Scaling up Israeli startups in emerging markets

An Assessment of ODA & B2G Consortium Models

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Table of Contents

Executive Summary

Israel is a small industrialized market with a high dependency on five key sectors: intensive and sophisticated research, hi-tech processes, tools and machinery.[1] While both dynamic and resource-efficient, Israel is at the risk of stagnating due to unsustained growth of its firms. To date, Israeli startups have experienced little to no success in emerging markets, and have reached market-level saturation in developed markets such as the US and Europe. Therefore, scaleup in emerging markets is a necessity for continued growth of the Israeli economy. As it stands, Israel has pursued international growth primarily through the form of bilateral research and development, and the nation has extensive international bilateral agreements with firms around the globe.[2] However, many of these agreements are underutilised and have not brought about significant return on investment.

This report focuses on two business strategies that comparable players in the international arena have utilised to enter emerging markets in recent years. As the Israeli Innovation Authority (IIA) is looking to scale up its startups in emerging markets such as China and India, Official Development Assistance (ODA) and Business to Government (B2G) Consortium Models have been analysed for the purpose of addressing the issue Israel is facing with limited growth in emerging markets.

The report will showcase how despite the potential of success ODA agreements appear to provide, ODA is not a promising method for scaling Israeli startups in emerging markets. This report will demonstrate why the IIA should not pursue this tool for scaleup. Furthermore, this report will demonstrate how the B2G Consortium model offers potential for success, if there is proven market demand in the destination economy, the project is industry-led, the cluster includes firms of different sizes, and the consortium offers demonstrated value to foreign government clients. Case studies are provided to illustrate how success can be achieved.

Official Development Assistance (ODA)

Overview

The OECD defines ODA as flows to countries and territories on the Development Assistance Committee's (DAC) list of ODA recipients and to multilateral institutions which are provided by official agencies, and are administered with the promotion of economic development and welfare of developing countries as its main objective.[3] ODA is meant to be concessional in character, with at least 25% making up a grant element of the aid provided. Military aid is not considered ODA, although the OECD's development assistance committee has recently redefined the definition to include some forms of counterterrorism and training as ODA-eligible.[4] The OECD prescribes that 0.7% of gross national income be spent on ODA, and this is a requirement that very few countries have been able to fulfil.[5]

Moreover, although ODA is intrinsically meant to be used as a poverty-reduction tool only, ODA can take on three main forms and thus, achieve varying objectives. The three ways in ways ODA can be used are: ODA which is used as a diplomatic tool, ODA for poverty reduction, and ODA as "Aid for Trade". It is because of these three varying forms that ODA has come under scrutiny by both civil society and state actors in recent years. Using ODA to further a country's self-interest and manipulating state actors through the provision of aid has been strongly discouraged by the OECD, and is regarded as an abuse of ODA as it further disadvantages developing nations at the benefit of donors. Furthermore, Recent OECD data also shows that support to the least developed countries is a declining trend, even though bilateral aid worldwide is increasing,[6] illustrating that many countries are directing their ODA funds inappropriately, and this is a concern for the OECD's Development Assistance Committee.[7] Therefore, while ODA can be used in various ways besides poverty reduction, they are strongly advised against by the OECD DAC.

Three Drivers for States to Use ODA

This section will overview the three main ways ODA can be used, and will highlight the benefits and challenges of the IIA in pursuing these tools.

1. ODA as a Diplomatic Tool

When ODA is used as a diplomatic tool, aid is provided on the basis that it will further a foreign policy objective. In this case, ODA is used strategically by a donor country in the hopes of:

a) Currying favour from federal or regional governments in a recipient country
b) Attempting to mitigate conflict
c) Promoting self-interest
d) Establishing a relationship of codependency and commitment

Literature emphasises that when ODA is used in this way, it should be perceived as manipulation.[8] As explained previously, ODA is to be used to eradicate poverty and the needs of a developing nation are to come first. When a donor country uses ODA to further its own national interests, critics claim that donor countries are exploiting the vulnerabilities of aid recipients. In layman terms, money is being used to influence a person who is in need of help, and the OECD strongly condemns this. Extensive literature exists to prove that ODA, when used as a diplomatic tool, can strongly influence an actor's behavior, change relationships, and influence the social environment of recipient countries.[9] In fact, many citizens have become wary of accepting aid from western countries, questioning the strings attached to such aid. Such instances triggered the 2016 DAC crackdown, in which new measures were introduced to make it mandatory that only the poorest countries received assistance under ODA agreements.[10]

An example of when ODA has been heavily criticized by the international community due to its transparent and unapologetic intent of furthering national interest can be seen with USAID's donations to Pakistan. Supposedly, the primary focus of the US Civilian Assistance Program was to develop a "stable, secure and tolerant Pakistan with a vibrant economy."[11] Officially, USAID had stated that their programs are essential to Pakistan's stability and long-term development, reflecting Pakistan's priorities which are: energy, economic growth, stabilization, education and health.[12] However, critics have noticed that the US has, incorrectly, used the same aid to strategically impact foreign policy objectives in Pakistan. For example, aid has been used to oversee national elections, with money being directed to Pakistan's National Election Commission.[13] Literature has criticised that the US has meddled with Pakistani elections in this way, attempting to influence them in a way that would sway election results in the US's favor.[14] Moreover, less subtly, the US has threatened to cut aid to Pakistan unless Pakistan carries out more intensive military operations against terrorists within the country - a request to which Pakistan has repeatedly responded to by saying that increased military operations would only

cause more civilian death and damage to crucial infrastructure.[15] The US's adamant and blatant request that Pakistan behave according to their demands at the risk of losing aid is a clear example of ODA being used to further foreign policy objectives - which the international community has loudly condemned and discouraged. Similar instances have been seen around the world, specifically with South Korea. In 2009, The Republic of Korea had pledged to almost triple its percentage of GNI devoted to ODA by 2015.[16] At the time, the pledge was made in line with Korea's commitment to join the world stage as a leader for development cooperation.[17] Titled the 'Global Korea' initiative, the program intended to raise the nation's profile in multinational diplomacy to reshape the global financial system, spread development and tackle climate change.[18] Ultimately, critics have argued that South Korea is using ODA as 'resource diplomacy,' in order to open up African markets for South Korean capital in competition with China and Japan, rather than provide aid to the poor.

Why ODA as a Diplomatic Tool is Not Appropriate for the IIA

Ultimately, there are other agencies within Israel that are responsible for foreign diplomacy, the most notable being MASHAV which is responsible for joining the global effort to achieve sustainable development worldwide.[19] The IIA, if it were to pursue foreign diplomacy through ODA, would be conflicting with the goals and objectives of organisations such as MASHAV and thus, this is not an appropriate avenue of scaling up for the IIA. Furthermore, the IIA is meant to be an impartial public entity that operates for the benefit of the Israeli Innovation Ecosystem, and therefore - foreign diplomacy is not within the purview of the IIA at all.[20] Therefore, not only would the IIA be acting outside of its bounds, it would be conflicting with the objectives of other organisations within the State of Israel.

2. ODA for Actual Development and Poverty Reduction

When used for poverty reduction, ODA is fulfilling its true objective. As stated previously, the OECD has reiterated that ODA be targeted to the poorest developing nations, and within those, ODA should provide appropriate assistance to the poorest 20% of people.[21] Specifically, ODA should be directed towards those who are in circumstances that are politically fragile, environmentally vulnerable or both.[22] The United Nations, as part of its development initiatives, have published guidelines for how ODA should achieve its poverty reduction goals:

1. Effective ODA should not draw resources away from the poorest countries
2. The design of ODA instruments should be tailored according to wider resources present and prioritise investments where other resources are scarce.
3. ODA should address the vulnerabilities people face: ending poverty requires supporting states affected by conflict and fragility transition to stability and increasing the resilience of the most vulnerable against climate and other shocks.
4. The nature of assistance should vary in different contexts; effective ODA does not always require large financial transfers.[23]

Bilateral vs. Multilateral ODA

As it currently stands, there are two main channels for providing ODA for the purposes of poverty reduction. Organisations can provide aid through bilateral means and multilateral means. The OECD defines bilateral transactions as "those undertaken by a donor country directly with a developing country."[24] They may also include transactions with NGOs active in development and other development related activities such as debt relief, administrative costs and spending on development awareness. In contrast, multilateral contributions can only be delivered by an international organisation conducting all or part of its activities in favour of development. Most importantly, "the flow itself must lose its identity and become an integral part of the recipient institutions assets such that donors cannot track and pre-define its uses."[25] A third form exists, labeled multi-bi, in which donors maintain some degree of control over multilateral contributions. The various forms that bilateral and multilateral aid can take, along with the channels through which it is distributed are outlined in figure 1.2

Aid Channel	First-Level Implementing Partners	Examples
Bilateral		
Public Sector	Donor governments* – central state and local institutions Aid recipients – central, state and local institutions	Development Ministry Ministry of Finance Ministry of Foreign Affairs
Non-Governmental	Non-Profit Entities	Cooperatives Foundations
Public-Private Partnership	Private Actors Bilateral/ Multilateral Agencies	Development finance institutions Challenge Funds
Other	For-profit entities	Consultancies, Think Tanks
Multilateral		
Multilateral Organisations	Intergovernmental Institutions	EU, World Bank, UN

Figure 1.2: Types of Aid Channels, Source: OECD, 2013.[26]

Recent literature has emerged to reveal that when providing ODA for the means of poverty reduction, bilateral ODA is strongly discouraged as multilateral ODA provides for more effective results. The reasons for this are multifold. Firstly, because bilateral channels are directly linked to a donor country, bilateral ODA is thought to be more easily influenced by biased interests and desire for political gain.[27] Therefore, recipient countries are more likely to be suspicious of bilateral aid, especially with the growing body of economic evidence that indicate bilateral channels are more vulnerable than multilateral channels to political capture with real consequences for development.[28] When bilateral donors skew aid allocation in favor of political considerations as opposed to a country's need, this can slow impact for growth.

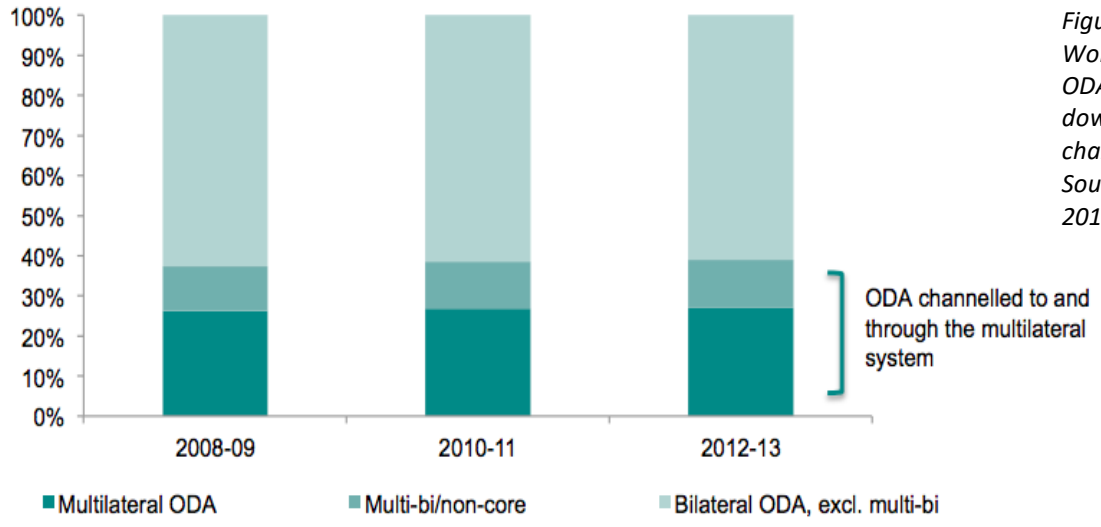

Figure 1.3: Worldwide ODA broken down by channel of aid, Source OECD 2015[29]

Moreover, an OECD survey, asking 40 aid-receiving officials about aid satisfaction revealed that there was significantly more satisfaction with multilateral channels than bilateral channels because multilateral channels were perceived to be more flexible and responsible, and in possession of valuable technical skills and policy expertise.[30] Multilateral agencies were regarded as better suppliers of public good, less biased, less fragmented, less politicized and more efficient.[31] Therefore, should ODA be pursued to reduce poverty internationally, it is advised that it be pursued multilaterally. While pick-up has been slow, there are some countries that are following suit. Belgium has been quick to agree with UN and OECD recommendations, and has very recently restated its commitment to providing 0.7% of GNI to ODA for poverty reduction, and increase aid donated to multilateral agencies.[32] Nearly half of Belgium's ODA flows are now executed through multilateral channels,[33] and thus Belgium has become an example to the international community of how to do ODA properly. Other countries such as New Zealand, Sweden and Finland are also following suit.

Why ODA as a Poverty Reduction Tool is Not Appropriate for the IIA

Ultimately, the IIA's focus is scaling up organisations for the purpose of innovation, not poverty reduction. Other agencies within Israel are already responsible for this and are actively involved. For example, in collaboration with MASHAV, Israel provided bilateral ODA to Jordan, Syria, the West Bank and the Gaza Strip.[34] Priority sectors have already been identified as "water resources management, desert agriculture, combating desertification, early childhood education, rural and community development, emergency and disaster medicine, and public health and women's empowerment."[35] Therefore, as other sectors of the government are already and actively responsible for poverty reduction through ODA, we advise the IIA not to pursue ODA through this tool.

3. ODA as a Tool to Increase Exports

The use of ODA as an instrument to increase donor countries' exports as a trend is increasing and makes up a large part of the justification for ODA spend among public agencies and to their constituents. Innovate UK has explicitly cited their ODA-funded projects as a potential source of revenue generation for UK-based companies,[36] while more and more countries shift to bilateral versus multilateral aid in order to pick and choose which regions hold economic opportunities for them. However, this is not without criticism. There has been vocal opposition to using ODA as a means of export and trade development from various perspectives. Bilateral ODA has been criticized as less effective in reducing poverty and reaching the poorest populations[37] and in some cases is used to funnel tax dollars to corporations, which critics refer to as "corporate welfare".[38]

However, even when we consider ODA as a tool to increase exports, it is not wholly clear whether it is effective even in that capacity. Findings have been mixed thus far and an explanation for why exports increase or decrease in relation to ODA has yet to be formulated. A 2014 study found that exports increase US$0.50 for every aid dollar spent in the short run, and though it rises in the long run up to US$1.8 for every aid dollar spent, this effect eventually decreases over time. The same study found that after 2000, the effect of bilateral aid on the respective donors' exports diminishes to near insignificant levels, likely due to the reduction of tied aid.[39] A Canadian study found similar results with a CAD$1.10 return for each dollar spent on aid, however the authors are careful to note that the effect in the long term is unclear and that while there is correlation there is no definitive causation and that a reverse effect may be happening whereby states who import from Canada may be more likely to receive ODA. Furthermore, the authors caution that there may be other factors at play which are not accounted for such as goodwill, trade concessions, or aid workers acting indirectly as export promoters.[40]

Furthermore, there were countries where exports increased despite a substantial decline in ODA (China, Brazil, India, Mexico).[41] A similar study on the relationship between German ODA and German exports from 2009 also found that between 1976 - 1995, for every aid dollar spent, Germany experienced around US$1.40 increase of exports. The effect, the authors note, is greater for countries targeted by the German Ministry of Development ('BMZ countries'), in which German ODA is distributed based on agreements between the German government and the recipient country's government.[42] However, again causation is unclear and both Canada and Germany spend substantial amounts compared to Israel. Between 1976 - 1995 when the study was conducted, Germany spent between US$ 5 - 9 billion a year and in the last few years has increased ODA spending. Canada between 1989 - 2015, spent around $US2.77 - 5.54 billion a year. Israel, on the other hand has hovered around US$194 million a year on average in the past ten years.[43] It is also important to note that these are high level correlations and these studies do not differentiate between the size or type of firm involved (startup vs. mature company) or how successful the companies were in continuing to sell or operate in the recipient country.

It should also be noted that during the 1960s and 70s increased aid was sent to Sub-Saharan Africa for diplomatic and political reasons. There was some hope that such aid would help expand trade relations, but exports did not rise substantially due to a lack of complementarity between what Israel at the time was producing (citrus and diamonds) and what Africa needed.[44] This further illustrates that ODA alone does not guarantee increased trade relations and that other factors play an important role.

The following sections will examine three main strategies used to increase trade between donor and recipient countries, their main challenges, and whether each strategy is suitable for the IIA. We then conclude on a final recommendation and considerations for the IIA.

Three Strategies For Conducting "Aid for Trade"

1. Build a market from the ground up

This approach requires long term, multigenerational planning and massive and consistent funding. Classic examples of this type of strategy come from China and Japan who have each spent billions around the world to develop core infrastructure projects that then act as a new market for Chinese and Japanese imports. Japan, who coined the "Japanese ODA model" was able to engage in this due partly to historic reasons. Beginning first with reparations to Southeast Asia after World War II, Japan increased ODA funding strategically to re-build relationships and in doing so helped support and develop private sector imports in agriculture, forestry and fisheries. This was a long process and entailed substantial economic assistance to build roads, power, and ports that would eventually pave the way for Japanese companies.[45] More recently, President Shinzo Abe announced in 2016 that Japan would commit US$30 billion to Africa in addition to the already US$32 billion pledged in 2013.[46] However, it is important to note that Japan, which is resource-poor, also views Africa as a necessary partner for future raw material imports.[47]

China has embarked on a similar path. Between 2000-2014, they have committed to spending upwards of US$350 billion dollars, in 140 countries and territories, and are engaged in or have completed 4,300 projects.[48] In 2014 alone, China spent US$37.3 billion in total official commitments.[49] Though China's developmental aid is vague and a lack of transparency over the conditions attached to such loans and projects makes understanding the success of their objectives difficult, it is clear that China is using ODA and other informal monetary aid to create new markets while expanding their global dominance.[50]

Ultimately, this approach is not recommended for the IIA for several reasons, not least of which is the massive amounts of funding required and the length of the time frame. It is not appropriate for startups, is not innovation focused, and is often done as part of a nation's larger grand strategic objectives.

2. Tied aid

Tied aid, defined as "official grants or loans that limit procurement to companies in the donor country or in a small group of countries"[51] by the OECD restricts recipient countries to where they can buy from. Though officially frowned upon by the Development Assistance Committee (DAC) since 2001,[52] iterations of tied aid still exist and most countries conduct some version of it. Australia, for example, has abandoned nationally-tied aid, but still conducts project-tied aid or in-kind aid, allowing them to pick and choose what they fund and what products are sent over.[53] In 2014, after 8 years of a policy of untied aid, 89.69% of aid contracts were still awarded to Australian based firms.[54] While this may benefit the contracting company, it does not allow for a startup to scale-up overseas and instead acts as a form of corporate welfare. Often the money goes straight from the state agency straight to the firm without it ever leaving the country. Furthermore, the public relations aspect of this can lead to negative backlash and criticism, which the IIA must be aware and of.

3. Niche-Sector Targeting

The third strategy of using aid for donor-based economic development can be referred to as "niche-sector targeting" whereby the donor country chooses specific countries or sectors to focus their time, energy, and efforts on. This is a strategy the IIA is already pursuing to some extent and is not restricted to just ODA funds. Norway is a prime example of targeting their aid allocation to specific sectors and regions. For example, Norway through their Norwegian Oil for Development Initiative (OfD) and their state-owned investment firm, Norfund, supports the building of sustainable businesses in developing nations,[55] focusing largely on the energy sector, food and agribusiness, and financial institutions. One of Norfund's most successful and largest projects is SN Power, which is operational in Southeast Asia, Africa, and Central America and headquartered in Oslo. The company, which Norfund owns 50% of, acquires, develops, and operates hydropower assets and in their 2011 provided electricity to over 11 million people in emerging markets.[56]

Again, funding is a key difference between Israel and other countries who have found export success through the use of ODA. OfD, for example, has a yearly budget of US$38.6 million,[57] while approximately 53% of Norway's bilateral support to private sector development in developing countries (~US$1.094 billion) has been channelled through Norfund alone between 2006-2013.[58] In 2018, Norfund received an additional US$200 million from the Norwegian government.[59] Their overall ODA spend in 2016 was US$4.6 billion.

However, what makes niche-sector targeting successful in increasing the exports of the donor country is not necessarily because the funding has been categorized as ODA but rather because the donor country is aware of its strengths and what it can offer. Israel is already a leader in several key sectors such as cybersecurity and water technology, and could position these strengths as a benefit for emerging markets. A lack of ODA funding does not prevent Israel from doing this and other sources of funding are likely to give the IIA more flexibility without the risk of criticism that Israel is using ODA for purely self-interested objectives.

Recommendations on ODA for the IIA

Ultimately, the IIA has neither the financial capacity nor the correct incentives to use ODA as a policy tool to help startups scale-up in emerging markets. While some studies have shown a positive correlation between ODA and donor country exports, the causation and long term effects are unclear and there is no differentiation between startups and mature firms in the data studied. Furthermore, not all donor countries benefit from increased exports by engaging in ODA (nor is it the goal of ODA). Where some success has been reported by countries that actively pursue ODA as a tool of economic development and improving trade relations, the following conditions are required, which may be lacking for Israel:

1. **Top-down bipartisan government support for ODA** - Where ODA appears to have the most impact in increasing exports and opening up trade relations, high-level government officials have also made ODA a priority visiting recipient nations, making public statements, and tying ODA to a larger diplomatic or foreign relations policy.
2. **Culture of giving ODA** - There is also a cultural norm of giving ODA and a feeling that it is part of the ethical and moral responsibility of the donor nation to help others. This is particularly true for Canada, Norway, Belgium, and even Japan though their motivations have been questioned.
3. **Large amounts of funding in the billions of dollars a year** - Despite varying sizes in population and GDP, successful ODA programs tend to commit billions of dollars a year with a sizeable number of agencies, civil society members, and employees involved.
4. **Longer time horizons** - While there is no consensus on the causation between ODA and trade exports outside of tied aid, some proposed explanations include goodwill, strengthening relationships, increased facetime and contact, and other "soft power" variables. These all, however, come down to long term relationship building.

Unless Israel is planning on announcing huge increases to ODA funding, it may not be in the best interest for the IIA to actively seek out ODA funds. The IIA can just as easily pursue niche-sector targeting while leveraging their strengths and expertise without coding the allocated funds as ODA. In doing so, the IIA may actually enjoy more flexibility and less scrutiny. Furthermore, there would be less inter-agency rivalry (MASHAV is already Israel's official ODA agency) and a smaller chance of politicization.

That being said, if the IIA happens to receive some ODA funding that they can allocate, by all means, go ahead. However, they should know that they will experience challenges similar to current bilateral R&D projects, such as cultural and communication obstacles, a lack of due diligence on the recipient country's side, possibility of corruption, or a lack of interest from competent private sector parties. The IIA should also be realistic about the goals of ODA projects and be clear on their end game and time frame. Scaling up a startup is a short term goal, whereas successful ODA projects tend be oriented more on long term, relationship building objectives.

Country	Net ODA (2016 USD Millions)[60]	% GNI[61]	% Bilateral	Agencies Involved	Target Sectors
Israel[62]	340.5	0.111%	90% (2015 data)	MASHAV (division of the Ministry of Foreign Affairs)	Water management; desert agriculture and combating desertification; early childhood education; rural and community development; emergency and disaster medicine; public health; women's empowerment
Norway[63]	4,636.39	1.12%	57%	Ministry of Foreign Affairs; Norfund; Norad; Ministry of Climate and Environment; embassies	Education, private sector development, health, clean energy, humanitarian assistance, climate change
Netherlands[64]	4,953.9	0.649	49%	Minister for Foreign Trade and Development Cooperation; embassies	Sexual and reproductive health and rights (including HIV/AIDS); security and the rule of law; water; food security
Canada[65]	4,056.21	0.261%	47%	Global Affairs Canada; Export Development Canada; FinDev; Intl. Development Research Centre	Health and rights of women and children; clean economic growth and climate change; governance, pluralism, diversity and human rights; peace and security; humanitarian assistance
South Korea[66]	2,262.93	0.159%	70%	Foreign Affairs; Ministry of Strategy and Finance; KOICA; Korea Eximbank	Industrialization; water, sanitation, and hygiene; health; education; and agriculture
Japan[67]	9,330.52	0.204%	71%	Ministry of Foreign Affairs; Japan Agency for International Cooperation (JICA); Ministry of Finance	Asia and Africa; infrastructure; energy; water and sanitation
Italy[68]	5,042.1	0.295%	43%	Ministry of Foreign Affairs and International Cooperation (MAECI); Agency for Development Cooperation (AICS); Ministry of Economy and Finance	Migration; agriculture; food security; Africa
United Kingdom[69]	20,139.4	0.7%	45%	Department for International Development (DFID); Innovate UK; Newton Fund	Strengthening global peace, security, and governance; Strengthening resilience and response to crisis; global prosperity; extreme poverty

The B2G Consortium Model

What is the B2G consortium model?

The Business-to-government (B2G) consortium model organizes a collection of businesses around a specific sector of expertise to develop and deliver products or services for emerging markets. The relationship between the countries is facilitated through government agencies with terms clearly established by MoUs. The home country's innovation agency holds the relationship, whereas the government agency in the destination market varies by project. Examples include state-owned corporations, ministries of economy, and municipal authorities. B2G Consortium projects last around three years and often lead to further collaboration and market integration between the two nations.

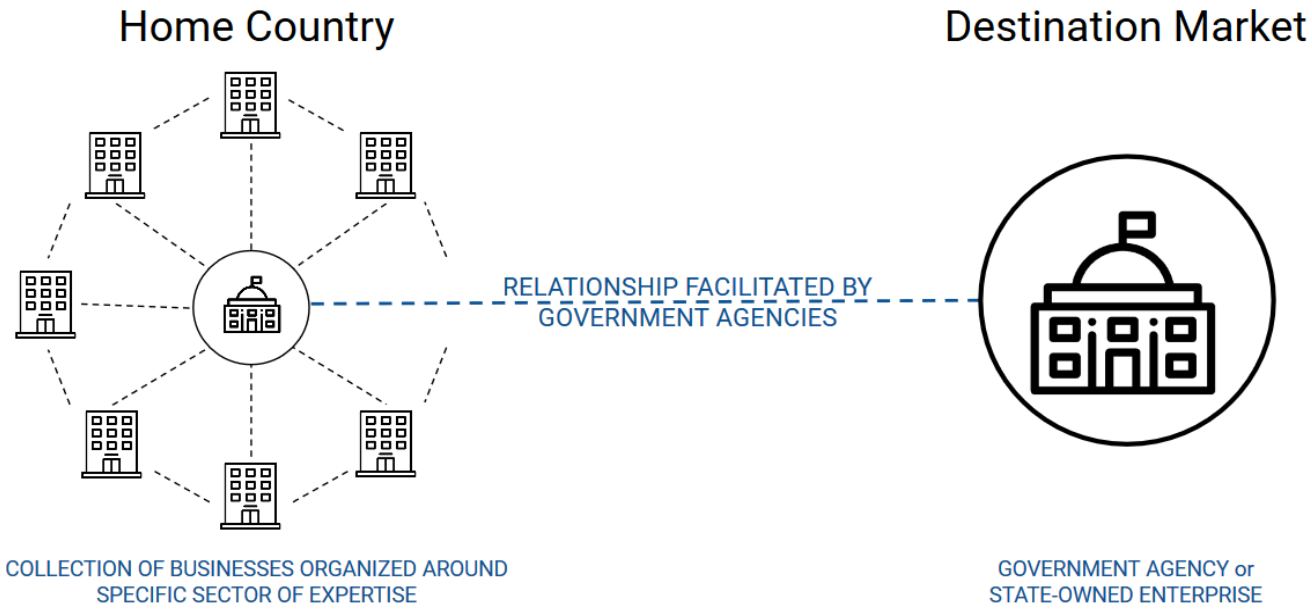

Figure 1.4: the B2G consortium model

Summary of Case Studies

In order to determine best practices for B2G consortia, we looked at three key case studies from two organizations: Innovate UK's Catapult program, and the Netherlands Enterprise Agency's Partners for International Business program (PIB).

Case studies from Catapult and PIB					
B2G consortium	TRL	Size/mix of firms involved (start-up, SME, MNC)	Method for evaluating market demand	Financial mechanisms	Results
Satellite Applications Catapult	1-3 6-9	10-15 SMEs & large firms, data supplied by established MNCs, central research institute	Phase 1, funding from UK side to deliver proof of concept. Phase 2 official agreement to provide 5 solutions to be purchased upon successful demonstration.	Phase 1, funding from Newton Fund & Innovate UK. Phase 2: paid for by purchasing agencies/SMEs	5 finished products sold to state agencies and SMEs, 100+ opportunities identified for further involvement in other sectors
Dutch Aviation Vietnam	7-9	10 companies, complementary mix of large consulting/ engineering firms, technology SMEs, and a university	Aggressive lobbying by lead company & RVO to win national contracts. Agreement to share expertise, provide training, build local capacity in exchange for winning contracts. Supported by MOU	Contracts negotiated for large tenders	MOU signed, delivering large tenders (Airport City), expansion of Dutch delegation into other sectors (34+ companies now)
Waste2Value India	7-9	8 companies, mix of engineering, tech, consulting, and waste management firms; G2G and K2K partners as well	Early and continuous meetings with federal and state ministries, supported by MOU	Funding from FMO (Dutch dev. Finance bank), Indian federal/local govts., and from MDBs (WB + ADB)	Landfill gas extraction project in Kanjur-Mumbai; Tender prep. in Jodhur; 30 major projects in pipeline

High-Level Overview of Key Findings

We recommend five components to build a successful B2G Consortium project, which we pulled from common elements and best practices across the case studies:

1. **Strong articulation of the value-add for the destination nation.** This can be the promise to build local capacity through training, to reduce operating costs for the government agency, or to improve productivity for local companies.
2. **Industry-led approach.** The projects that achieved the most success were those with a bottom-up structure, where industry stakeholders shaped the process.
3. **Complementary mix of startups and large firms.** The mix of companies involved in the consortia should include startups, midsize, and multinational firms with complementary areas of expertise.
4. **Proven market demand and clear contract terms.** The project should be guided by an MoU with the expectations and roles of each government partner clearly laid out. Projects with contracts and demand proven upfront fare best.
5. **Ongoing "economic diplomacy".** The project should be seen as an iterative process through which bilateral relationship-building can be continuously built upon and maintained. Projects with support from embassy and trade partners led to more spillover opportunities and proved more sustainable.

Case Study in Focus: Innovate UK's Catapult Program

Innovate UK's Catapult program comprises ten technology and research centres designed to drive innovation in specific sectors in which the UK has a competitive advantage. The not-for-profit centres are funded by Innovate UK but run at arms-length from government. Each catapult is mandated to increase collaboration between industry and researchers in a specific area of technological expertise in which the UK government anticipates will bring significant future economic growth. This case study focuses on two projects created by the Satellite Applications Catapult, which fosters innovation in the use of satellites and space technology.

Satellite Applications Catapult

The Satellite Applications Catapult has been involved in thirteen projects in the Latin American since its founding in 2013, seven of which were in Chile. In recent years, it launched a successful B2G consortium project with Chile in recent years that provided ongoing market demand for UK SMEs in the Chilean mining sector. The project was delivered in two phases.

Phase 1: Project OUREA

Project OUREA provided UK researchers and SMEs connected to the catapult with a small pot of funding to create proof-of-concepts to demonstrate how satellite data could be used to improve mining operations in Chile. The demonstration was showcased in April 2016 at Expomin, the biggest annual Chilean mining trade exhibition. Following successful demonstration, the catapult signed an MOU for deeper collaboration on future projects with three government agencies: the National Mining Company (ENAMI), the National Geology & Mining Service (SERNAGEOMIN), and the Chilean Copper Commission (COCHILCO).[70] The timing of the project fit well with the Chilean government's recent plan to boost output of smaller companies in the mining sector.

Phase 2: Project Hephaestus

Project Hephaestus began with a trip by Chilean delegates to the UK in which they identified and prioritized challenge areas in copper mining. From there, the Satellite Applications Catapult hosted a workshop in September 2016 in which a range of delegates from SMEs, researchers, and large firms began identifying potential solutions. By early 2017 five satellite data products developed by UK and European SMEs were sold to Chilean SMEs and government agencies to address the predefined challenge areas. An additional five other products covering environmental monitoring and supply chain operations were developed and sold to the agencies. One example product is software that uses satellite imagery to identify the location of copper, gold, and silver deposits, monitor tailings deposits, and modernize ENAMI's production processes. The product cost approximately 3.3 million GBP to develop.

Notably, the project led to the identification of over one-hundred other possible opportunities for UK SMEs to develop improvements within Chile's mining sector, covering geological items, environmental items and the supply chain.[71]

Key Lessons

Three elements were key to the success of the Satellite Application Catapult's consortium project. The first of these was clear articulation of the value-add for Chilean agencies and SMEs. The Chilean Ministry of Mines plans to boost the output of smaller companies by $1.8 billion per year by 2023 and Projects OUREA and Hephaestus promised to help meet this goal by making it cheaper and more efficient for mining companies to operate. Second, the the Catapult did not try to accomplish too much too fast, but rather implemented the project in phases from demonstration to market-ready solution. This allowed the Chilean stakeholders to recognize the value of the project and to clearly articulate the needs of the mining sector so the final product would best meet the demands of the market. Finally, the final products delivered to Chile were developed by self-driven groups of SMEs and large firms. Industry stakeholders recognized the potential for international expansion and developed products to develop their presence overseas. The catapult played a facilitating role rather than a central driving role.

Case Study in Focus: Partners for International Business (PIB)

What is PIB?

The Partners for International Business program (PIB) was launched by the Netherlands Enterprise Agency (RVO) in February 2012. According to the RVO, "The aim of this public-private venture is to position groups of companies, largely from the leading economic sectors, on promising foreign markets, and support the companies in gaining entry to these markets. The ultimate goal is to reinforce the international competitive strength of Dutch business."[72] PIB seeks to promote Dutch companies from the Netherlands' nine key economic sectors,[73] and targets 67 focus countries.[74] Since the first cluster of Dutch companies was established in California in 2012,[75] at least 87 PIB clusters have been established in markets around the world—including in key emerging markets like China, India, Southeast Asia, and South America.[76]

Note that the RVO uses the term "cluster," whereas many of the organizations that make up PIB groups around the world refer to themselves using the term "consortium." We recognize the distinction between these two terms, but we maintain each organization's preferred terminology.

How do firms join PIB?

PIB provides support to clusters of at least five Dutch companies and/or knowledge institutions; firms are expected to organize their own clusters in advance of application. Applicants to the program must "clearly show that they are willing to carry out concrete activities at their own expense and how they want to do this."[77] Applicants are scored against 11 assessment criteria, including "whether there is clear market opportunity in the intended target market" and "the extent to which the cluster consists of SMEs," and must score at least 75 out of a possible 100 points to be accepted into the program.[78] Notably, "PIB is not a subsidy... The government contribution is not provided as a financial compensation to the participating companies. It is used for the implementation of PIB modules that contribute to better market access and positioning of the Dutch business community in a promising foreign market."[79] PIB has a budget of € 5.03 million for 2018, with up to € 350,000 allocated to each project.[80] Some clusters require firms to pay membership fees to join.[81]

What does PIB provide?

PIB offers clusters support for three years, and then they are expected to become self-sustaining. The program is oriented around three modules:

(1) **Promotion and matchmaking**[82]
   (a) the Ministry of Foreign Affairs' (MFA) Holland Branding provides support for marketing, including multimedia capabilities;
   (b) RVO facilitates PIB members' participation in trade missions, conferences, trade shows, seminars, etc.;
   (c) RVO also helps organize incoming visits from foreign businesspeople, policymakers, and journalists.

(2) **Knowledge exchange and networks**[83]
   (a) RVO leverages G2G channels so that the Dutch government can assist foreign jurisdictions with regulatory changes or implementation of policies that will allow PIB cluster to operate in the target country;
   (b) RVO facilitates establishment of K2K relationships;
   (c) RVO provides Netherlands Management Training Program to facilitate firms' recruitment of managers from the host country.

(3) **Economic diplomacy**[84]
   (a) MFA assists clusters with drafting any MoUs with host government;
   (b) RVO helps clusters bid for projects from MDBs/development agencies;
   (c) In some cases, RVO can provide resources for a dedicated liaison for a specific PIB cluster within the broader Dutch mission to a host country.

Ultimately, each cluster is provided with different types and levels of support, depending on its needs. PIB is therefore a flexible policy tool that can be used to support vastly different projects in many different contexts. The two case studies below show this diversity of scope.

Dutch Aviation Vietnam

The Dutch Aviation Vietnam (DAV) consortium was designed to promote bilateral cooperation in civil aviation between Netherlands and Vietnam through the "exchange of expertise, knowledge and innovative solutions".[85] The consortium consists of ten companies, including small avionics tech companies, multinational engineering and project management firms, and midsize supply chain logistics firms. The DAV consortium is currently delivering several large projects in partnership with the Civil Aviation Authority of Vietnam. The projects include a greenfield airport project, air traffic management improvement, and aviation institutional reform.

A significant portion of DAV's operations revolve around training and developing skills and resources within the Vietnamese civil aviation industry. To this end, DAV provides human resource development, management training, workshops on PPP infrastructure financing, logistics training, and security and safety courses.

DAV won the contracts through extensive lobbying and concept demonstration by the Dutch Embassy in Hanoi and by Netherlands Airport Consultants, a multinational firm with an established presence in Vietnam. The process is illustrated in the figure below. The resulting MOU established DAV as the primary government advisor on the development and design of the Vietnamese Civil Aviation sector.[86]

Figure 1.5: Timeline of Dutch Aviation Vietnam (DAV)

Key Lessons

Three lessons can be drawn the example of the DAV consortium. First, capacity building and training can be a significant value-add for emerging markets where expertise is limited. In the case of DAV, capacity building helped to secure large contracts. Second, the established presence of a large multinational firm can act as a stepping stone for other firms to break into unfamiliar markets. They can also play a lobbying role to win contracts on a consortium's behalf. Third, the Dutch Enterprise Agency leveraged its full government network to break into the market. The Dutch Embassy and the Ministry of Foreign Affairs worked alongside the Dutch Enterprise agency to get the DAV project launched and successfully penetrate the Vietnamese aviation market.

Waste2Value India

In May 2013, the Dutch Ministry of Infrastructure and the Environment and India's Ministry of Urban Development signed an MoU to promote B2B, G2G, and K2K cooperation in the field of waste management.[87] In September 2014, the Waste2Value India PIB consortium was established under this agreement.[88] Waste2Value consists of eight private companies—a mix of engineering, tech, consulting, and waste management firms.[89]

PIB enabled Waste2Value to conduct 3 preliminary outgoing missions to India in the fall of 2014 and summer of 2015. During these missions, the RVO and MFA helped Waste2Value secure meetings with both the federal Ministry of Urban Development (MoUD) and state government representatives.[90] Waste2Value signed MoUs with several state governments to conduct feasibility studies into developing waste management projects in their municipalities; the consortium is now active in 10 states across India.[91] Waste2Value also signed agreements with the state of Himachal Pradesh to develop a biogas pilot project[92] and the state of Karnataka to various waste management projects in Bangalore.[93] Waste2Value continues to operate in seek new partnerships even though its three-year window with PIB has concluded, as evidenced by its upcoming participation in the October 2018 IFAT India Water, Sewage, Solid Waste, and Recycling conference.[94]

Key Lessons

The RVO identified three key lessons from Waste2Value India's first year of operations:[95]

(1) Early engagement with multiple state-level decision makers was a key to Waste2Value's success (rather than forging a relationship with only the national government).
(2) Waste2Value used a blended finance model to obtain funding from multiple sources, including:
    (a) India's Ministry of Urban Development,
    (b) Local municipalities,
    (c) The World Bank / IFC,
    (d) The Asian Development Bank, and
    (e) The Netherlands Development Finance Company (FMO).
(3) The private sector played the leading role.

This case study suggests that one of the keys to success for B2G consortia is to effectively function as "B2Gs" consortia—to pursue opportunities with all levels of government in the host country.

General Insights from PIB Analysis Report

To conclude our discussion of the PIB program, we will briefly describe the findings of a 2016 report produced for the RVO by PwC and released to the public in January 2018.[96] This report outlines the successes and failures of PIB clusters from 2012-2015, finding that:

- PIB helped with network expansion and brand awareness in the target market.
- Most firms say they would not have been able to enter the target market without the support of PIB.
- PIB offers more value-add for SMEs/startups than for large firms (250+ employees)
- 80% of firms report positive outcomes from the PIB.
- It's too early to determine the true sustainability/longevity of most clusters once PIB support is removed.
- It's too early to determine if program benefits outweigh the costs for RVO.

PwC makes the following recommendations to the RVO:

- PIBs should have mix of SMEs and larger firms, and be led by larger companies.
- Tailor-made clusters are great, but the RVO should nevertheless establish a general model for clusters to follow.
- Better MEE (Monitoring, Evaluation, and Effect) should be generated within the RVO so they can track the effectiveness of the program and their interventions.

Israeli Example of B2G Consortium: Shouguang Water City

Overview

As a final case study, we turn to the closest thing Israel has done to a B2G consortium: the Shouguang Water City. Originally conceived of during a state visit by the Israeli Prime Minister to China in 2013, the Shouguang Water City was announced in 2014 under the auspices of Israel NewTech, the Ministry of Economy and Industry's water agency.[97] Eight Chinese cities competed for the project, which was intended "to demonstrate Israel's water technology innovations at different stages — from taking water out of its sources and building the distribution system to taking care of urban water pipelines and preventing leakages, as well as managing sewage water and reusing water for agriculture."[98] It was hoped that the project would "serve as a model for dozens of other cities in China that face similar water issues, and [that] these areas could later adopt the same technologies and solutions."[99] The Israeli embassy predicted that "the volume of Israel's total water technology export to China will increase 'dramatically' to between $500 million and $700 million a year in the next five years, and to $2 billion to $3 billion a year within the coming decade."[100] A delegation of 20 Chinese officials visited Israel in 2015.[101]

Although it was established that "both the central and local levels of the Chinese government [would] assume the cost of setting up the pilot project,"[102] the Shouguang Water City has not proceeded due to a lack of funding support from the Chinese side. The next section will outline the key lessons learned from this failed (or, to be gentler, indefinitely delayed) project.

Key Lessons Learned

We connected with Ophir Gore, head of trade and investment at the Israeli embassy in Beijing, who answered a series of questions about the Shouguang Water City via email.[103] He indicated that although the project has not gone ahead, there is still a strong interest from many other cities in China for a similar project (although it should be noted that if these cities are expecting Israel to come and build their water infrastructure for free, then this isn't the great opportunity it once seemed). The main issue remains the lack of funding: "until this issue is solved, there will be no project. This issue need to be tackled in the first stages of negotiations between the governments."

On the plus side, the project has produced B2B spillovers for the firms involved (i.e. this was a good networking tool and marketing tool for promoting these firms): "despite the fact that the government project is stuck, there has been quite a lot of work that was done in the city by Israeli companies that collaborated with local Chinese companies. So there are some concrete business collaborations between the private sector in the city and Israeli companies, but not G2G... these kind[s] of initiatives, even when not implemented by the government, might give some back up to Israeli companies to conduct some concrete projects in China, even when the G2G side is much slower."

Gore also noted that his Ministry has just started a pilot program for Israeli SMEs seeking to enter emerging markets. The 6-month accelerator program will provide business supports for five Israeli SMEs in Beijing, "connecting them with clients, distributors, investors etc… [and] help[ing] them to reach concrete deals or reaching investments."

Ultimately, Gore reiterated what we have heard countless times throughout our case studies: "the private market should be the important player, they are operating fast and usually [have] the money. The government should be the one to only provide the platform and the best ways for the private companies to play together. It's specifically true in China."

In fairness to the Shouguang Water City, however, it should be noted that the International Water Valley—a similar consortium-based water project led by Dowell Technological and Environmental Engineering Co. since 2013—appears to have also been a failure (judging by the fact that its website is dead[104] and there are no recent news reports/press releases/social media posts/event listings about it).[105] Construction of the park was supposed to be complete by 2016; although it apparently attracted interest from 10 companies, as of April 2016 the park was still being written about in the future tense.[106] We interpret this parallel failure as a suggestion that any water-based consortium in China should include both strong private-sector buy-in and government facilitation.

Recommendations on B2G for the IIA

A successful B2G consortium ought to have five elements: a strong articulation of the value add for the destination nation, an industry-led approach, a complementary mix of industry stakeholders, proven market demand established in clear contract terms, and ongoing economic diplomacy.

To best establish these preconditions we recommend the following high-level roadmap for implementing a B2G consortium project in Israel:

1. Determine interest by Israeli firms to participate in IIA-facilitated consortia in specific emerging markets. We recommend starting with a single consortium to pilot the model.

2. Driven by industry-led interest, choose an interested consortia around a specific area of Israeli expertise. We recommend leveraging existing consortia, either through the MAGNET program or through iCOREs. The consortia must bring some measure of value to the destination nation.

3. Allow the consortia to identify the target market for their projects. Once a destination is identified, the IIA plays the role of helping to pitch the project to the government partner and facilitate the relationship between the consortia and the partner. If Israeli firms have an existing presence, use their influence as a foothold into expanding the bilateral relationship. If Israel does not have a presence in the target market, the consortia should begin with concept demonstration to prove the value of the project. Successful projects tagged into existing initiatives in the destination country with the backing of federal funds.

4. Establish MOUs and explicit contracts clearly delineating the roles of the government agencies on both sides and the project deliverables.

5. Create a framework to measure and evaluate success as the project launches into operation.

We also recommend that the IIA cooperate and communicate more with other Israeli agencies and departments. The Ministry of Economy and Industry and the Ministry of Foreign Affairs are already doing valuable work to support the scale-up of Israeli startups in emerging markets. Collaborating with existing initiatives or leveraging embassy resources not only reduces costs and labour inputs for the IIA, but gives a project better chances of success. Successful B2G Consortium projects will lead to further opportunities for other Israeli firms to expand their presence in emerging markets. Leveraging the full resources of Israeli government agencies can help to achieve this goal.

Conclusion

ODA is not a promising method for scaling Israeli startups or gaining access to emerging markets, because it requires significant economic resources, a longer time frame, rarely creates sustainable market demand, is politically complex, and better suited for diplomatic goals. Development projects require immense oversight and upfront planning, as well as robust monitoring and evaluation mechanisms. Given Israel's miniscule ODA funding and the long time frame required for successful ODA projects, we do not recommend pursuing ODA as a strategy to penetrate emerging markets. Furthermore, projects coded as ODA that do well are successful not because the funding is categorized as ODA, but because of complementarity, competent firms, high levels of engagement, leveraging donor strengths, and committed funding.

The B2G Consortium model offers more potential for establishing and scaling Israeli startups in emerging markets. However, certain conditions must be met first. There must be proven market demand in the destination economy, the project must be driven by industry interest, the consortia should have a complementary mix of firms of different sizes, and the consortium should offer significant value to the foreign government partners.

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