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Building a Cluster from the Outside In

Abu Dhabi's diversification strategy rests in part on laying the seeds of future industries overseas while preparing for their reception at home.

Economic diversification has long been a top priority for resource-based economies. From Canada to Australia, economic diversification away from natural resource dependency continues to occupy the minds of policymakers. The United Arab Emirates (UAE) is no different in this regard. The country has various economic vision strategies and plans all aimed at changing the industrial and economic structures of the economy. However, in the Emirate of Abu Dhabi, a new economic diversification policy experiment has been underway for some time now. Through a government investment arm called Mubadala, Abu Dhabi has pursued a diversification strategy that turns economic development models upside down.

In a paper, "**The surrogate model of cluster creation: The case of Mubadala in Abu Dhabi**", Yasser Al-Saleh and I show how Mubadala has sought to establish technology clusters through a two-step, parallel process: All the aspects of a traditional model of a cluster are pursued at home, while the necessary knowledge-base is pursued overseas. The two activities are eventually linked to each other in Abu Dhabi. We called this "place surrogacy".

Although Abu Dhabi wanted to explore new economic sectors to diversify away from oil and gas, it was understood that the development of heavy manufacturing or renewable industries wasn't going to appear by waving a magic wand.

When considering new markets to enter, Mubadala examined the economic expansion experiences of other countries, like South Korea, Thailand, Malaysia or Singapore. These countries pursued strategies that relied heavily on attracting foreign investment into targeted industrial domains; electronics in South Korea, Thailand and Malaysia; heavy machinery and car manufacturing also in South Korea and Japan; Singapore focused on IT and computer sciences then, more recently, the biosciences. All these countries encouraged investments from overseas to incentivise foreign companies to come and set up businesses; starting with a manufacturing or assembly plant, then upgrading that to a research and development (R&D) centre or a centre that would test and modify products that fit the local environment, be it culture, weather conditions or landscape. Eventually they sought to upgrade these modifying centres into full R&D centres to generate new products and services where they are.

Clustering in reverse

Mubadala realised that developing the level of industrial diversification to which Abu Dhabi aspired would be time-consuming and onerous because the country lacks a sizable workforce able to support any serious effort of industrialisation. Labour is imported into the UAE – all skills, professional to semi-skilled to unskilled labour come from other countries. Abu Dhabi also lacked the necessary local institutions, from universities and colleges that train professionals to work with foreign investors; the small companies that would be able to supply part of their needs, be it raw materials, parts or professional business and legal services. The country did not have a critical mass of these institutions, private or public, to support foreign direct investment in new industrial areas in a meaningful way in order to benefit the country, as well as investors. As a tax-free environment, Abu Dhabi provides investors with land, subsidised electricity and water, good roads, excellent airports but, the question remains, what does the emirate get in return?

Recognising that Abu Dhabi is not ready for these types of industries, Mubadala has adopted "place surrogacy" as a strategy. With its flagship Masdar Initiative, for example, it sought the development of new renewable companies in other areas of the world. Masdar bought into renewable companies in Spain and Germany, with an agreement that the Spanish and Germans would train local Emiratis to understand these new domains. Then, once these concerns were successful abroad, branches would be created in the UAE. The interactions happen locally/globally not locally/locally.

Masdar uses the Clean Tech Fund to pursue international investment. Instead of spending money creating a local cluster in a new industrial area, there is a two-step plan. Step 1, through Masdar, Mubadala invests in the renewable industry elsewhere in the world because the chances of its success are much higher with a proper ecosystem around it – supporting institutions, highly skilled workforce, potential markets for foreign buyers. Step 2 is using this overseas expertise to spin off economic activity from foreign-owned assets back to the home country. Mubadala ensures that, at least, if it doesn't make money locally, it is making money globally.

One example is Masdar PV. This company was based in Germany, a country that also gives generous subsidies to the renewable energy industry. It manufactured and sold photovoltaic films in Europe for solar power from 2009 to 2014. The German arm has folded but now there is a powerful clean energy company in the UAE with the **Masdar City Solar PV Plant**. Another success story from Masdar is **Shams 1** – a large solar power station.

Clean brands

Rebranding Abu Dhabi has been an important part of Mubadala's initiatives. For example, in the field of clean energy, Abu Dhabi hosts the headquarters of the **International Renewable Energy Agency (IRENA)**, the international agency dedicated towards renewable energy. An annual event, **Abu Dhabi Sustainability Week**, sponsored by Masdar, includes more than 30,000 participants from all over the globe. As the "Davos of renewable energy", ADSW sees the awarding of the **Zayed Future Energy Prize**, which allocates millions of dollars in prizes for addressing clean energy, climate change and sustainability. Among the past winners are former U.S. Vice President Al Gore and the former Norwegian Prime Minister Dr. Gro Harlem Brundtland.

Masdar also invests in rebranding Abu Dhabi as a place for renewables domestically with awareness campaigns about efficient use of energy at home and in the office. Utility bills are now itemised with information about personal usage in comparison to other homes in the neighbourhood; those who consume more than their neighbours are charged more. With this nudge toward energy efficiency awareness, Masdar has helped Emiratis think of themselves as more than an oil-and-gas country.

Mubadala's strategy to advance the development and deployment of new industrial sectors by developing an international investment portfolio and leveraging international networks while investing in local talent at home represents a unique approach to economic diversification. If successful, it may turn a page on the traditional cluster-based models of economic development that are inspired by Silicon Valley, with a strong university at its midst like the cathedral in the middle of the town.

Place surrogacy – investing abroad then at home – is an unusual approach to clusters and is not risk-free, but given the constraints and advantages present in Abu Dhabi, the strategy does indeed seek to minimise risks by spreading the geographic scope of its investments. Mubadala's strategy could well be the way forward for other economic diversification strategies around the world.

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