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Achieving sustainable industrialisation in Egypt: assessment of the potential for EIPs

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Introduction (1)

2015 paradigmatic shift in the world views of development path:

- Sep, WG adopted a 2030 global SD agenda and a set of 17 (SDGs)
- more sustainable, inclusive, equitable and innovative development (UN)
- July, Addis Ababa Action Agenda for **financing development** → strong foundation for SD by aligning financial flows and policies with economic, environmental and social priorities
- Dec, Paris Agreement on climate change (new level) → voluntary nationally commitment reduction of the **global greenhouse gas emissions**



Introduction (2)

- Middle and low-income countries:
 - challenges ..economic & technological development...
 - outdated industrial technologies & practices..
 - in the context of the global environmental degradation
- **SDG #9:** calls for sustainable industrial development by building resilient infrastructure and fostering innovation (UN, 2017).

Motivation & Objective..

experience of Egypt.. Why?

- MENA middle income
- Highest population
- Recovering economy...2011
- economic growth 4.2%
- Manufacturing=16% of GDP (2015) → expected to grow by 2% 2017

- **The main industries:** automobile production, chemicals, consumer electronics & home appliances, steel industries & textile & clothing.
- currently 131 industrial zones across 26 governorates in Egypt.
- Cairo (19) Alexandria (10) Port Said (9).
- matched with a sharp increase in CO2 emissions.



This paper focuses on...EIPs..Egypt

- Egypt's prospects for SID..
- how to achieve the SDG 9 by 2030?
- How is gov. supporting EIPs?
- exploring government attempts to create EIPs

What is EIPs?

“communities of manufacturing and service businesses located together on a common property.

Member businesses seek enhanced environmental, economic and social performance through collaboration in managing environmental and resource issues”

(Lowe, 2001).



- EIPs are developing around the world as a solution for more SID.
- no EIPs currently functioning in Egypt, though falls well within the outlined vision for SID in Egypt
- the overall idea of optimising and improving environmental and social impacts of industrial facilities,
- while optimising their economic performance through innovation and technological advancement,

Research method..



Egypt's Vision 2030 and EIPs

- Rio Conference in 1992 and ..LA21 → international commitment to SD
- **'Egypt's Vision 2030' – March 2015 → new SD strategy vision..**
 - core value of the new revised Constitution..
 - develop a competitive, balanced & diversified economy
 - covers all three dimensions of SD (Economic- Social- Environment)
- challenges at national level: Population (100 million) Unemployment (27.3%) water scarcity (climate change – farming)
- 2012 → National Industrial Development Strategy
- As part of the vision for SID, several programs help address key strategic priorities → creation of special industrial zones (ex. EIPs)

Egyptian Government supports EIPs

1- Egypt Vision 2030

- no specific mentioning of EIPs in the Egypt Vision 2030
- implicit support as a manifestation of industrial symbiosis and SID..
 - new regulatory and legal frameworks (for example, pollution control policies –
 - multiple initiatives aimed at transforming existing facilities into EIPs – or, at least, optimising their environmental performance.



Egyptian Government supports EIPs

2- Egypt's Strategy for Industrial Development

- has many references to various elements that constitute an EIP, without using this exact name.
 - strengthening industries + improving environmental performance.
 - establish industrial parks to support industrial integration between large factories on the one hand and small, medium and micro ones on the other hand (clusters with supply chain).
 - The target 22 new integrated industrial complexes 2016–2020 (Ministry of Trade and Industry of Egypt, 2015b).
 - **aggregating industries around certain centers:** Robbiki Eco-leather Park (RELP) for leather tanning industry, Damietta industrial zone for furniture production, textile clusters in Minya, Dakahlia, Sohag and Assiut, mining industry in the 'Golden Triangle' in the South of Egypt, etc.
 - **the Green Economy project:** green economy-friendly industries, including low-emission ones and those based on environmental dimensions, such as industrial or agricultural waste recycling industries. The project mainly focuses on supporting those industries to address environmental compliance, which has become a major requirement for exports.

Attempts to develop EIPs in Egypt



1- Robbiki Eco-leather Park (RELP)

2- El-Safaa industrial zone

3- Marble Technology Park Shaq Al-Thu'ban

This study evaluates the progress made on each to assess their future perspectives.

3.1 Robbiki Eco-leather Park (RELP)

Planned:

- signed 2010-lowering pollution + increasing VA → RELP aims to become a new EIP specialised in leather tanning.
- relocate tanners from Magra El Ouyoun area → between Badr city & the 10th of Ramadan city,
- improve the quality & productivity of the Egyptian leather industry, the environmental, health and social conditions
- planned budget of 5.5 billion EGP



3.1 Robbiki Eco-leather Park (RELP)

Planned to supports SD initiatives of the Egyptian Government in five main areas.

1. technological cooperation with international partners for developing cleaner production processes
2. establishment of a liquid wastewater treatment plant
3. solid waste treatment – planned (landfill capacity of 33,000 m³/year + solid waste treatment plant with a capacity of 400 tons/day)
4. establish environmental laboratory and Leather Tanning Technology Center
5. As a relocation project, RELP aims to facilitate a transition for tanners currently operating unsustainably in Cairo to a new ground

3.1 Robbiki Eco-leather Park (RELP)

Results..

- Requested several extensions.. slow progress towards a successful EIP
- **Not yet completed.. Why?**
 - lack of an effective site master plan
 - inadequate common utilities and services
 - limited financial resources to support the transition of some individual firms..
 - early 2017 Banks LR loans

3.2 El-Safaa industrial zone

Planned:

- signed 2008
- To relocate 80 metal industries from a heavily polluted Shoubra El Khima city
- To El-Safaa (143 acres) 35 kilometres from Cairo airport
- standard quality control, assurance system, training centre
- create 16,000 new job opportunities.
- recycle metal waste from the factories



3.2 El-Safaa industrial zone

Results

- Most of the foundries and small workshops owners in Shubra al-Khaymah intended to move but they did not!
- economic downturn after 2011 slowed down the relocation process.
- Many metal business owners had to sell their allocated land and to resort to other economic activities, such as cafés or toktok (transportation vehicle) businesses, to pay for their daily expenses
- According to some estimates, as much as 90% of the foundries of Shubra have exited the industry since the 2011.



3.2 El-Safaa industrial zone

Results..Why?

- lack of strong legal framework and policies to protect property rights and ensure security in the new site,
 - security problems: some Bedouin groups have prevented 12 factories from working.
- the limited financial resources offered by the government, which eventually raised the opportunity cost on individual manufacturers.



3.3 Marble Technology Park Shaq Al-Thu'ban Planned:

- the fifth largest marble and granite quarry in the world.
- signed 2010
- three-stage transformative agenda for recycling wastes and by-products on the site:
 - pre-processing industrial unit in upper part of the zone to collect and sort waste.
 - efforts of labs, incubators and pre-processing industrial unit to use technological 'know-how' on-going project at AUC
 - The final stage would be marketing for the new products and production



3.3 Marble Technology Park Shaq Al-Thu'ban

Results..Why?

- Despite the previous initiative seven years ago,
- Shaq Al-Thu'ban site and workers suffer from many economic, social and serious environmental problems.
- The lack of effective implementation of this initiative is due to
 - several institutional,
 - financial and
 - security challenges that Egypt witnessed in the aftermath of the political events of 2011.

4 Success factors for developing EIPs in Egypt

reasons explain unsuccessful attempts

- Recent negative economic conditions and political instability after 2011
- Institutional framework and government institutions are ambitious but not stable
- fulfilling short-term expectations basic needs vs long-term development initiatives.



However,

- the trajectory of development has been strongly supported by
 - the launch of a new industrial strategy in 2016
 - and the adoption of the sustainable development vision in 2015.

Most success stories of EIPs around the world are based on..

- government **direct** or **indirect** incentives along with the continuous dialogue and cooperation with the private sector.
 - US Government in 1996, Japan, China (cases)
 - Indirect (example: complete database of input-output of materials in the industrial sector at the firm level, identify waste exchange opportunities..awareness)
- **international experience suggests**
 - starting the EIPs establishment by simple low-cost exchanges with potentially rewarding benefits
 - allow for dynamic changes within the EIPs after it starts working
 - based on the practical feedback of working firms

Conclusion

- This paper explores the prospects of Egypt in realising SDG 9 and specifically the target of creating sustainable infrastructure
- focuses on EIPs as a proxy for achieving SD
- Egypt's Vision 2030 → a stakeholder participation process → **supports SDG9 for SID**
- Egypt's industrial development strategy → places much emphasis on the creation of new industrial clusters, aggregation of industries and overall improvement of the industrial environmental impact → **supports SDG9 for SID**

conclusion

- despite the strong overall government support of EIP in the Agenda and planning
- The analysis of three indicates the key factors impeding the success of EIPs in Egypt are:
 - weak policy and regulatory frameworks,
 - lack of strong enforcement mechanisms,
 - poor planning,
 - lack of financial resources to support relocation of most vulnerable (smallest) enterprises and
 - the negative impact of informal economy and criminal elements.



To overcome these obstacles..

- and achieve successful implementation of environmentally sound industrial development in Egypt,
- it is crucial for the government to incentivise the creation and development of EIPs.
- It is also critical to ensure collaboration and inputs from all relevant stakeholders.
- Communication with firms and representation of the private sector in policy debates come to the forefront of the successful solutions of the problem.



Thank you