

The relationship between the industrial clustering and organisational competitiveness

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Key Words

Competitiveness; Industrialization; Industrial Clustering; Government, Organisation and Policies

Abstract

The South African government has in the past developed various industrial policies that were geared towards industrialisation in order to make meaningful contributions towards job creation and growing the economy. Subsequently, the Industrial Clustering concept was employed as a special purpose vehicle in order to enhance competitiveness of the various sectors. The study interrogated the challenges that were experienced by the KwaZulu-Natal (KZN) Department of Economic Development, Tourism and Environmental Affairs (EDTEA) in supporting the five (Maritime Cluster, Wood and Wood Product Cluster, Music Cluster, Textile and Clothing Cluster and Fashion Council) industrial clusters. The study used mixed method approach in order to augment both positivism and phenomenological paradigm. There were 150 respondents from the five industrial clusters that participated in the study. The study established that the industrial clusters were besieged with financial support coming from government. There was no service delivery framework in place employed by government. This led to a downfall of the supported industrial clusters. The research discovered that some industrial clusters collapsed and failed to sustain due to governance, inconsistent funding, and the government proactive or induced approach in initiating clusters.

Introduction

Industrial clustering represents a group of similar and related firms in a defined geographic area that share common markets, technologies and worker skills (Morosini, 2017). Giacomini (2017) argues that industrial clustering enhances competitiveness, which in turn boosts the country's economy. In about five decades ago, industrial clustering was already popular in the developed world (Giacomini, 2017) and yet in Africa, particularly South Africa, it took longer to bring the business concept forward. The industrial clustering concept found its way to South Africa through the United Nations of Industrial Development Organisations (UNIDO) (Pisa, Rossouw and Viviers, 2015).

The challenge facing South Africa and Africa was the lack of industry experts in understanding the industrial clustering concept. The purpose of the study was to investigate the relationship between industrial clustering and organisational competitiveness. The study further analysed the regional and international competitiveness of industries in a bid to find an everlasting solution. Therefore, an industrial clustering framework was developed in order to ensure that industrial clusters are guided and supported in terms of the provision of the policy imperatives and financial resources. Lastly, the study re-affirmed the relevance of Porter's Diamond Model as there are unprecedented benefits that are accrued by individual members who join the industrial clusters.

Literature Review

The government policies and strategies that are developed for regional economic development are critical in order to contribute to industry competitiveness and recognising the actors that are policy and economic decision-makers whose integrity and expertise can be combined in a bid to enhance world economic performance (Udovik 2014). It was further noted that the notion of competitive advantage of industry clusters elevates the capabilities of the regions in the generation, acquisition and application of knowledge and information (Porter 1990). The cluster concept was founded by Porter (1990) when he advocated the concept of clustering. In this concept, Porter (1990) advocated that government should be

involved in the creation of policies that stimulate the development of industry clusters. Industrial clusters promote industries who are geographically located and specialises in common or complementary products. Porter (1998:199) defines industrial clusters as “a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities.” With the help of the diamond model, Porter stresses, for example, factor and demand conditions, and conditions that shape the firms’ strategy, structure, and rivalry as sources of positive cluster effects (Gordon and McCann 2000, Porter 2000, Markus 2008).

The Analysis of Theories of Trade and Competitiveness

National Competitive Advantage – NCA: Porter (1998) was in discontent with the economic theories of trade and developed a new theory referred to as the National Competitive Advantage (NCA). Smith (2010) argued that the theory of national competitive advantage is not novel.

The theory of absolute advantage by Adam Smith created a limitation in terms of gains from trade (Porter 1998, Smit 2010). Countries that were in favour of this theory had limitations in terms of import or export business (Krugman 1998, Obstfeld 2003). International competition at the firm level has changed over the last decade because of the changing patterns of world trade, globalisation of the world economy, the impact and emphasis on fourth industrial revolution and rapid dissemination of technology and information, and the rise of the transnational organisation (Smit 2010, Spencer, Vinodrai et al. 2010, De Backer and Miroudot 2014). The view that national competitive advantage provides a new meaning in respect of the international competitiveness as a country was refuted by many economics scholars expressing a position that Porters theory was mainly supported by management specialists on the issue of international competitiveness at a country level (Obstfeld 2003, Spencer, Vinodrai et al. 2010, Riasi 2015).

Theory of Absolute Advantage – TAA: Krugman and Obstfeld (2003) indicated that the theory of absolute advantage absorbed a notion that a country has to propel its efforts in concentrating on producing specialised commodities which has an absolute advantage over other countries and thereby importing those commodities that are costly to produce. They asserted that a country should produce and export commodities in order to have a positive balance of trade and to be competitive against the rest of the world (Kaplinsky and Morris 1999, Jan Stejskal 2011). The challenges of the theory of absolute advantage gave advent to the law of comparative advantage where a country is focusing on producing goods that are relatively easier to produce. This paradox that absolute cost advantage leads to specialisation, but that such specialisation may not necessarily lead to gains from trade, gave rise to Ricardo’s theory of comparative advantage (Dunning 1993, Altenburg and Meyer-Stamer 1999, Ceglie and Dini 1999). These new trade theories opened up the debate around government intervention as an active policy game changer in order to advance the international competitiveness of a country (Krugman 1998, Ishmael 2008, László 2014).

Theory of Competitiveness: Another protagonist for this notion, Gabor (2006), further indicated that the theory of competitiveness should be relooked at in many ways as industries at a local level have powers to take a decision regarding their competitiveness and strongly believed that competitiveness (Porter 1998, Gabor 2006, Jan Stejskal 2011):

- Encourages Cluster effects;
- Encourages Economic Growth and at the same time,
- Enhances local economic development.

Underscoring above issues, Gabor (2006) defined competitiveness as the aptitude to realize authority and stability in the competition between industries at micro and macroeconomic level. Unfortunately, Krugman (1998) was not in favour of the doctrine of competitiveness. Ioan and Gabriela (2009) defined competitiveness as an approach to each firm, country or sector to produce and supply goods and services within a specific conducive environment. Further competitiveness is an integral economic concept which relies on the natural resources and simulated (government) factors (László 2014). The government factors encompass the industrial policies where world economies compete against another in the same way as industrial corporations (Ioan and Gabriela 2009). In the quest for clarity, Porter (1990) founded the National Diamond Model that affords the fundamental principles for the determination of the national competitive advantage of a nation (Ioan and Gabriela 2009, Smit 2010). The theory Comparative advantage thus also leads to specialisation, but differs from specialisation based on

absolute advantage, in that a country will always import, whether or not it is more or less efficient overall in the production of all goods and services relative to other countries (Schmitz and Nadvi 1999, Schumacher 2012).

Characteristics of Organisational Competitiveness

Knowledge spillover: The geographic location of industries has a significant influence in ensuring that related industries continuously interchange ideas and innovations. The vertical and horizontal integration of firms is highly critical in cementing the working relationship between the industries in issues relating to new technologies and opportunities thereof (Ozgen 2011). The knowledge spillover is the trial and error amongst the cluster members. The reality is that when industries come together for a common goal where there is always room for error and improvement (Caniëls and Romijn 2003). In this regard the issue of business value chain and knowledge networks are significant for all industries within the value chain in order to collaborate, maximise knowledge and create new business opportunities (Titze, Brachert et al. 2014).

Improved market access: The improvement in market access is considered to be crucial especially for the cluster members since the collaboration of industries will circumvent the marketing gap where prior to the cluster formation industries were secluded from the global markets, fashion trends and the limited resources to establish a local brand (Schmitz and Nadvi 1999). Knappe (2003) argued that there are new trade opportunities in fast emergent developing countries especially the African markets. Knappe further pointed out that well-developed economies such as EU, Japan, USA, and Canada still account 80% of the world markets. The essence of supply and demand of goods and services relies heavily on the country's efficient and effective positioning in those niche markets (Knappe 2003). Therefore, market efficiencies also rely on the demand conditions such as consumer positioning and buyer intricacy.

A specialized and skilled labour pool: The Global Competitiveness Report (2017) identified labour as one of the critical elements of competitiveness in ensuring that the labour is used to its maximum strength and the rewards are accorded for the best performance in their jobs. The cluster concept and competitiveness encourage job rotation and flexibility from one economic activity after the other. It is not novel that the economy anywhere in the world cannot generate wealth without labour. The labour mobility is believed to have a significant contribution on the distribution of knowledge amongst the industry members (Power 2008). It is believed that the exchange and flow of information, innovation and spill over occur in the workplace (intra-cluster) rather than in the cosmopolitan street talk. The cross pollination and dissemination of knowledge are often crucial to knowledge building of industrial clusters (Altenburg and Meyer-Stamer 1999, Mytelka and Farinelli 2000).

Production and Production efficiency: Clusters increase productivity through the possibility of having access to specialized inputs (including human capital, information, and institutions). Further industrial clusters improve productivity through the supply and demand of goods. Clusters within the value chain provide complementary services in a bid to increase and improve productivity (Köhler 2014, László 2014). This maximises the economies of scales when production occurs within the location of the industrial clusters (Jacobs, Chase et al. 2004, Heizer 2016).

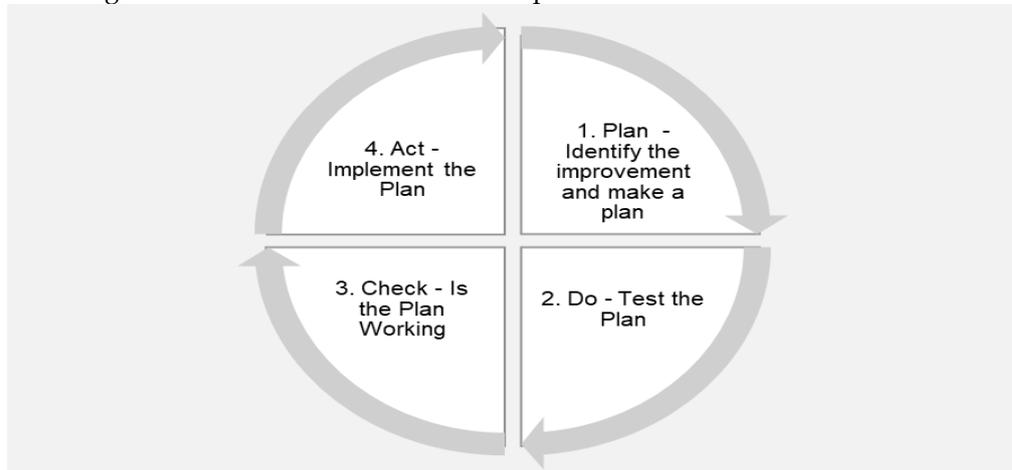
Economies of Scale: The cluster of economies is established from the related industries within a particular geographic area with common shared activities such as technical know-how; specialised labour pools; reduced costs of buying raw material (Tallman, Jenkins et al. 2004, Cho, Moon et al. 2008, Krugman 2011). Cho, Moon et al. (2008) asserted that Porter's single diamond model was mainly designed to explain the sources of national competitiveness possessed by the economies of advanced nations. The human factors in the nine-factor model drive the national economy forward by creating, motivating, and controlling the four physical factors in Porter's diamond model and, therefore, play an important role in explaining national competitiveness.

Lead Times: Lead times are critical in ensuring the continuous improvement in the situations where supply chain flexibility should be established and implemented through advanced lead time optimization capabilities (Yu, Chang et al. 2012, Heizer 2016). The lead time optimization provides an advanced opportunity to the industrial cluster to curtail mass production and thereby reducing the need to invest the limited resources into finished products (Jacobs, Chase et al. 2004, Gorynia, Jankowska et al. 2007).

Lead time optimization capabilities assist industries to devise new stratagems to delay production and logistic (Jacobs and De Jong 1992, Porter 1998).

Continuous Improvement (Kaizen): Kaizen is an important component of industrial Clusters in order to maintain their business to be competitive and to maximise the economies of scale (Jacobs and De Jong 1992, Porter 1998, Guerrieri and Pietrobelli 2004). Chase, Jacobs and Acquilano (2004:280) indicated that continuous improvement warrants the perpetual enhancement of machinery, production inputs, labour and total quality management (TQM). It also requires the continuous improvement plan that includes labour, machinery, service providers of materials and proper production procedures. The end results of the continuous improvement are the seamless processes (Barnes, Bessant et al. 2001, Jacobs, Chase et al. 2004). The following is the Continuous Improvement model:

Insert Figure 1: The vision of Continuous Improvement



Source: Adapted from Heizer and Render (2006:168)

Figure 1 depicts the on-going processes of the continuous process. In the heart of the Plan, Do, Check, Model (PDCA), Total Quality Management (TQM), Kaizen, or Zero defects lies the operations manager who plays a critical role in implementing the continuous improvement (Jacobs, Chase et al. 2004, Heizer 2016).

Just in Time: The Just in Time (JIT) method focuses on eliminating wasted time during the production process and thereby improving quality (Heizer and Render, Sugimori, Kusunoki et al. 1977, Tallman, Jenkins et al. 2004). The JIT justifies the process of acquiring information about the product, time and amount of goods required (Kaplinsky, Morris et al. 2002, Jacobs, Chase et al. 2004). Secondly, the JIT requires that the production line only produces the required amount of goods requested.

Cluster Value Chains: For industrial clusters to grow and succeed, it is critically important to work together in order to benefit from complementary competencies with the same industry value chain (Scheel 2002). In this instance, horizontal cluster dimension or companies indicating similar serving competencies, which are located on the same proximity often complement each other in terms of mutual learning and motivation (Scheel 2002).

Research Methodology

The study used mixed methodology which is a combination of phenomenological and positivism paradigm (Creswell 2009). The mixed method was based on the experiences, discussions and facts relating to industrial clusters in the KwaZulu-Natal and South Africa in particular. Further, it can be argued that by combining both types of research, the limitations of each individual method can be offset, and gaps of data can be filled or predicted especially perceptions, opinions, meanings, attitudes and beliefs. However it should be noted that facts should be reliable hence the use of the statistical methods (Rubin and Babbie 2005, Saunders 2011). In this instance, the researcher was instrumental in the development and establishment of the industrial clusters in the Kwazulu-Natal province. The research was based on five industrial clusters supported by Department of Economic Development, Tourism and Environmental

Affairs (EDTEA). The study used triangulation in collecting and analysing the data of five industrial clusters (Creswell and Clark 2007, Creswell 2013). A total of 160 sample was sent to members of five industrial clusters. A total of 150 respondents participated in the survey and the responses were computed through the use of statistical package of social science (SPSS) - Cronbach's Alpha Coefficient (Sekaran 1983, Rubin and Babbie 2005).

Further, there were ten participants interviewed for qualitative design. The study analysed both the collected data simultaneously in a bid to achieve optimum results.

Data Collection: The study plan included the actual primary data collection process as well as the data analysis plan (Saunders 2011, Strydom 2011). The layout of the research mechanism ensured that all aspects of the research were covered in the research instrument. Further, the in-depth interviews were conducted to ten industry captains of five industrial clusters supported by EDTEA. The interview guide carried a list of open-ended questions to allow the participants to express themselves freely without prejudice. A set of five-point Likert Scale type of questions was used to gather primary data whilst open-ended questions were used to collect data from key informants. A Likert Scale uses an ordinal psychometric measurement of views, attitudes, beliefs and opinions (Creswell 2013, Bezuidenhout, Davis et al. 2014). Each question in the instrument was presented as a statement or claim where research subjects would show the extent of agreement or otherwise in a structured response type format. The use of self-administered questionnaires together with personal interviews brought the advantages of triangulation to the research.

Data Analysis: There were twenty quantitative questionnaire items which aimed at addressing issues around Industrial Clustering as a tool to enhance the competitiveness of the KwaZulu-Natal economy. Since these twenty items were addressing a mixture of themes, there was a need to explore ways of sub-dividing them into sub-groups that will be identifiable. The statistical method of exploratory factor analysis was used to break the twenty questionnaire items into sub-constructs. Summary statistics of the sub-constructs and relevant inferential statistics are then presented in subsequent sections. Principal components-based factor analysis, with varimax rotation, was used to subdivide the twenty questionnaire items into sub-constructs with most appropriate construct names. Correlation Matrix was employed to check multi-collinearity and the relationship between variables. Survey data was analysed using SPSS version 21. Frequency analysis was used to analyse questions asked using a five-point Likert Scale, and these were presented in a percentage format.

Findings and Discussions

Exploratory factor analysis of the twenty Industrial Clustering items

After conducting principal components-based factor analysis, four sub-constructs of Industrial Clustering were obtained. The results are presented in Table 1 below.

The first sub-group of questionnaire items is made up of questions Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, and Q20. This group of questions is addressing the benefits of industrial clustering hence the name of this group or construct is "Industrial Clustering Benefits and Organisational Competitiveness". The Industry cluster competitiveness is addressed in this group of exploratory items. The industry feels strongly about the continuous improvement (KAIZEN), technological advancement, innovation, information sharing, production efficiencies and the creation of jobs.

The second sub-group of questionnaire items is made up of questions Q5, Q6, Q7, Q8, and Q9. This group of questions addresses the issues of industry and government stirring actions towards industrial clustering including the financing, policy development and strategy hence the name of this group of items or construct is "Industrial Clustering: Government-industry partnership actions towards Industrialisation". The government intervention in policy and strategy formulation is critical in levelling the foundations of the industry to grow.

The third sub-group of questionnaire items is made up of questions Q1, Q2, Q3 and Q4. This group of questions deals with who should take the initiative in setting up the industrial clusters including the facilitation of such clusters. The name for this group or construct is "Industrial Clustering policy formulation and facilitation". The formulation and facilitation of the policies is crucial for industries to participate fully into the programmes set by government in order to benefit.

The fourth and last construct consists of only one questionnaire item, that is, Q10 (Industries already receiving support from the government should be excluded from the cluster). This construct is pointing to the whole industrial clustering programme that it should have an exclusion clause which in turn suggests that potential companies for inclusion are those which might have been neglected by the government.

Table 1: Exploratory factor analysis results

Questionnaire Items for Industrial Clustering	Principal Components (Latent factors)			
	1	2	3	4
Q17. Industrial clustering promotes new entrants to benefit from the large firms	0.901			
Q20. Industrial clustering encourages knowledge sharing	0.880			
Q19. Industrial clustering encourages private public partnership	0.871			
Q16. Industrial clustering encourages production efficiencies	0.856			
Q14. Industrial clustering reduces production costs	0.853			
Q15. Industrial clustering promotes continuous improvement (Kaizen)	0.843			
Q18. Industries that produce related goods or services benefit if they are located within the spatial proximity	0.837			
Q13. Industrial clustering promotes innovation/creativity	0.724			
Q11. Industrial clustering promotes the maximization of the economies of scale	0.618			
Q12. Industrial clustering creates sustainable jobs	0.614			
Q7. Industry related sectors are encouraged to form clusters thereby benefiting from the cluster programme		0.756		
Q9. Government should support industrial clusters with a strong institutional framework to avoid mismanagement of resources		0.721		
Q8. Industries should show commitment before approaching government for support		0.688		
Q6. Government should develop a provincial programme dedicated for industrial clusters		0.616		
Q5. Government should set aside funding to support clusters		0.527		
Q4. Government should develop industrial policies in enhancing competitiveness of local firms			0.768	
Q1. Government should initiate Industrial clusters			0.703	
Q3. Government should play a facilitation role in supporting clusters			0.649	
Q2. Industries should take the initiative in forming clusters			0.621	
Q10. Industries already receiving support from government should be excluded from the cluster programme				0.618
Cronbach's Alpha	0.955	0.821	0.587	-
Suggested Construct name	Industrial Clustering Benefits	Government/industry partnership and actions	Government-industry initiation and facilitation	Industrial Clustering exclusion criteria

Descriptive statistics for Industrial Clustering Benefits and Organisational Competitiveness: The benefits and organisational competitiveness of industrial clustering can be broadly grouped into two

categories, namely, industrial clustering benefits and organisational competitiveness benefits. These two categories are discussed in the two sections under Table 2 below. On all the 10 items that make up the construct, there was overwhelming approval of the programme, particularly as far as its benefits are concerned. It can be noted that questions 11, 12, 13, 14, 15 and 16 are main benefits that are aimed at the organisational competitiveness while questions 17, 18, 19 and 20 are about industrial clustering synergies between companies.

Organisational Competitiveness/Individual company benefits: The results in Table 2 show that 97.3% of the respondents agree or strongly agree that industrial clustering promotes the maximization of the economies of scale while 94.0% agree or strongly agree that industrial clustering creates sustainable jobs. Most of the respondents (96.7%) indicated that industrial clustering promotes innovation/creativity, 95.3% indicated that industrial clustering reduces production costs, 98.0% indicated that industrial clustering promotes continuous improvement and 97.3% indicated industrial clustering encourages production efficiencies. In all items that are about organisational competitiveness/individual company benefits to be derived from industrial clustering, there was high approval rating.

Industrial Synergies between companies: The last four questions presented in Table 2 are the benefits industrial clustering in terms of synergies between companies. The results show that 96.7% of the respondents agree or strongly agree that industrial clustering promotes new entrants to benefit from the large firms, 98.0% indicated that industries who produce related goods or services benefit if they are located within spatial proximity, 98.7% indicated that industrial clustering encourages private and public partnership and 98.7% indicated that industrial clustering encourages knowledge sharing. The respondents seem to be embracing the concept of industrial clustering with enthusiasm as indicated by the high approval ratings in both individual companies benefit and corporate community benefits.

Table 2: Descriptive statistics for Industrial Clustering Benefits

Industrial Clustering Benefits	Descriptive Statistics				Latent Factor (Principal component) Coefficient
	n	% Agree/ Strongly Agree	Mean	Std Dev	
Q11. Industrial clustering promotes the maximization of the economies of scale	150	97.3%	4.37	0.54	0.747
Q12. Industrial clustering creates sustainable jobs	150	94.0%	4.31	0.6	0.742
Q13. Industrial clustering promotes innovation/creativity	150	96.7%	4.33	0.59	0.8
Q14. Industrial clustering reduces production costs	150	95.3%	4.33	0.59	0.873
Q15. Industrial clustering promotes continuous improvement (Kaizen)	150	98.0%	4.38	0.55	0.874
Q16. Industrial clustering encourages production efficiencies	150	97.3%	4.33	0.55	0.856
Q17. Industrial clustering promotes new entrants to benefit from the large firms	150	96.7%	4.31	0.55	0.91
Q18. Industries who produce related goods or services benefit if they are located within the spatial proximity	150	98.0%	4.33	0.51	0.85
Q19. Industrial clustering encourages private public partnership	150	98.7%	4.37	0.51	0.902
Q20. Industrial clustering encourages knowledge sharing	150	98.7%	4.37	0.51	0.905
Cronbach's Alpha			0.955		
% of total variation accounted for by latent factor			71.89%		

Descriptive statistics for Government/Industry partnership and actions towards Industrialisation: The construct of Government/Industry partnerships and actions towards industrialisation has four items that are summarised in Table 3 below. The partnership actions can be divided into two groups, namely, those which require government action and those which require industry action. The items that talk mainly about government actions are questions 5, 6 and 9 while questions 6 and 8 talk about industry actions.

Government initiatives and actions towards industrialisation: Results in Table 3 show that 99.3% of the respondents agreed or strongly agreed that government should set aside funding to support clusters, 98.0% indicated that government should develop a provincial programme dedicated for industrial clusters and 97.3% indicated that government should support industrial clusters with strong institutional frameworks in order to avoid mismanagement of resources.

Table 3: Descriptive statistics for Government/Industry partnerships

Government/industry partnership and actions	Descriptive Statistics				Latent Factor (Principal component) Coefficient
	n	% Agree/ Strongly Agree	Mean	Std. Dev.	
Q5. Government should set aside funding to support clusters	150	99.3%	4.47	0.54	0.745
Q6. Government should develop a provincial programme dedicated for industrial clusters	150	98.0%	4.4	0.56	0.780
Q7. Industry related sectors are encouraged to form clusters thereby benefiting from the cluster programme	150	97.3%	4.46	0.55	0.854
Q8. Industries should show commitment before approaching government for support	150	98.0%	4.41	0.56	0.726
Q9. Government should support industrial clusters with strong institutional framework in order to avoid mismanagement of resources	150	97.3%	4.39	0.64	0.723
Chronbach's Alpha		0.821			
% of total variation accounted for by latent factor		58.86%			

Industry initiatives and actions towards Industrialisation: Results in Table 3 show that 97.3% of the respondents agreed or strongly agreed that industry related sectors are encouraged to form clusters thereby benefiting from the cluster programme and 98.0% indicated that industries should show commitment before approaching the government for support. This shows that the clarion call to participation in the formation of industrial is on both fronts, that is, the government front and the industry front.

Descriptive statistics for Government/industry initiation and facilitation

Most of the respondents believe that government should not play the leading role in the initiation of industrial clusters. Only 28.0% of the respondents agreed or strongly agreed while 40.0% strongly disagreed with 21.3% disagreeing. This means that most of the respondents believe that industry itself should do some self-organisation and come up with industrial clusters they see fit. This is buttressed by the fact that 96.0% believe that industries should take an initiative in forming clusters.

Table 4: Descriptive statistics for Government/Industry partnerships

Government-industry initiation and facilitation	Descriptive Statistics				Latent Factor (Principal component) Coefficient
	n	% Agree/ Strongly Agree	Mean	Std Dev	
Q1. Government should initiate Industrial clusters	150	28.00%	2.47	1.56	0.678
Q2. Industries should take an initiative in forming clusters	150	96.00%	4.31	0.67	0.669
Q3. Government should play a facilitation role in supporting clusters	150	99.30%	4.37	0.5	0.828
Q4. Government should develop industrial policies in enhancing competitiveness of local firms	150	99.30%	4.45	0.51	0.798
Chronbach's Alpha		0.587			
% of total variation accounted for by latent factor		55.73%			

Most respondents (99.3%) believe that after the industry clusters are formed through the initiative of concerned industries, the government should play a facilitation role in supporting the industrial clusters while 99.3% of the respondents believe that government should develop industrial policies in enhancing the competitiveness of local firms.

Descriptive statistics for industrial clustering exclusion criteria

There is a need to be clear on who should be part of the industrial clusters. To this end, question 10 sought the options of respondents on who should be included in the industrial clustering programme. Table 5 indicates that there is an agreement on industries already receiving support from the government should be excluded from the cluster programme as only 27.3% agreed or strongly agreed on this matter. On the other hand, there seems to be strong disagreement to the exclusion of industries already enjoying some forms of government support as 25.3% strongly disagreed with 27.3% disagreeing and 20.0% neutral.

Table 5: Descriptive statistics for Government/Industry partnerships

Government-industry initiation and facilitation	Descriptive Statistics			
	n	% Agree/ Strongly Agree	Mean	Std. Dev
Q1. Government should initiate Industrial clusters	150	27.30%	2.6	1.3

Correlations between variables

Results presented in Table 6 indicate that there is a strong correlation between Individual company benefits and benefits derived from Synergies between companies (correlation=0.830, p-value<0.001). In fact, there are significant correlations between all variables except the exclusion criteria of some Industries.

Table 5: Correlation between variables

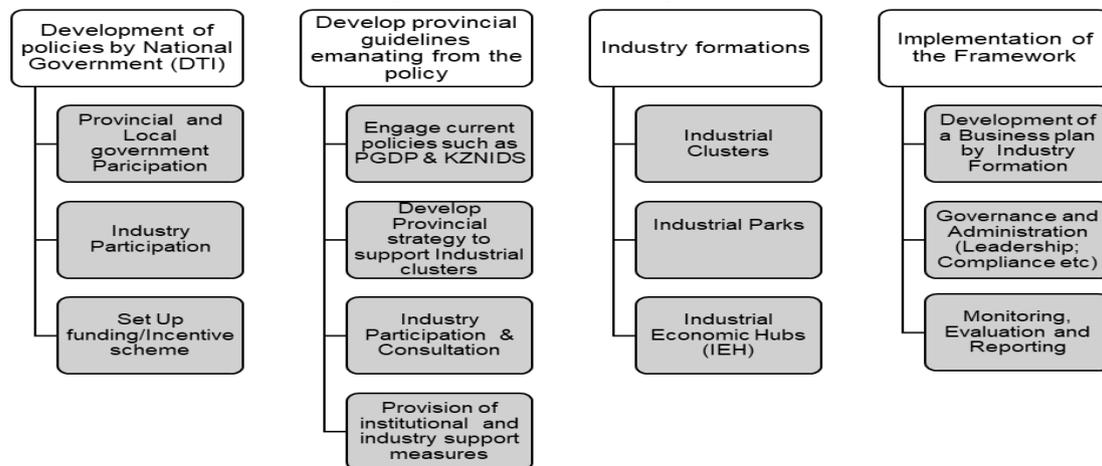
Pearson Correlations		Organisational Competitiveness benefits	Industrial Synergies between companies	Government initiatives and actions towards industrialization	Industry initiatives and actions towards industrialization	Government- industry initiation and facilitation
Organisational Competitiveness benefits	Correlation p-value N	-				
Industrial Synergies between companies	Correlation p-value N	0.830** <0.001 150	-			
Government initiatives and actions towards industrialization	Correlation p-value N	0.528** <0.001 150	0.455** <0.001 150	-		
Industry initiatives and actions towards industrialization	Correlation p-value N	0.511** <0.001 150	0.432** <0.001 150	0.750** <0.001 150	-	
Government- industry initiation and facilitation	Correlation p-value N	0.363** <0.001 150	0.352** <0.001 150	0.538** <0.001 150	0.464** <0.001 150	-
Exclusion of some Industries	Correlation p-value N	0.156 0.056 150	0.127 0.121 150	0.100 0.224 150	0.106 0.196 150	0.147 0.073 150

** . Correlation is significant at the 0.01 level (2-tailed).

The Impact of the study

The scholarly views and the study (research) are in agreement that the government has a significant role to play in ensuring that industries are propelled in achieving the desired goals. In this regard, the policy imperatives are key fundamentals for industrialisation and enhanced the competitiveness of industries (Altenburg and Meyer-Stamer 1999, Kaplinsky and Morris 1999, Morris and Barnes 2007, László 2014). For example, if policies such as National Industrial Policy Framework; Growth Employment and Redistribution; Accelerated Shared Growth Initiative of South Africa; New Growth Path; National Development Plan and many other ancillary strategies and position papers were not developed and implemented, South African industries or firms were going to struggle to compete with the outside world. Therefore deregulation of trade ensured that South African industries also benefit in respect of trading with other countries (Porter 2000, Weiss 2002, Morris and Barnes 2007, Schwab and Sala-i-Martin 2010). Figure 2 below depicts a framework which was developed based on the findings from the study, and there are gaps that need to be filled for the industrial clusters to grow and succeed. The proposed Framework has four elements:

figure: 2: Service Delivery Framework



Source: Author

Policy Directive: The underlying principle in respect of the current arrangement is that there is no policy developed regarding the establishment and supporting of the industrial clusters in South Africa (Altenburg and Meyer-Stamer 1999, Barnes 2003, Guerrieri and Pietrobelli 2004, Morris and Barnes 2007). The research discovered that the clusters managers and organisation captains were discontented that the government developed policy imperatives and strategies that are designed to assist the Special Economic Zones, Industrial Parks, Export Councils, Joint Action Groups and Customised Sector Programmes and excluded industrial clusters. They have registered concerns that the reasons for industrial clusters to fail are based on the fact that government has adopted the industrial clustering concept from UNIDO without tailoring the concept to suit the local environment (Barnes, Bessant et al. 2001). There are industrial clusters that are yet to understand the process of accessing government support unlike other industry formations (Morris and Barnes 2007).

Develop provincial guidelines emanating from the national policy: The development of the provincial guidelines is a fundamental step towards harmonising the fragmented processes that are prevailing in supporting the industrial clusters. The existence of the five supported clusters by government is based on the Industrial Policy Action Plan (IPAP) which is reviewed after three years based on the performance of the priority sectors. The study recommended that provincial guidelines emanating from the national policy should be developed in order to ensure future sustainability of the industry clusters. The study further discovered that there were industry support measures recommended by stakeholders: Serviced Industrial Land; Infrastructure Development; Negotiated Rates (Water and Electricity); Research & Development, Provision of Advanced Technological Facilities to support

Innovation; Skills Development Programme; Funding and Incubation facilities to support business linkages and integration.

Industry Formations: Even though the special economic zones (SEZ) have a lot of incentives to offer for new investments, the critical issue is the spatial geographic disparity and the creation of backward and forward linkages (Altenburg and Meyer-Stamer 1999). The SEZ licenses are only granted to the highly industrialised locations (Farole and Akinci 2011). This created a void regarding growing the economies of other regions which have no high density regarding the firms or industries. It was for these reasons that the government had initiated the process of establishing the Industrial Economic Hubs (IEH) which are sectorial based, and they are all in eleven districts of the KZN province. The IEHs are strategically located to enhance competitiveness through the managed resources such as infrastructure, water, and electricity, funding, logistics, provision of advanced technologies and innovation. The study discovered that the Industrial Economic Hubs also have strong resemblance and connotation with the industrial clusters. The study strongly recommended that the institutionalisation of industrial clusters must not be initiated by the government, but the industry should take the initiative (Morris and Barnes 2007).

Implementation of a framework: The study revealed that industrial clustering concept is a critical tool in industrialising the KZN province. Its importance has been evidence in the revival of the textile and clothing industry especially on the leg of fashion design. There has been the emergence of the fashion designers across the country. This is due to fashion, tastes, and preferences. The study discovered that most South Africans prefer individually designed garments with famous designer names. Further, some clusters failed to produce bankable business plans with no clear financials.

It is therefore in the best interest of the clusters to ensure that the crafted business plans are as comprehensive as possible to give prospective investors (government and private sector) and members' confidence that the cluster will thrive and sustain beyond the financial intervention (Barnes, Bessant et al. 2001). Some cluster members revealed that benchmarking exercise among cluster formations is critical to ensure a bankable business plan is crafted.

Conclusion

What came strongly from the research were the issues of industrialisation, competitiveness, challenges and the development of a framework. The significant contribution by industrial clusters in industrialising the KZN province is evident from the emergence of the five industrial clusters supported by EDTEA. The purpose of highlighting these clusters was to depict their significant contribution in unveiling new job opportunities, untapped careers, and business opportunities. The study proposed that industrial clusters should operate as formal and recognised entities by government for the sake of continuity and sustainability. The institutionalisation of industrial clusters must not be initiated by the government, but the industry should take the initiative (Morris and Barnes 2007). In that way industry clusters will have their aspirations and objectives that bind them together in order achieve the desired goals. This will circumvent the industrial clusters to fail. The implementation of the service delivery framework was strongly recommended as it was going to increase economic growth and restore confidence in developing industrial cluster in KZN province and the country in general.

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