Lessons-learnt from Growth Pole Strategies in the Developing World

by

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Abstract

Growth pole policies, despite claims otherwise, remain highly relevant and widely applied across the globe. Over recent years, they have emerged as a key instrument in development strategies, often under different names. However, the concept of growth pole policies has remained somewhat elusive, and few studies have systematically evaluated their effectiveness. This has resulted in a lack of comprehensive analysis, particularly regarding their viability and impact in developing countries. The main aim of this paper is to examine the key advantages and challenges involved in the design and implementation of growth pole policies. It outlines the theoretical foundations of these policies and reviews their recent application in various developing regions. Ten case studies were analysed to identify six key lessons, differentiating between successful initiatives —those that met their objectives— and less successful ones.

Keywords: Growth pole policies, developing countries, local economic development

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1. Introduction

Growth pole strategies have long been a cornerstone of regional and national development efforts. Introduced by François Perroux in the 1950s (Perroux, 1950, 1955), these strategies aim to enhance competitiveness, attract investment, and stimulate economic dynamism, while addressing territorial disparities. Despite their widespread application, the concept of growth pole policies remains somewhat ambiguous. Fundamentally, they involve coordinated public investments and policy reforms focused on specific geographic areas or industries to attract private sector investment, create employment opportunities, and deliver broader social benefits. Initiatives such as secondary city programmes, cluster policies, and techno-parks are commonly associated with this framework.

Although the popularity of growth pole policies declined during the late 1970s and 1980s, they have experienced a resurgence over the past few decades (Benedek et al., 2019; Gelb et al., 2015). This revival has been particularly pronounced in Asia since the 1990s and in Africa and Latin America since the 2000s. The renewed interest stems from a growing recognition of the advantages and complexities of agglomeration forces, a topic extensively explored in the new economic geography and urban economics literature over the past 25 years. The institutional drivers of these policies vary widely, with city, regional, and national governments often playing leading roles. Additionally, international organisations, such as the World Bank, have been instrumental in supporting numerous growth pole projects.[1]

In practice, growth pole policies have proven to be a source of considerable debate. Economically, their conceptual ambiguity and the substantial investments they necessitate have prompted questions about their cost-effectiveness and justification. Politically, these policies are often contentious due to their localised nature, which demands the prioritisation of specific regions or

[1] See for example the "Madagascar – Second Integrated Growth Poles and Corridor Program" or the "Mozambique – Integrated Growth Poles Project" (accessed September 2024)

industries over others. Moreover, recent systematic evaluations of their viability and impact, particularly in developing countries, remain scarce. Existing research has largely centred on individual case studies, while comparative analyses are either outdated (e.g. Lo & Salih, 1978; Miyoshi, 1997) or focus narrowly on institutional assessments of returns or value for money (Gelb et al., 2015; World Bank, 2015).

Against this backdrop, this paper seeks to review the principal advantages and challenges involved in designing and implementing growth pole interventions in emerging economies, thereby contributing to the advancement of knowledge in this field. This is especially pertinent in contexts where these policies hold significant relevance for policy and planning but have historically been under-researched. The paper begins by defining growth pole strategies and examining their underlying rationale. The subsequent section analyses their application in developing countries over recent decades, introducing a typology to categorise various interventions. Section four investigates the factors that determine the success or failure of growth pole policies, drawing on ten case studies —five classified as "strategies of gain" and five as "strategies of waste"— with a focus on the factors shaping their outcomes. Section five distils key lessons from these cases, providing guidance on distinguishing between strategies of gain and waste. The final section concludes the paper.

By examining the nuanced outcomes across different regions, this research expands the current understanding of growth pole strategies and highlights the importance of comprehensive evaluation and evidence-based implementation in developing regions.

2. The conceptual underpinnings of Growth Pole Policies

2.1. Definition

The term ‘growth pole’ originates from French economist François Perroux (1950, 1955) and refers to both a phenomenon (uneven growth) and a policy tool aimed at fostering economic transformation. Perroux’s theory is based on the observation that growth does not occur uniformly across a country

but is often concentrated in specific "growth poles" from which it spreads. These poles typically emerge around particular industries or firms, or in areas with inherent economic potential, such as dynamic cities (due to human capital accumulation), tourism centres (due to natural or historical beauty), or mining areas (due to natural resources). Growth poles are, in theory, characterised by growth rates that exceed those of surrounding areas or sectors (Parr, 1999a, 1999b). A dominant industry often drives growth at the core, which then spreads through linkages to adjacent sectors and regions.

Although Perroux did not initially assign a spatial dimension to growth poles, they tend to manifest spatially as industries and firms cluster geographically to benefit from agglomeration economies (Rauhut & Humer, 2020). As a result, growth poles can be defined as “centres of economic activity that benefit from agglomeration economies and spread prosperity to surrounding areas” (World Bank, 2010). This concept aligns with new economic geography and urban economics theories, which highlight the economic advantages of concentrating activity and people in dense, geographically limited areas (Duranton & Puga, 2004; Krugman, 1991).

Based on the observation of uneven growth around these poles, many countries have adopted growth pole policies to drive economic transformation by creating new centres of growth or enhancing existing ones. While the specifics of these policies vary, common characteristics can be identified. Table 1 provides an overview.

Table 1: Growth pole policy characteristics.[2]

Characteristic	Description	References
Objectives	• Boost national competitiveness, attract investment, and create wider social benefits • Drive national growth, support regional development, or assist lagging areas	Gelb et al., 2015; Parr, 199a

[2] Early iterations of growth pole policies often diverged from the characteristics outlined above, tending instead to adopt a unidimensional approach. These policies primarily focused on attracting large anchor investors to lagging regions. Such practices, along with the broader concept of growth pole strategies, were extensively critiqued in the literature of the time (see Parr, 1999b for an overview).

Characteristic	Description	References
Pre-existing or nascent economic potential	• Build upon existing concentrations of economic activity or aim to "unleash" latent potential, leveraging further growth • Examples are industries capable of developing supplier linkages, natural resources (e.g., forestry, mining, agriculture), or a strong human capital base • Provide a foundation for economic diversification and increased productivity • While an anchor investor is often central, the economic potential is sometimes untested prior to the policy intervention	Gelb et al., 2015; Hidalgo et al., 2018; Neffke et al., 2011, Parr, 199a
Dissemination of economic effects	• Aim to extend economic benefits to surrounding areas by building linkages with ancillary industries, thereby fostering growth in adjacent regions	Gelb et al., 2015; Parr, 1999a
Limited geographic scope	• Target specific locations within a country or region, making them part of the spatial policy toolkit • Unlike spatially blind policies, such as nationwide regulatory reforms, growth pole policies have an explicit spatial focus	Barca et al., 2012; Gelb et al., 2015; Parr, 1999a
Multidimensional approach	• Coordinated public and private interventions to unlock growth potential • Distinguishes growth pole policies from other tools, such as Special Economic Zones (SEZs), which may form part of a broader growth pole strategy • Specific instruments depend on the context and challenges of the targeted area, and can include spatial interventions like infrastructure investments, SEZs, and supplier development programmes, as well as broader reforms, such as regulatory and educational changes	Gelb et al., 2015; World Bank, 2013b
Coordination	• Effective coordination between public and private actors is crucial for realising the potential of growth poles and generating self-sustained growth	Gelb et al., 2015; Pike et al., 2017; World Bank, 2013b

2.2. Rationale for growth pole policies

Why does growth tend to concentrate in specific locations —growth poles— rather than spreading evenly across space? Many answers to this question revolve around the concept of agglomeration economies, which arise from the geographical concentration of people and economic activity. This concentration brings significant economic benefits and productivity gains for companies and individuals located within these areas, transforming them into growth poles. The concept of agglomeration economies has long been studied (Jacobs, 1970; Marshall, 1890) and has regained prominence in recent years through the work of endogenous growth theory, New Economic Geography (NEG), and urban economics (Duranton & Puga, 2004; Fujita et al., 1999; Krugman, 1991; Lucas, 1988; Romer, 1986).

The productivity gains in growth poles emerge through three primary channels: (1) pooled labour markets, (2) forward and backward linkages, and (3) knowledge spillovers. First, pooled labour markets arise when many employers and employees cluster in the same location, such as a large city or industrial district, making it easier for firms to find specialised talent and for workers to secure jobs, reducing the risk of long-term unemployment (Duranton & Puga, 2004). Second, forward and backward linkages occur when firms benefit from proximity to suppliers and customers, reducing transport costs and fostering a self-reinforcing cycle of growth (Krugman, 1991). As more firms cluster, the attractiveness of the location grows, drawing in additional businesses and workers. Third, knowledge spillovers are enhanced by co-location, as individuals learn from one another through face-to-face interactions, increasing innovation and productivity (Audretsch & Feldman, 2004; Boschma, 2005).

These mechanisms explain why growth poles emerge as firms and workers seek to benefit from the productivity gains of concentrated economic activity. The presence of forward and backward linkages is particularly important in growth pole policies, as the interaction between firms in the pole and their suppliers stimulates growth in surrounding areas. In addition, concentrated economic activity generates demand linkages (as workers spend their wages locally) and fiscal linkages (through business taxation, which funds infrastructure and social services). These factors are critical for fostering broader economic development. Moreover, the effectiveness of growth pole policies is significantly influenced by the quality of institutions and governance frameworks in place. Strong institutions enhance the benefits of agglomeration economies by providing stable environments for investment and innovation (Rodríguez-Pose, 2013). Conversely, weak governance hinders the potential spill-over effects to surrounding areas.

However, growth poles do not always emerge spontaneously. Path dependency and coordination failures can prevent their formation. Path dependency occurs when pre-existing growth poles, such as industrial clusters or cities, attract further investment and talent due to their established

infrastructure and economic base (Venables, 2005). Meanwhile, regions with less favourable initial conditions may struggle to compete, even if they have untapped economic potential, justifying policy interventions to help these areas capture investment and foster growth.

Does this mean that growth poles cannot develop in less favourable environments? Such areas are often underdeveloped precisely because they lack key factors for growth pole formation, such as advanced firms, skilled labour, and good infrastructure. This makes implementing growth pole strategies more challenging but not impossible. Well-designed, targeted strategies can succeed by tapping into existing potential, though the hurdles are greater, and success is not guaranteed.

The challenge for policymakers lies in creating a critical mass of economic activity, firms, and infrastructure suited to the characteristics and potential of a given territory. Coordination between actors is essential, but this is often hindered by the "chicken and egg" dilemma: firms and workers hesitate to move to a location without a critical mass, but that mass cannot form without their presence. Growth pole strategies can help overcome this impasse by triggering agglomeration economies, externalities, and knowledge spillovers. However, these strategies must be carefully crafted to address the specific challenges of the local environment (Pike et al., 2017).

Successful growth pole policies require integrated development strategies and coordinated efforts between public and private sectors. However, coordination is often more difficult in regions with institutional weaknesses, which tend to be poorer and where the concern with inclusive growth is greater. In these areas, growth pole strategies must not only focus on economic metrics but also consider social inclusion and equity to achieve sustainable development (Cattaneo et al., 2022). Thus, while growth pole strategies can work in less developed areas, they face greater challenges compared to more advanced regions.

3. Growth pole policies and typology

Following François Perroux's research, growth pole policies became prominent during the 1960s and 1970s (Parr, 1999a, 1999b). Both developed and developing countries implemented policies aimed at creating growth centres, often associated with building new cities. While it is commonly believed that the influence of growth pole strategies diminished after their peak in the 1960s and 1970s, a review of recent literature suggests otherwise. Many countries have continued to pursue growth pole strategies over the past few decades.

Appendix 1 lists 36 growth pole policies identified in 32 countries, both developed and developing. Notably, some countries —such as India, Indonesia, and Brazil— have implemented multiple growth pole initiatives. The labelling of these interventions varies across countries: some explicitly refer to "growth poles" or similar terms, such as Turkey's "Growth Poles Support Program" or Ghana's "Shared Growth and Development Agenda 2010–2013," which aims to develop growth poles around the gas and oil industries. In other cases, policies resembling growth pole interventions go by different names. For example, Morocco's "New Cities Program" and Costa Rica's efforts to build an electronics cluster around an anchor investor are examples of growth pole strategies without explicit labelling. In other cases, growth pole concepts were discussed within wider frameworks, but not implemented in the end (e.g. South Africa).[3]

While recent growth pole policies share common characteristics, they differ in several key dimensions: (1) the geographical level at which they are conceived; (2) the specific objectives; (3) the underlying economic opportunity; and (4) the instruments employed. Most policies mix elements of all these dimensions rather than fitting neatly into one category.

a. **Geographical level**: Growth pole strategies can be initiated at different tiers of government. Some are part of national, top-down strategies, while others are conceived locally. For

[3] The authors could not fully verify for all policies to what extent each was fully implemented or remained on paper only

example, Vietnam's "Key Economic Areas" are part of the national Strategy for Socio-Economic Development, designed to promote spatially balanced national growth. Romania's urban growth poles were chosen by the national government, although local authorities handle implementation. On the other hand, initiatives such as the Technopole in Campinas, Brazil, and the International City of Knowledge in Monterrey, Mexico, originated from local authorities.

b. **Objectives**: Most growth pole policies aim to drive broader economic transformation. However, their specific goals differ. Some policies focus on exploiting untapped economic potential in regions outside primary economic centres, fostering more balanced development. Examples include Sri Lanka's urban development plan, Romania's urban growth pole strategy, and Vietnam's secondary cities programme. These policies often aim to reduce congestion in major cities. Other policies, by contrast, focus on enhancing national competitiveness by upgrading to higher-value industries. Costa Rica's electronics cluster, Mexico's International City of Knowledge, and Malaysia's Super Corridor exemplify this approach, which leverages agglomeration economies rather than aiming to decongest primary urban centres.

c. **Economic opportunity**: Growth pole policies also differ based on the type of economic potential they aim to leverage. Broadly, two categories emerge: (1) growth poles based on natural resource endowments and (2) those based on human capital endowment. Natural resource-based growth poles may focus on agriculture, extractive industries, tourism, or logistics hubs, depending on local conditions. In contrast, human capital-based poles depend on a skilled or low-cost labour pool, making them attractive to investors in high-tech or labour-intensive industries. Some policies combine these elements, further boosted by factors like proximity to markets, favourable trade conditions, or strong institutions. Table 2 provides examples of different growth pole policies based on these underlying opportunities.

d. **Instruments:** The final key difference lies in the composition of interventions used to activate the economic potential of growth poles. On one hand, the mix of interventions is influenced by the underlying economic opportunity. Growth poles based on natural resources typically focus on providing public goods, such as transport infrastructure and utilities. In contrast, those centred around universities or innovation hubs require a stronger emphasis on "soft policies," such as innovation grants and specialised training programmes for highly skilled personnel. On the other hand, the choice of interventions must also consider the local context. A thorough analysis of the specific constraints faced by firms is necessary to ensure that interventions are well-suited to the region's needs.

While growth pole policies have proliferated globally, they vary widely in their objectives, levels of government involvement, and the types of economic potential they aim to exploit. This typology helps to categorise these interventions and understand how they are shaped by local and national conditions.

Table 2: Economic potential and growth pole policies

Economic potential	Example	Objective(s)	Interventions
Strategic location	Hambantota growth pole, Sri Lanka	Build-upon Hambantota's strategic location in vicinity to the East-West shipping route and develop a new urban hub in the South of Sri Lanka	Primarily focused on large scale infrastructure investments, including a new port, a new international airport, an industrial zone, a convention centre and a cricket stadium
Agricultural potential	Fruits cluster in Petrolina-Juazeiro, Brazil	Development of a high-value agricultural cluster taking advantage of the soil quality, topography and year-around sunshine	Large scale public investments in irrigation infrastructure in combination with the strategic attraction of agricultural firms, financial and technical support for smallholder farmers and the provision of agricultural research
Extractive industries	Mining and tourism-led growth in Taolagnaro, Madagascar	Open up the economically-isolated Taolagnaro area to new opportunities and leverage Rio Tinto's parallel investments in ilmenite mining (part of the Integrated Growth Poles Project)	A mix of locally targeted interventions (mainly focused on the upgrading of transport, urban and utilities infrastructure) and broader interventions to improve the country's business environment
Tourism potential	Tourism-led growth in Nosy Be, Madagascar	Leverage the natural beauty of the islands beaches to convert the island into a tourism destination	A mix of locally targeted interventions (including the upgrading of the urban development plans, port facilities and public utility provision) and broader

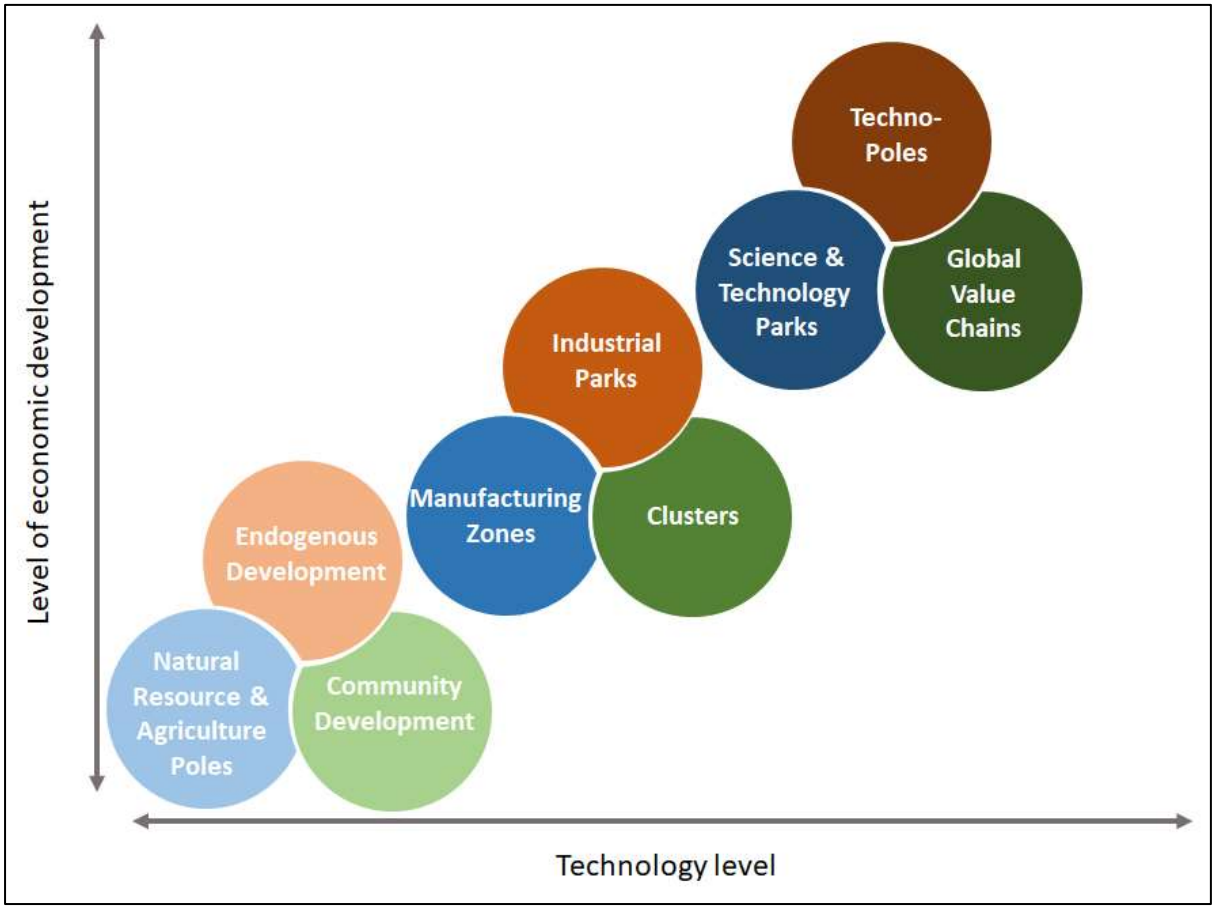
Economic potential	Example	Objective(s)	Interventions
		(part of the Integrated Growth Poles Project)	interventions to improve the country's business environment
Highly-skilled labour pool	Electronics cluster, Costa Rica	Promotion of the development of an electronics cluster, leveraging the anchor investment of Intel and Costa Rica's highly educated workforce	Integrated set of intervention to improve the general business environment (e.g. updating the existing SEZ scheme), adapting school/ university curricula to match the needs of the electronics cluster, improving infrastructure and implementation of a supplier development program
University	Technopole in Campinas, Brazil	Consolidate the city as one of the main technological hubs around the large concentration of technology development institutes such as Unicamp	A combination of fiscal incentives for high-tech companies, specialized infrastructure provision (technological parks) and a strong emphasis on fostering research-company linkages

Source: Authors' elaboration based on sources documented in Appendix 1

To better understand the variety of growth pole interventions globally, Figure 1 presents a stylised typology that illustrates which types of policies are feasible in different contexts. This typology is based on two key factors: the level of economic development and the technological intensity of the main industries within the growth pole. The level of economic development reflects the area's capacity to support a growth pole. At lower levels, strategies typically focus on exploiting natural resources, while at higher levels, human capital-based strategies become more viable.

The technological intensity of the industries involved is the second defining factor. As both the area's development and the technological sophistication of the industries increase, the composition of interventions changes. Lower levels of development and technological intensity often require strategies focused on infrastructure provision. As economic and technological conditions improve, more advanced policy options become available to local firms and decision-makers.

Figure 1. Growth pole typology.



Source: Authors' elaboration

Figure 1 highlights the variety of growth pole options available at different stages of economic and technological development. While not exhaustive, the figure reflects the diverse labelling of growth-pole-type interventions mentioned earlier. Importantly, there are genuine differences in the types of interventions and their potential economic outcomes at varying levels of development and technological distance (Acemoglu, Aghion, & Zilibotti, 2006).

At lower levels of development, with limited technological inputs, growth pole strategies often rely on natural resource and agricultural endowments. These interventions are typically grounded in endogenous development principles, promoting local entrepreneurship and investment in sectors with comparative advantages (Tödtling, 2010; Vázquez-Barquero, 2002). However, in many cases, low development levels, weak institutions, and widespread poverty mean that these strategies focus more

on poverty alleviation and social issues, often overlooking the economic potential of growth poles (Gilchrist, 2009; Pike et al., 2017).

As countries move up the economic and technological ladder, growth pole strategies shift towards manufacturing. Improved local economies, a better-skilled workforce, and stronger institutions facilitate the development of manufacturing zones, industrial parks, and clusters. This type of intervention has become increasingly common in the developing world, though with varying degrees of success.

At higher levels of development, closer to the technological frontier, the range of potential strategies expands. Industrial parks and manufacturing zones evolve into technopoles, science and technology parks, and smart or competitive city strategies. These advanced interventions often still include infrastructure provision but rely more on innovation grants, specialised training for highly-skilled personnel, and stronger engagement with global value chains. Success at this stage also depends on more developed local institutions and robust participation of local firms in global markets.

4. Case studies

Have growth pole interventions in the developing world succeeded in achieving their goals of generating more employment, increasing productivity, and fostering greater economic growth? In cases where these interventions targeted less developed areas, have they contributed to improving economic dynamism and the livelihoods of the people and firms in those regions? Despite the importance of these questions for policymakers and the widespread implementation of growth pole policies, clear answers remain difficult to pin down. As mentioned in the introduction, most evaluations of growth pole policies are either theoretical and abstract (e.g., Parr, 1999a, 1999b, 2015), or focus on individual cases, offering overviews of the returns on intervention or value-for-money assessments. Additionally, many of these studies are somewhat dated and rely on contributions that examine growth poles in different countries (e.g., Lo & Salih, 1978; Miyoshi, 1997).

This section aims to address this gap by reviewing the recent experience of ten countries that have implemented growth pole policies. The objective is to extract lessons from their implementation and, as much as possible, derive general principles about what works and what does not in growth pole interventions.

Determining the success of a specific policy involves some ambiguity. Five of the selected cases have been generally deemed relatively successful in achieving their initial objectives, while the remaining five were considered less effective. The successful cases, referred to as "strategies of gain," (Rodríguez-Pose & Wilkie, 2019) include Costa Rica's electronics cluster, Madagascar's Integrated Growth Pole project, Malaysia's Super Corridor, Vietnam's key economic regions, and the Petrolina-Juazeiro fruit cluster in Brazil. The less successful cases —labelled as "strategies of waste"— are Indonesia's KAPET program, Jordan's IT initiative, Peru's SEZ programme, Romania's urban growth pole policy, and Sri Lanka's urban development plan. Table 3 provides a detailed overview of these case studies.

Table 3. Strategies of gain and strategies of waste

Case study	Objective(s)	Growth pole type and economic potential
Strategies of Waste		
1) **Indonesia – Promoting growth in lagging regions through integrated zone development (KAPET)**	Create growth centres in peripheral regions in order to improve the competitiveness of these areas, attract investments and generate employment and exports	Manufacturing zones in laggings regions, hosting sectors with the potential to stimulate growth in surrounding regions
2) **Jordan – Transforming the country into an regional IT hub**	Transform the country into a regional hub and global exporter of IT products and services	IT parks leveraging the country's young and well-educated population
3) **Peru – Decreasing regional disparities through Special Economic**	Function as regional "growth poles" and to stimulate the economic and social development of the respective regions and reduce regional inequality	Manufacturing zones in lagging areas, however economic potential not clearly identified
4) **Romania – Developing urban growth poles outside Bucharest**	Support the economic, social, territorially balanced and sustainable development of the Romanian regions, according to their specific needs and resources	Urban growth poles including tourism and manufacturing centres, building upon pre-existing urban centres
5) **Sri Lanka – Building new metro-regions**	Achieve a spatially balanced development which will drive regional growth in the respective regions and support the country's long-term socio-economic development	New city functioning as logistics and manufacturing hub, leveraging the strategic geographical position
Strategies of Gain		
6) **Brazil – Creating a fruits cluster in Petrolina-Juazeiro**	Promote the area's socio-economic development	Agricultural pole leveraging the region's favourable climate and soil conditions
7) **Costa Rica – Developing an electronics cluster based on an anchor investor**	Build up high-tech cluster and promote Costa Rica's economic and social development	Technopole based on the country's favourable business environment and well-educated work force
8) **Madagascar – Leveraging the strategic potential of three regions**	Help provide the adequate business environment to stimulate and lead economic growth in three selected regional poles	Mixed strategy based on the specific context in each of the selected areas, including extractive industries and tourism potential
9) **Malaysia – Transforming the country into a knowledge economy through the Multimedia Super Corridor**	Support Malaysia's path to become a knowledge-based society and achieve high-income status by 2020	ICT hub leveraging the country's well-educated workforce
10) **Vietnam – Unifying the country through a central key economic region**	Make major contributions to the growth of the entire country, and motivate and help other regions, especially those laden with difficulties, for common development	Mixed strategy based on the region's strategic position, large labour pool and tourism potential

Source: Authors' elaboration based on sources documented in section 4.1 and 4.2

Given the diversity of approaches and contexts in which growth pole policies are implemented, as identified in sections 2 and 3, the selection of case studies aims to include examples from diverse geographies and different types of strategies, with varied objectives and underlying economic potential. This allows for a more nuanced understanding of similarities and differences between the varying approaches. Availability of information is been another key factor in the choice, as detailed data on many policies listed in Appendix 1 was limited.

This section begins by examining the "strategies of waste," summarising common themes after presenting the five case studies. It then moves to what can be considered "strategies of gain."

4.1. Strategies of Waste

4.1.1. Indonesia — Promoting growth in lagging regions through integrated zone development

Background

Indonesia has long faced significant regional disparities, particularly between its dynamic western regions —Java, Bali, and Sumatra— and its less developed eastern provinces (Akita et al., 2011). Even in the context of an emerging economy, Indonesia's regional inequality is high and has continued to rise over recent decades (Ezcurra & Rodríguez-Pose, 2014; Milanovic, 2005). Poverty rates also vary significantly across regions. To address these imbalances, the Indonesian government has implemented several policies aimed at fostering economic development, improving living standards and boosting overall economic dynamism (Soenander, 2005). Early efforts primarily focused on providing fiscal incentives for firms to invest in the eastern provinces, such as offering lower profit tax rates.

Objectives and Interventions

In 1993, the Indonesian government launched the Integrated Economic Development Zone Programme (KAPET) to create growth centres in less-developed regions. The aim was to boost competitiveness, attract investment, and generate employment and exports (Temenggung, 2013).

The programme set both short-term (up to 2004) and long-term (up to 2010) targets, including increasing regional GDP per capita to approach the national average and raising the regions' share of investment and exports to 20% (Soenander, 2005). The programme also sought to improve broader social indicators, like the Human Development Index, to reach national levels. Eligible areas needed to show (i) potential for rapid growth; (ii) leading sectors that could stimulate surrounding regions; and (iii) strong investment return prospects (Temenggung, 2013).

Unlike previous policies focused mainly on tax incentives, KAPET adopted a more comprehensive approach, combining fiscal and non-fiscal interventions. The policy included 31 priority programmes, covering human resources, natural resources and economics, infrastructure, and institutional development (Soenandar, 2005). Fiscal incentives remain as part of the programme, offering tax exemptions on capital goods and raw material imports, as well as reduced income tax for foreign investors (Rothenberg et al., 2017). The programme also aimed to provide industrial land, upgrade infrastructure, offer skills training, improve institutional environments, and streamline investment processes through one-stop-shops. This integrated approach was intended to address local constraints and create a favourable business environment to attract firms and generate economic activity.

KAPETs were managed locally with centralised guidance. Each region had a KAPET Managing Body, led by local governors and supported by technical teams. These teams were responsible for implementing the programme and providing one-stop-services to attract investment (Rothenberg et al., 2017).

Results

Since its launch, 14 KAPETs have been established, primarily in the eastern provinces (Temenggung, 2013). However, a 2011 evaluation concluded that the programme largely failed to meet its objectives. The regions only attracted 3.4% of overall investment, far short of the 20% target. Additionally, investments were heavily concentrated, with just three KAPETs receiving most of the inflows, while

the others saw little impact. The expected reduction in regional GDP disparities also failed to materialise. Rothenberg et al. (2017) found no evidence that the KAPET programme spurred economic growth or helped diversify production in the targeted areas. New firm entry remained stable, indicating that investment levels did not significantly improve.

Lessons-learnt

Several studies (Soenandar, 2005; Temenggung, 2013; Rothenberg et al., 2017; Rothenberg & Temenggung, 2019) have identified key reasons for the programme's shortcomings:

- **Lack of funding**: Responsibility for managing and funding the programme shifted from the central to local governments, leading to a funding shortfall. As a result, key infrastructure interventions, crucial for creating a favourable business environment, were often not implemented.
- **Low institutional capacity and poor coordination**: Decentralised implementation led to confusion over responsibilities, while coordination between national and local governments was weak throughout the programme. Furthermore, local authorities had varying levels of institutional capacity, which hindered implementation.
- **Challenging locational choices**: KAPETs were located in lagging regions with poor infrastructure and limited access to markets. Although the programme intended to address these issues, the funding shortfalls and weak institutional capacity prevented the necessary improvements.

4.1.2. Jordan – Transforming the country into a regional IT hub

Background

Jordan is a relatively wealthy country within its regional context. The economy is largely service-based, with the sector employing almost 80% of the workforce and contributing 60% to national GDP in 2022 (World Bank, 2022), while the manufacturing industry is less developed. Agriculture and natural

resource-based activities play a minor role due to the country's shortage of natural resources, arable land, and water (United Nations, 2011).

Historically, the central government has played an active role in the economy (World Bank 2016a), engaging directly in productive activities, offering trade protection, and setting prices (United Nations, 2011). This interventionist approach is reflected in the high share of public employment, which accounts for nearly 40% of the workforce (World Bank, 2016a). Given the lack of natural resources, the government has focused on building Jordan's human capital, investing heavily in education for its young population (United Nations, 2011).

Objectives and interventions

In 1999, Jordan launched the REACH initiative with the goal of transforming the country into a regional IT hub and global exporter of IT products and services (Mofleh et al., 2008). The initiative was built on Jordan's relatively young and well-educated workforce. This, together with its high urbanisation rate, where considered as key assets for IT development (Al-Jaghoub & Westrup, 2003). However, the country's ICT infrastructure was underdeveloped compared to other IT hubs, presenting a major constraint to the sector's growth.

The strategy included a wide range of interventions targeting five key areas: regulatory bodies, human resource development, government support, capital and finance, and infrastructure.[4] A Ministry of Information and Communication Technology (MoICT) was created to lead the ICT strategy, and the Jordan Education Initiative aimed to align school and university curricula with the needs of the IT industry. Legislative changes were also introduced to make Jordan more attractive to foreign companies (Al-Jaghoub & Westrup, 2003).

[4] Information based on https://kingabdullah.jo/en/sub-initiatives/reach-initiative (accessed June 2018)

A central component of the strategy was the development of IT parks, intended to both address infrastructure deficits and promote regional development outside the capital, Amman. Three IT parks were planned by 2003, combining private investment with government support.

Results

Following the launch of the REACH initiative, the IT sector experienced positive growth, though from a low base. Between 2001 and 2004, the IT sector grew by 37% annually, increasing its share of GDP from 1.8% to 2.9% (PWC, 2008). This growth was mainly driven by the domestic market, with the industry remaining fragmented and dominated by small firms (PWC, 2008). Today, the ICT sector represents 12% of Jordan's GDP.[5]

Despite the overall positive trajectory of the ICT sector, the initiative's goal of developing IT parks outside Amman was largely unsuccessful. Most IT activity remained concentrated in the capital, which emerged as the natural hub for the industry (Al-Jaghoub & Westrup, 2003). Of the three planned IT parks, only one —CyberCity in Irbid— became operational, while the others were never developed (PWC, 2008).

CyberCity, located 85 kilometres from Amman, was intended to be a self-sustained community offering IT infrastructure, residential housing, and commercial and recreational facilities (PWC, 2008). Designated as both a qualifying industrial zone and an export free zone, the park offered generous tax incentives to attract companies (Kardoosh, 2004). However, by 2004, CyberCity had primarily attracted low-tech manufacturing firms in the textile sector rather than IT companies (Kardoosh, 2004; PWC, 2008). Recent reports suggest that part of the park has since been converted into a refugee camp.[6]

[5] https://oxfordbusinessgroup.com/news/jordan-looks-revitalise-its-digital-economy-engine-growth (accessed September 2024)
[6] https://www.amnesty.org/en/latest/campaigns/2013/07/a-dog-has-more-freedom-palestinians-at-cyber-city-camp-for-refugees-from-syria/ (accessed September 2024)

Lessons-learnt

Several challenges contributed to the lack of success of the IT park strategy in Jordan:

- **Location of the parks**: The lack of a critical mass of economic activity outside Amman made it difficult for the planned IT parks to attract investors (Al-Jaghoub & Westrup, 2003; Magableh, 2010; PWC, 2008). New IT companies, fostered by the REACH initiative, preferred to base themselves in Amman, where other firms and a trained labour pool already existed.
- **Infrastructure and services within the park**: CyberCity in Irbid, envisioned as a fully integrated township, failed to develop sufficient commercial and recreational infrastructure, nor was an optical fibre network installed. These shortcomings reduced its attractiveness to IT firms and knowledge workers. A lack of public sector investment in infrastructure was a key issue (PWC, 2008).
- **University linkages**: The anticipated strong ties between IT parks and local universities did not materialise as expected (Magableh, 2010; PWC, 2008). One reason is that most Jordanian universities lack a research focus, making it harder for them to serve as incubators for innovation and project ideas.

4.1.3. Peru – Decreasing regional disparities through Special Economic Zones

Background

Over the past decades, Peru has experienced periods of strong economic growth and significant reductions in poverty. Between 2000 and 2023, GDP per capita doubled and poverty rates fell from 35% to below 10% (World Bank, 2023a).[7] Despite this progress, regional disparities remain high, with stark differences in economic strength and living conditions across the country. Lima, which dominates Peru's urban hierarchy, is home to nearly 40% of the urban population and produces around half of the nation's industrial output. In contrast, regions like Arequipa and Cusco each contribute just 5%,

[7] GDP per capita based on constant 2015 US$ & Poverty headcount ratio at $3.65 a day (2017 PPP)

and poverty rates vary drastically: from 10% in Lima and Arequipa to around 50% in Amazonas, Cajamarca, and Apurímac (OECD, 2016).

Objectives and interventions

In response to these disparities, Peru launched its current Special Economic Zones (SEZs) policy in 1996 with the creation of "Centros de Exportación, Transformación, Industria, Comercialización y Servicios" (CETICOS). These zones were intended to function as regional "growth poles," stimulating economic and social development in their respective regions.[8] The first SEZs were established in Ilo, Matarani, and Tacna in southern Peru, followed by a zone in Paita in the north (Tello & Tavarra, 2010).

The Ministry of Trade and Tourism oversees the overall policy and strategy, while zone-specific administrative boards —linked to regional governments— handle operations. To attract investment, firms in SEZs receive several benefits, including access to serviced industrial land, tax exemptions, and duty-free imports and exports (Hidalgo et al., 2023; World Bank, 2016b). Regional governments are responsible for providing infrastructure within and around the zones, while the central government grants tax and duty exemptions (World Bank, 2016b).

Results

The success of Peru's SEZs as a growth pole strategy has been, at best, mixed. To date, seven SEZs have been designated to serve as regional growth poles, but only four are operational, primarily in coastal regions near ports or border crossings (Hidalgo et al., 2023; World Bank, 2016b). Investor interest —particularly from foreign firms— has been moderate. Approximately 100 firms operate in the zones, with 70% being local investments. The occupancy rate across the operational zones stands at around 20%, and most businesses are focused on commercial and logistical activities, rather than manufacturing, the primary target of the policy.

[8] see for example Law 2011–29704 on the creation of the CETICOS Tumbes available under http://www.leyes.congreso.gob.pe/Documentos/Leyes/29704.pdf (accessed September 2024)

In terms of regional development, the zones have had limited impact due to the difficulty in attracting significant investment (Tello & Tavarra, 2010). The exception is the Tacna zone, where a special regulation allows firms to sell products domestically at a flat 6% tax rate, fostering some commercial tourism around the zone. However, even in Tacna, low occupancy rates have restricted its overall effect (World Bank, 2016b).

Lessons-learnt

Several factors have been identified as contributing to the limited success of Peru's SEZs as growth poles:

- **Lack of pre-existing economic concentration**: Effective growth pole policies typically build on pre-existing economic hubs or emerging potential. Peru's SEZs were located in lagging regions with little regard for pre-existing economic activity, making it difficult to achieve agglomeration economies (Tello & Tavarra, 2010; World Bank 2016b). More recent efforts have acknowledged this issue and aim to support growth poles in areas already showing signs of economic acceleration.

- **Reliance on a single instrument without a broader development strategy**: While SEZs can drive economic growth, they rarely succeed in isolation. The SEZs in Peru were established in regions with limited infrastructure and human capital, but without broader policies to address these challenges —such as investments in education, infrastructure, and business environment improvements (Hidalgo et al., 2023; Tello & Tavarra, 2010; World Bank, 2016b).

- **Lack of supplier linkages**: Little attention was given to fostering connections between SEZ firms and local suppliers, which could have further stimulated regional economies (World Bank, 2016b).

- **Low-quality infrastructure**: SEZs are meant to provide access to infrastructure and overcome local business environment barriers, but the Peruvian SEZs have struggled to offer adequate

infrastructure and services, limiting their attractiveness to investors (Farole, 2011; World Bank, 2016b).

- **Limited implementation capacity**: The responsibility for SEZ implementation lies with provincial governments, but an OECD review (2016) found that regional governments in Peru have the lowest capacity within the national system, hampering the strategy's success (Hidalgo et al., 2023).

4.1.4. Romania – Developing urban growth poles outside Bucharest

Background

Like many Central and Eastern European countries, Romania has a highly centralised urban system (Sandu, 2024). Bucharest, the capital, is nearly six times larger than the second-largest city, Cluj-Napoca. Economic production is similarly concentrated, with 75% of firm revenues generated in Bucharest and seven other cities (World Bank, 2013b). While Bucharest's productivity has caught up with other European cities, secondary cities lag behind,[9] and Romania continues to face growing regional disparities (Benedek, 2016).

Objectives and interventions

To promote more spatially balanced development, Romania's 2007-2013 Regional Operational Plan (ROP) aimed to "support the economic, social, territorially balanced and sustainable development of Romanian regions," focusing on urban growth poles, improving the business environment, and enhancing infrastructure (Neagu et al., 2013). Seven cities, in addition to Bucharest, were designated as national growth poles, while 13 smaller cities were identified as centres of regional importance. These growth poles coincided with Romania's major urban centres (World Bank, 2013b).

[9] http://blogs.worldbank.org/europeandcentralasia/turning-romania-s-secondary-cities-engines-growth (accessed September 2024)

The strategy's implementation was both centralised and decentralised. The growth poles were centrally designated, and funding largely came from the European Regional Development Fund and national sources. However, each city was responsible for developing its own Integrated Urban Development Plan (World Bank, 2013b). Voluntary associations between the central city and nearby urban areas (within 30 kilometres) formed functional metropolitan areas with a unified development vision (Benedek & Cristea, 2014). Around 30% of the total ROP budget was allocated to the seven growth poles.

Between 2007 and 2013, approximately €620 million was invested across the growth poles. Funded projects included transport infrastructure, tourism promotion, educational infrastructure, and SME support. A significant portion of the funds was directed toward the disadvantaged regions of Iasi and Craiova, with transport infrastructure receiving the largest share (Benedek & Cristea, 2014).

Results

The introduction of growth poles marked Romania's first attempt at integrated urban planning, combining bottom-up initiatives with national policy (Neagu et al., 2013). However, the outcomes fell short of expectations. Despite the goal of promoting more balanced regional development, disparities in GDP per capita actually increased during the 2007-2013 period (Benedek, 2016). The focus on growth poles was identified as a contributing factor to these widening inequalities (Benedek & Cristea, 2014).

Firm revenues in the seven growth poles grew faster than the national average between 2008 and 2011 (11% in growth poles vs. 8% nationally), but this growth was mainly driven by Timisoara (24%). Other growth poles, such as Cluj-Napoca (12%) and Ploiesti (12%), grew at similar rates to the national average, while Brasov (1%), Constanta (9%), Craiova (7%), and Iasi (8%) lagged behind. Ironically, Craiova and Iasi, which received the most funding, were among the slowest-growing poles.

Lessons-learnt

Several factors have been identified as barriers to the success of Romania's growth pole strategy:

- **Institutional challenges at the metro level**: The voluntary creation of metropolitan areas through inter-community development associations (IDAs) presented difficulties. Some municipalities chose not to join, hindering efforts to create truly integrated development strategies (Benedek, 2016; World Bank, 2013b). The 30-kilometre distance limit around cities also prevented effective planning for larger metropolitan areas. Additionally, many IDAs lacked the institutional capacity to design and implement integrated urban plans effectively.[10]
- **Strategy design flaws**: The criteria for selecting the seven growth poles were unclear. No in-depth understanding of how these poles would contribute to national development was provided (Benedek, 2016; World Bank, 2013b). Additionally, projects within the development plans were often piecemeal, lacking a clear strategic vision. Most funded projects were concentrated in city centres rather than addressing the broader metropolitan area, further undermining the goal of balanced urban development (Neagu et al., 2013).[11]
- **Policy coordination and sequencing**: Romania's urban development efforts involved multiple strategies and funding instruments, but coordination between them was often weak. Greater emphasis should have been placed on ensuring complementarity between interventions (World Bank, 2013b). Moreover, the sequencing of projects was poorly planned. For example, road rehabilitations were sometimes completed before underground utility works were finalised, leading to inefficiencies.

[10] http://blogs.worldbank.org/europeandcentralasia/how-can-romania-s-cities-strengthen-implementation-capacity-greater-development-impact (accessed September 2024)

[11] http://blogs.worldbank.org/europeandcentralasia/turning-romania-s-secondary-cities-engines-growth (accessed September 2024)

4.1.5. Sri Lanka – Building new metro-regions as growth poles

Background

Sri Lanka achieved middle-income status in 2010, following decades of steady growth around 5% annually. Since 2000, GDP per capita more than doubled, from $2,000 to $4,000 in 2022 (in constant 2015 US$), although, of recent, the country has witnessed considerable economic troubles (World Bank, 2023b). For its level of development, Sri Lanka's urbanisation remains relatively low compared to other lower middle-income countries. As of 2023, only 19% of the population lived in urban areas, far below the average of 41% for comparable countries (World Bank, 2023b). Most urban development is concentrated on the west coast, centred around Colombo, forming a wider metropolitan area with Kaduwela and Maharagama (Sakalasooriya, 2021).

Like many middle-income countries, Sri Lanka faces the challenge of transitioning from a labour-competitive economy to one that competes through higher workforce productivity (Ellis & Roberts, 2016).

Objectives and interventions

In 2006, the Sri Lankan government launched an ambitious city development plan under the Mahinda Chintana framework. This plan aimed to develop five interconnected metropolitan areas as national growth centres, complemented by several smaller regional growth centres (Department of National Planning, 2006). The plan had two objectives: first, to leverage the benefits of increased density through agglomeration economies, and second, to promote spatially balanced development by driving regional growth. The strategy intended for these growth centres to stimulate surrounding areas by attracting private investment (Department of National Planning, 2006).

Most of the proposed centres were located around existing cities, but the Hambantota metro region in southern Sri Lanka was an exception (National Physical Planning Department, 2010). Hambantota, home to a deep-sea port, is a scarcely urbanised area that was severely affected by the 2004 tsunami.

It remains one of Sri Lanka's least developed regions, with a population of only 23,000 in 2012 (World Bank, 2012). Despite its small size and lack of infrastructure, Hambantota was prioritised in the urban development plan, with a target population of 1 million by 2030 (National Physical Planning Department, 2010). The plan envisaged Hambantota as a major economic hub driven by the deep-sea port and an international airport, aiming to attract industry and commerce to the southern region.

The **Greater Hambantota Project** included large-scale infrastructure developments such as the Hambantota Sea Port, Mattala Airport, a botanical garden, a convention centre, and an industrial park. The project aimed to leverage Hambantota's strategic location on the East-West shipping route connecting East Asia to Europe, Africa, and West Asia, positioning the city as a key logistical and industrial centre (Weerakoon & Perera, 2014). The project was also seen as a key node in China's Belt and Road Initiative, particularly the maritime silk road (Mendis, 2012).

Results

Since the project's announcement in 2006, the Hambantota project channelled unprecedented investment, primarily from China. The first phase of the deep-sea port was completed in 2010, and the international airport, with a capacity of 1 million passengers annually, opened in 2013. Additionally, a 35,000-seat cricket stadium and a convention centre were built (Shepard, 2016a). However, the project encountered massive challenges from the beginning, with most infrastructure remaining severely underutilised. By 2016, the airport was servicing just one daily flight (Shepard, 2016b), and both the port and conference centre were operating far below capacity. Use of the port by ships declined year-on-year for most of the 2010s (Jones & Hameiri, 2020). Industrial development in the area has not materialised and the planned industrial zone is still underdeveloped (Shepard, 2016a). Additionally, the city has failed to attract significant population growth, falling far short of the target of 1 million residents by 2030 (World Bank, 2012).

These issues have raised serious concerns about the project's long-term viability. The large infrastructure investments have led to high debt service obligations, while the lack of revenue-

generating activities threatens the project's financial sustainability.[12] In 2017, due to mounting financial pressures, the port was leased to the Chinese government for 99 years (Roy-Chaudhury, 2019) and the country is now mired in a considerable debt crisis.

Lessons-learnt

While some aspects of the project continue, several factors have contributed to its challenges:

- **Remote location and unclear economic potential**: Despite Hambantota's location along the East-West sea route, the main reason for selecting Hambantota as a growth pole instead of other areas in the South with better infrastructure and economic concentration was purely political. The project was promoted by then president and Hambantota native Mahinda Hambantota native Mahinda Rajapaksa (Shepard, 2016b). The lack of pre-existing infrastructure and economic activity made it difficult for the project to gain momentum and achieve agglomeration economies.
- **Complexity of interventions**: Building a new economic hub from scratch requires highly complex project designs with numerous interventions. The project design focused too heavily on the desired end-state without considering the proper sequencing of developments (Gunawardhana et al., 2012). For example, Hambantota struggles with water supply issues due to seasonal droughts, and infrastructure was not developed in a coordinated manner. The "chicken and egg" problem persists: without an industrial park, firms are reluctant to invest, but without investment, the industrial park cannot be built.
- **Financing for long-term projects**: The Hambantota project required large-scale infrastructure investments, putting significant pressure on the financing structure. Long-term, capital-intensive projects face sustainability challenges if they cannot generate revenue in the early stages.

[12] See for example http://dailynews.lk/2017/01/27/business/105883/hambantota-mega-port-project-receive-rs165-bn-fdi (accessed September 2024) & http://globalriskinsights.com/2017/04/radar-sri-lanka-next-great-game/ (accessed September 2024)

- **Weak implementation capacity and coordination**: Local implementation capacity was insufficient, with overlapping responsibilities between central and local authorities complicating coordination (World Bank, 2012). Sri Lanka's administrative system lacks the institutional quality to support such complex and large-scale urban planning projects effectively.

4.1.6. Lessons-learnt from the strategies of waste

These five case studies show that growth pole strategies can fail if not carefully designed to suit local conditions and national or global economic contexts. Although the reasons for failure differ across cases, several common themes emerge:

1. **Locational choice and lack of clear economic potential:** A central challenge in growth pole strategies is selecting the right location. Growth poles naturally arise where firms and people benefit from agglomeration economies. However, many growth pole initiatives are designed to promote growth in already lagging areas that lack the preconditions for economic concentration. The cases presented —whether integrated zones in Indonesia, IT parks in Jordan, or a new metropolitan-logistics hub in Sri Lanka— aimed to boost development in disadvantaged regions, often without solid economic foundations. For instance, Sri Lanka's plan to turn Hambantota into a metropolis lacked a clear underlying economic potential, making the plan megalomaniac and the goals unrealistic. This mismatch between ambitious objectives and on-the-ground realities often led to costly, complex projects with significant upfront investments in infrastructure, many of which turned into "white elephants." Additionally, the lack of clear criteria and sound analysis for selecting growth pole locations reduced private sector interest, further diminishing the likelihood of success.
2. **One-dimensional choice of instruments:** Growth pole policies are meant to involve a multidimensional set of interventions. However, many strategies of waste focused narrowly on physical infrastructure, which, while visible and popular, absorbed much of the available

funding. In Indonesia and Peru, the emphasis was on developing SEZs, with limited attention to improving broader infrastructure or the overall business environment. Conversely, in Romania, multiple projects were proposed, but they were uncoordinated and lacked a clear strategic goal. This narrow focus or lack of coordination reduced the effectiveness of the interventions.

3. **Challenges in sequencing interventions:** Growth pole strategies often involve complex, interconnected interventions that require careful sequencing to succeed. In all five cases, there was a failure to phase interventions properly. For instance, Sri Lanka's Hambantota project faced a "chicken and egg" problem: without a developed industrial park, firms were reluctant to invest, and without investment, the industrial park could not develop.
4. **Financing risks:** Large upfront investments were required to develop growth poles in disadvantaged areas, where basic infrastructure and industrial structures were often missing. Significant financial risks have ensued. In Indonesia and Romania, insufficient funding limited the development of integrated zones and secondary cities. In Peru and Sri Lanka, capital-intensive projects faced sustainability challenges due to limited revenue generation. These cases highlight the importance of securing private sector interest and ensuring adequate funding over the long term.
5. **Low implementation capacity and institutional weaknesses:** Effective implementation of growth pole strategies requires strong institutional capacity. Across the five cases, institutions lacked the capacity to design, implement, monitor, and finance the ambitious strategies. Institutional deficiencies led to unbalanced approaches, weak integration with broader development plans, and prioritisation of short-term political interests over long-term economic and social goals. The complexity of these projects, coupled with the involvement of multiple layers of government, exacerbated coordination problems, as seen in Indonesia, Romania, and Sri Lanka.

6. **Political meddling:** Weak institutions facilitate political interference, with decision-makers using development projects for personal or political gain. Hambantota in Sri Lanka is a prime example, where the president's ambition to transform his birthplace seemingly influenced its selection as a growth pole, despite its limited economic potential. Political meddling also contributed to the lack of clear criteria for selecting interventions in nearly all cases studied.

4.2. Strategies of gain

Not all growth pole interventions have resulted in failure. In fact, many growth pole policies implemented around the world have successfully generated new businesses, attracted inward investment, improved employment prospects, increased productivity, and boosted economic growth. These policies have also enhanced the livelihoods of people in the affected regions and surrounding areas. In this section, we examine five growth pole strategies that are considered relatively successful in achieving their intended goals, contributing to the economic dynamism of both the regions they are based in and neighbouring areas.

4.2.1. Brazil – Creating a fruits cluster in Petrolina-Juazeiro under government leadership

Background

Petrolina-Juazeiro is an area covering 53,000 km² in the São Francisco River Valley in northeastern Brazil, with a population of roughly half a million people (Damiani, 2007). Up until the 1960s, the region had socio-economic characteristics similar to other parts of the northeast: subsistence agriculture, cotton farming, cattle raising, and widespread poverty (Gálvez-Nogales, 2010; Locke, 2001). However, over time, the area transformed into Brazil's most important producer of high-quality fruits, thanks to government-led efforts to develop a fruit cluster. The Petrolina-Juazeiro cluster is one of the few examples of a successful government-driven cluster development (Gálvez-Nogales, 2010).

Objectives and interventions

The cluster's development efforts began in the 1960s when the federal government initiated a series of actions to activate the region's economic potential. The area's year-round sunshine and suitable soil held comparative advantages for producing high-value crops for export (Selwyn, 2008). CODEVASF, a government agency responsible for the development of the São Francisco River Basin, led the cluster foundation efforts (Damiani, 2007).

The initial interventions focused on building the necessary infrastructure, particularly irrigation systems and transportation networks, to enable farmers to increase productivity (Damiani, 2007). Large-scale irrigation projects were implemented, and smallholder farmers were provided with irrigated plots to generate a critical mass of small and medium-sized producers (Gálvez-Nogales, 2010).

At first, local farmers continued to grow traditional food crops. However, starting in the early 1980s, CODEVASF began attracting private agricultural firms from other parts of Brazil to the region. The goal was to have these firms collaborate with smallholder farmers, helping them adopt new production methods and shift to higher-value crops (Damiani, 2007).

To attract these firms, CODEVASF offered subsidised land and irrigation infrastructure through a competitive bidding process. Companies had to submit project proposals, which were evaluated based on their potential to upgrade production, generate employment, and boost exports (Damiani, 2007). This ensured that only projects with realistic potential to contribute to the region's development received government support.

In addition to infrastructure, CODEVASF and other government agencies implemented policies to support the cluster's growth. An association of exporters, Valexport, was established to market the cluster's products, upgrade production techniques, and introduce quality control measures (Damiani, 2007; Locke, 2001). Smallholder farmers received training and extension services, as well as access to subsidised credit from public banks (Damiani, 2007; Selwyn, 2008). Additionally, government research

agencies conducted agricultural studies to assess soil quality and determine which crops could be grown successfully in the region. This research was fundamental in demonstrating the feasibility of higher-value crops early on (Selwyn, 2008).

Results

The Petrolina-Juazeiro area has been radically transformed. By 2006, CODEVASF had implemented six large-scale irrigation projects covering almost 46,000 hectares, with private firms adding another 77,000 hectares (Damiani, 2007). A 2004 World Bank assessment of four irrigation schemes estimated a net present value of US$57 million and an average economic rate of return of 22.8% (World Bank, 2004).

The cluster has had a notable impact on employment and production. By 2005, approximately 2,200 smallholder farmers, 200 agricultural firms, and around 40,000 waged workers were active in the cluster. The region accounted for 40% of Brazil's total fruit exports, and in some sectors, such as grapes, over 90% of the country's exports came from this cluster (Damiani, 2007; Locke, 2001).

Lessons-learnt

The Petrolina-Juazeiro cluster's success offers several valuable insights:

- **Strong institutional capacity**: CODEVASF and other government agencies have been key for the cluster's development. Their strong financial and human resources allowed for consistent support over time, shaping the cluster's success (Gálvez-Nogales, 2010; Selwyn, 2008).
- **Public-private collaboration**: While the government drove the cluster's development, collaboration with the private sector was essential. Valexport, the exporters' association, led the way in marketing, upgrading production, and diversifying crops (Gálvez-Nogales, 2010; Locke, 2001). Private firms also facilitated the transfer of knowledge to smallholder farmers, helping them adopt more advanced farming techniques (De Marchi et al., 2018).

- **Gradual upgrading of production**: Instead of pushing for an immediate shift to high-value crops, CODEVASF pursued a deliberate strategy of gradual upgrading, allowing smallholder farmers to adapt slowly and continue generating income while upgrading to more capital-intensive crops over time (Damiani, 2007).
- **Emotional approach**: The success of the cluster was due to a comprehensive approach that included infrastructure investments, technical and financial support for smallholder farmers, private sector involvement, and agricultural research. This integrated strategy was essential for the cluster's development (Damiani, 2007).
- **Quality control for subsidies**: Subsidies for private firms were allocated based on the merit of project proposals. This selective approach ensured that only promising projects received government support, maximising the impact of public investment.

4.2.2. Costa Rica – Developing an electronics cluster based on an anchor investor

Background

Costa Rica is among the most prosperous Latin American countries, known for its stable democratic government, progressive economic policies, and environmentally conscious development approach. The country has long pursued an outward-oriented economic strategy, with trade openness and foreign direct investment (FDI) as key components (Oviedo et al., 2015). It was within this context that, in 1996, the American tech giant Intel made a landmark investment in Costa Rica, establishing a US$300 million semiconductor assembly and testing plant. This was the largest FDI in the country's history, which at the time had a population of just 3.5 million (World Bank, 2006). While much attention has been given to how Costa Rica managed to attract Intel (Spar, 1998), the broader set of integrated policy actions that followed the investment represents one of the most successful growth pole strategies based on an anchor investor.

Objectives and interventions

The Costa Rican government saw Intel's investment as a unique opportunity to build a high-tech cluster around the multinational company, driving economic and social development (World Bank, 2006). The country's well-educated workforce and political stability were key comparative advantages, but the government also implemented a comprehensive set of policies to further enhance the business environment, develop a local supplier network, and attract additional investors.

While Costa Rica already had a favourable investment environment —which helped attract Intel— further measures were taken to strengthen it. These included streamlining the construction permit process, upgrading electricity infrastructure, speeding up customs clearance at the airport, and revising the existing free trade zone law to make it more attractive for high-tech companies. To align the workforce's skills with the needs of the tech industry, universities and technical schools adapted their curricula, introducing new courses and certifications. The National Centre for High Technology was established to link academic research with industries in IT, materials science, nanotechnology, and advanced manufacturing.

A key focus was fostering linkages between Intel and local companies. In 2000, a supplier development programme was launched through collaboration between government agencies, the chamber of industry, and private companies. Additionally, Costa Rica undertook a promotional campaign to attract other investors, leveraging Intel's presence to boost interest in the tech sector and related industries, such as medical equipment and back-office services (World Bank, 2006).

Results

Eight years after Intel's initial investment, its impact on Costa Rica's economy was substantial, both directly and indirectly (World Bank, 2006). Intel employed 2,900 workers, with an additional 2,000 indirect jobs created. By 2004, Intel's total investment had reached US$770 million, and the company's presence had attracted further FDI from other multinational companies. Although the local content

of Intel's exports remained relatively low, the value of products and services it purchased from local suppliers was estimated at US$50 to 150 million, primarily in services.

Intel's arrival gave a major boost to Costa Rica's emerging electronics cluster. By 2005, the cluster included 55 companies —42 of which were foreign— and employed around 12,000 workers. Thirteen local suppliers emerged, mainly providing metal works, plastic injection moulding, and engineering services (World Bank, 2006).

The long-term effects of Intel's investment are still visible today. By 2012, Costa Rica had around 39 companies exclusively operating in the electronics sector (Ciravegna, 2012; Frederick & Gereffi, 2013). Moreover, other high-tech sectors, such as medical devices, automotive components, and business services, grew significantly due to similar promotional efforts and improvements in the business environment following Intel's arrival (Oviedo et al., 2015).

Despite these positive outcomes, some studies (Ciravegna, 2012) have pointed out that linkages between foreign and local companies, while present, are less strong than those in more mature clusters. Additionally, in 2014, Intel moved its assembly and testing plant to Vietnam, driven by cost pressures. However, Intel also opened and R&D Centre in Costa Rica the same year (Arias, 2015; The Economist, 2014).

Lessons-learnt

The Costa Rican experience offers several important lessons for successful growth pole strategies:

- **Leveraging conducive initial conditions**: Costa Rica started from a position of strength, with an already favourable business environment, a relatively skilled labour force, and long-standing political stability. These factors made the country attractive for FDI (Spar, 1998). Intel's investment provided a crucial anchor around which a high-tech cluster could develop.

- **Clear strategic focus**: Costa Rica followed a targeted approach, identifying sectors where the country had the most potential based on a careful analysis of its strengths and weaknesses (Rodríguez-Clare, 2001; Spar, 1998). This allowed for concentrated efforts in sectors like electronics, preventing the development of "white elephants" or underutilised infrastructure.
- **High-Level political support**: The growth pole strategy enjoyed support from the highest levels of government. For example, a public-private sector committee, led by the president, was established to address investors' challenges and find solutions (World Bank, 2006).
- **Comprehensive approach**: Although Costa Rica did not follow a single, integrated national development plan like some Asian countries, its various interventions —ranging from infrastructure improvements to supplier development programs— created a comprehensive policy framework. This included targeted investments in specific areas while also focusing on broader improvements in education and the business environment (Rodríguez-Clare, 2001).

4.2.3. Madagascar – Leveraging the strategic potential of three regions through an integrated growth poles project

Background

Madagascar has one of the highest poverty rates globally, with 80% of its population living in extreme poverty by 2023 (World Bank, 2024). Although the country experienced steady economic growth in the early 2000s, this did not translate into improved living conditions, and the benefits of growth were not shared equally. Despite having significant potential in sectors such as tourism (thanks to its unique flora and fauna), mining, agribusiness, and light manufacturing, Madagascar has struggled to attract private investment. High costs, poor infrastructure, unreliable electricity, an unfavourable business environment, and political instability have all deterred investors from capitalising on the country's opportunities.

Objectives and interventions

To address these challenges, Madagascar launched the 'Integrated Growth Poles Project' (2005-2014) with support from the World Bank. The project's overarching goal was to create a business environment conducive to economic growth in three selected regional poles (World Bank, 2015). The growth poles were chosen based on their strategic potential: a) Antananarivo-Antsirabe, the capital city region and main export processing hub; b) Taolagnaro (Fort Dauphin) in the southeast, with a focus on tourism, agribusiness, and mining; and c) Nosy Be, a small island in the north, known for its tourism and agribusiness potential.

The idea was to capitalise on each region's specific strengths: tourism and agribusiness in Taolagnaro and Nosy Be, and export processing zones, light manufacturing, an ICT park, and an agro-techno pole in the Antananarivo-Antsirabe region (World Bank 2015). Taolagnaro's interventions were designed to complement Rio Tinto's parallel mining investment (Di Boscio, 2010).

A range of integrated soft and hard infrastructure interventions was implemented at the micro, meso, and macro levels to attract private sector investment (World Bank, 2015). The first component aimed to improve the country's overall business environment, while the other components targeted specific industry development in each growth pole. These included technical assistance for export processing zones, infrastructure investments in transport, communications, and energy, as well as policy reforms like value chain support and urban and tourism master planning.

Results

Despite political turmoil in 2009, which temporarily stalled the project, the overall outcomes were positive. While the Antananarivo-Antsirabe component was dropped midway due to a lack of private sector interest, the other two growth poles —Taolagnaro and Nosy Be— saw considerable progress. The number of formal firms in these regions increased significantly between 2005 and 2014, largely thanks to the project's interventions. Tax revenues in Taolagnaro grew at an average annual rate of

85%, and substantial job creation occurred in the mining sector in Taolagnaro and the tourism sector in Nosy Be. (World Bank, 2015)

The project also improved access to basic infrastructure for the local population. In Nosy Be, access to drinking water increased from 13% to 74%, while in Taolagnaro it rose from 50% to 95%. However, the growth pole project in the capital area, which included an ICT park and an agro-techno pole, did not succeed due to fading investor interest, exacerbated by political instability. (World Bank, 2015)

Following the initial success, Madagascar has continued to build on the Integrated Growth Poles Project. Recent studies indicate that the second phase of the project has further enhanced economic activities, particularly in the agribusiness and tourism sectors, contributing to poverty reduction in the targeted regions. However, challenges remain in ensuring the sustainability of these gains amid political and economic uncertainties (African Development Bank, 2020).

Lessons-learnt

Several key lessons emerged from the Madagascar Growth Poles Project (World Bank, 2015):

- **Multidimensional interventions**: The project's success was partly due to matching supply-side measures (like attracting firms) with demand-side measures (such as providing technical and vocational training for workers). This ensured that the available workforce had the skills to fill the newly created jobs. Environmental sustainability has also been integrated into the growth pole strategy, recognising Madagascar's unique biodiversity. Efforts have been made to promote eco-tourism and sustainable mining practices to preserve natural resources while fostering economic growth (Huff & Orengo, 2020). This approach aligns with global trends emphasising sustainable development within growth pole policies.
- **Leveraging economic potential**: Private sector investment, particularly through Rio Tinto mining company, helped share the financial burden for critical infrastructure projects such as water and electricity systems, as well as training programmes. This reduced the financial risk

of the policy and supported successful implementation. However, reliance on a single large investor also made the regions vulnerable, as any changes in the investor's plans could jeopardise the project's sustainability.

- **Local implementation capacity**: Despite political instability and limited central government support during periods of unrest, the success of the two regional growth poles was largely due to well-established local steering committees, which ensured the projects stayed on track.
- **Careful sequencing of project components**: Proper sequencing of infrastructure and policy reforms was critical for the growth pole strategies. Addressing infrastructure gaps and implementing necessary policy reforms in parallel ensured that conditions for private investment were ready as soon as the infrastructure was completed.

- **Visible successes and public support**: Hard infrastructure projects, like roads and utilities, provided tangible results that generated public and political support for the project. These "quick wins" helped build momentum for the project, although a focus on visible infrastructure can sometimes overshadow the need for softer, long-term interventions. Madagascar successfully avoided letting infrastructure become the sole driver of the project.

4.2.4. Malaysia – Transforming the country into a knowledge economy through the Multimedia Super Corridor

Background

Like many other East Asian countries, Malaysia experienced significant success of recent in building a dynamic manufacturing sector. From 1970 to 2000, the country's economy grew by 6-7% annually, driven by cost advantages rooted in low-cost labour and abundant natural resources (Yusof & Bhattasali, 2008). However, as Malaysia's income levels rose, so did wages, leading the country to face the "middle-income trap." (Flaaen, Ghani & Mishra, 2013). It needed to shift from an economy reliant on cost advantages to a more knowledge-based economy capable of attracting sectors with greater value-added activities.

Objectives and interventions

The Multimedia Super Corridor (MSC) was launched in 1996 by the Malaysian government with the goal of transforming the country into a knowledge-based society and achieving high-income status by 2020 (Ramasamy et al., 2004). Building on Malaysia's relatively well-educated population, the MSC initiative focused on creating an attractive environment for multimedia and ICT companies, promoting deformation of new clusters of high-tech and service-oriented firms.

In its initial phase, the MSC focused on a 15x50 km corridor stretching from the Petronas Towers in Kuala Lumpur to the international airport in the south. During its second phase, the MSC expanded to other hubs in Malaysia, including Bayan Lepas in Penang and the Kulim Hi-Tech Park in Kedah (Multimedia Development Corporation, 2007; Yusof & Bhattasali, 2008).

A comprehensive set of interventions was implemented to support the MSC's objectives. The most notable and capital-intensive projects were the construction of two purpose-built cities: Putrajaya, the new administrative capital, and Cyberjaya, designed to provide the necessary infrastructure for high-tech companies (Injau, 2011). Additional interventions included regulatory reforms —such as the introduction of a new cyber law— and the establishment of fiscal incentives to improve the business environment (Injau, 2011). To qualify for MSC benefits, companies had to be "ICT and ICT-facilitated businesses that develop or use multimedia technologies to enhance their products and services."[13]

Results

While some argue that the MSC has seen limited success in attracting higher value-added operations (Hassan & Abu Talib, 2015; Yigitcanlar & Sarimin, 2015), the initiative has undeniably excelled in attracting companies and generating local employment. The number of companies in the MSC has grown steadily since its inception. According to the 2015 MSC Annual Report (Malaysia Digital Economy Corporation, 2015), a total of 3,881 companies had been granted MSC status, meaning they

[13] http://www.mscmalaysia.my/what_is_msc_malaysia_status (accessed June 2018)

operated within the MSC area and qualified for its benefits. Nearly 160,000 workers were employed by these companies.

MSC companies fall into four clusters: the InfoTech cluster, which represented 67% of all companies in 2015; the Global Business Services cluster (14%); the Creative Content cluster (13%); and the Higher Learning & Incubators cluster (4%). About 75% of MSC companies are locally owned, while the remaining 25% are either foreign-owned or joint ventures.

Lessons-learnt

Several studies have examined the MSC initiative, highlighting the factors contributing to its success:

- **Alignment with other policies**: The MSC was not launched in isolation but was integrated into Malaysia's broader national development agenda, aligning with various development plans (Yigitcanlar & Sarimin, 2015). This ensured policy complementarity and cohesion.

- **Integrated approach**: The MSC's design, coupled with its integration into national development plans, allowed for a holistic set of interventions. Although infrastructure development was a major focus, the MSC also made progress in other areas essential to developing a technopole, such as institutional support, business services, and improvements in the overall economic environment (Ramasamy et al., 2004).

- **High-level political support**: The MSC initiative was championed by then Prime Minister Mahathir Mohamad, whose personal involvement and commitment were critical to its implementation (Yusof & Bhattasali, 2008). His leadership ensured that the necessary resources and political will were in place to drive the project forward.

- **Institutional capacity**: The MDC, a government-owned entity, was established to oversee the MSC's implementation. The MDC's continuity and capacity have been credited with ensuring the project's success (Yigitcanlar & Sarimin, 2015).

- **Strong starting point**: Malaysia's business climate was already favourable before the MSC's launch (Goswami et al., 2012). The corridor's proximity to Kuala Lumpur also meant that companies in the MSC had access to existing legal, financial, and corporate services, which helped attract firms (Ramasamy et al., 2004; Yigitcanlar & Sarimin, 2015).

- **Industries with strong multiplier effects**: One challenge for growth pole policies is ensuring that the industries they target create strong inter- and intra-industry linkages. Malaysia's focus on services through the MSC created a strong multiplier effect, benefiting other sectors (Goswami et al., 2012).

- **Skilled labour shortages**: Despite its overall success in attracting investments and generating employment, the MSC has struggled to attract higher value-added industries. Many studies (Goswami et al., 2012; Hassan & Abu Talib, 2015; Kiflie & Lo, 2024) have pointed to the lack of sufficiently skilled labour as a barrier to moving up the technological ladder. This underscores the broader challenge faced by middle-income countries in upgrading to more knowledge-intensive industries.

4.2.5. Vietnam – Unifying the country through a central key economic region

Background

Vietnam's development over the past 30 years is considered one of the major success stories, both in terms of achieving economic growth as well as in terms of creating shared prosperity among its population (World Bank, 2016c). The country has grown over 6.5% annually during 1991–2015, while the poverty rate was reduced from 49% in 1993 to just 3% in 2012 ($1.90 per day) (Asian Development Bank, 2016). Following in the footsteps of its northern neighbour, China, the Doi Moi policy was introduced in 1987 with the aim of gradually opening up the country and transforming it from a centrally planned system to a socialist market economy (Breul & Pruss, 2022). Growth pole policies have played and continue to play an important role in in this endeavor (Tran et al., 2019).

Objectives and interventions

As many other Asian countries, the Vietnamese government employs a combination of long-term strategic plans together with a set of periodically updated five-year plans as strategic planning tools for socio-economic development. A key element of the economic plans are the implementation of growth pole policies in specific regions with the objective: "to ensure higher than average growth rates, make major contributions to the growth of the entire country, and motivate and help other regions, especially those laden with difficulties, for common development" (Vietnam National Congress, 2001).

Three key economic regions (KERs) have been identified and promoted: a) the Southern key economic region around Ho Chi Minh City (HCMC); b) the Northern key economic region around Hanoi; and c) the Central key economic region (CKER) around Da Nang.

The Southern and Northern regions have traditionally been the country's main centres of economic and political power. In 2004, the HCMC region contributed 36% of Vietnam's GDP, while Hanoi contributed 21%. The CKER, centred around Da Nang, contributed only 5% of GDP in 2004.[14] Despite its smaller economic footprint, the CKER was strategically chosen to play a crucial role in unifying the country, given its location near the former demilitarised zone that once divided North and South Vietnam (Tran et al., 2019).

The CKER includes Thua Thien Hue, Quang Nam, Quang Ngai, Binh Dinh, and Da Nang City. The region was selected due to its significant economic potential (JICA, 2010). It serves as a gateway to the sea for parts of the Greater Mekong Sub-region and forms part of the east-west economic corridor between Vietnam and Thailand via Laos, making it a potential logistics and industrial hub. Additionally, the area boasts strong tourism potential due to its rich natural and cultural heritage. It also has a large pool of relatively low-cost, well-educated labour, making it attractive for a variety of investments.

[14] Numbers based on Prime Minister DECISION No. 145/2004/QD-TTg, Prime Minister DECISION No. 146/2004/QD-TTg, Prime Minister DECISION No. 148/2004/QD-TTg. Available under http://vietnamlawmagazine.vn/decision-no-148-2004-qd-ttg-1894.html (accessed September 2024).

Several socio-economic development plans for the CKER have been proposed since the 1990s, including the 1995 Socio-Economic Development Plan for the Focal Economic Zone in the Central Region of Vietnam and the 2006 Master Plan for North and South Central Coastal Regions. In 2010, a comprehensive review by JICA (Japan International Cooperation Agency) resulted in "The Study on the Integrated Development Strategy for Da Nang City and Its Neighboring Area," which informed subsequent five-year plans (JICA, 2010).

The plans proposed numerous interventions to stimulate growth in the CKER, including establishing industrial zones, developing new urban areas, upgrading Da Nang airport, building a mass transport system, and strengthening regional transport links. Several international organisations supported these efforts through various infrastructure projects, including the World Bank's Da Nang Priority Infrastructure Investment Project[15] and the Da Nang Sustainable City Development Project,[16] as well as the Green Cities Project funded by the Asian Development Bank. In addition to infrastructure development, reforms were implemented to improve the regional business environment, and promotional efforts, such as Da Nang opening a representative office in Japan, were undertaken. More recent plans have focused on attracting high-tech, environmental, tourism, education, and healthcare investments (JICA, 2016).

Results

While some argue that Da Nang and the CKER have not fully met all expectations, the region has seen significant progress over the past decades. From 1997 to 2014, regional GDP grew more than fivefold[17] and Da Nang attracted over 350 foreign direct investment (FDI) projects, totalling nearly US$3.5 billion (JICA, 2016). The region's economy has shifted from agriculture to a more diversified structure, with industry and construction accounting for 36% of GDP, services for over 60%, and agriculture for just

[15] http://documents.worldbank.org/curated/en/845281468329997432/Vietnam-Da-Nang-Priority-Infrastructure-Investment-Project (accessed September 2024).
[16] https://projects.worldbank.org/en/projects-operations/project-detail/P123384 (accessed September 2024).
[17] At constant 2010 prices.

2% by 2014 (JICA, 2016). Social development has also improved, with Da Nang's poverty rate close to 0% (JICA, 2016).

Lessons-learnt

Although there is no comprehensive review of Vietnam's growth pole policy, several factors likely contributed to the relative success of the CKER:

- **Long-term commitment from the central government**: The CKER was designated over 20 years ago, and despite setbacks, the plan was continuously refined and developed. This long-term commitment has been essential, as complex projects like these require sustained effort over time.

- **Local government capacity**: The local government's capacity is widely regarded as a key factor in the successful implementation of projects (World Bank, 2013c). For example, the establishment of the Drainage and Wastewater Management Company as part of the World Bank Priority Infrastructure Project demonstrated the local government's commitment to building institutional capacity (World Bank, 2013a).

- **Sound fiscal position**: Da Nang enjoys relatively high fiscal autonomy compared to other provinces in Vietnam, allowing it to issue municipal bonds to fund development projects. The city has also consistently generated budget surpluses, which has supported its ability to sustain capital-intensive projects (JICA, 2016).

- **Collaboration with antinational donors and partners**: From the start, Da Nang has worked closely with a range of bilateral and multilateral donors. The city has also formed partnerships with cities around the world to share knowledge and expertise (JICA, 2016).

- **Conducive business environment**: Da Nang has consistently focused on creating a business-friendly environment, as evidenced by its top ranking in Vietnam's Provincial Competitiveness

Index since 2013 (USAID, 2016). This strong business environment has complemented infrastructure improvements, helping to attract both domestic and foreign investment.

4.2.6. Lessons-learnt from the strategies of gain

The five successful growth pole strategies highlighted in the previous section reveal common themes that serve as drivers of success. Unsurprisingly, many of these themes stand in contrast to the lessons from the failed strategies. The main success drivers include: (1) identifying and capitalising on clearly demonstrated economic potential; (2) implementing a comprehensive and integrated set of interventions; (3) ensuring strong institutional capacity; (4) securing high-level political support; and (5) maintaining policy commitment over a relatively long time horizon.

The cases of Costa Rica's Intel-anchored IT cluster, Madagascar's integrated growth poles, Malaysia's Multimedia Super Corridor (MSC), Vietnam's Da Nang key economic region, and Brazil's Petrolina-Juazeiro fruit cluster all demonstrate that unlocking existing or emerging comparative advantages is central to any effective growth pole strategy. These success stories relied on sound analysis to identify areas where they had the highest likelihood of success and focused on the clearly identified economic potential of their regions.

The nature of that economic potential varied across cases. In Costa Rica, the combination of a highly skilled workforce, a stable political environment, and Intel as an anchor investor enabled the country to tap into the potential of its IT sector. In contrast, Madagascar leveraged Rio Tinto's mining investment in Taolagnaro (Di Boscio, 2010) and built on the natural beauty of its beaches to boost tourism. Meanwhile, Brazil's fruit cluster in Petrolina-Juazeiro took advantage of on the region's geographic and climatic endowments to transform itself into a major exporter of high-quality fruits.

A common factor in all five cases was the use of a comprehensive and coordinated set of interventions. Successful growth pole strategies combined localised interventions, such as infrastructure development and SEZs, with broader institutional reforms at the national level. For example, Costa

Rica adapted school curricula to meet the needs of the electronics cluster, while Malaysia introduced new cyber laws to strengthen its MSC. These growth pole policies were not standalone initiatives but were integrated into wider national strategies. Malaysia's MSC was part of a broader effort to transform the country into a knowledge-based economy, just as Vietnam's Key Economic Regions strategy fit into the country's long-term development plans.

Institutional capacity was another crucial success factor. Effective coordination between central and local governments, or the establishment of dedicated implementation bodies, ensured the smooth execution of these policies. Malaysia's MDC was a fundamental catalyst for the success of the growth pole, while local steering committees helped keep Madagascar's growth pole project on track. In Brazil, the government agency CODEVASF oversaw the success of the Petrolina-Juazeiro fruit cluster. In all five cases, collaboration between public and private sectors, as well as engagement with civil society, was essential to achieving long-term success.

Additionally, high-level political support was a common theme across the successful growth poles. This political backing not only ensured effective implementation but also provided a steady stream of funding to drive the projects forward.

Finally, except for Madagascar's growth poles project—which is relatively recent—these strategies were not one-off initiatives. Instead, they were implemented and refined over an extended period. This long-term approach allowed for gradual improvements and adjustments. For example, Brazil's fruit cluster in Petrolina-Juazeiro slowly upgraded production methods over time, allowing for continuous learning rather than attempting unrealistic leaps up the value chain in a short time frame. Similarly, Malaysia's MSC, Vietnam's core economic regions, and Costa Rica's electronics cluster have evolved over two decades or more, adapting to changing circumstances and opportunities.

5. Putting it all together – success factors for growth pole policies

Taking the ten case studies discussed in the previous section illustrates both the potential and the risks of growth pole policies. On the one hand, when balanced and integrated policies are aligned with national development strategies, based on comparative advantages, supported by strong institutions, and bolstered by political backing and adequate funding, they can yield significant benefits. These benefits include new economic activity, job creation, and overall improvements in social welfare. On the other hand, there is a fine line between success and failure. The large-scale and complex nature of growth pole projects, particularly in economically, socially, or politically vulnerable environments, poses significant risks that can derail even well-designed interventions. While some growth poles have become major success stories, others have consumed vast resources with minimal returns, creating large opportunity costs.

Six main lessons can be drawn to differentiate strategies of gain from strategies of waste.

a) ***Identifying and capitalising on clear economic potential***

The main differentiator for success is the clear identification of economic potential in the chosen area. Successful growth pole strategies are based on a thorough and realistic diagnosis of local social and economic conditions, strengths, weaknesses, and stakeholder interests, especially those of the private sector. Sound socio-economic data and analysis underpin every successful growth pole, providing a vision and guiding implementation with coherence and purpose.

In Costa Rica's IT cluster, the combination of a highly skilled workforce, political stability, and a reliable anchor investor (Intel) created a strong foundation for the country's IT sector. Similarly, Madagascar capitalized on Rio Tinto's investment for its mining sector, while Brazil leveraged its geographical and climatic advantages to develop the successful Petrolina-Juazeiro fruit cluster. These examples show that clear, viable objectives based on sound analysis facilitate gradual progress and help maintain political and public support.

In some cases, success was bolstered by the presence of a pre-committed private investo**r**, such as Intel in Costa Rica or Rio Tinto in Madagascar. These pre-commitments confirmed the area's economic potential and helped reduce the financial burden on the public sector by sharing costs or generating revenue in parallel with public expenditures. Even in the absence of a pre-existing investor, successful growth poles were located in areas with identifiable economic potential and favourable starting points, such as proximity to large cities. For instance, Malaysia's Multimedia Super Corridor (MSC) is strategically located near Kuala Lumpur, allowing it to benefit from the city's existing infrastructure and labour pool.

In contrast, strategies of waste often struggled due to poor location choices, with remote or underdeveloped areas that lacked infrastructure or a conducive business environment. Indonesia's KAPET program, Sri Lanka's Hambantota project, and Peru's SEZs faced difficulties in attracting private sector interest due to these locational disadvantages. While promoting lagging regions is often a goal of growth pole policies, the choice of location must be carefully considered. Focusing on secondary towns with some pre-existing infrastructure, rather than remote or institutionally weak areas, can significantly increase the chances of success.

b) ***Comprehensive and well-sequenced interventions***

The second driver of success is the implementation of a comprehensive and well-sequenced set of interventions. This is notably in contrast with the early practice of growth pole policies in the 1960s and 1970s, which were often uni-dimensional focusing on the attraction of individual anchor investors and/ or infrastructure provision (Parr, 1999ab). While infrastructure development continues to be central to growth pole strategies, successful policies did not rely solely on this component. Instead, they complemented infrastructure investments with other measures, such as educational reforms (e.g., in Costa Rica and Malaysia) or improvements to the general business climate and supplier linkages. Moreover, successful growth pole strategies were integrated with broader national policies, rather than operating in isolation.

For example, Malaysia's MSC was part of a broader national shift towards a knowledge-based economy and Vietnam's key economic regions strategy was similarly aligned with national development plans. In contrast, strategies of waste were often one-dimensional, focusing on a single aspect, such as infrastructure, without addressing broader needs. This was either by design —as in the case of Peru's SEZs, which ignored broader development needs— or due to a lack of funding or capacity, as seen in Indonesia's KAPET programme.

Both successful and unsuccessful strategies highlight the importance of properly sequencing interventions and adapting them over time. Developing infrastructure without simultaneously improving the business environment, education system, and local competitiveness often results in wasted resources.

c) Targeted and balanced interventions

A crucial element of success in growth pole strategies is the combination of interventions aimed at attracting inward investment with those focused on improving local competitiveness. This includes human capital development, skills upgrading, and providing adequate infrastructure. A balanced approach —one that develops local capabilities alongside attracting external investments— greatly enhances the likelihood of success.

However, there is a common temptation to focus on more visible and politically popular projects, such as large infrastructure developments, which was a common theme in the early growth pole policies. This frequently results in suboptimal outcomes, particularly when the local economic fabric is weak or institutional conditions are lacking. Peru, Sri Lanka, and Jordan are clear examples of countries where a narrow focus on infrastructure failed to yield significant returns due to the absence of broader economic support measures.

d) Institutional capacity

Growth pole projects are inherently complex, involving a broad set of interventions and multiple stakeholders. This complexity requires strong institutional structures to manage and coordinate the process. The successful strategies of gain were characterised by robust institutions capable of steering these interventions. Strategies of waste, by contrast, often failed due to limited institutional capacity.

There are different aspects of institutional capacity that are essential for success. First is policy capacity, or the ability of governments to guide, oversee, and coordinate the growth pole strategy. This requires not only basic administrative skills but also more advanced leadership and management abilities from both national and local officials. Many of the strategies of waste were hindered by the absence of these capabilities. The lack of such skills can, to some extent, be mitigated by technical support from external organizations, both national and international. However, in the cases of Peru, Sri Lanka, Indonesia, and to a lesser extent Romania, there was little evidence of such external support being effectively provided.

Another crucial aspect of institutional capacity is the ability to build strong connections with stakeholders, particularly with the private sector. These connections are vital for tapping into local economic potential and attracting the inward investment needed for growth pole success. The lack of such engagement was a common weakness in the cases of Romania, Indonesia, Jordan, Peru, and Sri Lanka. Moreover, the role of social capital cannot be underestimated in the success of growth pole strategies. Strong networks and trust among local actors facilitate knowledge sharing and collective action, which are essential for regional development (Westlund et al., 2018). Policies that strengthen social cohesion can therefore amplify the impact of growth poles

Since many growth pole policies target specific regions within a country, institutional capacity at the sub-national level becomes particularly important. Central governments must ensure that local authorities have sufficient capacity and resources to implement the policy effectively. This requires a combination of operational effectiveness, adequate technical and administrative skills, and relatively

low levels of corruption. Unfortunately, in many developing countries, particularly those where growth pole strategies are aimed at reducing regional disparities, these conditions are often lacking.

Institutional capacity also involves the ability to coordinate and synchronise different stakeholders in the development process. This requires both horizontal and vertical coordination. Horizontal coordination entails aligning the views and actions of local stakeholders from different sectors, while also coordinating the development strategies of neighbouring areas. Vertical coordination involves synchronising the objectives of local, regional, and national governments to avoid conflicts and ensure smooth policy delivery. The success of Costa Rica's IT cluster, Malaysia's MSC, and Vietnam's Da Nang economic region demonstrates how effective policy coordination —both horizontal and vertical— can be a key driver of success.

e) Financing of growth pole projects

The financing of growth pole projects which often require significant public investment, particularly in infrastructure. Ensuring that adequate funding is available to cover the key components of the project is an essential step towards a growth pole's success. A pre-committed anchor investor can help ease this financial burden and ensure that the policy delivers tangible results quickly. In cases like Madagascar's integrated growth poles, sound risk management was critical in managing finances, especially in the face of rising social and political instability. This highlights the importance of having a well-thought-out financing and risk management plan from the outset.

f) **High-level political support**

High-level political support was a common feature in many of the strategies of gain. This support was crucial in pushing projects forward and ensuring that they were followed through, even during challenging times. For instance, the strong backing behind Malaysia's MSC ensured its continuity and success, even when obstacles arose. However, while political support is needed, it is also a double-edged sword. Over-reliance on the backing of a specific political leader or government can be risky.

While it can provide a project with the necessary momentum and funding in the early stages, it may also lead to the project's downfall if the political climate changes, as seen in several cases.

6. Conclusions

The objective of this paper has been to identify the advantages and challenges in the design and implementation of growth pole policies. To achieve this, the theoretical foundations of growth pole strategies have been explored and their recent application across various parts of the developing world examined. Ten detailed case studies were used to identify lessons, distinguishing between strategies that achieved their objectives and those that fell short of them.

The review has highlighted that growth pole policies, contrary to some claims, remain widely used and can be effective tools for development. Over the past few decades, these policies have been applied under different names across the globe and have become essential components of many national and local development strategies. A total of 36 growth pole policies in 32 countries were identified during the review.

Although the term *growth pole policy* can be somewhat elusive, common characteristics have emerged. First, the core of any growth pole strategy is the activation of pre-existing or nascent economic potential. Second, these policies aim to generate spill-over effects from the growth pole into surrounding areas. Third, although they often have a strong infrastructure focus, successful growth pole strategies require an interconnected set of interventions and coordination between a broad range of stakeholders and actors. Finally, growth pole policies follow a spatially targeted approach, with interventions aimed at specific locations.

The analysis of successful and less successful cases shows that while growth poles are not a cure-all for comprehensive development in emerging countries, they can oftentimes become highly effective instruments for boosting economic dynamism in cities and regions, and for improving the welfare of local populations when well-designed and implemented.

The key to success, as highlighted in the lessons-learnt, often revolves around a few critical factors, particularly the choice of location and the design of the policy. Growth pole strategies targeting peripheral or lagging regions, or areas with weak institutional capacity, face a higher likelihood of encountering serious challenges. Deficiencies in infrastructure, skill shortages, poor accessibility, and weak institutions and governance represent significant barriers that can limit the return on investment and undermine the objectives of the strategy, whether those objectives are to increase local economic dynamism, reduce regional disparities, or achieve both. Tailoring growth pole policies to the specific context of each region is paramount. Recent research underscores that one-size-fits-all approaches are less effective than strategies customised to local economic structures, cultural factors, and institutional capacities (Iammarino et al., 2019). This bespoke approach enhances the relevance and impact of interventions.

Growth pole strategies that place a heavy —or exclusive— emphasis on physical infrastructure are often less successful. While infrastructure is undoubtedly necessary, it is insufficient on its own to sustain economic dynamism. Moreover, the significant investment required for infrastructure projects frequently consumes the majority of available funds, resulting in high opportunity costs and leaving limited resources for alternative investments that could address deeper structural challenges. Insufficient funding, therefore, represents a critical barrier to the success of these interventions.

In addition, political interference frequently distorts or extends the objectives of growth pole policies beyond their feasible scope, particularly in areas with limited growth potential, further undermining their effectiveness. These implementation challenges echo the difficulties that hindered the effectiveness of growth pole strategies during the 1960s and 1970s, demonstrating that, despite the evolution of the concept, it remains vulnerable to similar pitfalls in practice.

On the other hand, comprehensive and balanced interventions —based on a sound diagnosis of each growth pole's potential and building on its comparative advantages— are far more likely to succeed. Growth poles with high levels of political support and sufficient funding stand a much better chance

of achieving their objectives. Location is also a crucial determinant of success: areas with more developed economic infrastructure and greater initial potential provide a more conducive environment for maximising the benefits of growth pole policies. Furthermore, integrating technology and innovation into growth pole strategies has become increasingly important in the digital age. Leveraging digital infrastructure and promoting innovation ecosystems can amplify the effects of growth poles, especially in developing countries (UNCTAD, 2021). Additionally, fostering regional innovation systems can significantly enhance the effectiveness of growth pole policies. By promoting collaboration between universities, research institutions, and industries, regions can stimulate innovation-driven economic growth (Grillitsch et al., 2019).

In conclusion, growth pole policies, when well-designed and implemented, can serve as important drivers for reducing poverty, promoting shared growth, and upgrading economies in many parts of the developing and emerging world. However, policymakers must carefully consider the conditions under which these policies are most likely to succeed. Leveraging clearly demonstrated economic potential —ideally coupled with pre-committed private investment— and executing a fully integrated, well-sequenced set of interventions that address both infrastructure needs and broader structural deficiencies is critical. Moreover, building local institutional capacity, ensuring adequate financing, and maintaining political support are a must for the long-term viability of growth pole policies.

For many developing countries, these preconditions are undoubtedly challenging to meet. However, this should not dissuade nations from pursuing growth pole policies. Instead, it should encourage them to carefully consider these factors during the design phase and address them within the scope of their capabilities. When these conditions are met, growth pole strategies have the potential to serve as powerful catalysts for economic transformation, revitalising cities and regions while enhancing opportunities and quality of life for people across the developing world.

References

Acemoglu, D., Aghion, P., & Zilibotti, F. (2006). Distance to frontier, selection and economic growth. *Journal of the European Economic Association, 4*(1), 37-74. doi:10.1162/jeea.2006.4.1.37

African Development Bank. (2020). *Madagascar Economic Outlook*. African Development Bank Group.

Akita, T., Kurniawan, P., & Miyata, S. (2011). Structural Changes and Regional Income Inequality in Indonesia: A Bidimensional Decomposition Analysis. *Asian Economic Journal, 25*(1), 55-77. doi:10.1111/j.1467-8381.2011.02053.x

Al-Jaghoub, S., & Westrup, C. (2003). Jordan and ICT- led development: towards a competition state? *Information Technology & People, 16*(1), 93-110. doi:10.1108/09593840310463032

Arias, L. (2015). Intel expands Costa Rica operation. *The Tico Times*. Available at: http://www.ticotimes.net/2015/11/16/intel-expands-costa-rica-operations (accessed September 2024)

Asian Development Bank. (2016). *Viet Nam, 2016 - 2020. Fostering more inclusive and environmentally sustainable growth*. Available at: https://www.adb.org/sites/default/files/institutional-document/199661/cps-vie-2016-2020.pdf (accessed September 2024)

Audretsch, D. B., & Feldman, M. P. (2004). Knowledge spillovers and the geography of innovation. In *Handbook of regional and urban economics* (Vol. 4, pp. 2713-2739). Elsevier.

Barca, F., McCann, P., & Rodríguez-Pose, A. (2012). The case for regional development intervention: place-based versus place-neutral approaches. *Journal of regional science*, *52*(1), 134-152.

Benedek, J. (2016). The Role of Urban Growth Poles in Regional Policy: The Romanian Case. *Procedia - Social and Behavioral Sciences, 223*, 285-290. doi:10.1016/j.sbspro.2016.05.368

Benedek, J., & Cristea, M. (2014). Growth pole development and metropolizaton in post-socialist Romania. *Studia Universitatis Babeş-Bolyai: Geographia, LIX*(2), 125-138.

Benedek, J., Varvari, Ş., & Litan, C. M. (2019). Urban growth pole policy and regional development: old wine in new bottles?. *Regional and Local Development in Times of Polarisation: Re-Thinking Spatial Policies in Europe*, 173-195.

Boschma, R. (2005). Proximity and innovation: a critical assessment. *Regional studies*, *39*(1), 61-74.

Breul, M., & Pruß, F. (2022). Applying evolutionary economic geography beyond case studies in the global north: Regional diversification in Vietnam. *Singapore Journal of Tropical Geography*, *43*(1), 26-42.

Cattaneo, A., Adukia, A., Brown, D. L., Christiaensen, L., Evans, D. K., Haakenstad, A., ... & Weiss, D. J. (2022). Economic and social development along the urban–rural continuum: New opportunities to inform policy. *World Development*, *157*, 105941.

Ciravegna, L. (2012). Linkages in the New ICT Clusters of Latin America: Evidence from Costa Rica. *Journal of Latin American Studies, 44*(3), 553-580. doi:10.1017/S0022216X12000417

Damiani, O. (2007). *Rural development from a territorial perspective. Case studies in Asia and Latin America*. Available at: https://publications.iadb.org/handle/11319/3794 (accessed September 2024)

De Marchi, V., Giuliani, E., & Rabellotti, R. (2018). Do global value chains offer developing countries learning and innovation opportunities?. *The European Journal of Development Research*, *30*, 389-407.

Department of National Planning. (2006). *Mahinda Chintana: Vision for a new Sri Lanka. A ten year horizon 2006 - 2016*: Department of National Planning, Ministry of Finance and Planing, Sri Lanka.

Di Boscio, N. (2010). *Mining enterprises and regional economic development : an exploratory analysis of the sustainable development model.* Ph.D. (London) thesis 2010 LSE.

Duranton, G., & Puga, D. (2004). Chapter 48 - Micro-foundations of urban agglomeration economies. In J. V. Henderson & J. F. Thisse (Eds.), *Handbook of Regional and Urban Economics* (Vol. 4, pp. 2063-2117). Burlington: Elsevier.

Ellis, P. D., & Roberts, M. (2016). *Leveraging urbanization in South Asia: managing spatial transformation for prosperity and livability*. Washington, D.C.: World Bank.

Ezcurra, R., & Rodríguez-Pose, A. (2014). Trade Openness and Spatial Inequality in Emerging Countries. *Spatial Economic Analysis, 9*(2), 162-182. doi:10.1080/17421772.2014.891155

Farole, T. (2011). *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experience*. Washington D.C.: The World Bank.

Flaaen, A., Ghani, S. E., & Mishra, S. (2013). How to avoid middle income traps? Evidence from Malaysia. *Evidence from Malaysia (April 1, 2013). World Bank Policy Research Working Paper*, (6427).

Frederick, S., & Gereffi, G. (2013). Costa Rica in the Electronics Global Value Chain. Opportunities for Upgrading. Available at: (PDF) Costa Rica in the Electronics Global Value Chain: Opportunities for Upgrading (researchgate.net) (accessed September 2024)

Fujita, M., Krugman, P., & Venables, A. J. (1999). *The spatial economy: cities, regions and international trade*. Cambridge Mass.: MIT Press.

Gelb, A., Tata, G., Ramachandran, V., & Rossignol, I. (2015). *When Agglomeration Theory Meets Development Reality: Preliminary Lessons from Twenty World Bank Private Sector Projects*. Available at: https://www.cgdev.org/publication/when-agglomeration-theory-meets-development-reality-preliminary-lessons-twenty-world (accessed September 2024)

Gilchrist, A. (2009). *The well-connected community: a networking approach to community development* (2nd ed. ed.). Bristol, UK: Policy Press University of Bristol.

Goswami, A. G., Mattoo, A., & Sáez, S. n. (2012). *Exporting services: a developing country perspective*. Washington, D.C.: Washington, D.C.: World Bank Publications.

Grillitsch, M., Asheim, B., & Trippl, M. (2018). Unrelated knowledge combinations: the unexplored potential for regional industrial path development. *Cambridge Journal of Regions, Economy and Society*, *11*(2), 257-274.

Gunawardhana, M., Ratanyake, R., Budg, T., & De Silva, C. (2012). *Hambantota Sri Lanka: Challenges in using a "new city" planning approach to regional growth in developing countries*. Available at: https://www.researchgate.net/publication/303946910_HAMBANTOTA_SRI_LANKA_CHALLENGES_IN_USING_A_'NEW_CITY'_PLANNING_APPROACH_TO_REGIONAL_GROWTH_IN_DEVELOPING_COUNTRIES (accessed September 2024)

Gálvez-Nogales, E. (2010). Agro-based clusters in developing countries: staying competitive in a globalized economy. *Agricultural Management, Marketing and Finance Occassional Paper*, 25, Rome: FAO.

Hassan, I.-E., & Abu Talib, N. (2015). State-led cluster development initiatives: a brief anecdote of multimedia super corridor. *The Journal of Management Development, 34*(5), 524-535.

Hidalgo, C. A., Balland, P. A., Boschma, R., Delgado, M., Feldman, M., Frenken, K., Glaeser, E., He, C., Kogler, D., Morrison, A., Neffke, F., Rigby, D., Stern, S., Zheng, S. & Zhu, S. (2018). The principle of relatedness. In *Unifying Themes in Complex Systems IX: Proceedings of the Ninth International Conference on Complex Systems 9* (pp. 451-457). Springer International Publishing.

Huff, A., & Orengo, Y. (2020). Resource warfare, pacification and the spectacle of 'green'development: Logics of violence in engineering extraction in southern Madagascar. *Political Geography*, *81*, 102195.

Iammarino, S., Rodríguez-Pose, A., & Storper, M. (2019). Regional inequality in Europe: evidence, theory and policy implications*. Journal of Economic Geography, 19*(2), 273–298.

Injau, H. B. (2011). *Evaluation of multimedia super corridor (MSC Malaysia) contribution to Malaysian economy* (Doctoral dissertation, MSc Thesis (unpublished), Beppu: Ritsumeikan Asia Pacific University).

Kiflie, M., & Lo, M. C. (2024). Impact of Knowledge Management Processes on Competitive Advantage: The Case of Multimedia Super Corridor (MSC) Companies in Malaysia. *International Journal of Economics & Management*, *18*(1).

Manuel, H. T., Benjamín, E. V. A., Liliana, S. R., Abelina, O. B. J. M., & Ricardo, M. M. J. (2023). Analysis in the Special Economic Zones as a Strategy to Promote Economic Growth in Peru. *Migration Letters*, *20*(S5), 1147-1159.

Neffke, F., Henning, M., & Boschma, R. (2011). How do regions diversify over time? Industry relatedness and the development of new growth paths in regions. *Economic geography*, *87*(3), 237-265.

Jacobs, J. (1970). *The economy of cities*. London: Cape.

JICA. (2010). *The Study on Integrated Development Strategy for Danang City and Its Neighboring Area in the Socialist Republic of Vietnam (DaCRISS) - Final Report*. Available at: https://openjicareport.jica.go.jp/pdf/12014940_01.pdf (accessed September 2024)

JICA. (2016). *Data collection survey on sustainable and integrated urban development in Da Nang*. Available at: http://open_jicareport.jica.go.jp/pdf/12260584.pdf (accessed September 2024)

Jones, S. & Gu, J. (2012). Vietnam's Regions and Key Economic Zones. Available at: http://www.vietnam-briefing.com/news/vietnams-regions-key-economic-zones.html/#more-3913 (accessed September 2024)

Jones, L., & Hameiri, S. (2020). Debunking the myth of 'debt-trap diplomacy': How recipient countries shape China's Belt and Road Initiative. Chatham House - The Royal Institute of International Affairs. Available at: https://www.chathamhouse.org/2020/08/debunking-myth-debt-trap-diplomacy (accessed September 2024)

Kardoosh, M. A. (2004). *Qualifying Industrial Zones and Sustainable Development in Jordan*. Jordan Centre for Public Policy Research and Dialogue. Available at: http://arabdevelopmentportal.com/publication/qualifying-industrial-zones-and-sustainable-development-jordan (accessed September 2024)

Krugman, P. (1991). Increasing Returns and Economic-Geography. *Journal of Political Economy, 99*(3), 483-499. doi:10.1086/261763

Lo, F., & Salih, K. (1978). *Growth pole strategy and regional development policy: Asian experience and alternative approaches*. New York: Pergamon Press.

Locke, R. M. (2001, September). Building trust. In *Annual Meetings of the American Political Science Association, Hilton Towers, San Francisco, California*.

Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics, 22*(1), 3-42. doi:10.1016/0304-3932(88)90168-7

Magableh, I. (2010). Obstacles of Success of Technology Parks: The Case of Jordan. *Proceedings of the 11th European Conference on Knowledge Management*, 546-553.

Malaysia Digital Economy Corporation. (2015). *MSC Malaysia Annual Industry Support 2015*. Available at: https://www.mdec.my/media-and-downloads#downloads (accessed June 2018)

Marshall, A. (1890). *Principles of economics*. London, New York: Macmillan and Co.

Mendis, P. (2012). The Sri Lankan Silk Road: The potential war between China and the United States. *Harvard International Review, 34*(2), 54-58.

Milanovic, B. (2005). Half a World: Regional Inequality in Five Great Federations. *Journal of the Asia Pacific Economy, 10*(4), 408-445. doi:10.1080/13547860500291562

Miyoshi, T. (1997). *Successes and failures associated with the growth pole strategies*. Manchester: University of Manchester.

Mofleh, S., Wanous, M., & Strachan, P. (2008). Developing countries and ICT initiatives: Lessons learnt from Jordan's experience. *The Electronic Journal of Information Systems in Developing Countries*, *34*(1), 1-17.

Multimedia Development Corporation (2007). MSC Malaysia. Contribution in the Agriculture Sector. Available at: https://www.slideshare.net/slideshow/msc-malaysia-contribution-in-the-agriculture-sector/8417993 (accessed September 2024)

National Physical Planning Department. (2010). *National Physical Planning Policy and Plan Sri Lanka - 2030*. Available at: http://www.nppd.gov.lk/index.php?lang=ta (accessed September 2024)

Neagu, M., Bădescu, G., Țarălungă, N., Vrabie, A., & Ionescu-Heroiu, M. (2013). *Strategic IDPs Assessment*. Available at: https://openknowledge.worldbank.org/handle/10986/24490 (accessed September 2024)

OECD. (2016). *OECD Territorial Reviews: Peru 2016*: Paris: OECD Publishing.

Oviedo, A. M., Sanchez, S. M., Lindert, K. A., & Lopez, J. H. (2015). *Costa Rica's Development. From Good to Better.* Available at: https://openknowledge.worldbank.org/bitstream/handle/10986/22023/K8319.pdf?sequence=4 (accessed September 2024)

Parr, J. (1999a). Growth- pole strategies in regional economic planning: A retrospective view. Part 1. Origins and advocacy. *Urban Studies, 36*(7), 1195-1215. doi:10.1080/0042098993187

Parr, J. (1999b). Growth- pole strategies in regional economic planning: A retrospective view. Part 2. Implementation and outcome. *Urban Studies, 36*(8), 1247-1268. doi:10.1080/0042098992971

Parr, J. (2015). Neglected Aspects of Regional Policy: A Retrospective View. *Environment and Planning C: Government and Policy, 33*(2), 376-392. doi:10.1068/c1371r

Perroux, F. (1950). Economic Space: Theory and Applications. *The Quarterly Journal of Economics, 64*(1), 89-104.

Perroux, F. (1955). Note sur la notion de" pôle de croissance". *Économie appliquée*, *8*(1), 307-320.

Pike, A., Rodríguez-Pose, A., & Tomaney, J. (2017). *Local and regional development* (Second edition. ed.). London: Routledge.

Polidano, C. (2000). Measuring Public Sector Capacity. *World Development, 28*(5), 805-822. doi:10.1016/S0305-750X(99)00158-8

PWC. (2008). *International good practice for the etsablishment of sustainable IT Parks*. Available at: International good practice for establishment of sustainable IT parks : review of experiences, including three country case studies - Vietnam, Russia, and Jordan (worldbank.org) (accessed September 2024)

Ramasamy, B., Chakrabarty, A., & Cheah, M. (2004). Malaysia's leap into the future: an evaluation of the multimedia super corridor. *Technovation, 24*(11), 871-883. doi:10.1016/S0166-4972(03)00049-X

Rauhut, D., & Humer, A. (2020). EU Cohesion Policy and spatial economic growth: trajectories in economic thought. *European Planning Studies*, *28*(11), 2116-2133.

Roberts, B. (2014). *Managing systems of secondary cities. Policy responses in international development.* Brussels: Cities Alliance/ UNOPS.

Rodríguez-Clare, A. (2001). Costa Rica's Development Strategy based on Human Capital and Technology: How it got there, the impact of Intel, and lessons for other countries. *Journal of Human Development, 2*(2), 311-324. doi:10.1080/14649880120067301

Rodríguez-Pose, A. (2013). Do institutions matter for regional development? *Regional Studies, 47*(7), 1034–1047.

Rodríguez-Pose, A., & Wilkie, C. (2019). Strategies of gain and strategies of waste: What determines the success of development intervention? *Progress in Planning*, *133*, 100423.

Romer, P. M. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy, 94*(5), 1002-1037. doi:10.1086/261420

Rothenberg, A. D., Bazzi, S. D., Nataraj, S., & Chari, A. V. (2017). When Regional Policies Fail: An Evaluation of Indonesia's Integrated Economic Development Zones. Available at: https://www.rand.org/pubs/working_papers/WR1183.html (accessed September 2024)

Rothenberg, A. D., & Temenggung, D. (2019). Place-based policies in Indonesia: A critical review. Available at: https://documents1.worldbank.org/curated/en/376361571412939496/pdf/Place-Based-Policies-in-Indonesia-A-Critical-Review.pdf (accessed September 2024)

Roy-Chaudhury, S. (2019). China, the belt and road initiative, and the Hambantota port project. *St Antony's International Review*, *15*(1), 153-164.

Sakalasooriya, N. (2021). Regional development disparities in Sri Lanka. *Open Journal of Social Sciences*, *9*(7), 62-91.

Sandu, A. (2024). The post-socialist cities from Central and Eastern Europe: Between spatial growth and demographic decline. *Urban Studies*, *61*(5), 821-837.

Selwyn, B. (2008). Institutions, Upgrading and Development: Evidence from North East Brazilian Export Horticulture. *Competition & Change, 12*(4), 377-396. doi:10.1179/102452908X357310

Shepard, W. (2016a). Sri Lanka And China's Hambantota Debacle May Now Be 'Too Big To Fail'. *Forbes*.

Shepard, W. (2016b). The Story Behind The World's Emptiest International Airport. *Forbes*.

Soenandar, E. (2005). Government Policy in Solving Uneven Regional Development betweenWest and East Indonesia: Case Study on KAPET. *Economic Journal of Hokkaido University, 34*, 171-192.

Spar, D. (1998). *Attracting High Technology Investment*. Available at: http://documents.worldbank.org/curated/en/949541468770676701/pdf/multi0page.pdf (accessed September 2024)

Tello, M. D., & Tavara, J. (2010). Productive development policies in Latin American countries: The case of Perú, 1990-2007. IDB Working Paper 39. Available at: https://dx.doi.org/10.2139/ssrn.1817261 (accessed September 2024)

Temenggung, T. (2013). Policies to Promote Development and Integration of Lagging Regions: The Indonesian Experience. In Farole & Thomas (Eds.), *The Internal Geography of Trade: Lagging Regions and Global Markets. Directions in Development*. Washington, D.C.: World Bank.

The Economist. (2014). Intel outside. Available at: http://www.economist.com/news/americas/21600985-chipmaker-shuts-factory-slicing-away-one-fifth-countrys-exports-intel-outside (accessed September 2024)

Tödtling, F. (2010). Endogenous approaches to local and regional development policy. In A. Pike, A. Rodríguez-Pose, & J. Tomaney (Eds.), *Handbook of local and regional development* (pp. 333-343). New York: Routledge.

Tran, T., Phi, T., Tran, M., & Hoang, V. (2019). Economic linkage in key economic zones: The case of Vietnam. *Management Science Letters*, *9*(3), 443-456.

United Nations. (2011). *Jordan Country Assessment*: New York: Author.

United Nations Conference on Trade and Development (UNCTAD). (2021). *Technology and Innovation Report 2021: Catching Technological Waves—Innovation with Equity*. Geneva: United Nations.

USAID. (2016). *THE VIET NAM PROVINCIAL COMPETITIVENESS INDEX 2016*. Available at: 2016_PCI_Report_final.pdf (pcivietnam.vn) (accessed September 2024)

Vazquez-Barquero, A. (2002). *Endogenous development: networking, innovation, institutions and cities*. London: Routledge.

Venables, A. J. (2005). Spatial disparities in developing countries: cities, regions, and international trade. *Journal of Economic Geography*, *5*(1), 3-21.

Vietnam National Congress (2001). Strategy for socio-economic development 2001-2010. Available at: Strategy for socio-economic development 2001-2010 (vietnam.gov.vn) (accessed September 2024)

Westlund, H., Larsson, J. P., & Olsson, A. R. (2017). Start-ups and local entrepreneurial social capital in the municipalities of Sweden. In *Entrepreneurship in a Regional Context* (pp. 36-56). Routledge.

World Bank. (2004). *Brazil Irrigated Agriculture in the Brazilian Semi-Arid Region: Social Impacts and Externalities* Washington, D.C.: Author.

World Bank. (2006). *The impact of Intel in Costa Rica*. Available at: http://documents.worldbank.org/curated/en/540381468032652317/pdf/374020CR0Impact0of0Intel01PUBLIC1.pdf (accessed September 2024)

World Bank. (2010). *Prospects for Growth Poles in Mozambique*. Available at: http://www.iese.ac.mz/lib/PPI/IESE-PPI/pastas/governacao/geral/legislativo_documentos_oficiais/FINALMozambique.pdf (accessed September 2024)

World Bank. (2012). *Turning Sri Lanka's Urban Vision into Policy and Action*. Available at:: https://openknowledge.worldbank.org/handle/10986/11929 (accessed September 2024)

World Bank. (2013a). *DA NANG PRIORITY INFRASTRUCTURE INVESTMENT PROJECT - IMPLEMENTATION COMPLETION AND RESULTS REPORT*. Washington, D.C.: Author.

World Bank. (2013b). *Growth Poles: The next phase*. Available at: https://openknowledge.worldbank.org/handle/10986/24488 (accessed September 2024)

World Bank. (2013c). *Project Appraisal Document - DA NANG SUSTAINABLE CITY DEVELOPMENT PROJECT*. Washington, D.C.: Author.

World Bank. (2015). *Madagascar Integrated Growth Poles Project - Implementation completion and results report*. Available at http://documents.worldbank.org/curated/en/780871468191351269/pdf/ICR3490-P083351-Box391499B-PUBLIC-disclosed-7-8-15.pdf (accessed September 2024)

World Bank. (2016a). Hashemite Kingdom of Jordan. Promoting Poverty Reduction and Shared Prosperity. Systematic Country Diagnostic. Washington, D.C.: Author.

World Bank. (2016b). *Republic of Peru Review of Special Economic Zones (SEZs)*. Washington, D.C.: Author.

World Bank. (2016c). *Vietnam Systematic Country Diagnostic*. Washington, D.C.: Author.

World Bank. (2022). Jordan: Services Value added (% of GDP) and Employment in Services (% of total employment). *The World Development Indicators.* Available at: https://databank.worldbank.org/source/world-development-indicators (accessed September 2024).

World Bank. (2023a). Peru: GDP per capita (constant 2015 US$) and Poverty headcount ratio at $3.65 a day (2017 PPP) (% of population). *The World Development Indicators.* Available at: https://databank.worldbank.org/source/world-development-indicators (accessed September 2024).

World Bank. (2023b). Sri Lanka: GDP per capita (constant 2015 US$) and Poverty headcount ratio at $3.65 a day (2017 PPP) (% of population). *The World Development Indicators.* Available at: https://databank.worldbank.org/source/world-development-indicators (accessed September 2024).

World Bank. (2024). The World Bank in Madagascar. Available at: https://www.worldbank.org/en/country/madagascar/overview#:~:text=However%2C%20its%20population%2C%20estimated%20at,%242.15%20per%20person%20per%20day (accessed September 2024)

Yigitcanlar, T., & Sarimin, M. (2015). Multimedia Super Corridor, Malaysia. *VINE, 45*(1), 126-147. doi:10.1108/VINE-06-2014-0041

Yusof, Z. A., & Bhattasali, D. (2008). *Economic Growth and Development in Malaysia: Policy Making and Leadership*. Available at: World Bank Document (accessed September 2024)

Appendix 1 – List of growth pole policies and policies including growth pole elements

Country	Policy	Description	Period	References
Angola	National Policy for the Promotion of the Balanced Development of the Territory	The National Policy for the Promotion of the Balanced Development of the Territory aims to create a network of growth poles to promote the diversification of the economy and a territorially balanced strategy A mix of different types of poles to be developed around food, agribusiness, energy, water, housing, and transport and logistics	2013 -2017	http://www.governo.gov.ao/download.aspx?id=1264&tipo=publicacao (accessed September 2024) https://www.urbanafrica.net/urban-voices/cities-as-growth-poles-the-case-of-angola/ (accessed September 2024)
Brazil	Campinas	Ciatec (Centro de Desenvolvimento Pólo Alta Tecnologia Campinas) was constituted by the municipal decree nº 6850 of 17 of December of 1991 like municipal company of mixed economy, and aims to consolidate the city of Campinas as one of the main technological poles in the country.	Since 1991	http://www.ciatec.org.br/site/ (June 2018)
	Fruits cluster in Petrolina-Juazeiro	Cluster development efforts led by government institution CODEVASF with the aim to develop an agricultural cluster	Since the 1960s	https://publications.iadb.org/handle/11319/3794 (accessed September 2024) http://www2.codevasf.gov.br/empresa (accessed June 2018)
Burkina Faso	Bagre Growth Pole Project	"The objective of the Bagre Growth Pole Project for Burkina Faso is to contribute to increased economic activity in the project area, resulting in an increase in private investment, employment generation and agricultural production." (Implementation Completion Report (ICR) Review, 2022, p. 1)	Since 2011	http://projects.worldbank.org/P119662/burkina-faso-bagre-growth-pole-project?lang=en (accessed September 2024)
Costa Rica	Creation of electronics cluster	Promotion of the development of an electronics cluster, leveraging the anchor investment of Intel	Since 1990s	http://documents.worldbank.org/curated/en/540381468032652317/The-impact-of-Intel-in-Costa-

				Rica-nine-years-after-the-decision-to-invest (accessed September 2024)
Czech Republic	Growth Pole Program Prague	"The Programme aims to boost economic growth in the region of Prague and contribute to achieving the Europe 2020 targets for smart, sustainable and inclusive growth. EU funding will be targeted on strengthening research, technological development and innovation, on sustainable urban mobility and energy savings in public buildings, and on promoting social inclusion and better quality of education." (OP Prague – Growth Pole, Project Description)	Since 2015	https://ec.europa.eu/regional_policy/in-your-country/programmes/2014-2020/cz/2014cz16m2op001_en (accessed September 2024)
Egypt	Alexandria City Development Strategy and Growth Pole Project	Alexandria Growth Pole Project (AGPP, 2006-2011) $100.00 m, World Bank Support, and $40.00 m donors and Government contribution To enable Alexandria to take advantage of its competitive endowments, better manage local assets, remove constraints to private sector-led growth, while ensuring the socio-economic integration of the poor	Planned for 2006 – 2011	https://documents.worldbank.org/en/publication/documents-reports/documentdetail/795571468247491987/egypt-alexandria-growth-pole-project (accessed September 2024) http://www.euromedina.org/bibliotheque_fichiers/Doc_CDSAlexandria.pdf (accessed June 2018)
Ethiopia, Ghana, Kenya, Malawi, Mali, Nigeria, Senegal, Tanzania	Millennium Cities Initiative in 11 cities across 8 African countries	"[…] MCI has worked largely in secondary cities near to the sites of our sister integrated rural development initiative, the Millennium Villages Project. MCI has strived to strengthen both backward and forward linkages – back to community-based village life and to fresh agricultural production, forward to advanced health care, secondary schools, universities, agro-production and to domestic, regional and international markets – and to set these largely provincial capitals on a course toward the kind of healthful, sustainable urban development that will enable residents to enjoy fulfilling lives near to their families and their homes. Our objective has been to help prepare the participating "Millennium Cities" not simply to meet the MDG targets – although this in itself can prove daunting in some settings – but to develop integrated, MDG-based development strategies that, when implemented, have the potential to be truly	2006 - 2015	http://mci.ei.columbia.edu/files/2015/06/%EF%BB%BFImproving-Lives-in-Sub-Saharan-Cities.pdf (accessed September 2024)

		transformational, to the point where whole communities can escape from extreme urban poverty and its crippling effects." (Millennium Cities Initiatives, 2015, p. 1)		
Ghana	Ghana Shared Growth and Development Agenda 2010 - 2013	"These initiatives will ultimately contribute to an improvement in infrastructure that will lead to the creation of new growth poles, enhancing employment and income-generation opportunities." Ghana Shared Growth and Development Agenda, 2010, p. 13)	2010 - 2013	https://www.greenpolicyplatform.org/sites/default/files/downloads/policy-database//GHANA%29%20Ghana%20Shared%20Growth%20and%20Development%20Agenda%20%28GSGDA%29%202010-2013%20Vol%20I.pdf (accessed September 2024)
Guatemala	Intermediate cities program	Aims to promote the development of new urban centres as regional growth poles		PA00WCJ4.pdf (usaid.gov) (accessed September 2024) Cuáles son las primeras ciudades intermedias del país y por qué pueden convertirse en polos de desarrollo (prensalibre.com) (accessed September 2024) http://www.guatemala.gob.gt/index.php/noticias/item/3376-enade-2016-a-debate-ciudades-intermedias-en-nueve-departamentos-de-guatemala (accessed June 2018)
India	Provision of Urban Amenities in Rural Areas (PURA)	Creation of rural growth poles: "Holistic and accelerated development of compact areas around a potential growth center in a Panchayat (or group of Panchayats) through Public Private Partnership (PPP) by providing livelihood opportunities and urban amenities to improve the quality of life in rural areas."	Since 2003	https://unece.org/fileadmin/DAM/ceci/documents/2012/ppp/ppp_days/Day1/Mayaram.pdf (accessed September 2024)
Indonesia	KAPET - Integrated Economic	Development of lagging Eastern provinces of Indonesia through an integrated approach	1993 - 2010	See for example Chapter 8 in https://openknowledge.worldbank.org/bitstream/handle/10986/13817/765490PUB0EPI00LIC00pub

	Development Zone Program			0date0408013.pdf?sequence=1&isAllowed=y (accessed September 2024)
	2005 National Development Plan	Indonesia's 2005 national development policy emphasizes growth poles (Roberts, 2014)	Since 2005	
Jordan	Reach Initiative	REACH initiative launched in 1999 with the aim of transforming Jordan into a regional hub and global exporter of IT products and services. Jordan's relatively well educated workforce and high urbanization rate were seen as a key ingredient to facilitate this development	Since 1999	https://kingabdullah.jo/en/sub-initiatives/reach-initiative (accessed June 2018)
Madagascar	Integrated Growth Poles Project	"The overall purpose of the proposed project is to help provide the adequate business environment to stimulate and lead economic growth in three selected regional poles." Implementation, completion and results report, p. vii)	2006 – 2012	http://documents.worldbank.org/curated/en/780871468191351269/Madagascar-Integrated-Growth-Poles-Project (accessed September 2024)
Malaysia	Malaysia Super Corridor (MSC)	Initiative launched in 1996 by the Malaysian government with the objective to support Malaysia's path to become a knowledge-based society and achieve high-income status by 2020. The MSC initiative targets a number of specific locations in Malaysia where it aims to create an attractive environment for multimedia and ICT companies and to develop new clusters of service and high-tech companies	Since 1996	https://www.mdec.my/ (accessed September 2024)
Mexico	Monterrey International City of Knowledge Initiative	Creation of a Technopole in the Mexican state of Nuevo Leon to accelerate the local and national economy.	Since 2004	https://www.iadb.org/en/news/building-city-knowledge (accessed September 2024)
Morocco	New Cities Program	Aims to create new cities in the vicinity of the major metropolitan areas in order to ease congestion in large cities, to reduce the deficit in social housing, the promotion of the local and regional economy, the strengthening of territorial and regional balance	Launched 2004	https://emam.revues.org/1333 (accessed September 2024) http://emam.revues.org/1316 (accessed September 2014)
	Casablanca Technopole		Since 2001	http://www.journaldunet.com/solutions/systemes-reseaux/dossier/20-technopoles-qui-font-face-a-

				la-silicon-valley/casablanca-maroc.shtml (accessed September 2024)
Niger	Designing a strategy to promote regional development poles in Niger	"To increase production and contribute to the structural development of these countries, the SRO-WA plans to bring institutional support, through this field project, to each of the countries to develop or strengthen its strategy for promoting growth poles in areas with opportunities to create value chains on promising sectors in agriculture, food processing, animal husbandry, tourism, industry, mining, etc."		https://archive.uneca.org/sites/default/files/uploaded-documents/SROs/WA/report_bagrepole_englishfinal_versionoct2016.pdf (accessed September 2024)
Peru	Special Economic Zone's Program	Zones were established with the explicit objective to function as regional "growth poles" and to stimulate the economic and social development of their respective regions	Since 1996	http://www.leyes.congreso.gob.pe/Documentos/Leyes/29704.pdf (accessed September 2024)
Romania	Urban Growth Poles policy	"support the economic, social, territorially balanced and sustainable development of the Romanian regions, according to their specific needs and resources, focusing on urban growth poles, improving the business environment and basic infrastructure, in order to make the Romanian regions, especially the ones lagging behind, more attractive places to live, visit, invest in and work." (Neagu et al., 2013, p. 6).	Since 2007	https://openknowledge.worldbank.org/handle/10986/24490 (accessed September 2024)
Rwanda	Secondary Cities Programme in the Second Economic Development and Poverty Reduction Strategy (EDPRS II) for 2013-2018	"Priority 4: Transform the economic geography of Rwanda by facilitating urbanisation and promoting secondary cities. Six Secondary Cities will be developed as poles of growth and centres of non-agricultural economic activities. This will require investment in specific hard and soft infrastructure and strategic economic projects that will trigger growth of these cities and enhance linkages to other towns and rural areas. Affordable housing will also be a key element of increased attractiveness of these cities. Kigali will continue to be developed as a regional hub." (Economic Development and Poverty Reduction Strategy 2013-18, p. 22)	2013 - 2018	https://www.minaloc.gov.rw/fileadmin/user_upload/Minaloc/Publications/Useful_Documents/EDPRS_2__1_.pdf (accessed September 2024)

Saudi Arabia		Long tradition to apply growth pole policies, e.g. the Future Saudi Cities Programme	Since 1970s	https://unhabitat.org/sites/default/files/2020/05/saudi_city_report.english.pdf (accessed September 2024)
South Africa	National Spatial Development Perspective 2006	"Principle 5: In order to overcome the spatial distortions of apartheid, future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or that link the main growth centres. Infrastructure investment should primarily support localities that will become major growth nodes in South Africa and the SADC region to create regional gateways to the global economy" (National Spatial Development Perspective 2006, p. iii) Not fully implemented in the way intended	2006 (superseded the spatial chapter of the National Development Plan 2012 and the National Spatial Development Framework 2023)	https://www.gov.za/sites/default/files/gcis_document/201409/complete1.pdf (accessed September 2024)
Sri Lanka	Mahinda Chintana: Vision for a new Sri Lanka	The plan foresees the development of five interconnected metropolitan areas as national level growth centres, complemented by a number of smaller regional growth centres	Since 2006	https://www.thegef.org/sites/default/files/ncsa-documents/MahindaChintanaTenYearDevelopmentPlan.pdf (accessed September 2024)
Turkey	Growth Poles Support Program	Aim is to identify regional centres with the potential to grow and provide services to their hinterlands by developing their accessibility, physical and social infrastructure	2008	https://www.eeas.europa.eu/sites/default/files/documents/2023/SWD_2023_696%20Tu%CC%88rkiye%20report.pdf (accessed September 2024)
Vietnam	Key Economic Regions	Development of three key economic regions in the country with the objective "to ensure higher than average growth rates, make major contributions to the growth of the entire country, and motivate and help other regions, especially those laden with difficulties, for common development."	Since 1994	http://www.vietnam-briefing.com/news/vietnams-regions-key-economic-zones.html (accessed September 2024)