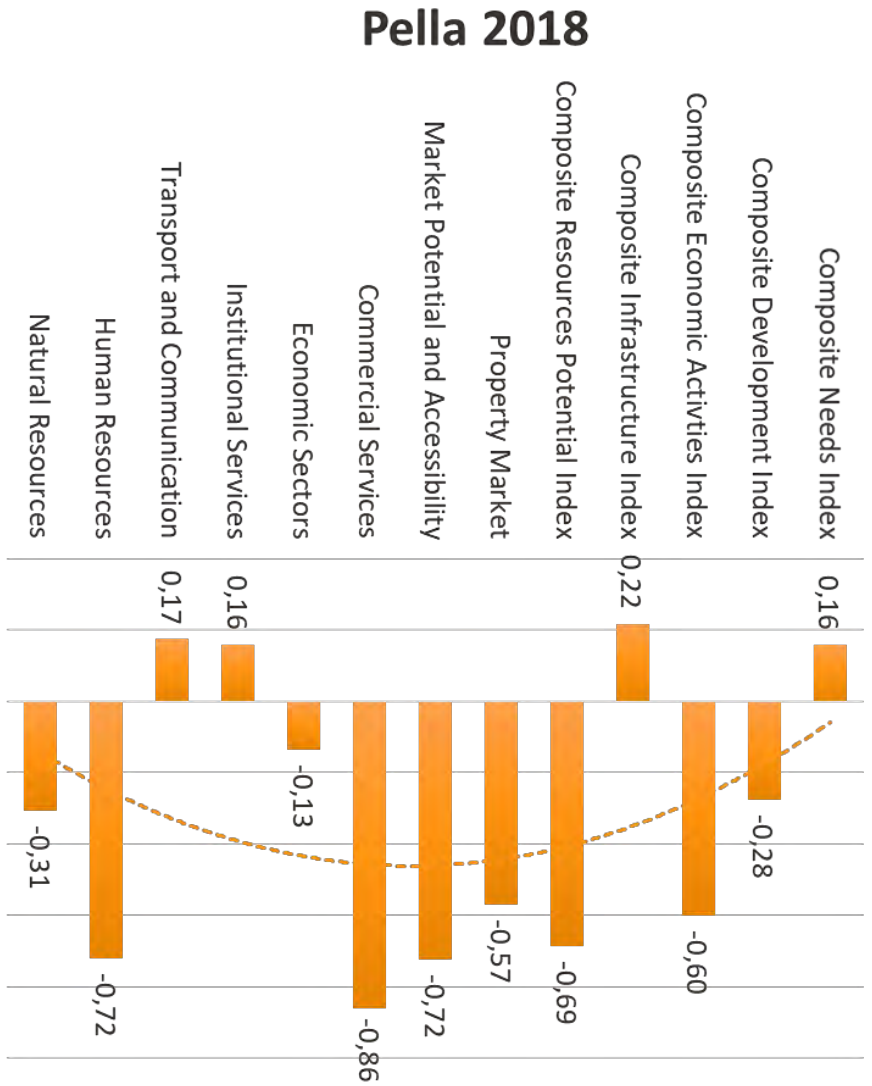


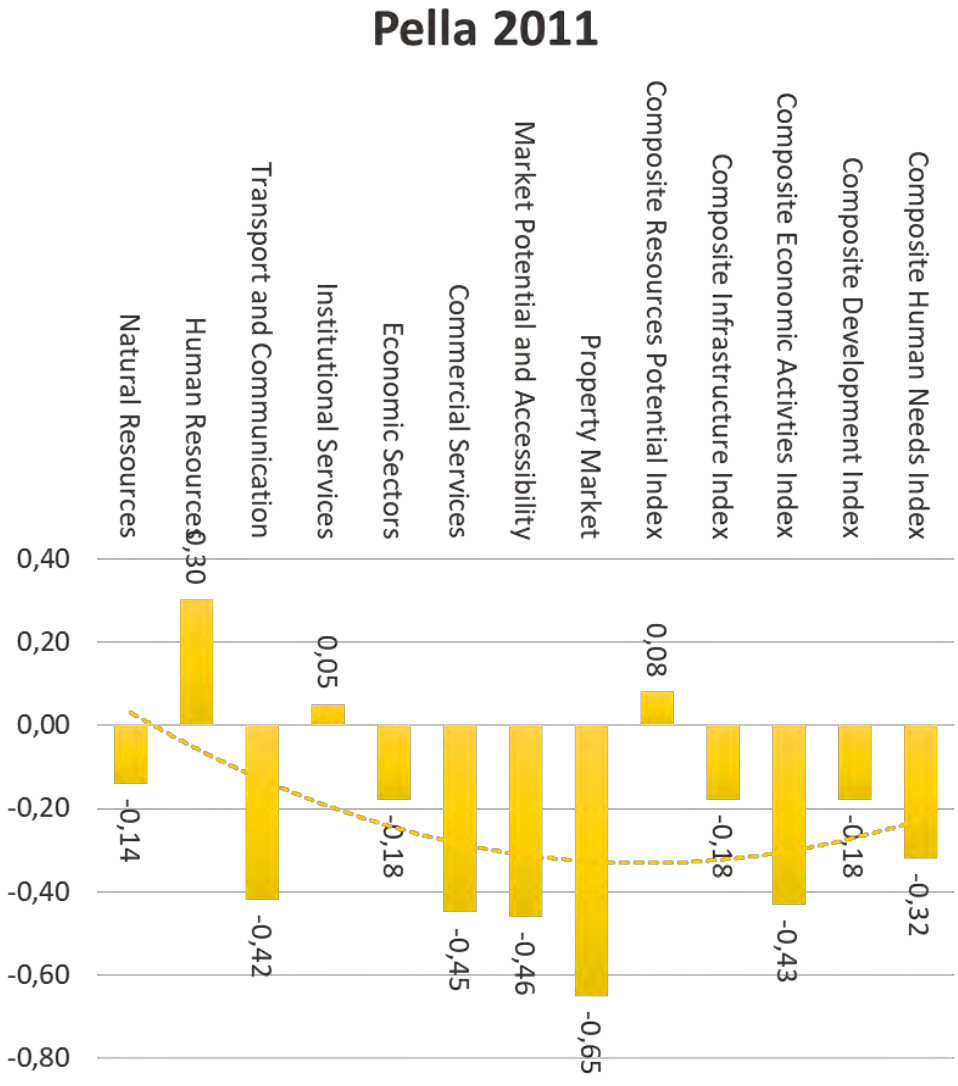
5.18 ONSEEPKANS



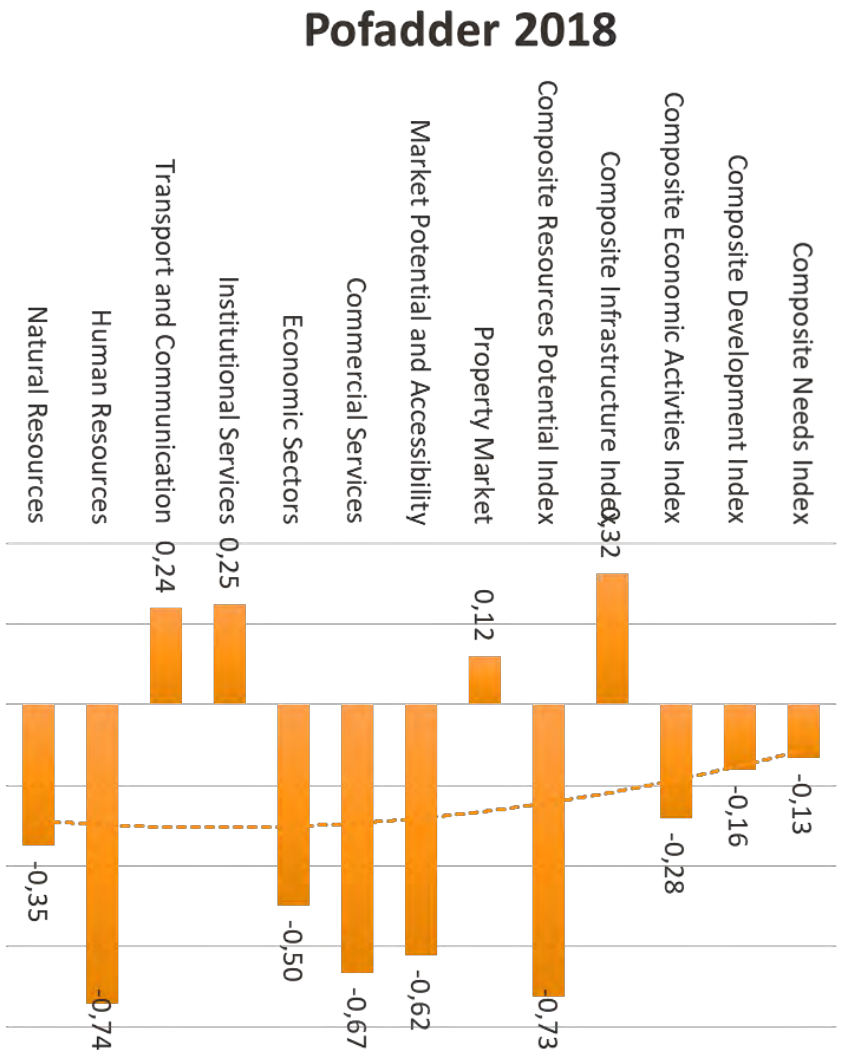


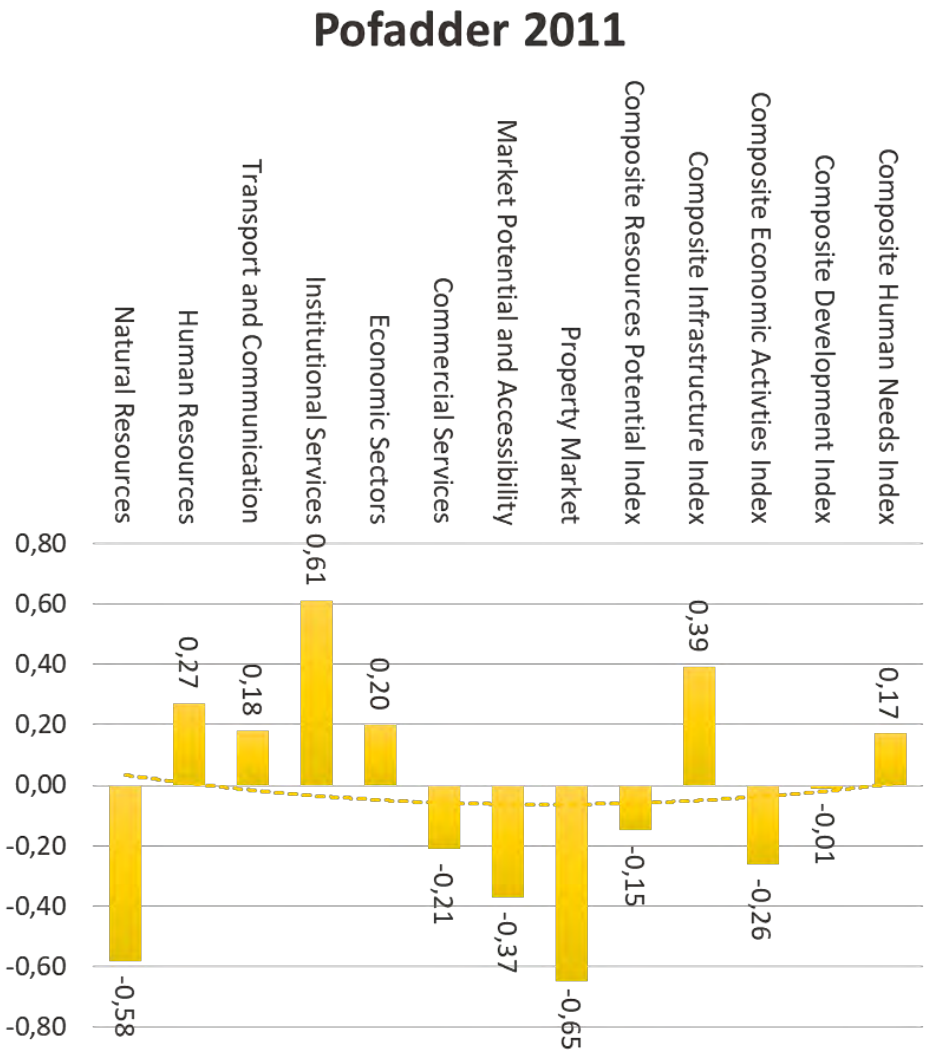
5.19 PELLA


Pella 2018
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Needs Index
-0,31
-0,72
0,17
0,16
-0,13
-0,86
-0,72
-0,57
-0,69
0,22
-0,60
-0,28
0,16
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80
-1,00


Pella 2011
Natural Resources
Human Resources
Transport and Communication
Institutional Services
Economic Sectors
Commercial Services
Market Potential and Accessibility
Property Market
Composite Resources Potential Index
Composite Infrastructure Index
Composite Economic Activties Index
Composite Development Index
Composite Human Needs Index
-0,14
0,30
-0,42
0,05
-0,18
-0,45
-0,46
-0,65
0,08
-0,18
-0,43
-0,18
-0,32
0,40
0,20
0,00
-0,20
-0,40
-0,60
-0,80

5.20 POFADDER





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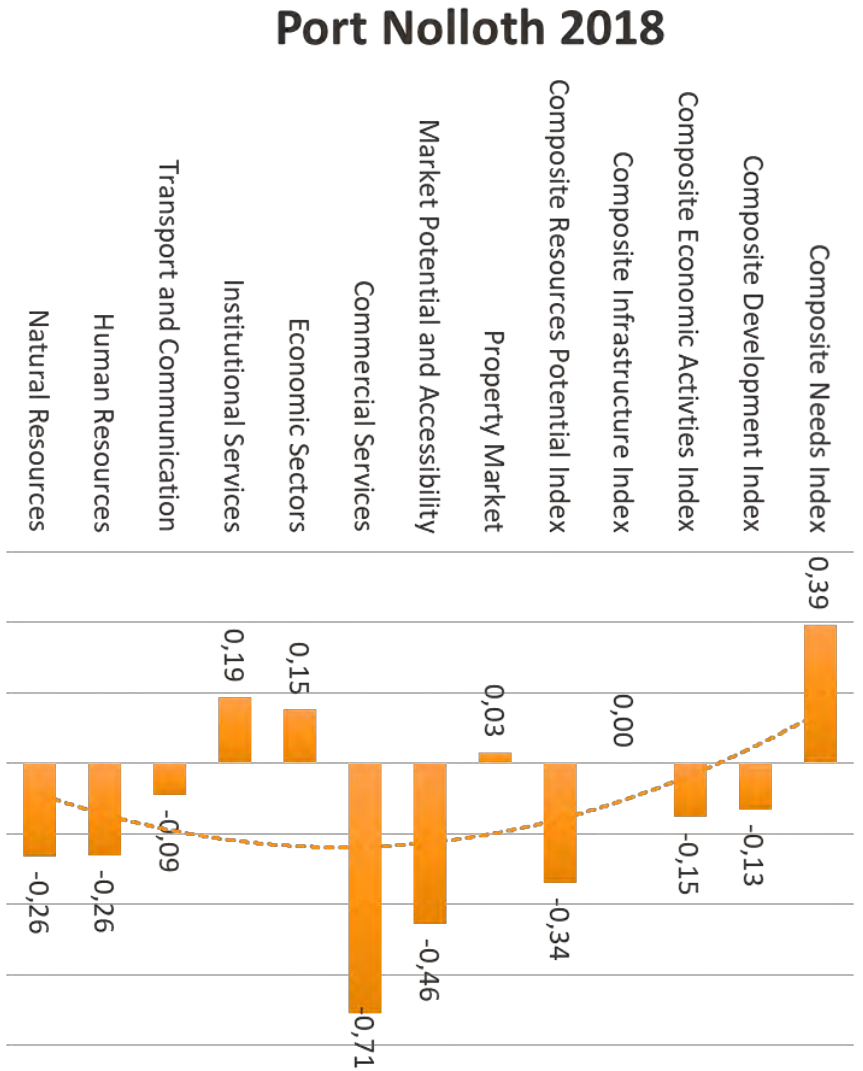

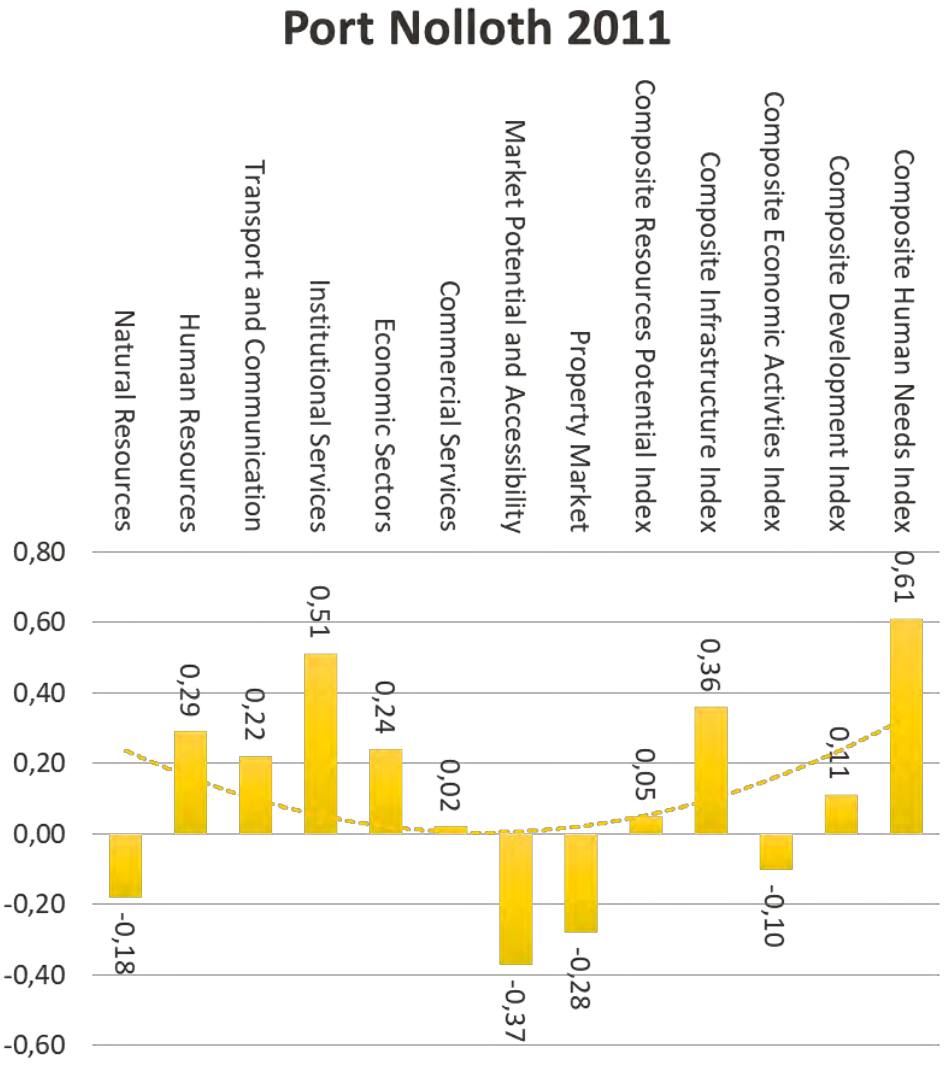

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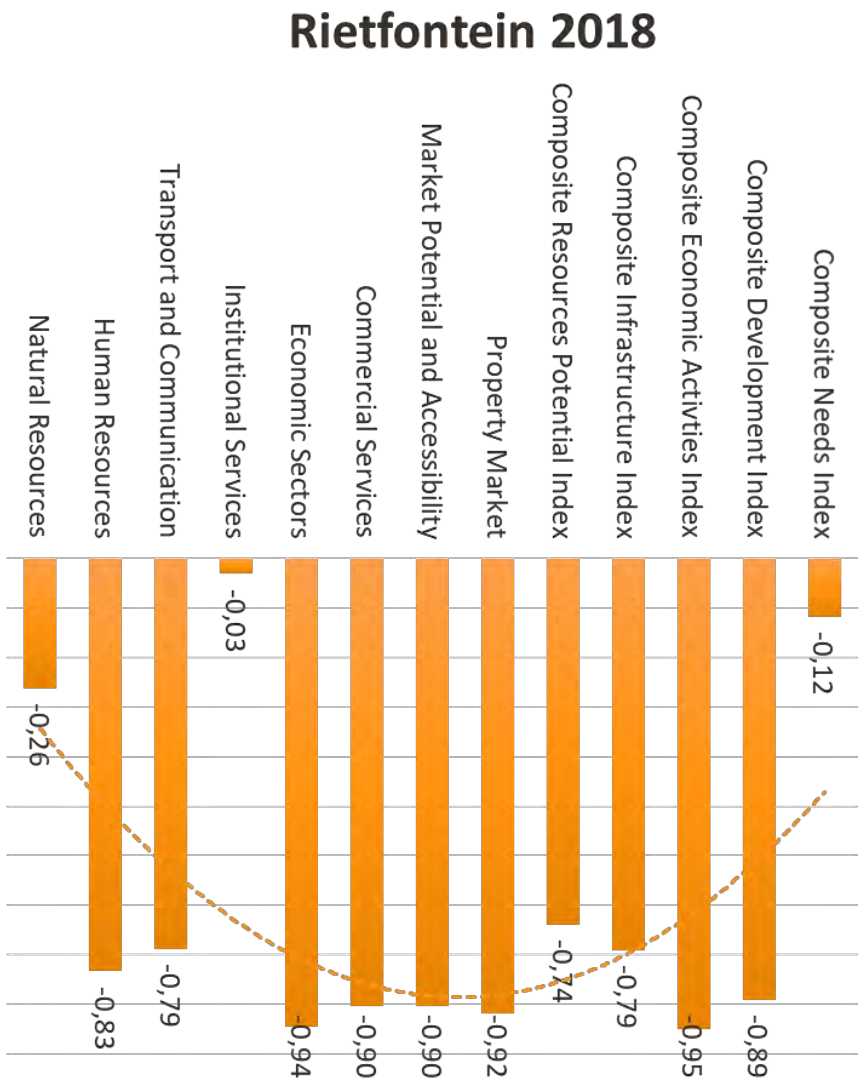

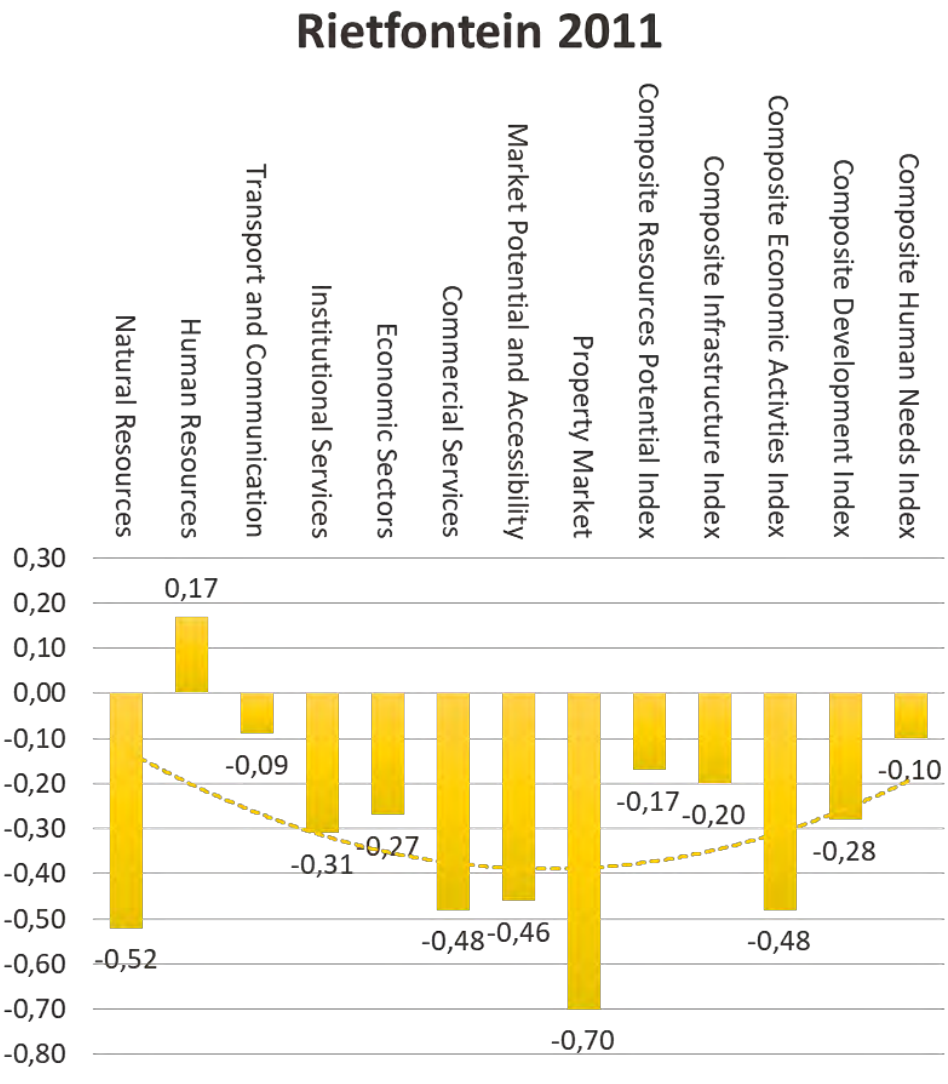

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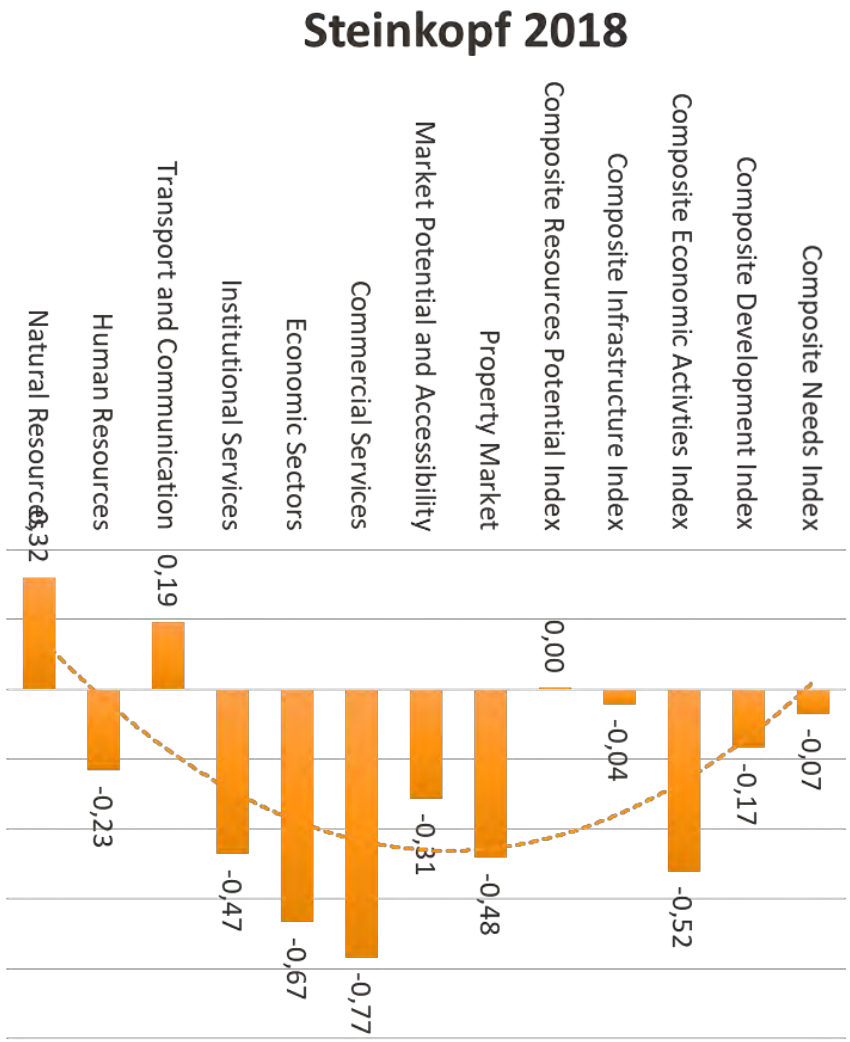
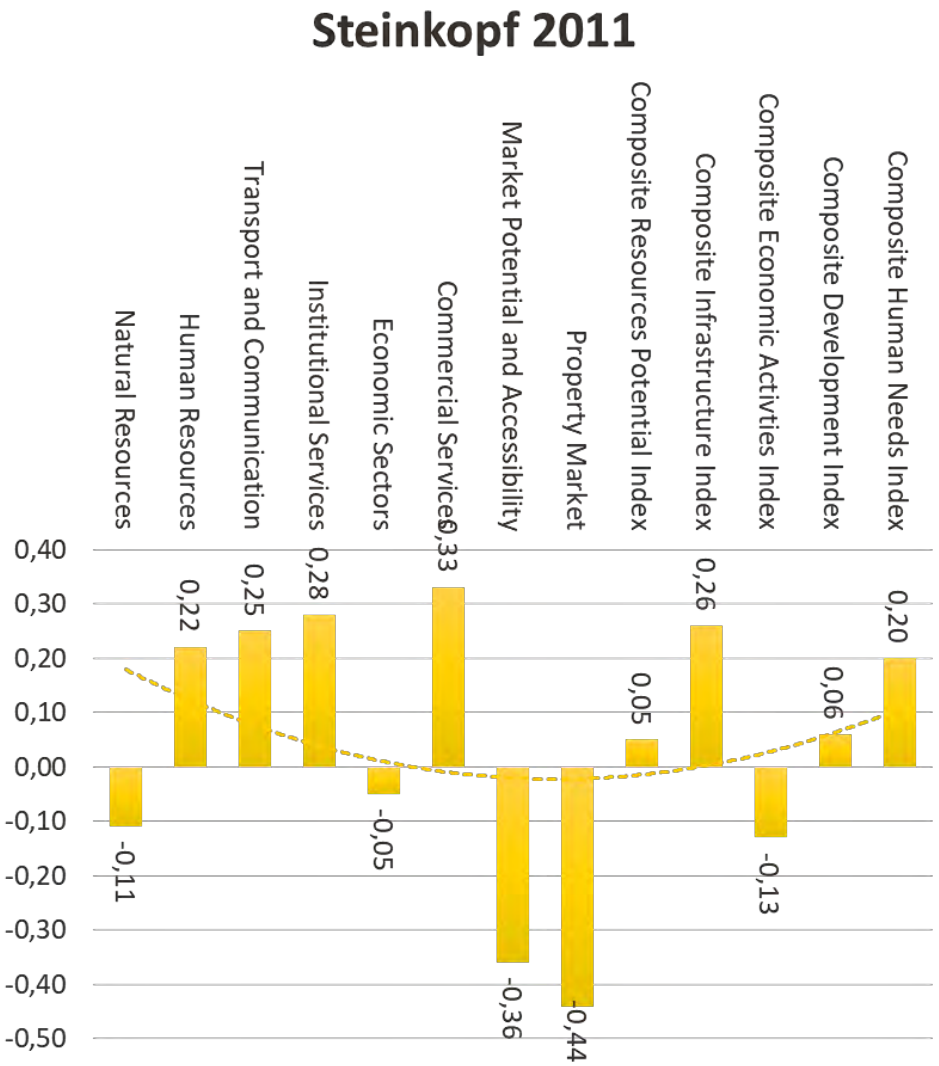
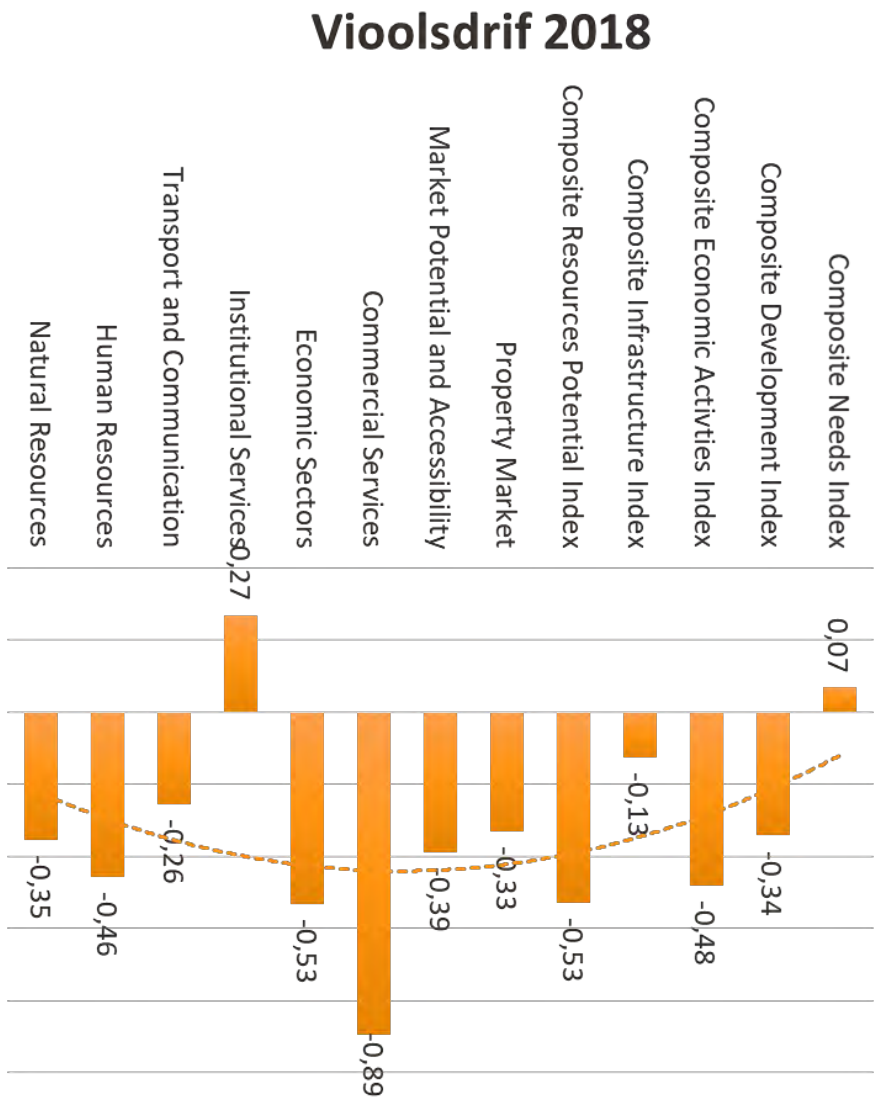
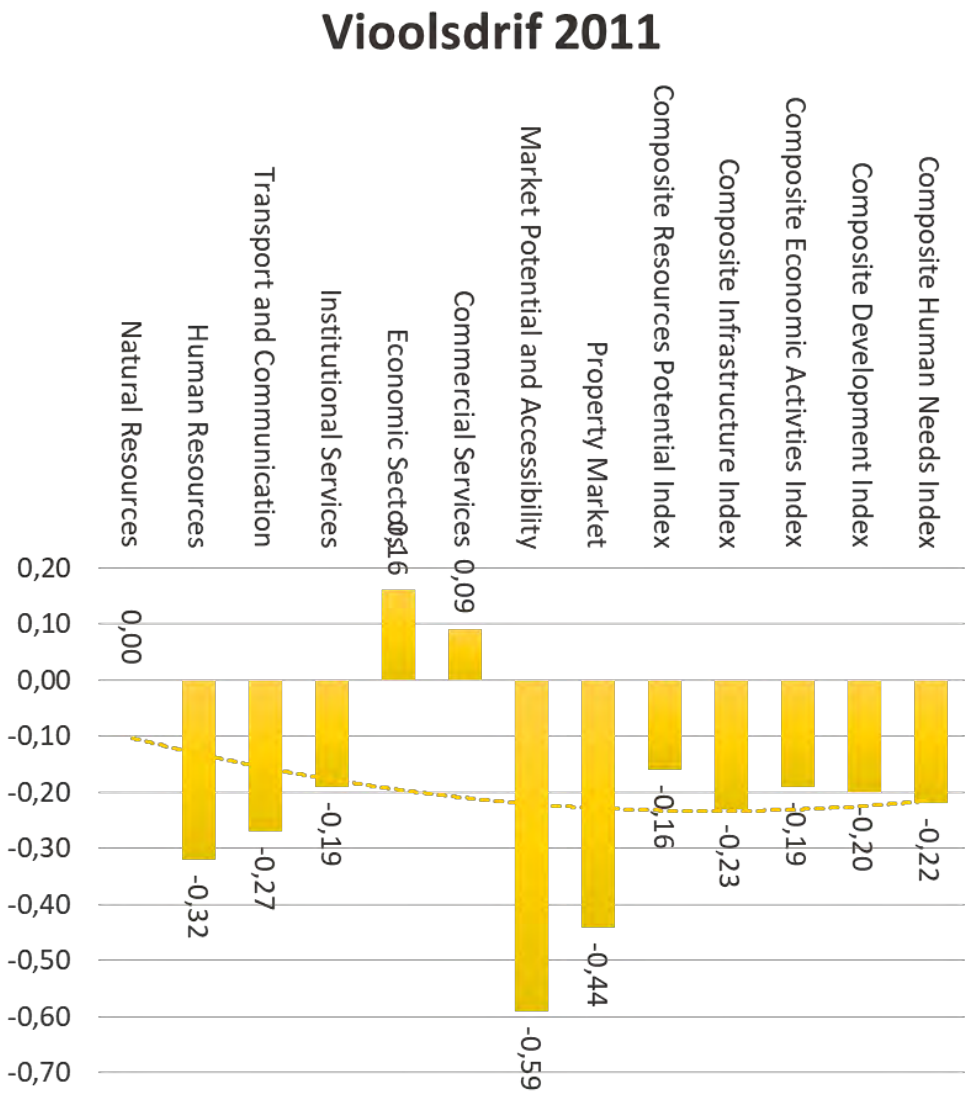


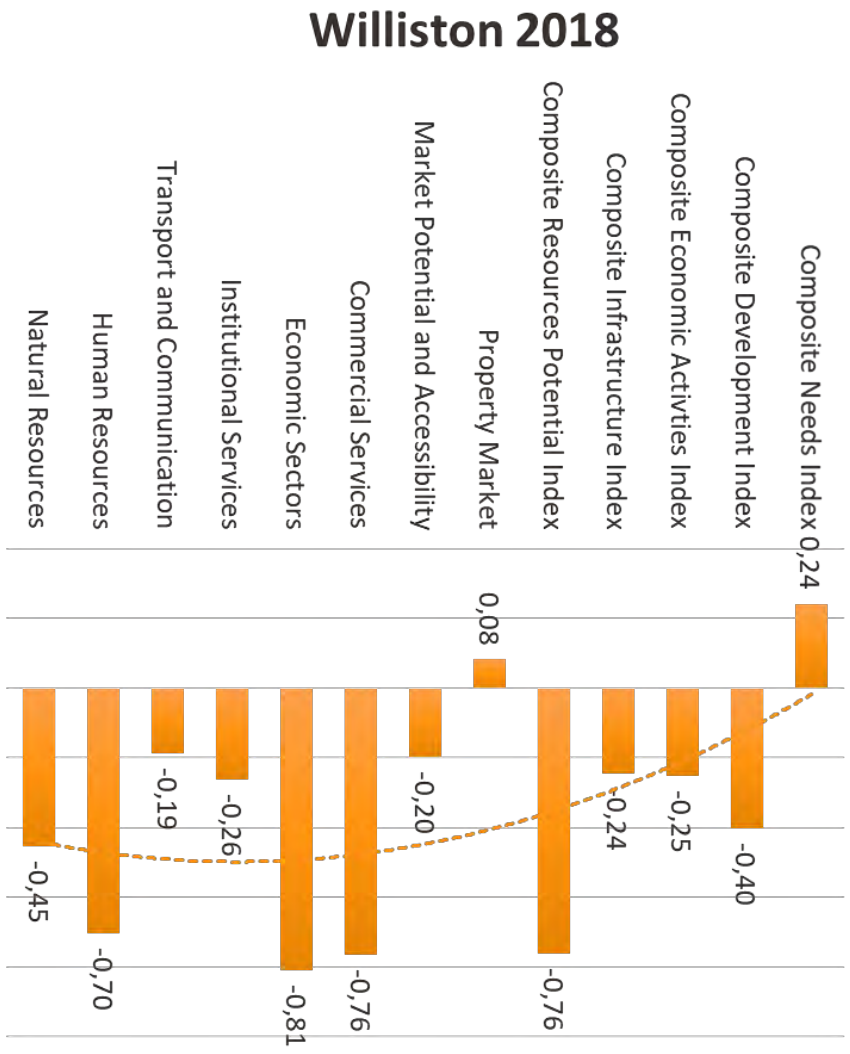


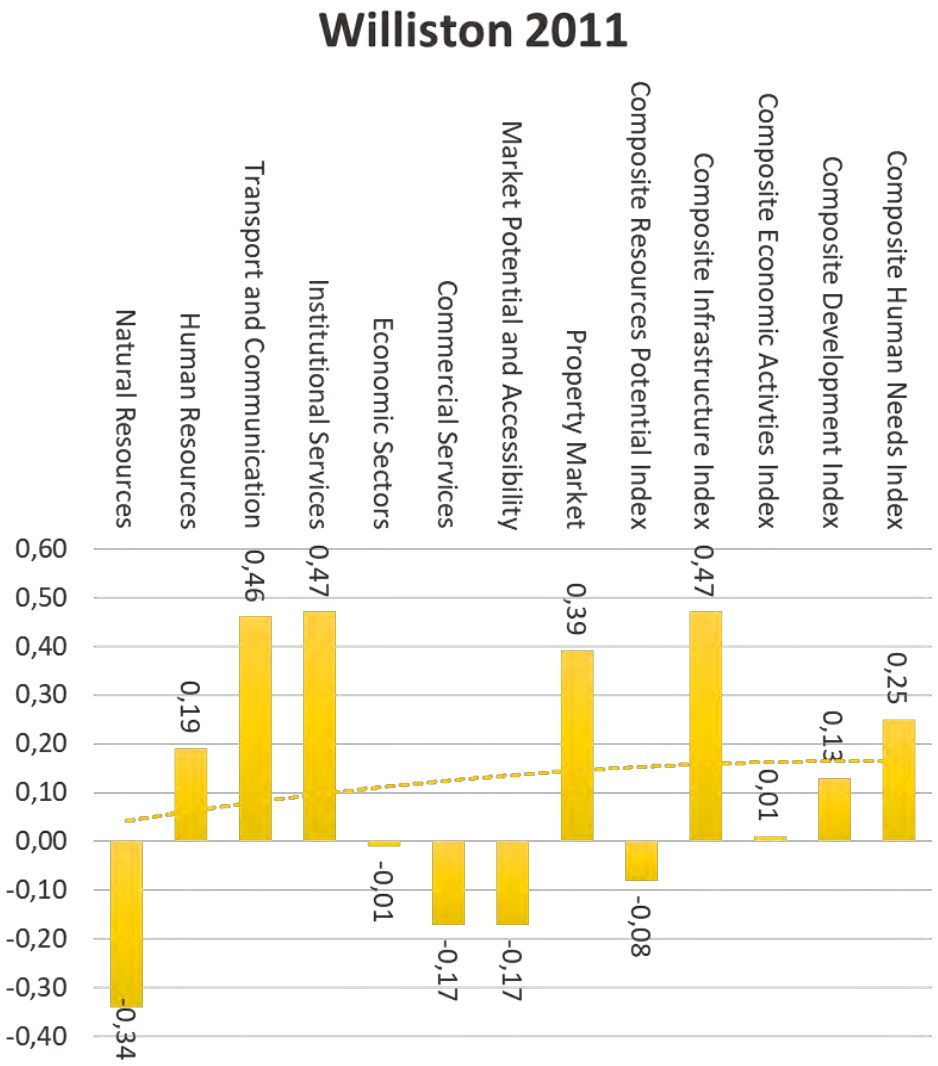
5.24 VIOOLDRIF



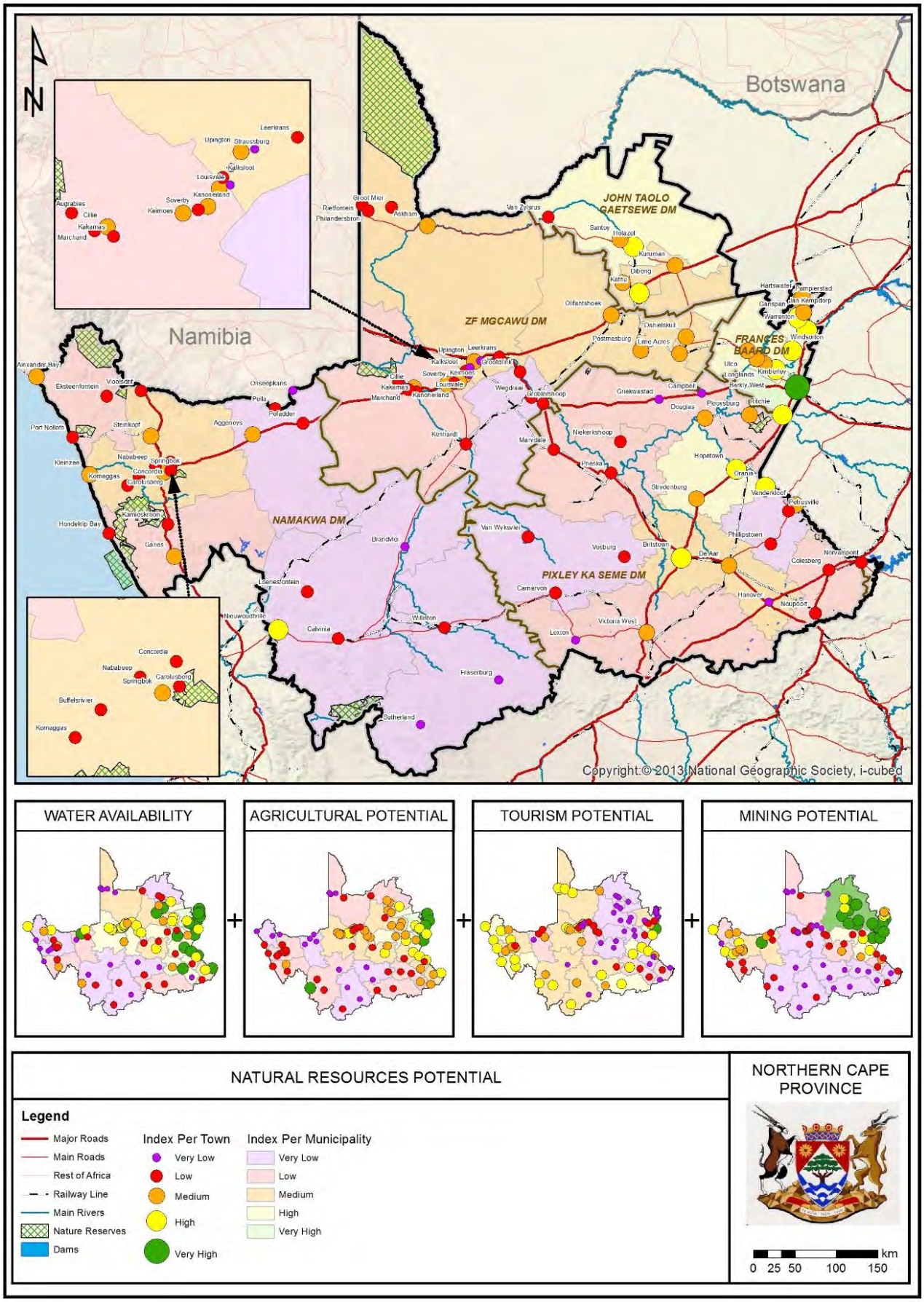


5.25 WILLLISTON





ADDENDUM C: MAPS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FRANCES BAARD DM
NAMAKWA DM
PIXLEY KA SEME DM
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TOURISM POTENTIAL
MINING POTENTIAL
NATURAL RESOURCES POTENTIAL
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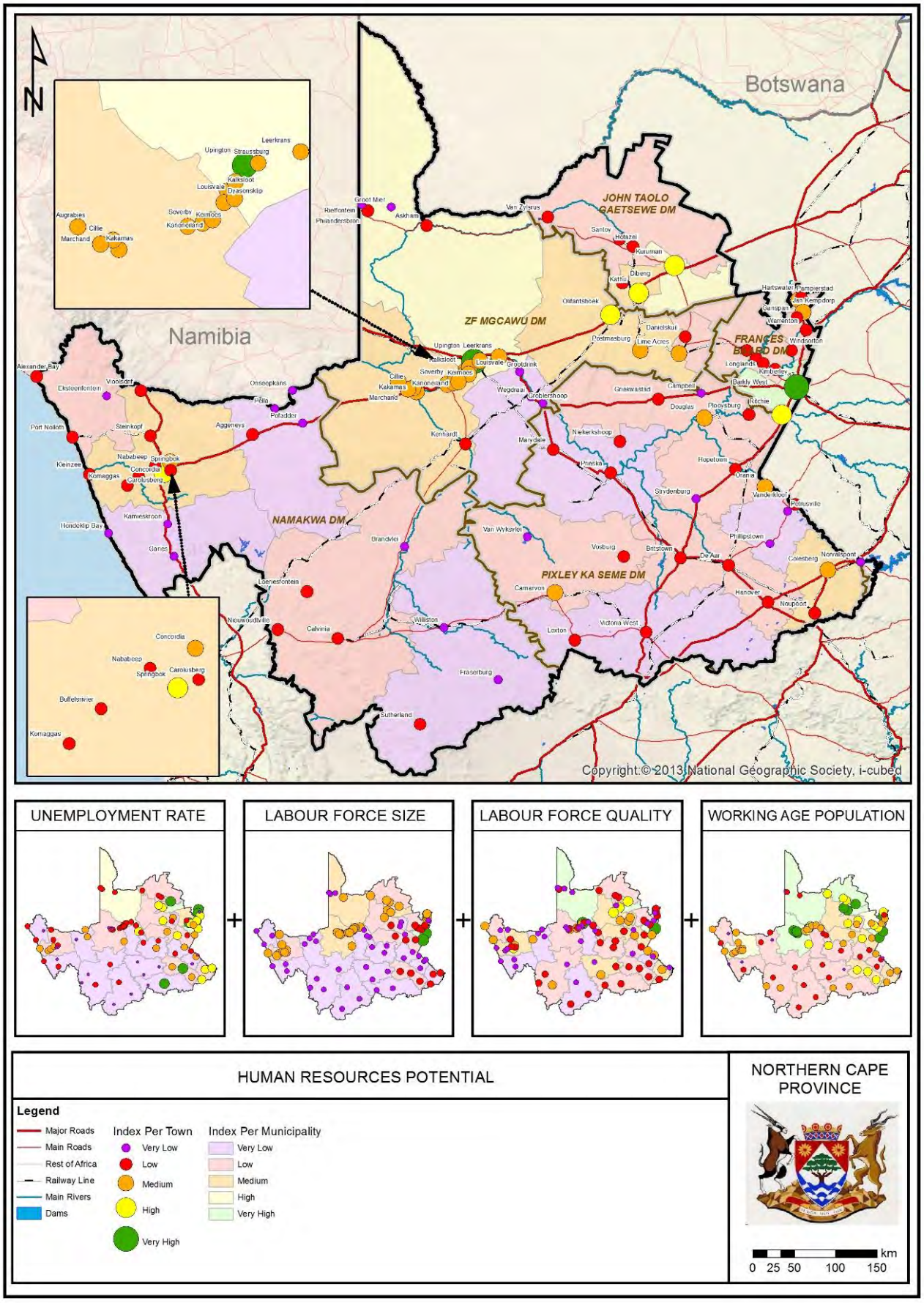
Low
Medium
High
Very High
Index Per Municipality
Very Low
Low
Medium
High
Very High
NORTHERN CAPE PROVINCE
km
0 25 50 100 150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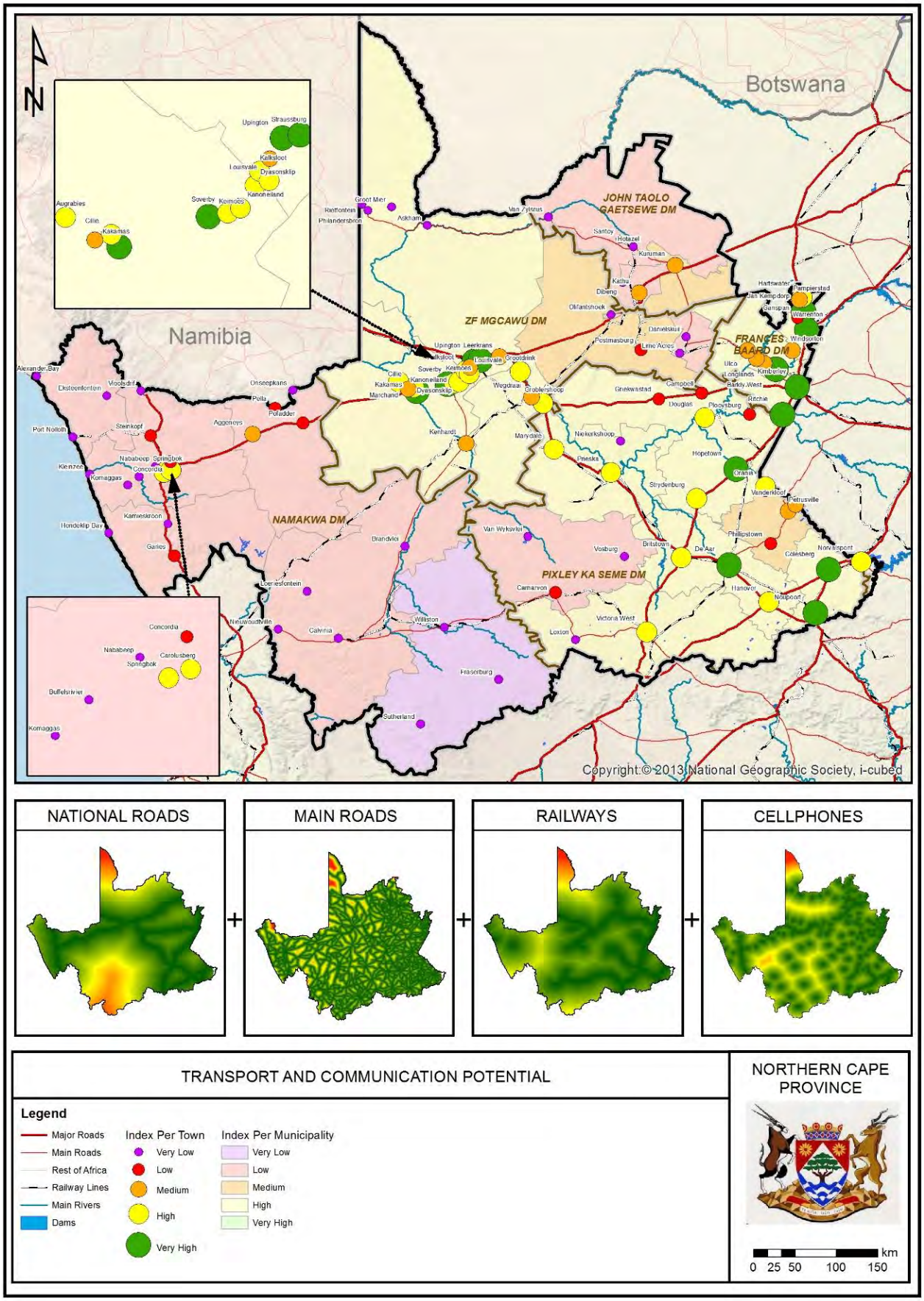
Low
Medium
High
Very High
Index Per Municipality
Very Low
Low
Medium
High
Very High
NORTHERN CAPE PROVINCE
km
0 25 50 100 150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Very High
Index Per Municipality
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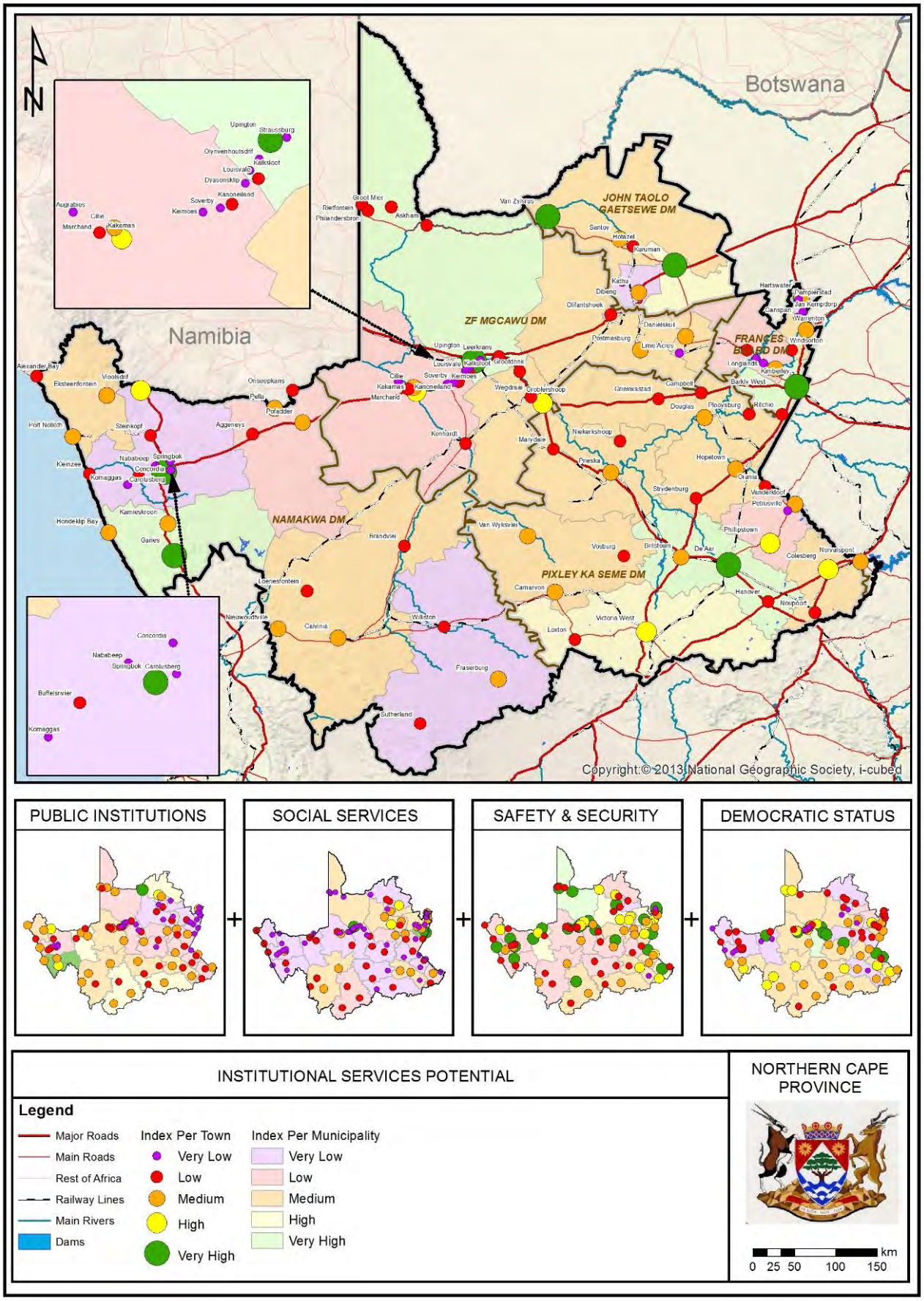
Medium
High
Very High
NORTHERN CAPE PROVINCE
km
0 25 50 100 150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Very High
Index Per Municipality
Very Low
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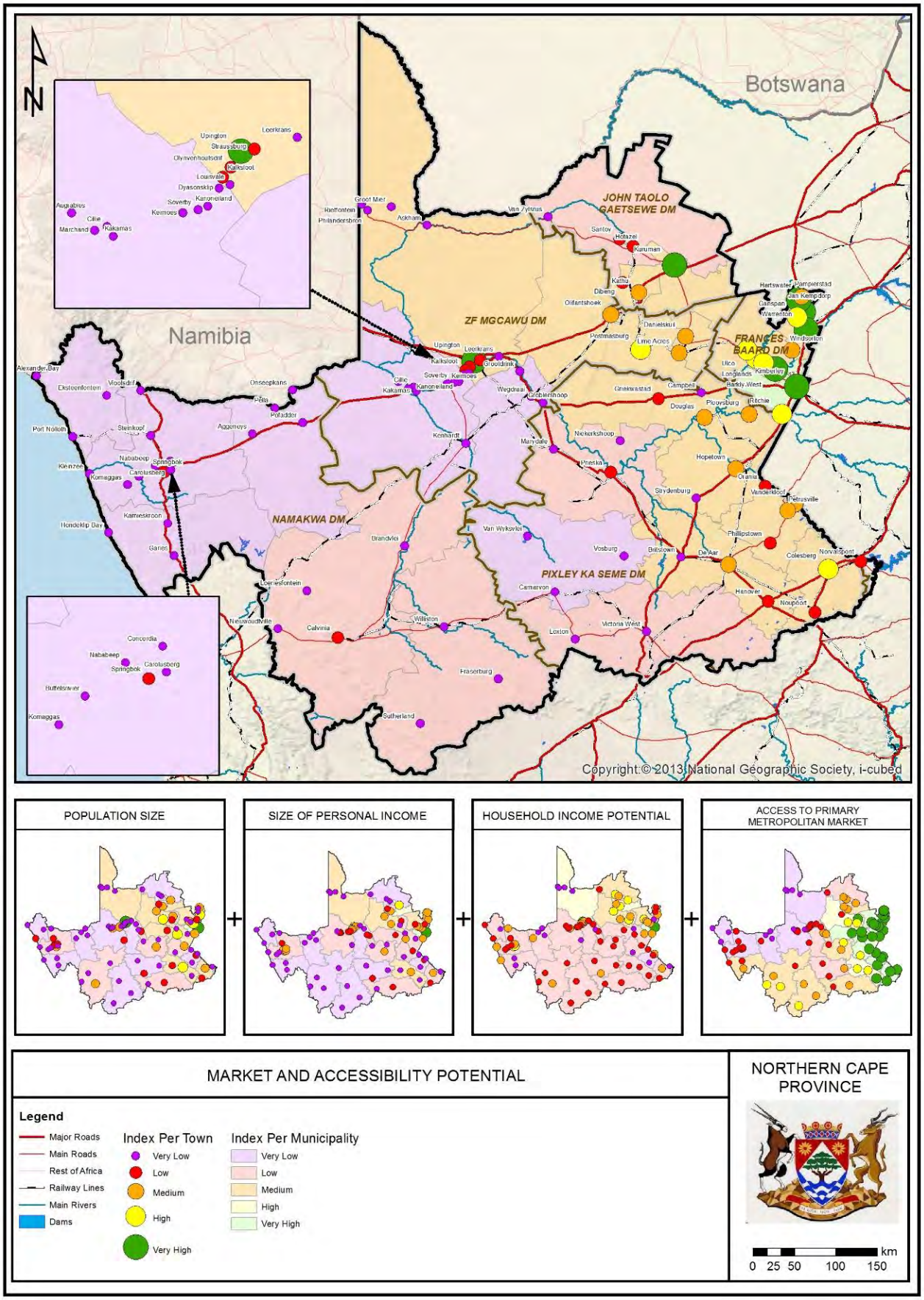
Medium
High
Very High
NORTHERN CAPE PROVINCE
km
0 25 50 100 150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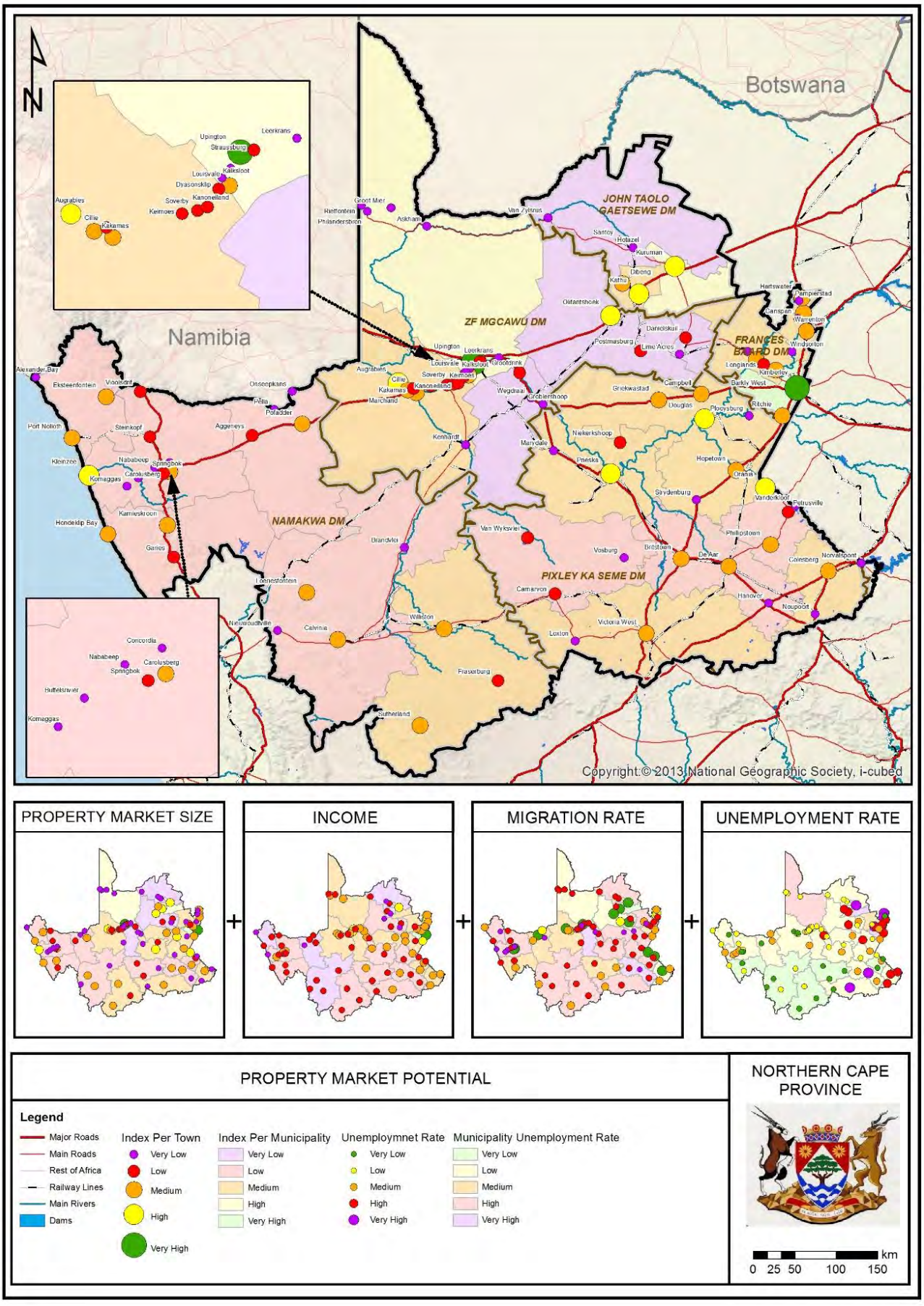
Very High
Index Per Municipality
Very Low
Low
Medium
High
Very High
NORTHERN CAPE PROVINCE
km
0 25 50 100 150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PROPERTY MARKET SIZE
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Unemploymnet Rate
Very Low
Low
Medium
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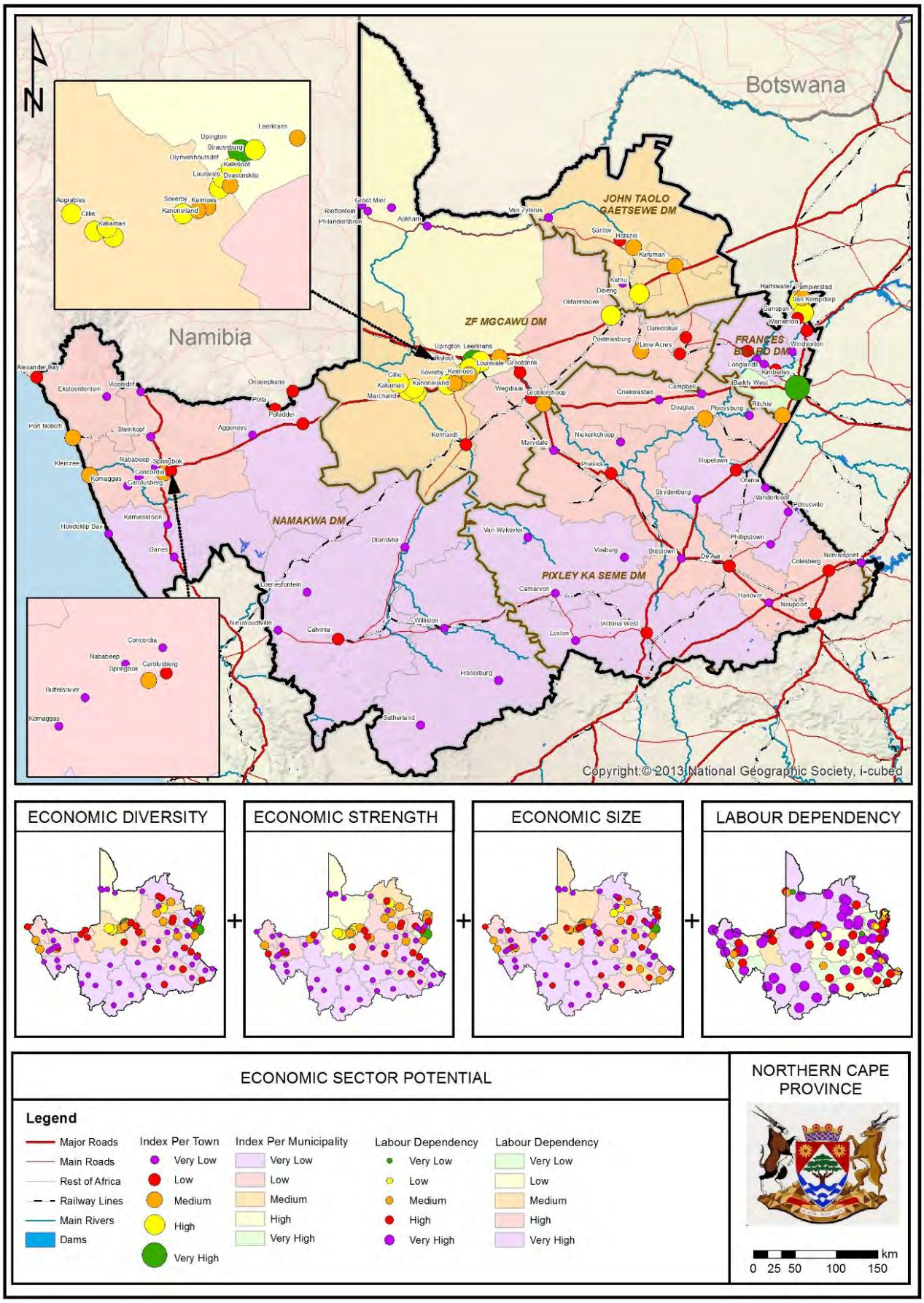
Very High
Municipality Unemployment Rate
Very Low
Low
Medium
High
Very High
NORTHERN CAPE PROVINCE
km
0 25 50 100 150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ECONOMIC DIVERSITY
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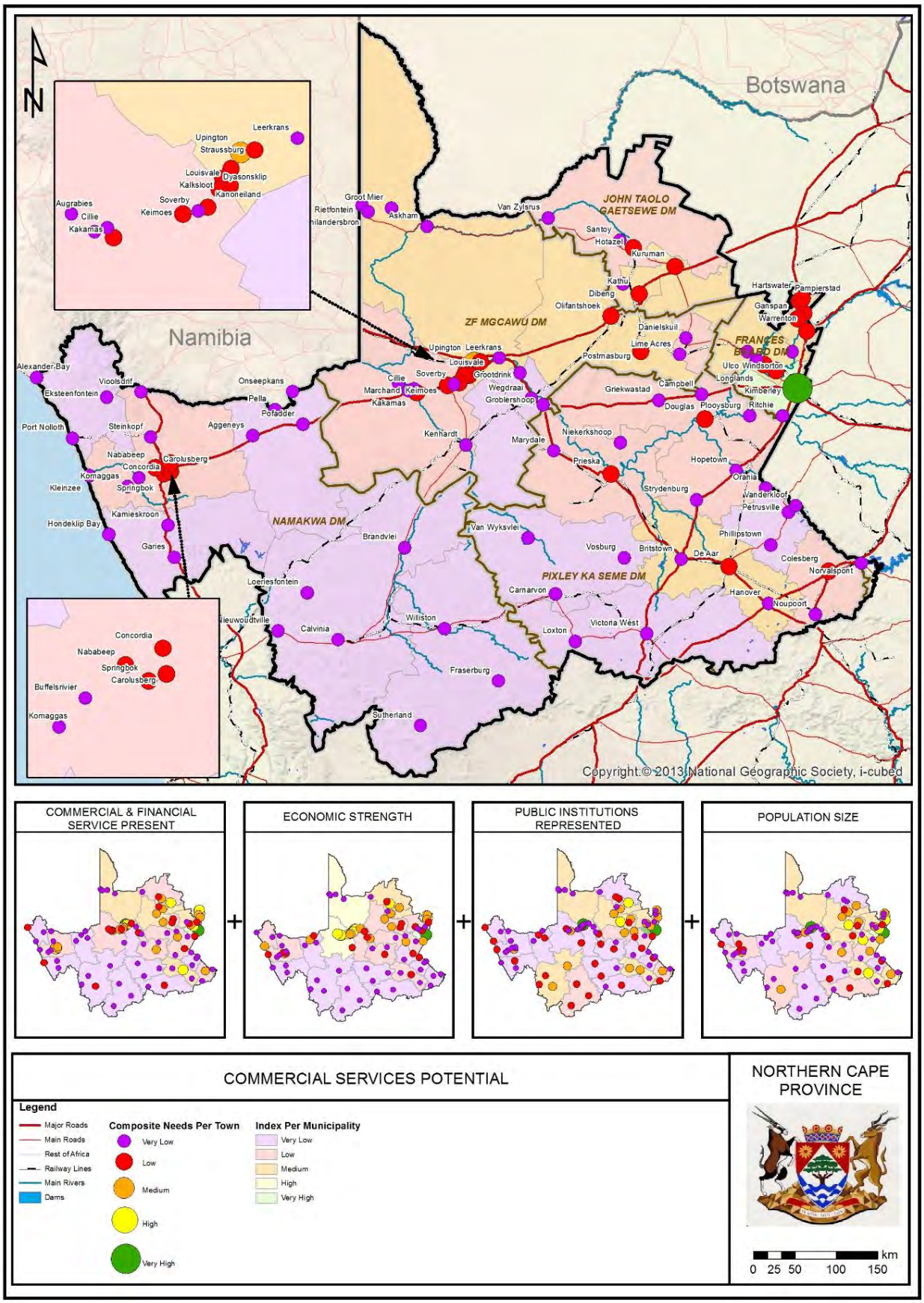
Low
Medium
High
Very High
Labour Dependency
Very Low
Low
Medium
High
Very High
NORTHERN CAPE PROVINCE
km
0 25 50 100 150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COMMERCIAL & FINANCIAL SERVICE PRESENT
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Very High
Index Per Municipality
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Medium
High
Very High
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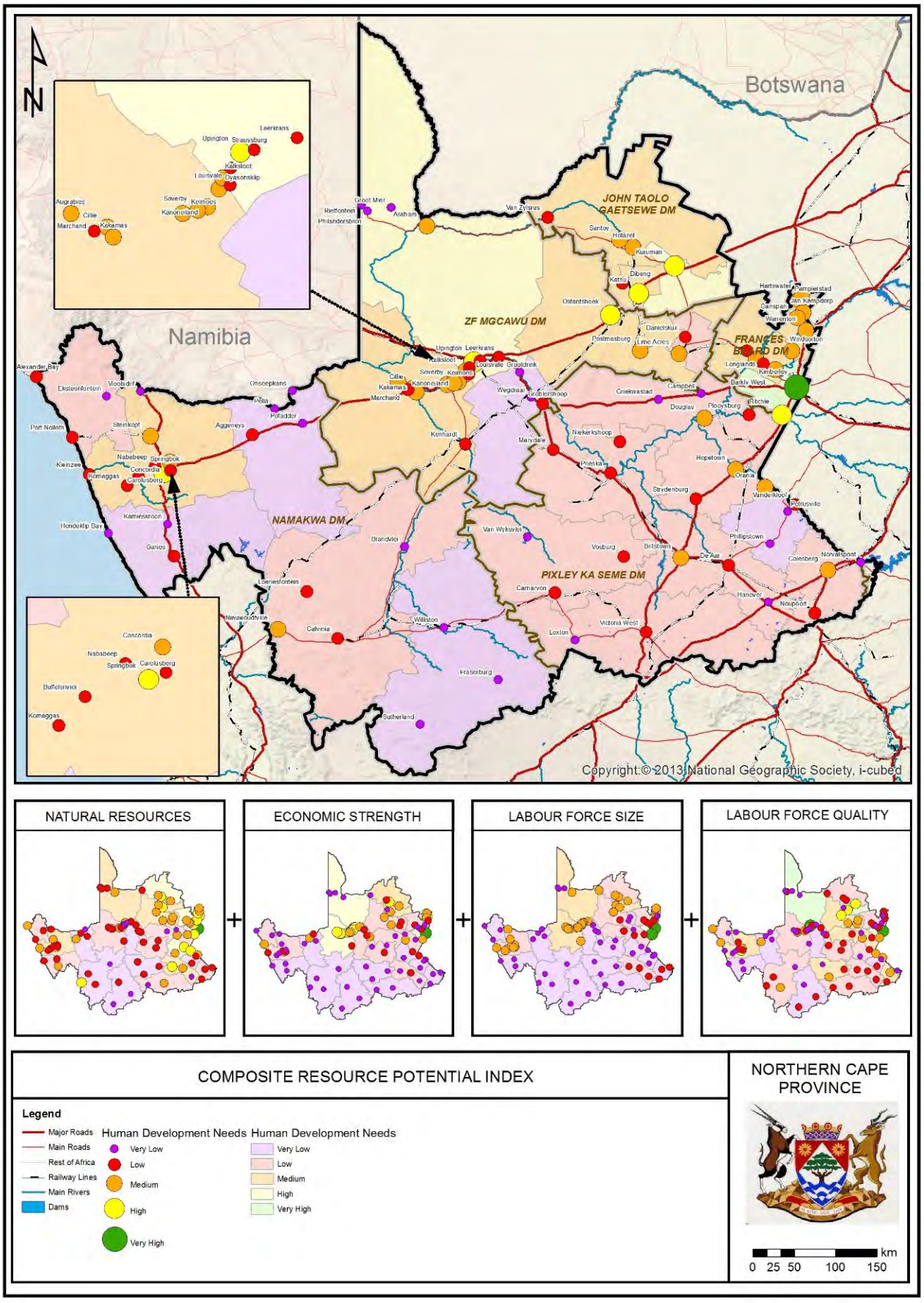
km
0 25 50 100 150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Human Development Needs
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Medium
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Very High
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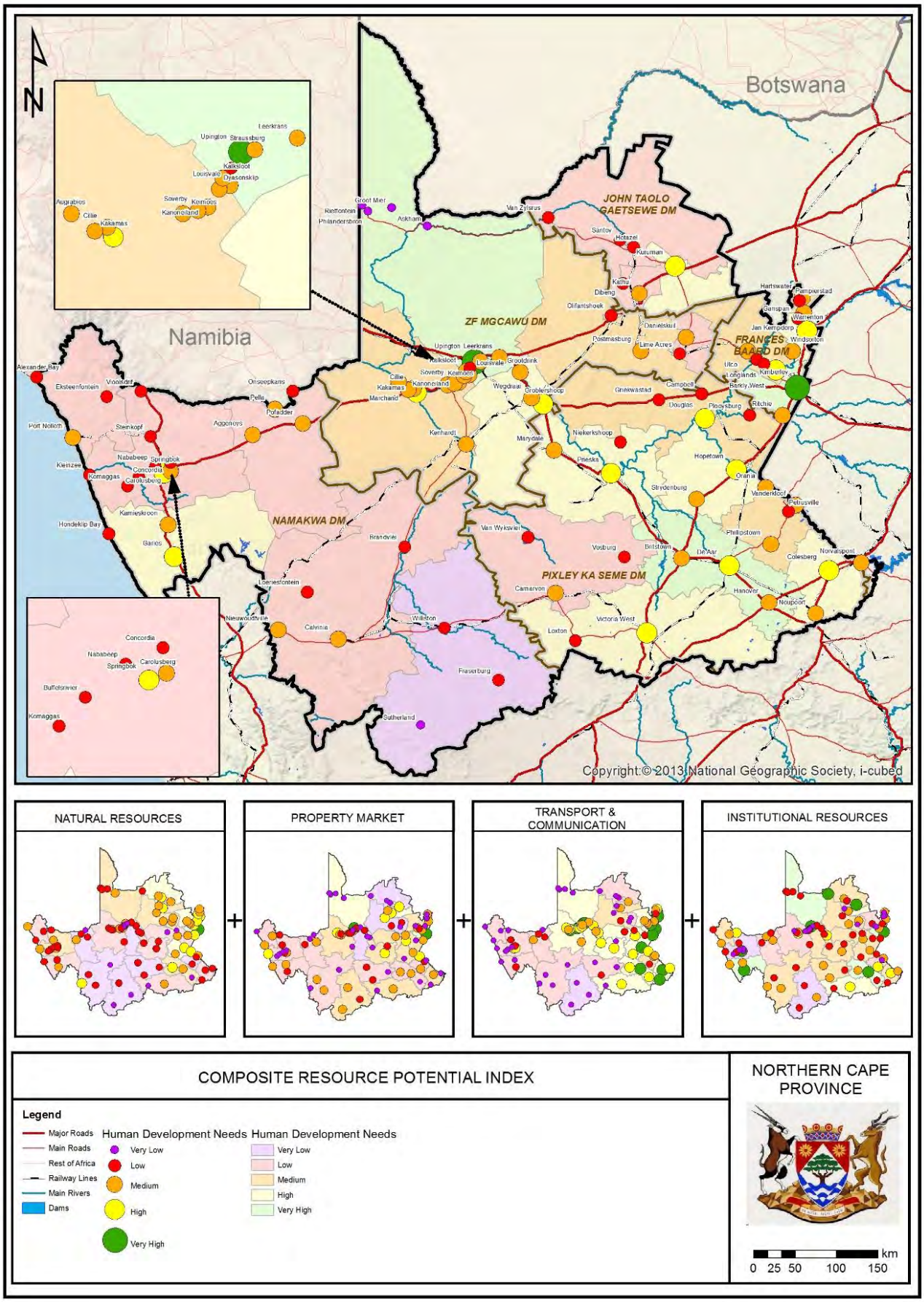
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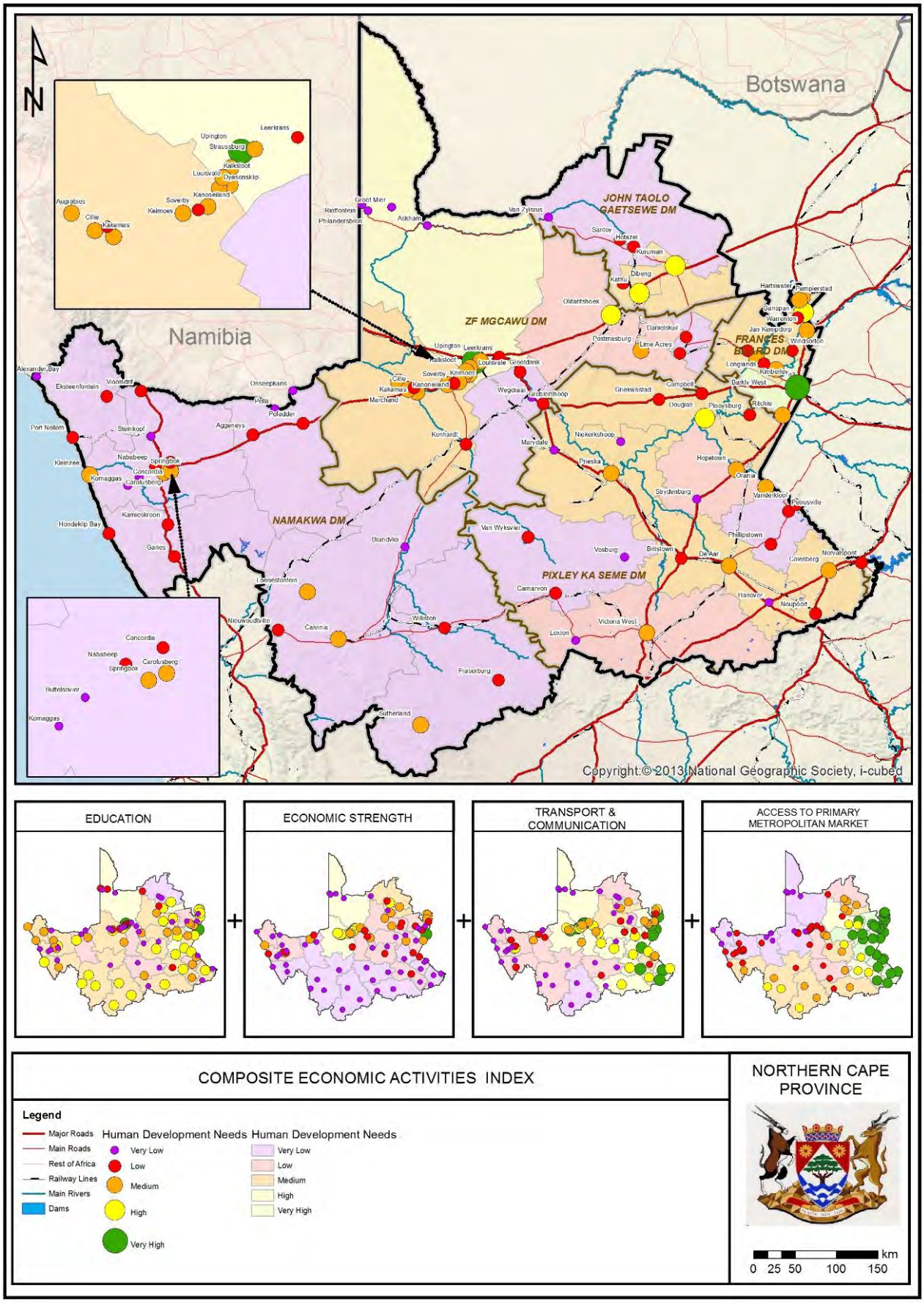
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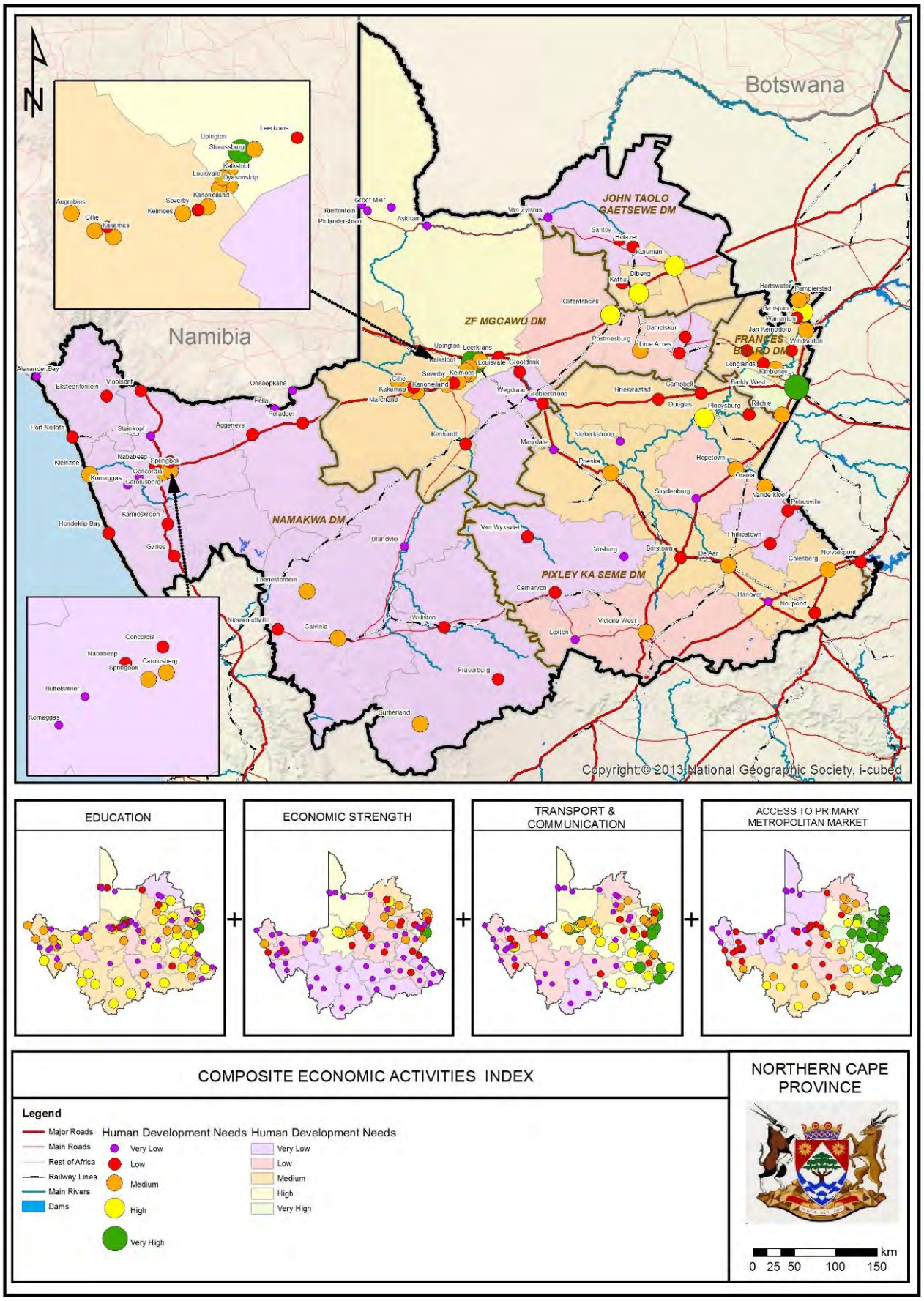
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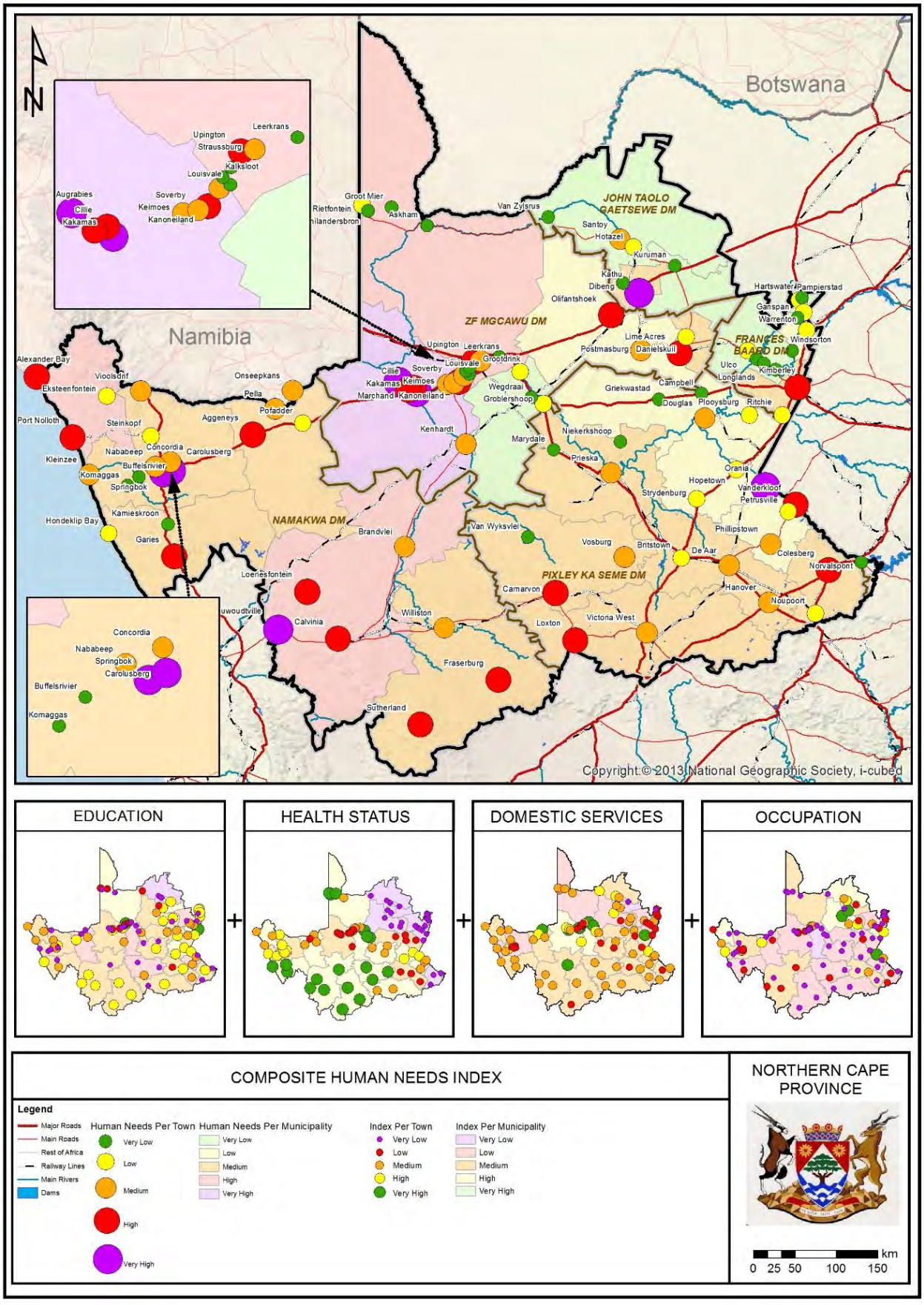
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Index Per Municipality
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Very High
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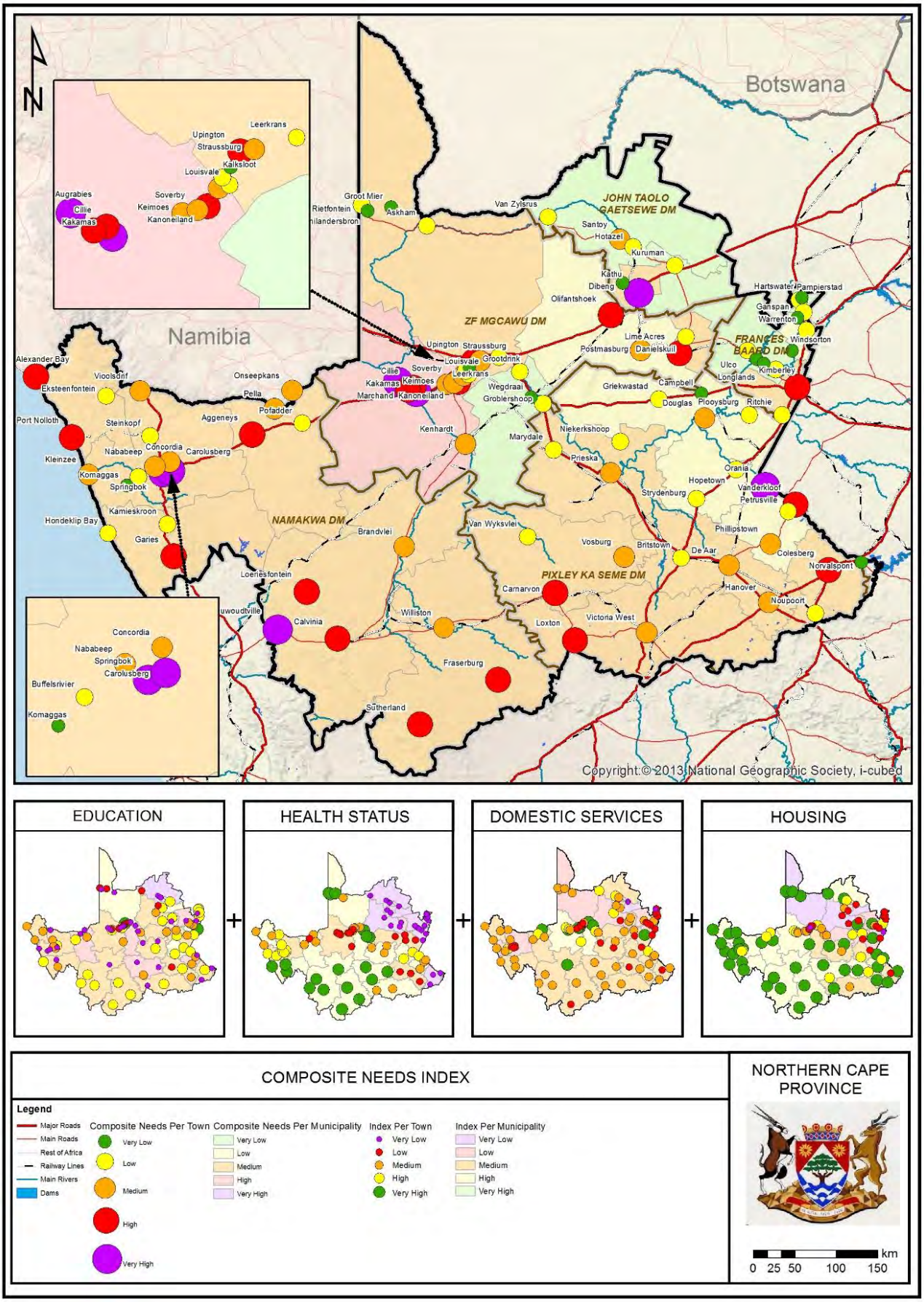
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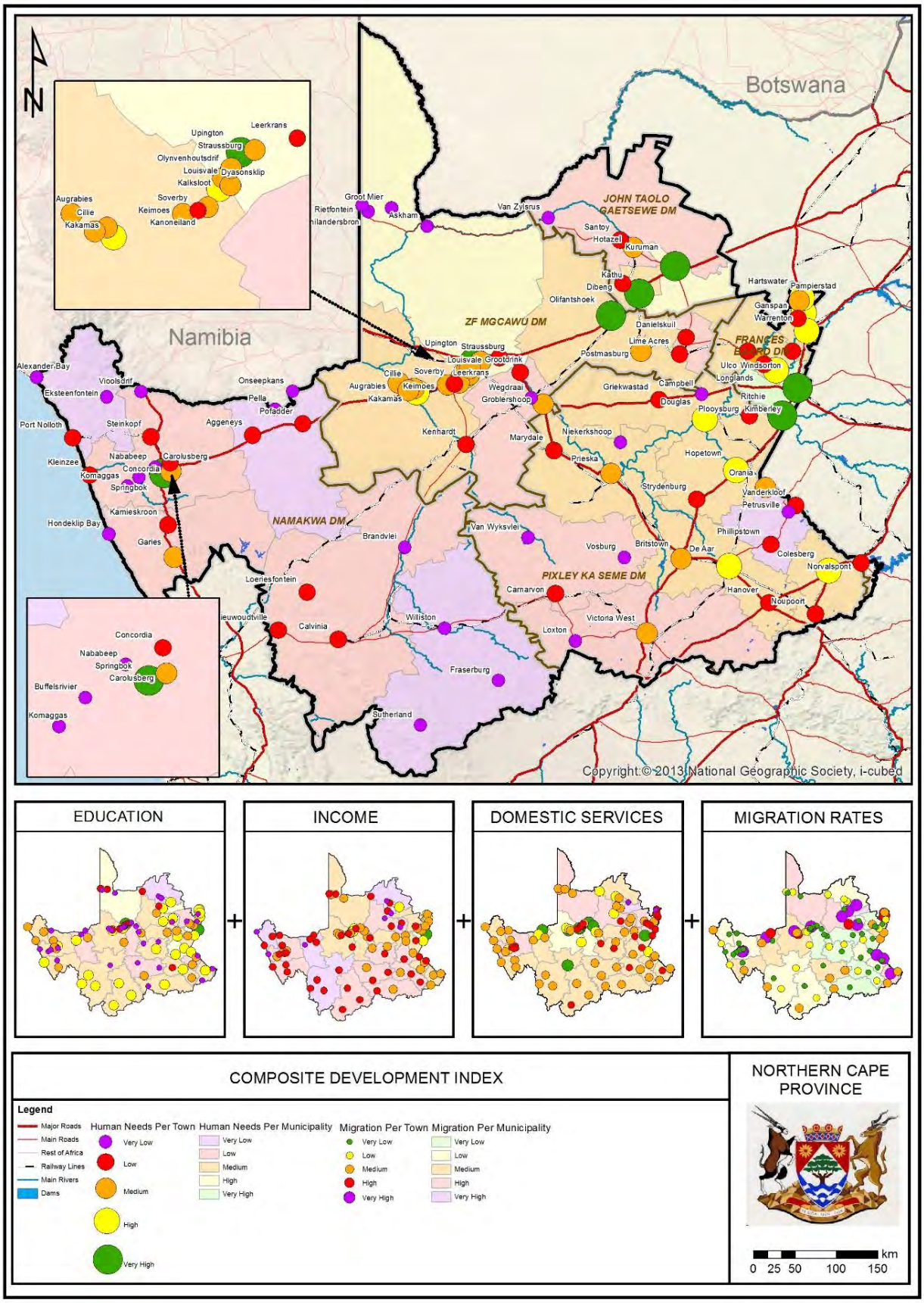
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