

The settlement of IT-Startups in Bochum:

An analysis of the city Bochum's pull factors based on Porter's Diamond Model



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1970/1980

After more than 200 years of mining the last mine in Bochum closes
This means that since 1959 about 45,000 miners from Bochum became unemployed

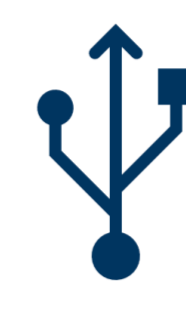


The cluster concept of Michael E Porter has also found its way into the competence-field-oriented structural policy of the Ruhr Area through the Lisbon Treaties which make the Ruhr area more attractive



2000/2010

Several Bochum university start-ups from the IT sector are growing in the ZITS environment



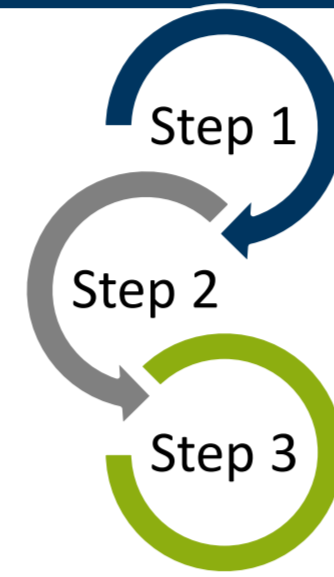
Decision of the development project Mark 5'17 Settlement of the Max Planck Institute for Cyber Security and the IT start-up Escrypt

2017-Today

Research Question:



Does Bochum have competitive advantages in terms of attracting IT start-ups from a cluster perspective?



Systematic Approach:

Definition of the theoretical competitive advantages within the dimensions of the Porter's diamond model

Elaboration of the actual competitive advantages of the Bochum city region based on the Porter's diamond model

Final determination of the competitive factors which strengthen a pull effect on the settlement of IT start-ups in the Bochum city region

Regional Overview: The Bochum strategy

Location & Population



- > 365.000
- Major city in the centre of the Ruhr area
- One of the 20 largest cities in Germany



Structural Change

- For many years the economy in Bochum was dominated by the mining and steel industry
- Increasing tertiarisation of the economy led to many job losses



Economic situation:

- "The Bochum strategy" as the goal of the strategic development of the economic future
- Attractive location factors with regard to workforce, infrastructure and know-how
- Focused promotion of future prospects by the government



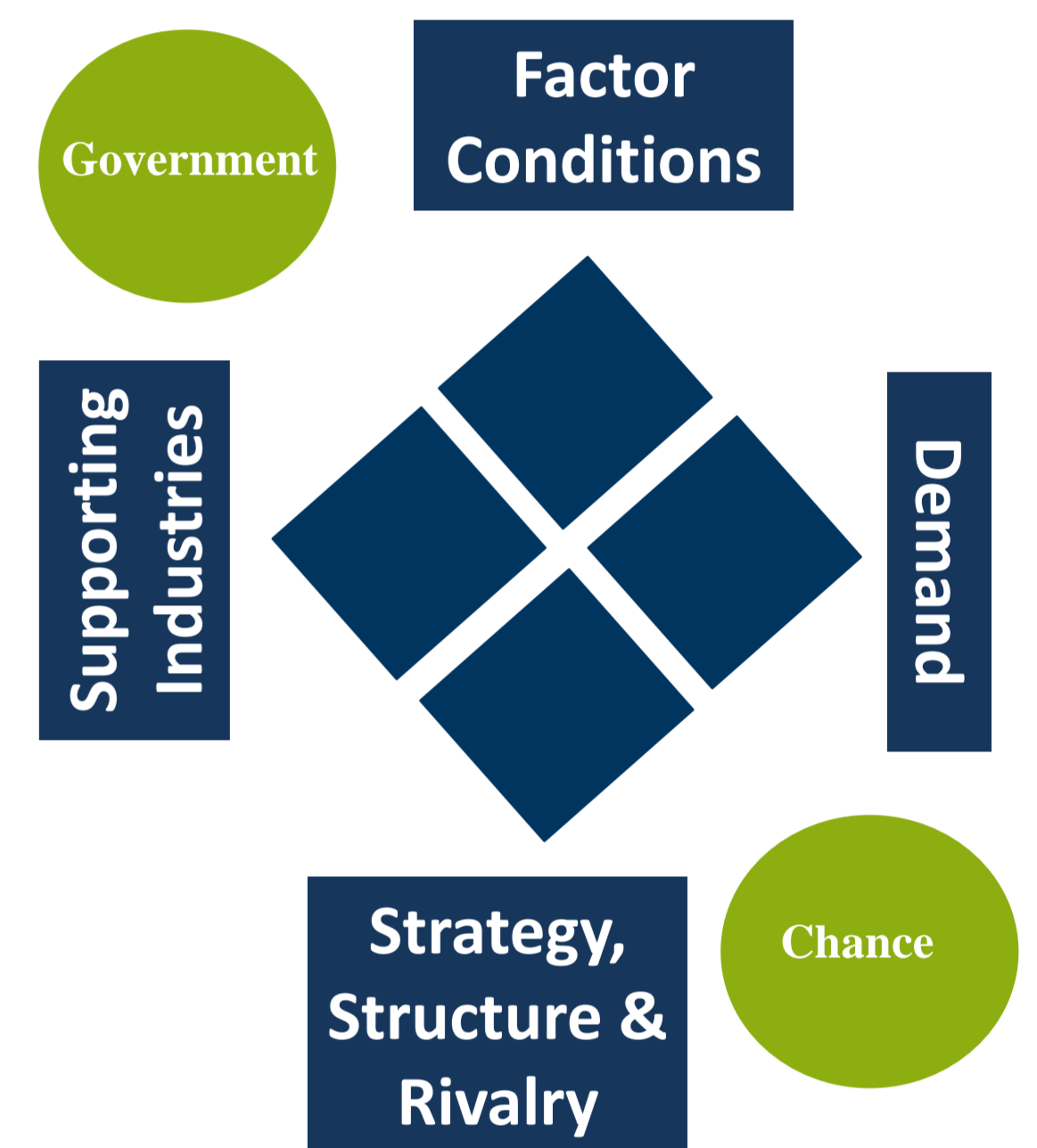
Research

- Knowledge location: 9 own universities and many research institutes
- Know-how at the cutting edge of science
- Development of the largest technology campus in the Ruhr Area



Theoretical Foundation & Methodology

- Porter's Diamond Model is being used to analyze environmental contingencies of nations, clusters, companies or industries
- Four different dimensions determine how well an organization is thriving based on geographical proximity or relatedness
- This enables policy makers to identify problems and strengths
- The data used is quantitative
- The data used is relatively new since the industry is still developing and growing
- Bochum's formulated strategy was being used to identify strengths and potential for growth



Key Findings

Theory

Factor Conditions

- Availability of production factors
- Availability of financial capital
- Specific expertise of the population
- Existing infrastructure and availability of energy and ground

Demand Conditions

- Level of demand due to increasing digitisation of the economy effects pressure on price and quality
- Companies are required to react faster and more innovatively to customer requirements

Strategy, Structure, and Rivalry

- Companies are being pushed to innovate due to intense domestic rivalry
- Competitiveness determines how firm set different strategies and structure

Related & Supporting Industries

- Existence of subsidies, support from initiatives and complementary companies and related industries that are competitive
- Clustering creates spillover effects that can lead to competitive advantage

Role of Government

- Government role as a catalyst and challenger
- Regulations and policy influence the success of a company
- Highest position and distribution of power

Bochum

- Development of the technology and knowledge location Mark 517
- Start-up centers support infrastructure
- Settlement of the Max Planck Institute for IT Security
- Providing fundings by the State of NRW
- Many available skilled workers

- Sophisticated and large demand for high quality B2B IT (Security) solutions in today's business environment
- Companies and public authorities have recognized the enormous importance of IT security and are investing increasingly more

- Old fashioned image
- New offers for digital entrepreneurs are emerging e.g. Worldfactory and Wirtschaftsentwicklung Bochum
- IT-Security sector has more potential
- Strategy & Initiative to improve Quality of Life in Bochum

- Mint Cluster Initiative of "Bochum Strategie" to boost interest in science
- Networks of companies and institutes e.g. the "zdi Netzwerk"
- Werk X as a Cross Innovation Engine helps accelerate Start-Up activity

- The project Gigabit-City Bochum is aimed at developing better infrastructure
- Bochum is building a three-pillar system of Fonds, Pitches and Incubators for the IT-Security Sector
- The new innovation lab SHIFT

Conclusion



- Bochum has many plans and initiatives to enhance IT Startup growth over the next 10 years
- Incubators and accelerators are in place to strengthen Startup activity in the future.
- Due to the many universities in the area, Bochum has excellent access to research and qualified employees.



- Bochum may be too focused on Security rather than IT as a whole -> three pillar system
- The locational advantages that formerly characterized the region are no longer economically interesting today

The advantages show that the Bochum Strategy sets a promising course for the future

Implications

- While a system of improving Startups is in place, there needs to be more networking to encourage spillover effects to ensure a broader development across industries.
- "The danger of specialization" is given here too since focusing solely on the IT-Sector can lead to "economic blindness"
- Helping IT-Startups to connect to big firms from other industries should be encouraged (industrial sparring partners and partnerships)
- Targeted support for start-ups and adaptation to specific needs by the government and related institutions

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