

Regional development of Saldanha Bay region, South Africa: The role of Saldanha Steel

Lesley Welman^{1, DR}, Sanette L.A. Ferreira^{2, CFMR}

Stellenbosch University, Department of Geography and Environmental Studies, South Africa; ¹phone +27 218 083 105; e-mail: leswelman@gmail.com; ²phone +27 218 083 105; e-mail slaf@sun.ac.za (*corresponding author*)

How to cite:

Welman, L. and Ferreira, S.L.A., 2014: Regional development of Saldanha Bay region, South Africa: The role of Saldanha Steel. In: Rogerson, C.M. and Szymańska, D. editors, *Bulletin of Geography. Socio-economic Series*, No. 26, Toruń: Nicolaus Copernicus University, pp. 219–231. DOI: <http://dx.doi.org/10.2478/bog-2014-0055>

Abstract. Since 1970 the Saldanha Bay region on the West Coast of the Western Cape Province has been high on South Africa's national development agenda. The region has been struggling for years to meet the preconditions for economic take-off. In this analysis the Saldanha Bay region is positioned in the contexts of global competition among steel-producing countries, South Africa's national development plan and the Greater Cape Town functional region. The aim is to explain the nature and extent of the relationship between a single secondary industry – ArcelorMittal Saldanha – and the economic development of the larger Saldanha region. Following a brief introduction and background to the Saldanha Bay region, the evolutionary economic geography (EEG) approach and the role of institutions in the development of regions are reviewed. Saldanha Steel (ArcelorMittal), the pioneer industrial firm, is analysed by using a mixed-method approach, where semi-structured interviews and a questionnaire survey are the main research instruments. The contribution of Saldanha Steel to regional development is explored.

Article details:

Received: 3 June 2014
Revised: 17 September 2014
Accepted: 19 September 2014

Key words:

regional development,
institutional thickness,
symbiosis,
spatial development initiatives,
South Africa.

© 2014 Nicolaus Copernicus University. All rights reserved.

Contents

1. Introduction	220
2. Evolutionary economic geography (EEG) and the role of institutions in regional development ..	221
3. Regional development policy in South Africa	222
4. Research methods	223
5. Regional development of Saldanha Bay region: The role of Saldanha Steel	223
5.1. The evolution of Saldanha Bay and the establishment of an industrial node	223
5.2. Locational factors, core business and cluster formation	225
5.3. Sourcing of employees, contractors and services	226

5.4. Forward and backward linkage	226
5.5. Contribution to the regional economy	226
Discussion and conclusions	227
Acknowledgements	228
Note	229
References	229

1. Introduction

Since the late 1960s, Saldanha Bay (1) has been on the South African government's national development agenda because of its strategic location on the West Coast and the presence of a deep water harbour. Over the past 20 years the economy of Saldanha has experienced a gradual shift from production orientated primary activities (agriculture and fisheries) toward capital-intensive secondary activities (steel manufacturing). In the mid-1990s the importance of Saldanha Bay was further confirmed when it was earmarked as a region that would benefit from spatial development initiatives (SDIs) – a national policy – where certain regions (corridors, industrial zones and clusters) were identified for special development support (Rogerson, 1998, 1999, 2001). Most SDIs were coastal development corridors, including port facilities (Bek et al., 2004). In 1998 a steel-processing plant of the Industrial Steel Corporation of South Africa (IsCOR) was established at Saldanha Bay and in 2011 the region was listed as presidential priority development region (National Planning Commission, 2011). In 2012 the region was proclaimed as a new industrial development zone (IDZ), one of group of new spatial interventions that have been launched in South Africa (Nel, Rogerson, 2013, 2014). At the opening of Saldanha's new IDZ in November 2013 South Africa's President Jacob Zuma proclaimed: "*It is a new beginning for the region*" (Jacka, Saunders, 2013: 1).

The Saldanha Bay region occupies an important place in national, provincial and local regional development of South Africa. Nationally Saldanha Bay (with its harbour) is a growth node for the sustainable development of the West Coast region. Saldanha Bay is linked to the Sishen area – a resource outpost in the Northern Cape – by a single 860-km, heavy-haul railway line specifically de-

signed and equipped for handling at least 27 million metric tons of iron ore per annum (Taylor et al., 1988). The mass exports were meant to establish South Africa as a leader among the world's iron-ore exporting countries. But, currently the steelmaking capacity of South Africa exceeds the domestic demand and along with a global over-production of steel (Ernst & Young, 2014), the demand for iron ore and steel coils has declined to the detriment of the profitability of the ArcelorMittal steel-producing plant in Saldanha (ArcelorMittal, 2014a). Provincially, the Saldanha Bay area complements the Cape Town metropolitan functional region (Clark et al., 2007) by offering breathing or developable space for the fast-growing Cape Town metropolitan area through affordable land for the future establishment of manufacturing industries, extra harbour capacity and leisure space for Capetonians. Locally, Saldanha Bay accommodates important economic sectors (such as fisheries and steelmaking) as well as important government institutions (Military Academy, the South African Naval Academy and South African Special Forces). These sectors and institutions are responsible for more than 50% of all job opportunities in the West Coast region (West Coast District Municipality, 2013). The expectations around the establishment of the steel-processing plant in the Saldanha Bay region were high concerning job creation and other economic spin-offs. Today, the steel producing-plant is known as Saldanha Steel and part of the ArcelorMittal South Africa group (Table 1). The establishment of this large undertaking was heralded as the generator of regional development in an arid peripheral region with rich ocean-fishing grounds albeit now under threaten with dwindling fish stocks. The decision to industrialise the Saldanha Bay area was received with mixed emotions regarding the economic and environmental health of the Saldanha Bay area and its local communities.

Table 1. Evolution of ArcelorMittal South Africa

Year	Event
1928	Iscor founded
1989	Iscor privatised and listed on the Johannesburg Stock Exchange (JSE)
1996	Iscor embarks on major restructuring programme
2001	Unbundling of steel-producing and mining enterprises into Iscor and Kumba respectively
2002	Iscor enters into strategic partnership with London Mining Network (LMN) with a business assistance agreement (BAA)
2004-2005	LMN lift stake to 52% and name change to Ispat Iscor
2005	LMN holdings and Ispat merge to form Mittal Steel
2006	Mittal Steel merge with Arcelor to form ArcelorMittal
2007	Name change to ArcelorMittal South Africa

Source: Authors

This paper aims to explain the nature and extent of the symbiotic relationships between a single secondary industry – ArcelorMittal Saldanha (Saldanha Steel) – and the regional development of the wider Saldanha Bay-region. First, there is a brief introduction to evolutionary economic geography (EEG) as an approach to understanding the development path of regions, the role of institutions (or firms) in the development of regions and regional development policy in South Africa regarding spatial development initiatives (SDIs). Second, the mixed-method approach, including an in-depth case study of Saldanha Steel, semi-structured interviews with informed managers, a questionnaire survey and a review of appropriate secondary information are reported. Third, Saldanha Steel's contribution to regional development is examined.

2. Evolutionary economic geography and the role of institutions

An evolutionary approach focuses on the historical processes that produce uneven patterns of economic development. EEG explains the spatial evolution of firms, industries, networks, cities and regions based on the processes of the entry, growth, decline and exit of firms, and their locational behaviour (Storper, 1997). EEG focuses on the regional scale since development tends to be geographically-bounded (Boschma, Lambooy, 1999; Boschma, Frenken, 2006). An EEG approach contributes to

our understanding of development in national territories and the refining of general economic theory. Although local contexts are important in the EEG approach, it goes beyond the specific and the unique case studies (Boschma, Frenken, 2009). EEG scholars recognise three foundations of EEG – path dependence, complexity theory and generalised Darwinism (Boschma, Martin, 2010). These concepts form the bedrock on which empirical work is built. The current distribution of economic activity across space is understood as an outcome of largely contingent, yet path-dependent, historical processes.

Since the early 2000s a wide range of social scientists has voiced the need for a better understanding of the role of institutions in explaining economic development. Scholars attach different meanings to the concept 'institution', so that the literature on institutions distinguishes two types: "formal institutions (rules, laws and organisations) and informal institutions (or tacit institutions) such as individual habits, group routines, and social norms and values" (Amin, 1999: 367). Taylor (1986) placed the institution within the context of wider social relations, politico-economic processes and environmental change. Since the early 1990s, scholars in the field of regional development have found that "the role of institutions in economic growth and development has expanded" (North, 1990: 89). Institutions constantly "interact with and impact on one another in various ways and they become the underlying determinants of long-lasting economies" (North, 1990: 89).

Across different regions around the world, increasing attention has been paid to the roles of institutions in economic development, how they affect economic development and how institutions can be introduced into policy-making processes. Bek et al. (2004) have posited that although institutions play an important role in regional development, it is not clear why these institutions are less successful in socio-economic transformation. Boschma and Frenken (2006) agree institutions play a vital role in EEG and assert that an evolutionary approach perceives the behaviour of firms as mainly stemming from their routines, rather than from territorial institutions (Boschma, Frenken 2009). Firms develop routines in path-dependent and idiosyncratic ways so that the routines of firms vary greatly, even under the same institutional conditions. Care must be taken to avoid reading the behaviour and performance of firms deterministically regarding territorial institutions (Gertler, 1995). The deepening, strengthening and expansion of the EEG approach to institutions has resulted in the re-emergence of the concept of institutional thickness. Amin and Thrift (1995) define institutional thickness as a combination of factors involving inter-institutional interaction and synergy, collective representation by many bodies, a common industrial purpose, and shared cultural norms and values. Scholars of trust (Berggren, Jordahl, 2006) and social capital (Putman, 1993; Beugelsdijk, Van Schaik, 2005) contend that trusts and social capital are essential elements

of institutional thickness. Other researchers have found that communities, localities and regions with a 'thin' institutional thickness have a low probability of achieving sustainable economic development (Amin, 1999; Woolcock, 1999; Bek et al., 2004).

As geographical space is inherently economically uneven (Harvey, 2006), it requires spatially-focussed locally unique interventions (Rogerson, 2009). These interventions offer opportunities to address the complexities of territorial planning and mobilize the strategic competitive advantages of place-based assets within a globalised economy. Attention turns now to the national context of this study. A review is offered of the major national policies that have influenced development in South Africa since 1994 most of which are seen to be spatially-neutral (Oranje, 2010) and, of the SDI programme that is appropriate to the context of this investigation.

3. Development policy in South Africa since 1994 and the SDIs

Since the advent of the democratic South Africa in April 1994, five important policies have entered the national development scene (Table 2), some with direct spatial implications and some focused on the redistribution of wealth in a society characterised by an extremely wide gap between the affluent and the poor.

Table 2. Main economic development policies since 1994

	Policy and Aim	Acronym
1994	Accelerated and Shared Growth Initiative for South Africa Reduce poverty by 2010 and halve unemployment by 2014.	ASGISA
1994	Reconstruction and Development Programme: Broad socio-economic upliftment	RDP
1996	Growth Employment and Redistribution: Stimulate faster growth to provide for social investment needs.	GEAR
2010	New Growth Path Accelerate economic growth to provide for all election promises.	GNP
2012	National Development Plan Long-term, socio-economic development roadmap	NDP

Source: Authors

Spatial Development Initiatives (SDIs) were formulated to improve the functioning of government in targeted regions of the country, particularly those areas with the greatest potential for new growth (Rogerson, 1998, 1999, 2001, 2002). Industrial development zones (IDZs) such as at Saldanha, Coega and Richard's Bay became the beacons of SDIs which were established in selected regions. The scheme was initiated by the Department of Trade and Industry to develop regions having inherent economic potential – but were under-resourced due to apartheid spatial planning – by generating regional sites or clusters of economic agglomerations (Luiz, 2003). SDIs and IDZs became key components of the government policy response to the national and regional spatial economic development needs of the country (Kleynhans et al., 2003). In their review of the success or not of the SDI initiatives in the West Coast, Bek et al. (2004: 4) found a “general lack of entrepreneurial culture within the non-White component of the West Coast population, and the lack of an effective growth coalition among local institutions to facilitate development.” They ascribed the “lack of business culture among non-white citizens to the legacy of apartheid where ‘people from colour’ were destined to be labourers in factories and fishermen and this impacted detrimentally on the creation and development of knowledge and skills for entrepreneurship” (Bek et al., 2004: 5). Spatial inequalities have proven to be the most stubborn legacy of apartheid, both reflecting and reinforcing wider social inequalities in the country (Nel, Rogerson, 2009). Key responses in this regard include the identification of the need to address the legacy of apartheid spatial planning and to promote rural development in order to create five million jobs in terms of the New Growth Path (Department of Economic Development, 2011). In May 2014 the South African government passed Special Economic Zone (SEZ) Act (RSA, 2014) that introduced a new era of spatial planning and intervention (Nel, Rogerson, 2014; Rogerson, 2014).

4. Research methods

The EEG approach was used to analyse the industrial development path of Saldanha Bay and of the role

played by Saldanha Steel in regional development. First, a desktop study was done of all available and appropriate information about the development of Saldanha Bay region and Saldanha Steel, including annual reports. Second, senior management (and other knowledgeable people) of Saldanha Steel were interviewed about the reasons for the firm's establishment, the company's performance over the last 16 years and the development scenarios for the company. Senior members of Saldanha Steel's management also completed a questionnaire, consisting of 18 questions. Working from a crude picture (self-assessment and completed questionnaire) a snowballing process, consisting of telephone and e-mail communications was followed to complete the data collection.

5. Regional development of Saldanha Bay region: The Role of Saldanha Steel

5.1. The evolution of Saldanha Bay and the establishment of an industrial node

Saldanha Bay is situated approximately 110 km north-west of Cape Town on the West Coast (Figure 1). The bay has a wide entrance between two protruding peninsulas which makes it one of the best natural harbours of the south-western part of the African continent. Over the centuries the bay has been used as a harbour of refuge by passing explorers and East Indiamen (Zwemmer, Van't Hoff, 1982). According to Zwemmer and Van't Hoff (1982: 1248), had it not been for the lack of fresh water “Saldanha Bay would have been developed as a major port long ago”. Saldanha is the major settlement of the Saldanha Bay Municipality which is the most developed part in the West Coast District Municipality of the Western Cape. Today, Saldanha has a relatively strong manufacturing sector and well-known as a harbour town. The regional economy is based on steel manufacturing, fishing, tourism and harbour-related industries.

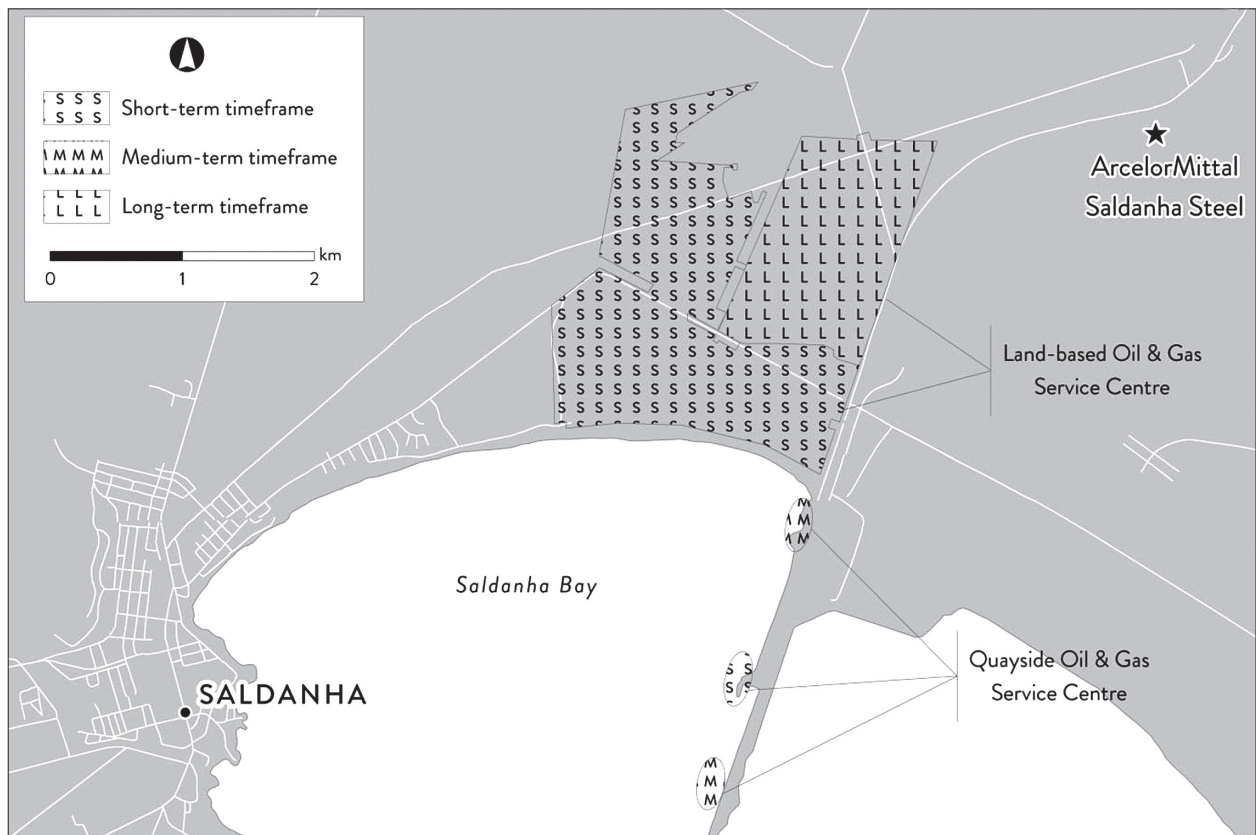


Fig. 1. Saldanha Bay region and the proposed IDZ (Short-, Medium- and Long-term Timeframe)

Source: Authors' own production

Table 3. Major infrastructural and industrial developments in Saldanha Bay since 1973

Date	Construction and establishment
1973	3-km artificial breakwater linking Marcus Island to the mainland of Saldanha Bay
1974	Sishen-Saldanha railway line
1974-1976	Iron-ore jetty
1975-1976	Oil jetty (facilities for handling oil imports)
1976	Extension and deepening of the harbour
1980	Multipurpose cargo terminal added to iron-ore jetty (facilities for handling high-value lead and copper concentrates)
1994	Tronox (mine and beneficiate heavy minerals to produce titanium dioxide feedstock) - previously known as Namakwa Sands.
1997-1998	Extensions to multi-purpose terminal
1998	Saldanha Steel (ArcelorMittal)
1999	Duferco (steel coils)
2014	Industrial Development Zone established

Source: Authors

Highlights in the development of the infrastructural base (spine) of the region (Table 3) were the three-kilometre long artificial breakwater linking Marcus Island to the mainland (1973); the Sishen-Saldanha railway line (1974); and, the extension and

deepening of the port (1976). These developments set the foundation for the industrial development in the region, but they also created industrial-path dependence that would constrain future tourism developments. During the 1980s the completion of

the multipurpose cargo terminal enabled oil imports and the export of high-value lead and copper.

In 1998 a steel-processing plant was established by publicly-owned Iscor in Saldanha Bay. Today the mother firm is called ArcelorMittal South Africa which operates major facilities at Newcastle, Vanderbijlpark, Vereeniging as well as at Saldanha. The works at Saldanha are called Saldanha Steel which is part of a transnational family of steel-producing plants in 25 countries. Duferco – a Swedish firm that manufactures steel coils – joined the industrial incipient cluster in 1999. Unfortunately, because of the lack of certain preconditions for industrial take-off, other megaprojects (aluminium smelters, titanium plants and large-scale chemical plants) identified between 1999 and 2008 for inclusion have never been realised. Reasons for this are given as “limited government cooperation between local and provincial government” and the lack of provision of certain services and the environmental sensitivity of the adjacent Ramsar wetlands site (Wesgro, 2011: 6). During 2011 the Saldanha Bay region was listed as one of the presidential priority development regions (National Planning Commission, 2011) and in 2012 declared as a new industrial development Zone (IDZ) (The Presidency, 2012). According to the National Development Plan the IDZ of Saldanha is strategically positioned to serve the envisaged oil-and-gas sector on the African continent and will create opportunities for components manufacturing to support the oil-and-gas industry (The Presidency, 2012).

In the following subsections the information, data and observations obtained through the secondary and primary surveys of Saldanha Steel are presented and analysed. This involves the reasons for establishment, phase in the life-cycle, core business, sourcing of employees, procurement of contractors and services, forward and backward linkages, the nature and extent of in-service training, current standing of the company and the economic contributions to the wider region and province.

5.2. Locational factors, core business and cluster formation

The main reasons for the establishment of Saldanha Steel in the Saldanha Bay area were to add value to the available iron ore; the availability of afford-

able labour, land, electricity and other raw materials; opportunities in the export market; proximity to the harbour; and an opportunity to stimulate the West Coast economy. Saldanha Steel is 16 years old, in the middle-of-life phase of its life cycle as a firm and largely is an export-focused plant. The firm continually faces the challenge of being focused on the export market in which competition from major steel-producing countries like China, India, Japan and Korea is strong. Plant closure was contemplated in 2010 but improved cost performance through an intensive energy-saving programme combined with a world-class manufacturing programme has ensured availability and reliability (ArcelorMittal, 2014). The plant now produces hot rolled coil (HRC) at its designed nameplate capacity of 1.2 million tonnes per annum. The plant is distinguished by its merging of leading-edge technologies to produce high-quality, ultra-thin hot rolled coil (UTHRC). It is stated that “The ISO 9002 and ISO 14001 accredited plant is the only steel mill in the world to have successfully combined the Corex/Midrex process into a continuous chain – replacing the need for coke ovens and blast furnaces, and making the plant a world leader in emission control and environmental management” (ArcelorMittal, 2014:1). The facilities and technologies at Saldanha Steel were designed to produce clean steel with virtually no impurities such as tin or copper. The continuous-production chain is exceptionally short, taking only 16 hours from the time iron ore enters the Corex or Midrex units to exit of the rolled product. In the highly-competitive international HRC market, Saldanha Steel has carved a niche in applications requiring HRC in thicknesses of less than 1.6 mm. In 2009 they sold 20 000 metric tons per month to Duferco (firm located in Saldanha Bay region) and the rest of their products were exported. Key target markets are West and East Africa (Saldanha Bay Municipality, 2009: 50).

The establishment of Saldanha Steel has not only triggered the development of Duferco (a complementary steel-coil manufacturer) but also the establishment of various other engineering firms in close proximity to the plant. Six engineering firms; namely Westarcor, Vaalmac, Profab, Dagbreek, Saldanha Rewinding and Panda are all located in the Saldanha heavy-industry zone. A co-evolutionary perspective (Nelson, 1995) is important here because it

acknowledges how the innovation and technology of a single secondary industry (Saldanha Steel) leads to the establishment of new firms in the Saldanha Bay industrial zone. Saldanha Steel has made some of its land available at fair-cost purchase or rental agreements to encourage linked developments (ArcelorMittal, 2014).

5.3. Sourcing of employees, contractors and services

Saldanha Steel employs 542 permanent workers and has a policy that at least 60% of its employees must be sourced locally. Thirty-one per cent of the skilled and 40% of the semi-skilled employees originate in the West Coast region. In addition to these job opportunities, the firm outsources service provision to subcontractors (engineering, cleaning, slag handling). Some 690 contract workers are on-site but these jobs are seasonal in nature. A major concern for the management of Saldanha Steel is the quality of the local human resources and a lack of appropriate skills and qualifications. Shortages of skilled workers are addressed through the use of a skills development pipeline and facilities such as the local Science Centre. Nevertheless, there is competition for human resources in the immediate area from other enterprises. The issues of skills and secondary education are not related to a specific institution rather the national criteria set for competence does not work in practice. The previous training period of four years for an artisan has been reduced to 18 months with the result that inadequately trained employees do not have degree of competence to function unsupervised in an industrial environment. This situation can be rectified only at a national level. Until then, Saldanha Steel is responsible for in-service training on all levels from basic skills to managerial status.

5.4. Forward and backward linkages

Saldanha Steel is linked to the global, national, provincial and local economies. For example, since its establishment Saldanha Steel has had product and resource exchanges with Pretoria Portland Cement (PPC) which provides dolomite and lime from its

quarries and reciprocally uses the slag from Saldanha Steel's production processes to manufacture cement in their plants at De Hoek and Riebeeck-Wes. Steel production at Saldanha is dependent on acquiring essential inputs like iron-ore pellets from Brazil, coal from Limpopo and coke from China if not available from Vanderbijlpark in South Africa. The following firms provide service inputs to Saldanha Steel's production process: IMS Tube City (*provider of on-site, industrial mill services*), Radex Herekligt International (supplier of fireproof products), Westarcor (manufacturer of certain parts for production process), Air Liquide (supply oxygen to be used in the steel-manufacturing process) and Profab (an engineering company for repairs and installations on site). Saldanha Steel is engaged with various stakeholders in the region to produce synergies, to work together to try to remove local constraints and unlock the region's potential. Currently, the enterprise is part of a new initiative in which industry and various tiers of government work together to remove barriers that hinder progress and economic growth in the region.

ArcelorMittal South Africa has been under political pressure to provide steel at a heavily-discounted price for infrastructure development in South Africa. ArcelorMittal South Africa is optimistic for an end to the tough trading conditions on infrastructure development projects, both locally and across the continent. South Africa's construction industry remains subdued despite recent signs of revival. The construction sector is the country's largest user of steel, and recovery is dependent on the government implementing its R4-trillion infrastructure investment plan (DTI, 2013). The demand for iron ore is not only driven by domestic consumption but also by international steel production currently experiencing an excess of steelmaking capacity (Ernst & Young, 2014). The sector is under strain by the pressures caused by several years of excess steelmaking capacity and resultant low margins.

5.5. Contribution to the regional economy

Table 3 captures the contribution of Saldanha Steel to the economy of the Western Cape. It is evident that the enterprise is an important role player in the West Coast region and provincial economies as

large employer, a contributor to the gross domestic product of approximately R5 billion per annum and a significant client of Eskom with an electricity bill of R750 million in 2012. Locally, Saldanha Steel is the largest consumer of water and tax payer (R16.5 million per annum) in the Saldanha Bay Municipality. As for social responsibility, the Arce-

lorMittal Saldanha Science Centre has been operational for three years and provides extra-curricular support in mathematics, science, English and life sciences to learners from 18 local primary schools and five high schools. During 2011, the Foundation spent R3.2 million on the operational costs towards the centre (ArcelorMittal, 2011b)

Table 3. Saldanha Steel's contribution to the Western Cape economy

Type of Contribution	Impact per annum
Permanent jobs	542
Contractors on-site	689
Foreign revenue generated by hot rolled coil exports	US\$511 million (R3.7 billion)
Eskom's income from Saldanha Steel	R750 million (2012)
West Coast business spending (small business contractors) – Red Zones	R175 million
Western Cape Business spending	R 786 million
Spending in other regions (rail and road transport; spares, excluding mining of raw materials)	R 1.613 billion
Total turnover of Saldanha Steel as contribution to gross domestic product	R5.023 billion
Municipal income (water and taxes)	R16.5 million
Tax paid to SARS (salaries and vendors)	R122 million
VAT generated by Saldanha Steel	R347 million
Estimated contribution to income and economic activity in area (salaries and spending)	R340 million

Source: Questionnaire survey, June 2014

The biological concept of symbiosis means living together. A more nuanced interpretation of symbiotic interrelationships involves mutualism (both entities involved benefit from the relationship), commensalism (one entity benefits and the other is not affected), and parasitism (one entity benefits and the other is harmed in the relationship (Wilkinson, 2001). These three concepts constitute the framework for discussing below the symbiotic relationships between Saldanha Steel and development of the Saldanha Bay region of South Africa.

6. Discussion and conclusions

Institutions are crucial components of any society. The “decisions made by institutions and the actions they take reverberate throughout society” (Afrin, 2013: 153). Communities depend largely on institutions for the provision of jobs, investment, goods and services produced, and development of

new technologies. In return, institutions depend on support and resources from society. Accordingly, business and society are deeply and dynamically interdependent and interconnected. An institution such as Saldanha Steel has exerted an extraordinary influence over the civic, economic and cultural life of the local Bay region. Although the firm has contributed to local wealth at the same time it also has had negative impacts on certain segments of economy and civil society. Mutualistic relationships are not stable at all points in the evolution (or development process) of a firm and can be disrupted by conflicts of interest among the partners and the community as a whole.

At Saldanha Steel there is evidence that a strong commodity supply chain exists that benefits both the direct backward and forward linkages between different sectors in Saldanha Bay's economy. The existence or survival of most industrial institutions strongly relies on sustainable network relationships along the production chain. The more production units are integrated through a web of industrial

linkages, the greater the chance that benefits will spill-over into the overall system of the regional development process (Yeung, 2000). The rising contribution (job creation and percentage share in the GDP) of the secondary sector to the regional economy, including opportunities for small entrepreneurs, increasing reinvestment in new infrastructure and superstructure development since 1998, the forward and backward linkages associated with Saldanha Steel and the Saldanha Bay IDZ all serve as catalysts for further development in the Saldanha Bay region and for fostering a mutualistic relationship.

Since 1974 the construction of the Sishen-Saldanha railway line has created high expectations of potential job seekers and triggered migration into the Saldanha Bay region. This has resulted in a gradual regression to economic parasitism in the region. The establishment of Saldanha Steel in 1998 attracted large numbers of people into the Saldanha Bay region with expectations of securing jobs in the steel industry. During the construction phase of the plant (pre-1998) Saldanha Steel employed more than 3 000 people; once construction was completed, however, only 750 remained in service. An influx of unskilled migrants occurred to Saldanha from the Eastern Cape Province arriving in the Saldanha Bay region. According to 2011 census data Saldanha Bay experienced a dramatic increase in population from 16 820 in 1996 to 28 850 (42% increase) in 2011. The number of households in informal dwellings increased from 16% in 1996 to 25% by 2011 and proportion of unemployed rose from 15% to 25% over the inter-censal period (Stats-SA 2011). With 90 % of households in Saldanha Bay living on R38 400 or less per year (which represents low-incomes), the majority of the population are unable or barely able to meet basic needs. Most are reliant on government grants (child support grant, old-age pension, disability grant) and/or indigent household grants (free basic services) from municipalities for household survival. Overall, there is only a small middle-class (less than 10% of the households) and 0.45 % of households which would be categorised as affluent (Wesgro, 2011: 66-67).

A commensalism relationship is difficult to demonstrate between Saldanha Steel and the Saldanha Bay region. The thriving property market in the Saldanha Bay region can be linked to the presence of Saldanha Steel and prospects about the IDZ.

Since the establishment of Saldanha Steel in 1998, however, there has been an increased demand for rental accommodation which has spurred the building of apartment blocks in central areas of Saldanha Bay. According to one local property specialist, particular segments related to the industrial sector are experiencing a growth in demand. This trend reflects the market pattern since Saldanha Steel came to the region with a knock-on impact on business activity occurring 12 months later. Rents of R3 500 to R4 500 per month are charged for two- and three-bedroom houses with single garages on plots as small as 120m² (Business Day, 2013). In addition, there is also a rising demand for new upmarket residential properties away from the industrial developments in the Saldanha Bay region and situated in aesthetically more pleasing surrounds. This sector of the property market is associated with upmarket housing developments along the coastline at Jacobsbaai and Langebaan (Smith, 2013).

In final analysis one of the distinctive features of the regional economy is its dependence on a large steel plant that is primarily export-based and operating in a global market with an excess in steel capacity as well as a fishing industry that is suffering from dwindling fish stocks. It is crucial that the regional economic base be diversified and alternative economic activities promoted which are less dependent on external factors or economic fluctuations. This analysis has revealed the symbiotic relationships between Saldanha Steel and the wider Saldanha Bay region. Mutualistic relationships should be increased and the authorities should support the establishment of broader inter firm linkages. Further, it is argued local authorities and developers must find a balance between the promotion of industrial growth on the one hand and preservation of other opportunities and potential for tourism development. More specifically, the vital environmental assets of Saldanha Bay with its Ramsar wetlands site and other critical biodiversity areas must be protected and negotiated prior to further industrial development taking place.

Acknowledgements

Thanks to referees for helpful inputs on earlier versions of the paper. Usual disclaimers apply.

Note

In the context of this paper Saldanha Bay refers to the town of Saldanha Bay and the larger region.

References

- Afrin, S.**, 2013: Traditional vs. Strategic Corporate Social Responsibility: In: Pursuit of Supporting Sustainable Development. In: *Journal of Economics and Sustainable Development*, Vol.4 (20), pp. 1-6.
- Amin, A.**, 1999: An Institutional Perspective on Regional Economic Development. In: *International Journal of Urban and Regional Research*, Vol. 23, pp. 365-378.
- Amin, A. and Thrift, N.J.**, 1995: Globalisation, 'Institutional Thickness' and the Global Economy. In: Healey, P., Cameron, S., Davoudi, S. Graham, S. and Madani-Pour, A. editors, *Managing Cities: The New Urban Context*, Chichester: John Wiley, pp. 91-108.
- ArcelorMittal Saldanha Works**, 2011a: *Introduction and Implementation of an Energy Management System and Energy Systems Optimization*. Available at: <http://ietd.iipnetwork.org/content/iron-and-steel>, DoA: 14 March 2014
- ArcelorMittal**, 2011b: ArcelorMittal South Africa Sustainability Report 2011. Available at: http://corporate.arcelormittal.com/~/_/media/Files/A/ArcelorMittal/corporate-responsibility/publications-and-reports/archive/regi-corp-resp-reports/ArcelorMittal-South-Africa-SustainabilityReport-2011.pdf, DoA: 22 March 2014
- ArcelorMittal**, 2014: Global R & D. ArcelorMittal South Africa results for the first quarter ended 31 March 2014. Available at: <http://www.arcelormittals.com/Portals/0/ArcelorMittal%20qtrly%20update%2031%20March%202014%20media%20release%20final%209%20May.pdf>, DoA: 14 March 2014
- Ashton, W.S.**, 2008: Social Network Analysis and Industrial Symbiosis: Application of a Social Science Tool to Understand Industrial Ecosystem Organisation. In: *Journal of Industrial Ecology*, Vol. 12 (1), pp. 34-51.
- Bek, D., Binns, J.A. and Nel, E.L.**, 2004: 'Catching the Developing Train': Perspectives on 'Top-Down' and 'Bottom-Up' Development in Post-Apartheid South Africa. In: *Progress in Development Studies*, Vol. 4 (1), pp. 22-46.
- Berggren, N. and Jordahl, H.** 2006: Free to Trust: Economic Freedom and Social Capital. In: *Kyklos*, 59 (2), pp. 141-169.
- Beugelsdijk, S. and Van Schaik, A.**, 2005: Differences in Social Capital between 54 Western European Regions. In: *Regional Studies*, Vol. 39, pp. 1053-1064.
- Boschma, R.A. and Frenken, K.**, 2006: Why is Economic Geography Not an Evolutionary Science? Towards An Evolutionary Economic Geography. In: *Journal of Economic Geography*, Vol. 6 (3), pp. 273-302.
- Boschma, R.A. and Frenken, K.**, 2009: Some Notes on Institutions in Evolutionary Economic Geography. In: *Economic Geography*, Vol. 85 (2), pp. 151-158.
- Boschma, R.A. and Frenken, K.**, 2010: The Spatial Evolution of Innovation Networks: A Proximity Perspective. In: Boschma, R.A. Martin, R. editors, *Handbook on Evolutionary Economic Geography*, Cheltenham: Edward Elgar, pp. 120-135.
- Boschma, R.A. and Lambooy, J.G.** 1999: Evolutionary Economics and Economic Geography. In: *Journal of Evolutionary Economics*, Vol. 9, pp. 411-429.
- Boschma, R.A. and Martin, R.** editors, 2010: *The Handbook of Evolutionary Economic Geography*, Cheltenham: Edward Elgar.
- Business Day, 2013: Property Market in Saldanha Bay, October 25.
- Clark, G., Dexter, P. and Parnell, S.**, 2007: *Rethinking Regional Development in the Western Cape*. Discussion Paper for the Integrated Development Planning Provincial Conference, Isandla Institute, Cape Town, 7-8 May.
- Ernst & Young, 2014: Global Steel 2014: Planning to profit from opportunity, preparing for future demand. [http://www.ey.com/Publication/vwLUAssets/EY_-_Global_steel_2014/\\$FILE/EY-Global-steel-2014.pdf](http://www.ey.com/Publication/vwLUAssets/EY_-_Global_steel_2014/$FILE/EY-Global-steel-2014.pdf), DoA: 14 August 2014
- Department of Economic Development, 2011: New Growth Path. Pretoria: Department of Economic Development.
- Department of Trade and Industry (DTI), 2011: Industrial Policy Action Plan: 2011/2012-2013-2014. Pretoria, DTI.
- Department of Trade and Industry (DTI), 2013: Industrial Policy Action Plan IPAP, 2013/2014-2015/2016: Economic Sectors and Employment Clusters. Pretoria, DTI.

- Gertler, M.S.**, 1995: 'Being There': Proximity, Organization, and Culture in the Development and Adoption of Advanced Manufacturing Technologies. In: *Economic Geography*, Vol. 71, pp. 1-26.
- Harvey, D.**, 2006: *Spaces of Global Capitalism*, London, Verso.
- Jacka, C. and Saunders, S.**, 2014. Saldanha IDZ: Is the Saldanha IDZ the new beginning for Saldanha, Maritime Review Africa, Available at: <http://www.maritimesa.co.za/Leadarticles/Jan2014SaldanhaIDZ/tabid/142/Default.aspx>, DoA: 15 August 2014
- Kleynhans, E. P. J., Naude, W. A., and Van der Merwe, S. J.**, 2003:. Spatial Economic Development in South Africa: An Overview and Evaluation of the Platinum Spatial Development Initiative. In: *Development Southern Africa*, Vol. 20 (5), pp. 617-631.
- Luiz, J. M.**, 2003: The Relevance, Practicality and Viability of Spatial Development Initiatives: A South African Case Study. In: *Public Administration and Development*, Vol. 23(5), pp. 433-443
- Marais, H.**, 2001: *South Africa: Limits to Growth*, London: Zed.
- National Planning Commission, 2011: National Development Plan. Pretoria, The Presidency.
- Nel, E.**, 1999: *Regional and Local Development in South Africa*, Aldershot: Ashgate.
- Nel, E. and Rogerson, C.M.**, 2009: Rethinking Spatial Inequalities in South Africa: Lessons From International Experience. In: *Urban Forum*, Vol. 20 (2), pp. 141-155.
- Nel, E. and Rogerson, C.M.**, 2013: Special Economic Zones in South Africa: Reflections From International Debates. In: *Urban Forum*, Vol. 24(3), pp. 205-217.
- Nel, E. and Rogerson, C.M.**, 2014: Re-Spatializing Development: Reflections From South Africa's Recent Re-engagement with Planning for Special Economic Zones. In: *Urbani Izziv*, 25 (Supplement), pp. S25-S36.
- Nelson, R.R.**, 1995: Co-Evolution of Industry Structure, Technology and Supporting Institutions, and the Making of Comparative Advantage. In: *International Journal of the Economics of Business*, Vol. 2 (2), pp. 171-184.
- North, D.C.**, 1990: *Institutions, Institutional Change and Economic Performance*, New York: Cambridge University Press.
- Oranje, M.**, 2010: Post-Apartheid Spatial Development Planning in South Africa, 1930-2010. In: *Town and Regional Planning*, Vol. 56, pp. 29-45.
- Putnam, R.D.**, 1993: *Making Democracy Work: Civic Traditions in Modern Italy*, New Jersey: Princeton University Press.
- Rogerson, C.M.**, 1998: Restructuring of the Post-Apartheid Space Economy. In: *Regional Studies*, Vol. 32, pp.187-197.
- Rogerson, C.M.**, 1999: Planning Spatial Development Initiatives: South Africa's Industrial Development Zones. In: *Urban Forum*, Vol. 10 (2), pp.259-273.
- Rogerson, C.M.**, 2001: Spatial Development Initiatives in Southern Africa: The Maputo Development Corridor. In: *Tijdschrift voor Economische en Sociale Geografie*, Vol. 92, pp. 324-346.
- Rogerson, C.M.**, 2002: Spatial Development Initiatives in South Africa: Elements, Evolution and Evaluation. In: *Geography*, Vol. 87, pp. 38-48.
- Rogerson, C.M.**, 2009: The Turn to 'New Regionalism': South African Reflections. In: *Urban Forum*, Vol. 20, pp. 111-140.
- Rogerson, C.M.**, 2014: Reframing place-based economic development in South Africa: the example of local economic development. In: Szymańska, D. and Biegańska, J. editors, *Bulletin of Geography. Socio-economic Series*, No. 24, Toruń: Nicolaus Copernicus University Press, pp. 203–218. DOI: <http://dx.doi.org/10.12775/BGSS.2014.023>
- RSA, 2014: Act No 16 of 2014: Special Economic Zones, Act 2014 government gazette Vol. 587, No.37664, Cape Town
- Saldanha Bay Municipality, 2009: Saldanha Industrial Development Zone Pre-Feasibility Analysis - Final Report, October 2009.
- Smith, A.**, 2013: West Coast property development gets a boost. Available at: <http://www.moneyweb.co.za/moneyweb-property/west-coast-property-development-gets-a-boost>, DoA: 11 September 2013
- Storper, M.**, 1997: *The Regional World*, New York: The Guilford Press.
- Taylor, M.**, 1986: Industrial Geography. In: *Progress in Human Geography*, Vol. 10, pp. 407-415.
- Taylor, D.J.C., Page, D.C. and Geldenhuys, P.**, 1988: Iron and steel in South Africa. In: *Journal of the South African Institute of Mining and Metallurgy*, Vol. 88(3), pp. 73-95.
- The Presidency, 2012: The Industrial Development Zones. Pretoria, The Presidency, Pretoria.
- Wesgro, 2011: Saldanha Bay Industrial Development Zone Feasibility Study, Revision 1. Available at: <http://>

- wesgro.co.za/docs/SBIDZ%20Feasibility%20Study%20Report%20Rev%201.pdf, DoA: 16 August 2014
- West Coast District Municipality, 2013: West Coast District Municipality IDP 2013-2014.
- Wilkinson, D.M.**, 2001: At Cross Purposes. In: *Nature*, Vol. 412 (6846), pp. 485-486
- Woolcock, M.**, 1999: Social Capital and Economic Development: Towards a Theoretical Synthesis of Policy Framework. In: *Theory and Society*, Vol. 27, pp. 151-208.
- Yeung, H.W.C.**, 2000: Organizing the Firm in Industrial Geography I: Networks, Institutions and Regional Development. In: *Progress in Human Geography*, Vol. 24(2), pp. 301–315.
- Zwemmer, I.D and Van't Hoff** 1983: Spending Beach Breakwater at Saldanha Bay. <https://journals.tdl.org/icce/index.php/icce/article/viewFile/3692/3375>, DoA: 10 August 2014