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Cluster Models Confronted with Small Island Developing States: Relevance, Usefulness and Limits of the Marshall, Porter and Schmitz Models

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Abstract

The cluster concept is applied to Small Island Developing States (SIDS) through models developed and tested in continental settings. These are generally Marshall's industrial district, Porter's competitive cluster and Schmitz's collective efficiency. To varying degrees, these models depend on a critical mass of firms, sufficient spatial density and a deep domestic market. Small SIDS, however, fail to meet all three conditions at once. Following Martin and Sunley (2003) and Hamdouch (2008), the article assesses the relevance, usefulness and limits of these models for small island economies. It confronts them with the stylised facts of a corpus of island productive agglomerations and treats Singapore as a limiting case. Neither Marshallian passive externalities nor Porterian domestic rivalry appear as triggers. Schmitz's model proves the most transferable, subject to three amendments. Joint action substitutes for missing external economies, the capital anchoring of a pivotal firm may replace it, and insertion into value chains acts as a trigger as much as a discipline. The article proposes an agenda built on four shifts. They lead from density to anchoring, from domestic to imported rivalry, from passive externalities to institutionalised joint action and from the subnational cluster to the countrycluster. It suggests testing them through qualitative comparative analysis, network analysis and *process tracing*.

***Keywords**: Clusters, Small Island Developing States, Industrial Districts, Porter's Diamond, Collective Efficiency, Small-State Economics, Territorial Anchoring*

Résumé

La notion de cluster est appliquée aux Petits États Insulaires en Développement (PEID) à partir de modèles développés et éprouvés dans des contextes continentaux. Il s'agit généralement du district industriel de Marshall, du cluster compétitif de Porter et de l'efficacité collective de Schmitz. Ces modèles dépendent, à des degrés divers, d'une masse critique d'entreprises, d'une densité spatiale suffisante et d'un marché domestique profond. Or, les petits PEID méconnaissent ces trois conditions à la fois. Dans la lignée de Martin et Sunley (2003) et de Hamdouch (2008), l'article évalue la pertinence, l'utilité et les limites

de ces modèles pour les petites économies insulaires. Il les confronte aux faits stylisés d'un corpus d'agglomérations productives insulaires et traite Singapour comme un cas limite. Les externalités passives marshalliennes et la rivalité domestique porterienne n'apparaissent pas comme des déclencheurs. Le modèle de Schmitz se révèle le plus transposable, au prix de trois amendements. L'action conjointe y supplée les économies externes absentes, l'ancrage capitalistique d'une firme pivot peut la remplacer, et l'insertion dans les chaînes de valeur agit comme déclencheur autant que comme discipline. L'article propose un agenda fondé sur quatre déplacements. Ils mènent de la densité à l'ancrage, de la rivalité domestique à la rivalité importée, des externalités passives à l'action conjointe institutionnalisée et du cluster infranational au cluster-pays. Il suggère de les éprouver par l'analyse qualitative comparée, l'analyse de réseaux et le process tracing.

Mots clés : clusters ; Petits États Insulaires en Développement ; district industriel ; diamant de Porter ; efficacité collective ; économie des petits États ; ancrage territorial insulaire. Cite as: Saïd Attoumane A.A (2026), "Cluster Models Confronted with Small Island Developing States: Relevance, Usefulness and Limits of the Marshall, Porter and Schmitz Models", EUCLID University. Licence: Creative Commons Attribution 4.0 International (CC BY 4.0).

Introduction

Since the publication of *The Competitive Advantage of Nations* (Porter, 1990), the cluster concept has spread internationally to an uncommon degree. The OECD (1999, 2001), regional development banks and United Nations agencies have adopted it. It has become an ordinary instrument of industrial and territorial policy. Industrialised and developing countries alike resort to it (Sölvell, Lindqvist and Ketels, 2003; UNIDO, 2010, 2013).

This diffusion has nevertheless been accompanied by a persistent conceptual indeterminacy, as Martin and Sunley (2003) and later Hamdouch (2008) have shown. No consensus exists on the definition of the cluster, on its spatial and sectoral boundaries, or on the conditions of its emergence and evolution.

This indeterminacy becomes particularly acute in Small Island Developing States (SIDS). The thirty-nine States and eighteen associate members listed by UN-OHRLLS have a combined population of about 65 million. They account for 0.4% of world GDP, 0.3% of world merchandise trade and 0.2% of foreign direct investment.[1] Yet they concentrate a disproportionate share of the planet's economic, climatic and logistical vulnerabilities.

The category nonetheless remains heterogeneous. It brings together micro-States of a few thousand inhabitants and countries of ten million or more, such as Cuba, Haiti, the Dominican Republic or Papua New Guinea. It also includes Singapore, whose industrial trajectory has scarcely any equivalent. The present article therefore focuses mainly on small SIDS, defined in Section 2.2, and treats Singapore as a limiting case.

Three models structure the literature. They are Marshall's industrial district (1919; 1920 [1890]), Porter's competitive cluster (1990, 1998, 2000) and Schmitz's collective efficiency (1992, 1995a, 1999a). They were forged on large economies, whether insular or not. Their founding cases are Lancashire and Sheffield, the Third Italy, Silicon Valley, the Sinos Valley in Brazil and Sialkot in Pakistan.

Lancashire and Sheffield are, moreover, located on the island of Great Britain. The decisive variable is therefore size rather than insularity, which compounds smallness through

[1] United Nations (2024), background note to the Fourth International Conference on SIDS; UN-OHRLLS, list of SIDS. According to UNCTAD (2024), thirty-seven of the fifty economies least connected to regular shipping lines are SIDS.

remoteness and territorial discontinuity. To varying degrees, the three models depend on three assumptions. They presuppose a critical mass of firms and specialised workers, as well as a density conducive to repeated interactions. They also require a domestic market large enough to sustain a division of labour and rivalry between firms.

Porter's model fully requires these three assumptions. Marshall's rests mainly on critical mass and density, since the district exports. Schmitz's tempers them without dispensing with them. Small SIDS, however, fail to meet all three conditions simultaneously, which calls into question the external validity of the three frameworks, albeit unevenly.

The international community, moreover, has made productive diversification a priority for SIDS. The SAMOA Pathway (2014) and the Antigua and Barbuda Agenda for SIDS for the 2024-
2034 period bear witness to this.[2] Donors have multiplied programmes supporting clusters, sectors

and value chains in this context. Yet the conceptual frameworks mobilised are imported, and their relevance for economies of a few hundred thousand inhabitants has scarcely been questioned.

The aim of this article is to conduct that inquiry. It first assesses the relevance of the three models, that is, whether their assumptions are satisfied in SIDS. It then appraises their usefulness, that is, their capacity to explain observed trajectories. It finally delineates their limits, that is, the phenomena they leave unexplained.

The confrontation draws on the stylised facts of a corpus of twenty-seven island productive agglomerations, whose systematic analysis is the subject of a companion article (Saïd Attoumane, 2026). The cases used here are listed in Appendix A. The article derives a research agenda from them, specifying the necessary theoretical shifts and the methods suited to testing them.

The article is organised as follows. Section 2 sets out the motivation, scope and definitions adopted. Section 3 examines the three canonical models, and Section 4 the complementary frameworks. Section 5 reviews the state of knowledge on island clusters. Section 6 confronts the models with the stylised facts. Section 7 formulates the research agenda, and Section 8 concludes on the approach, the findings and the prospects.

Motivation, scope and definitions

A gap between imported theory and island realities

The primary motivation for this research lies in a manifest gap. On the one hand, cluster policies pursued in SIDS rely on standardised theoretical frameworks. On the other, the structural conditions of these economies contradict the premises of those frameworks.

The thirty-two Caribbean clusters mapped for the Inter-American Development Bank offer a telling example (Rabellotti, Giuliani and Alexander, 2017). The competitiveness plans financed by Compete Caribbean and UNIDO programmes proceed in the same way. All of them apply Porter's diamond or the collective efficiency grid, most often unchanged.

Yet these tools presuppose what they should explain, at the risk of begging the question. They assume a sufficient number of firms to generate external economies and a domestic

[2] UN-OHRLLS (2024), *Antigua and Barbuda Agenda for SIDS (ABAS): A Renewed Declaration for Resilient Prosperity*, adopted in St John's on 27-30 May 2024; UNIDO (2019), *UNIDO's Small Island Developing States Strategy 2019-2025*, GC.18/CRP.5, Vienna.

demand able to exert pressure on quality. They also assume localised related industries and a labour market deep enough for matching mechanisms to operate.

The literature confirms this observation. Koonj Beharry, Pemberton and Pun (2026) note, with regard to Trinidad and Tobago, the scarcity of formal studies devoted to cluster development in small island States. Rabellotti and Conz (2023) observe that, despite a decade of interventions, cluster policies are still not integrated into Caribbean industrial strategies. Monitoring their performance also remains "very difficult" for lack of data.

To our knowledge, Armstrong and Read (2003) remain the only authors to link the cluster literature explicitly to that on small States. Their article compares the industrial policy lessons of micro-States and subnational regions. Apart from this contribution, the two fields have scarcely engaged with each other. Small-state economics studies vulnerability (Briguglio, 1995; Briguglio et al., 2009) and business costs (Winters and Martins, 2004). It also analyses the MIRAB, PROFIT and SITE configurations (Bertram and Watters, 1985; Baldacchino, 2006; McElroy, 2006). Cluster economics largely ignores these contributions.

The author's field experience further reinforces this motivation.[3] In an archipelago of fewer than one million inhabitants, the "cluster" of ylang-ylang, vanilla or cloves coincides with the entire national sector. The methods codified by UNIDO (UNIDO, 2010, 2013) are therefore difficult to transpose there.

Scope and definitions

In terms of subject matter, the article focuses on the establishment of clusters, that is, on processes of emergence, structuring, consolidation or decline. It is therefore not confined to their functioning once established. Martin and Sunley (2003) recall that Marshall himself had not addressed this distinction.

In spatial terms, the article adopts the UN-OHRLLS list but concentrates the analysis on small SIDS. These are understood as SIDS with fewer than two million inhabitants. The threshold encompasses Mauritius, Trinidad and Tobago, Fiji and the Comoros. It excludes the large Caribbean States, Papua New Guinea and Singapore, which Section 6.7 discusses as a limiting case.

Counterpoints are also drawn from small high-income island economies, such as Malta, Cyprus, Iceland and the Faroe Islands. These territories share smallness and insularity without underdevelopment. Their status as counterpoints is flagged whenever they are invoked, so as not to conflate their successes with those of SIDS.

To prevent the conceptual stretching described by Sartori (1970), the article adopts an operational definition. An island productive agglomeration designates a set of organisations established on the national territory and specialised in the same sector or in related sectors. Recurrent transactions or joint action bind them over a period of at least ten years.

The definition admits three configurations, which the analysis carefully distinguishes. The first is a population of small and medium-sized enterprises, close to the Marshallian district. The second is a star-shaped structure, known as *hub-and-spoke*, organised around a pivotal firm and its suppliers, subcontractors and support institutions. The third is an arrangement projected from outside by a donor programme, whose durability remains to be demonstrated.

[3] The author coordinates the APILE-Comoros action, implemented by UNIDO with European Union funding. See the declaration of interests at the end of the article.

An isolated firm, devoid of linked suppliers, subcontractors and support institutions, does not constitute an agglomeration in the sense adopted here. The pivotal firm thesis therefore does not reduce the cluster to a single enterprise. It designates a form of agglomeration of which one firm constitutes the centre of gravity.

In terms of approach, the article belongs to theory and critical review. It does not claim to measure the effect of cluster policies. It assesses the external validity of the frameworks that inspire them.

Research questions

Three questions guide the analysis. The question of relevance comes first: to what extent are the founding assumptions of the three models satisfied in small SIDS (RQ1)? The question of usefulness follows: do these models explain the observed agglomeration trajectories (RQ2)? The question of limits closes the examination: what phenomena do they leave unexplained, and what shifts should an adapted model make (RQ3)?

The three canonical models

The Marshallian model: industrial district and externalities

The theoretical core and its Italian reinterpretation

Alfred Marshall introduces the notions of localised industry and external economies in the *Principles of Economics* (1st edition 1890; 8th edition 1920, Book IV, Chapter X). He develops them further in *Industry and Trade* (1919). In his view, the geographical concentration of an industry produces advantages external to the firm but internal to the localised industry.

The literature refers to these advantages as the Marshallian trinity. The first is a pool of specialised labour, "a constant market for skill", which reduces matching costs. The second stems from the growth of specialised suppliers and subsidiary trades, made possible by the size of the local intermediate market. The third lies in knowledge spillovers, the "industrial atmosphere" in which "the mysteries of the trade become no mysteries" (Marshall, 1920, Book IV, Chapter X).

Duranton and Puga (2004) reduced this trinity to three micro-mechanisms: *sharing*, *matching* and *learning*. They ground them respectively in indivisibilities, the quality of matches and the diffusion of knowledge. Their formalisation makes it possible to examine, mechanism by mechanism, what can work in a given economy.

The concept's revival owes much to the Italian school. Becattini (1979) rehabilitates the district as a unit of analysis in industrial economics. He then defines it as a "socio-territorial entity" (Becattini, 1990, p. 38). A community of people and a population of firms actively coexist within it, in a given geographical and historical space.

The district is no longer merely a phenomenon of agglomeration. It becomes an interweaving of the local community and the productive system, in which norms, trust and territorial identity lower transaction costs. In this respect, Brusco (1982) describes the "Emilian model" of productive decentralisation. Piore and Sabel (1984) then generalise this observation into a thesis of flexible specialisation.

Three criticisms structure the debate. The concept is said to have been idealised, at the cost of overestimating cooperation and underestimating power relations. Its transferability is considered doubtful, since the Italian districts stem from a long history. The rise of global value chains is finally thought to undermine the assumption of a closed and endogenous

system. Above all, Martin and Sunley (2003) recall that Marshall described how districts function without ever theorising their genesis.

Relevance, usefulness and limits for SIDS

The Marshallian model remains a useful framework for describing the sectoral microagglomerations of SIDS: crafts, agro-processing, fisheries, clothing and creative industries. Its socio-communal dimension is even particularly relevant there. In a small island society, relational density, reputation and social capital are high (Baldacchino, 2005b). They can partly offset low economic density.

Baldacchino (2005a) further shows, on the basis of small island manufacturing firms, that island identity can become an asset. It can be converted into a brand, a link with tourism and an argument for differentiation that firms know how to exploit.

The limits are no less structural. In a given sector, specialised firms often number fewer than ten. Such a headcount precludes the emergence of a market for specialised suppliers and of a deep labour market. The local intermediate market is lacking, since inputs are imported. The vertical division of labour between firms thus loses its substance.

The industrial atmosphere often exists, but it may degenerate into cognitive lock-in or collusion for want of a plurality of firms. Boschma (2005) theorises this risk of excessive proximity. Above all, the relevant scale is no longer the sub-regional district but the entire country, or even the archipelago. A small SIDS constitutes, in a sense, a district in itself, which blurs the boundary between cluster policy and national industrial policy (Armstrong and Read, 2003).

Porter's model: diamond, cluster and competitiveness

The framework and its critics

Porter (1990) proposes the "diamond" of the determinants of national competitive advantage. It comprises factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry. Chance and government are added as exogenous factors.

Clusters are its spatial manifestation. Porter defines them as "geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions" (Porter, 2000, p. 15). Active in a particular field, these actors compete while also cooperating.

The Porterian cluster differs from the Marshallian district in three respects. Its sectoral definition is broad. It places local rivalry at the heart of innovation. Its purpose is, finally, explicitly prescriptive. Cluster mapping and cluster initiatives become instruments of economic policy (Porter, 2000; Sölvell, Lindqvist and Ketels, 2003; Delgado, Porter and Stern, 2010, 2014).

Criticisms are numerous. Martin and Sunley (2003) regard the cluster as a "chaotic concept". Its boundaries, the required strength of linkages and its distinction from mere co-location remain vague. Its success would stem from its political plasticity. Motoyama (2008) argues that Porter's theory adds nothing fundamentally new to Marshall. It would answer neither the question of how clusters emerge nor that of their replication through public policy.

Duranton (2011) deems the case for cluster policies "feeble". In his view, most externalities operate at the scale of the city rather than the sector, expected benefits are modest and failures costly. Ketels (2013) offers a nuanced defence. He invokes the positive

effects of clusters on employment, wages and entrepreneurship (Delgado, Porter and Stern, 2010, 2014). He nonetheless concedes that policies should strengthen existing clusters rather than create them *ex nihilo*.

Relevance, usefulness and limits for SIDS

The diamond is genuinely useful as a teaching and diagnostic tool. It remains the most widespread instrument in competitiveness reports on SIDS. It compels reasoning in terms of related industries, support institutions and sophisticated demand. Porter's prescriptive approach is, moreover, the one applied by Compete Caribbean (Rabellotti, Giuliani and Alexander, 2017; Rabellotti and Conz, 2023).

Three of the diamond's four determinants, however, are scarcely present in a small SIDS. Domestic demand is narrow and seldom demanding, so that exporting firms turn abroad from the outset (Read, 2004). Domestic rivalry is weak, since the market often supports only one or two players per activity. Winters and Martins (2004) show that such oligopolistic structures follow mechanically from smallness. Related industries, finally, are imported rather than localised.

The Porterian cluster presupposes feedback among the four determinants. Deprived of three of them, it shrinks to a hub-and-spoke structure or to a satellite cluster dominated by foreign firms. Rabellotti, Giuliani and Alexander (2017) observe structures of this type in a notable share of Caribbean clusters. Moreover, mapping by location quotients remains inapplicable in most SIDS, for lack of disaggregated employment data and of sufficient subnational spatial units.

Schmitz's model: collective efficiency, joint action and value chains

The framework and its extension

Schmitz (1992) introduces the concept of collective efficiency in relation to the clustering of small firms, then deepens it in subsequent work (Schmitz, 1995a, 1999a). He defines it as "the competitive advantage derived from local external economies and joint action" (Schmitz and Nadvi, 1999, p. 1504).

The concept combines two components. Passive external economies, inherited from Marshall, benefit firms by virtue of their location alone. Joint action, deliberate and conscious, may be bilateral, in the form of vertical or horizontal cooperation between two firms. It may also be multilateral, within associations, consortia or collective institutions.

Schmitz (1999a) considers this distinction crucial for understanding increasing returns at cluster level. External economies would explain emergence, while joint action would explain the capacity to respond to shocks and to upgrade. The founding studies concern the Sinos Valley in Brazil (Schmitz, 1995b, 1999b) and Sialkot in Pakistan (Nadvi, 1999).

These studies illustrate the power of joint action in the face of external pressures, such as the quality standards of the US FDA in Sialkot. They also show its failures, which Nadvi (1999) terms *collective failure*. Joint action fails in particular when functional upgrading requires challenging the power of large buyers.

Humphrey and Schmitz (2002) extend this framework by combining cluster analysis with the analysis of global value chains (GVCs). The chain's governance mode, whether market, network, quasi-hierarchy or hierarchy, conditions upgrading opportunities. Insertion under quasi-hierarchy, beneath a dominant buyer, favours process and product upgrading. It blocks functional upgrading, by contrast.

Gereffi, Humphrey and Sturgeon (2005) then formalise five governance modes: market, modular, relational, captive and hierarchical. These modes depend on the complexity and codifiability of transactions, as well as on supplier capabilities. Pietrobelli and Rabellotti (2007) apply this framework to Latin American clusters.

Relevance, usefulness and limits for SIDS

Of the three models, Schmitz's departs furthest from critical mass assumptions, without freeing itself from them entirely. It does not postulate that external economies exist spontaneously. It focuses on what actors undertake to create collective advantages.

Three features make it particularly suited to SIDS. It was designed for SME clusters located in developing countries with weak institutions. Multilateral joint action also corresponds to the instruments that development agencies mobilise in SIDS (UNIDO, 2010, 2013; Rabellotti and Conz, 2023). Sectoral associations, export consortia and common service centres are its usual forms.

The link with GVCs, finally, proves indispensable. Any export activity in a SIDS is, by construction, embedded in a chain steered from outside: international tourism, textile subcontracting, tuna fishing or services outsourcing.

Its limits are no less real. The distinction between passive externalities and joint action presupposes a sufficient number of firms for the former to materialise. In a small SIDS, joint action risks being the only effective component, and the cluster risks shrinking to a network or a professional association.

The cases studied by Schmitz involve hundreds of firms, out of all proportion to the few dozen operators of an island sector. Insertion into GVCs also tends towards captive or hierarchical forms, which limit functional upgrading as in Sialkot. The framework remains, finally, silent on exogenous business costs of transport, energy and telecommunications. In SIDS, these costs often outweigh the gains from collective efficiency (Winters and Martins, 2004).

Complementary frameworks and small-state economics

Economic geography, proximities and production networks

Several contributions from economic geography and the economics of innovation shed light on the analysis, without constituting cluster models as such. Krugman's New Economic Geography (1991) explains agglomeration through the interaction of increasing returns, transport costs and factor mobility. Applied to SIDS, it predicts concentration in the capital and difficulty in developing secondary poles. It also illuminates the peripheral position of islands relative to major markets.

Boschma (2005) distinguishes five forms of proximity: geographical, cognitive, organisational, social and institutional. He argues that geographical proximity is neither necessary nor sufficient for innovation. In SIDS, social and institutional proximities are saturated by mutual acquaintance. Cognitive proximity to the technological frontier is, by contrast, weak, hence the decisive importance of external linkages.

Bathelt, Malmberg and Maskell (2004) formalise this complementarity. *Local buzz*, the informal circulation of information within the cluster, must be complemented by *global pipelines*, deliberate linkages with distant partners. In SIDS, the diaspora, foreign firms, partner universities and regional organisations constitute the channels that compensate for weak local buzz. Wolfe and Gertler (2004) confirm the joint importance of internal dynamics and global linkages.

The French school of proximity enriches this reading (Torre and Gilly, 2000). Colletis and Pecqueur (2005) distinguish generic, transferable resources from specific resources, whose value stems from situated coordination. A specific resource cannot be relocated without loss. The notion directly illuminates the island question of retention, which Section 7 places at the heart of the agenda.

The literature on global production networks provides a complementary perspective. Coe et al. (2004) conceive regional development as the product of strategic coupling between a region's assets and the needs of global firms. Yeung (2009, 2016) shows that the State can seek, negotiate and institutionalise this coupling. The perspective thus suits economies where agglomeration depends on a foreign firm more than on a population of local firms.

Storper (1997), for his part, grounds regional advantage in *untraded interdependencies*, that is, conventions, relationships and non-market knowledge. Cooke (1992) introduces regional innovation systems. In a SIDS, the regional version of these systems merges with an often embryonic national innovation system.

In dynamic terms, Menzel and Fornahl (2010) make the cluster life cycle depend on cluster size and the heterogeneity of knowledge. A nascent cluster may die out for failing to reach critical mass, a frequent scenario in SIDS. Martin and Sunley (2006), for their part, theorise path dependence and regional lock-in. Small specialised economies offer clear illustrations, such as sugar in Mauritius and Fiji or bananas in the Windward Islands.

In terms of industrial policy, Hausmann and Rodrik (2003) conceive development as a process of self-discovery of the activities in which a country is productive. Information externalities then justify public intervention in favour of experimentation. Rodrik (2004) defines industrial policy as strategic collaboration between the State and the private sector, a framework compatible with cluster initiatives.

Through the notion of product space, Hidalgo et al. (2007) show that diversification advances step by step towards products close to existing capabilities. Hidalgo and Hausmann (2009) derive from it a measure of economic complexity. For most SIDS, whose export baskets are narrow, one may infer the hypothesis of limited adjacent diversification. It would explain why clusters there often remain single-product, a conjecture that remains to be tested.

The economics of small States and islands

The literature on small States provides the structural constraints that any island cluster model must incorporate. Briguglio (1995) constructs the first composite index of economic vulnerability for SIDS, based on smallness, insularity, remoteness and exposure to disasters. Briguglio et al. (2009) add a measure of resilience. The United Nations General Assembly enshrined this approach by adopting, on 13 August 2024, a multidimensional vulnerability index.[4]

Easterly and Kraay (2000) qualify the picture. Small States enjoy higher per capita income than their size would predict and comparable growth. Their volatility is, however, greater owing to their openness. Winters and Martins (2004) provide the most decisive argument for the present purpose. Business costs in small remote economies so far exceed

[4] Resolution A/RES/78/322, adopted without a vote on 13 August 2024 (draft A/78/L.98). The index seeks to capture "exogenous vulnerabilities and lack of resilience to exogenous shocks". Its use is voluntary and must not restrict developing countries' access to development cooperation.

the norm that comparative advantage is not enough to guarantee the viability of many activities.

Bertram and Watters (1985) describe, under the acronym MIRAB (*Migration, Remittances, Aid, Bureaucracy*), Pacific micro-economies structurally dependent on external rents. Baldacchino (2006) contrasts them with the PROFIT model (*People, Resources, Overseas engagement, Finance, Transport*), founded on the strategic exploitation of jurisdiction. McElroy (2006), for his part, characterises SITEs (*Small Island Tourist Economies*). Baldacchino and Bertram (2009) then discuss these configurations from a comparative perspective.

The typology matters for the analysis. A cluster finds its place more easily in a PROFIT or SITE economy than in a MIRAB economy. The transition from a MIRAB configuration towards one of the other two is precisely what is at stake in productive diversification policies.

Baldacchino (2006) further describes a strategy of "managing the hinterland beyond" the island, that is, exploiting jurisdiction, the diaspora and external relations. This strategy echoes the pipelines intuition of Bathelt, Malmberg and Maskell (2004). Read (2004) and Armstrong and Read (2003), for their part, analyse the effects of globalisation and regionalism on the growth of small island States. Scheyvens and Momsen (2008), lastly, discuss tourism as a lever for poverty reduction in small island States.

A final body of literature sheds light on the temporality of island agglomerations, namely the erosion of trade preferences. Alexandraki and Lankes (2004) show that multilateral liberalisation reduces the value of non-reciprocal preferences. Small island economies exporting sugar and bananas are among the most exposed. Section 7 derives from this the notion of a "rent clock".

Clusters in SIDS: the state of knowledge

The literature on clusters in SIDS is thin, largely grey and concentrated on the Caribbean. The most substantial contribution is the report by Rabellotti, Giuliani and Alexander (2017) for the InterAmerican Development Bank. It analyses thirty-two Caribbean clusters along six dimensions: structure, collective efficiency, innovation capacity, openness, life-cycle stage and policy influence.

The authors identify three types. "Rising" clusters, such as animation, multimedia or ecotourism, display a hub-and-spoke structure. "Innovative" clusters, such as oil, business services or aquaculture, stand out for strong collective efficiency. "Lethargic" clusters, of Marshallian character, remain oriented towards the domestic market and deprived of public support.

The authors note weak intra-regional linkages despite CARICOM, embryonic innovation systems, brain drain and deficient infrastructure. Rabellotti and Conz (2023), for their part, evaluate the capacity-building initiative of the Compete Caribbean Partnership Facility. They recommend a three-level approach, linking cluster organisations, the national ecosystem and the regional ecosystem.

The two authors consider clusters useful in the region. They invoke "the predominance of micro and small enterprises, their weak insertion in value chains and the scarcity of specialised inputs". Seraphin et al. (2018), for their part, discuss clustering as a regional tourism planning strategy in the Caribbean. They conclude that it cannot constitute a panacea.

For Mauritius, Seychelles, Cabo Verde, the Comoros, Fiji, Samoa or the Maldives, we have identified no academic cluster study grounded in an explicit theoretical framework. The concepts certainly appear in documents of the World Bank, the IMF, the AfDB or UNIDO. They are, however, mobilised there without discussion of their assumptions.

Six gaps emerge from this review. No adapted theoretical framework exists, since studies apply the diamond or Schmitz's grid without discussing the violation of their assumptions. Comparison across SIDS is lacking, as work remains regional or monographic. Establishment processes, moreover, remain poorly documented.

Grey literature indeed describes outputs, such as the number of clusters supported, rather than mechanisms. It says little about who initiates, how governance stabilises or why some initiatives fail. Furthermore, the small-state literature and the cluster literature remain disconnected. The question of scale, whether subnational, national or regional, is not theorised. No impact evaluation, finally, is available.

Table 1 summarises the graded dependence of the three models on the assumptions that small SIDS fail to satisfy. Section 6 puts this synthesis to the test of the facts.

Table 1. Dependence of the three canonical models on the assumptions that small SIDS fail to satisfy

Dimension	Marshall (industrial district)	Porter (competitive cluster)	Schmitz (collective efficiency)
Core mechanism	Passive external economies: labour, suppliers, industrial atmosphere	Feedback among the four determinants of the diamond; local rivalry	External economies and deliberate joint action; insertion into GVCs
Critical mass assumption	Strong: local intermediate market, labour pool	Strong: related industries, plurality of rivals	Moderate: joint action can offset weak externalities
Density assumption	Strong: geographical proximity	Strong, but blurred spatial boundaries	Moderate
Domestic market and rivalry assumption	Weak: the district exports	Strong: demanding domestic demand, rivalry	Weak: export orientation, external buyers
Overall degree of dependence	High for two of the three assumptions	High for all three assumptions	Moderate
Theory of genesis	Absent (Martin and Sunley, 2003)	Absent (Motoyama, 2008)	Partial: externalities and emergence; joint action and upgrading
Relevance in SIDS	Strong for the sociocommunal dimension; weak for economic mechanisms	Weak: three determinants scarcely present; mapping inapplicable	Strong: designed for SMEs and weak institutions; link to GVCs
Usefulness in SIDS	Analysis of microagglomerations and social capital	Teaching diagnostic; framework for Caribbean cluster initiatives	Analysis of joint action and upgrading
Major limitation in SIDS	Scale: the country is the district; risk of lock-in	Absence of domestic rivalry and demand; hub-and-spoke structures	Silence on exogenous business costs; joint action as sole component

Source: compiled by the author.

The three models in light of island stylised facts

Corpus, sources and caveats

To confront the models with the realities of SIDS, the article draws on a corpus of twentyseven documented productive agglomerations. Twenty-three belong to sixteen SIDS from the three regions of the UN-OHRLLS list, and four are high-income island counterpoints. The systematic comparative analysis of this corpus is the subject of the companion article (Saïd Attoumane, 2026).

The present article retains only the stylised facts useful for assessing the models. The cases used, their status, trigger, retention mechanism and sources appear in Appendix A.[5] The cases selected are contrasting and documented by official statistics or independent evaluations.

Three caveats are in order. The choice of well-documented cases exposes the analysis to selection bias and survivorship bias, since failures leave fewer traces. Several of the successes invoked also come from high-income counterpoints or hydrocarbon-rich economies, such as Trinidad and Tobago. The regularities identified therefore hold for the corpus examined and call for the configurational verification of the companion article.

The vocabulary adopted reflects this caution. A mechanism is said to be "corroborated" when it is observed in the cases examined, and "not observed" otherwise. None of these verdicts carries the weight of a refutation in the Popperian sense.

Some orders of magnitude

A few orders of magnitude frame the stakes. The Mauritian export processing zone was created by the *Export Processing Zone Act* of 1970. By the end of the 1980s, it accounted for more than 60% of exports and more than 30% of total employment (Alter, 1991). At the end of 2023, exportoriented enterprises still numbered 231 and employed 33,293 people (Statistics Mauritius, 2024).

Clothing remains the leading employer there, with 17,333 jobs at the end of 2023. The decline is slow, but survival has lasted half a century, at the cost of diversification into seafood, jewellery and services.

In Trinidad and Tobago, the Point Lisas Industrial Estate covers some 860 hectares. It hosts eleven ammonia plants with a combined capacity of about 5.2 million tonnes per year (Ministry of Energy and Energy Industries, n.d.). According to the Ammonia Energy Association (2024), the country is the world's largest ammonia exporter.

In Seychelles, the Indian Ocean Tuna cannery in Port Victoria is 60% owned by the Thai Union group and 40% by the State. It employs about 1,800 people and accounts for 95% of the country's manufacturing exports (EEAS, 2024).

In Iceland, the main high-income counterpoint, the Iceland Ocean Cluster was founded in 2011 by an entrepreneur, without public subsidy. It brings together more than seventy organisations and supports greater valorisation of fishing by-products. The utilisation rate

[5] For Mauritius, the sources are Alter (1991) and Statistics Mauritius (2024). For Trinidad and Tobago, they are the Ministry of Energy and Energy Industries (n.d.), IAPH (n.d.) and the Ammonia Energy Association (2024). Data on Seychelles come from EEAS (2024), and those on Grenada from the World Bank (2005). For Fiji, the article relies on Storey (2006), on the Reserve Bank of Fiji as cited by The Fiji Times (n.d.) and on Medina Hidalgo et al. (2024). Samoa is documented by Automotive World (2017) and the Samoa Observer (n.d.). Compete Caribbean is documented by Technopolis Group (2016) and Rabellotti and Conz (2023). The other sources are Kaoka (n.d.) for Sao Tome and Principe, UNIDO (n.d.) and the Enhanced Integrated Framework (n.d.) for the Comoros, and Sigfusson (2020) for Iceland.

of cod there reportedly now exceeds 80%, compared with just over half in Europe and North America (Sigfusson, 2020).

Trajectories of collapse are equally instructive. In 2004, Hurricane Ivan destroyed about 60% of Grenada's nutmeg trees. Rebuilding the sector then ran up against the reluctance of ageing growers to replant (World Bank, 2005).

Fiji's clothing industry employed about 20,000 people around 2000. Its exports almost halved between 2004 and 2005, after the end of the Multi-Fibre Arrangement (Storey, 2006). In Samoa, Yazaki's wire harness plant employed up to 3,800 people in 1996. It still had some 700 employees when it closed in August 2017, following the withdrawal of its customers from the Australian automotive industry (Automotive World, 2017).

Lastly, the final evaluation of the first phase of Compete Caribbean covers fifteen cluster competitiveness plans, financed to the tune of about 6.3 million dollars (Technopolis Group, 2016). It notes a "theory of change" in need of clarification. It also criticises a uniform approach, which produces "inconsistent results depending on the maturity of firms and clusters".

Four regularities

Four regularities emerge from the corpus. The most visible concerns the structure of consolidated agglomerations. In the great majority of cases, they are hub-and-spoke structures or regulated oligopolies rather than populations of rival SMEs. A cannery, three salmon farming companies, four distilleries or some ten petrochemical plants supplied by a single gas provider are examples.

Another regularity concerns the origin of emergence, whose trigger is most often external. It may be a trade preference, such as the Lomé Convention, the Multi-Fibre Arrangement, SPARTECA, the Sugar Protocol or the Economic Partnership Agreements. It may also be a foreign investor or a donor programme.

Survival obeys a third regularity. Agglomerations that survive the erosion of their trigger are not distinguished by the number of their firms. They are distinguished by the presence of a retention mechanism. This may be a non-relocatable asset, such as a gas field, a fishing zone with a deepwater port, a jurisdiction or a terroir.

The retention mechanism may also be an endogenous collective organisation capable of anticipating shocks. The coalition between the State, sugar capital and exporters in Mauritius provides an example. The South Trinidad Chamber of Industry and Commerce and the sectoral regulatory regimes of the Faroe Islands or Cyprus follow the same logic.

Arrangements projected from outside, finally, follow their own logic. Compete Caribbean, the Comorian programmes and the Timorese coffee cooperative fall into this category. They survive the end of funding only when they are backed by a pivotal firm whose capital is locked in on site. The partnership forged since 2001 between the French chocolate maker Kaoka and the cocoa cooperatives of Sao Tome and Principe illustrates this.

Marshall: community without externalities

The Marshallian model is corroborated in its socio-communal dimension, but its economic mechanisms are not observed as triggers. None of the consolidated agglomerations in the corpus originally rests on the trinity of passive externalities. Neither the specialised labour pool, nor specialised suppliers, nor industrial atmosphere played this role.

Duranton and Puga's (2004) micro-mechanisms behave in differentiated ways. Learning is observed in mature agglomerations, such as Barbadian rum, Seychellois tuna, Trinidadian petrochemicals or Icelandic marine biotechnology. It appears, however, as a consequence of consolidation rather than its cause. Matching is observed in no case, specialised labour markets being too narrow.

Sharing operates, but in an organised rather than spontaneous form. A port, a cold chain, a gas supply or a training centre provide its supports. By contrast, the interweaving of community and productive system theorised by Becattini (1990) is manifest in the Icelandic, Faroese, Trinidadian and Santomean trajectories. Collective organisation there precedes public intervention and makes it possible.

The "atmosphere" that Marshall saw arising of its own accord in the district must therefore, in a small SIDS, be produced by institutions.

Porter: a diagnostic tool deprived of its engine

Porter's model retains its diagnostic purpose, but its core mechanism is not observed. In none of the cases examined does domestic rivalry appear as the driver of consolidation. Competitive pressure is imported through global value chains, by way of buyer standards, certification and international cost comparison.

Demanding domestic demand is not observed in any of the cases studied. Related industries are imported, except where an organisation has deliberately created them, such as the shared services of Point Lisas or the spin-offs of the Iceland Ocean Cluster. The Porterian prescription of mapping and then strengthening existing clusters (Ketels, 2013) remains useful, and Compete Caribbean followed it successfully.

Mapping by location quotients nevertheless remains inapplicable there. Above all, the prescription says nothing about the question that matters most in SIDS. How can an activity be retained on site when nothing in the diamond retains it?

A paradox deserves mention. The most severe criticism levelled at cluster policies holds that agglomeration benefits operate at the urban rather than sectoral scale (Duranton, 2011). Yet this criticism proves rather reassuring for single-city SIDS. In Port Louis, Port of Spain, Suva or Moroni, the capital agglomeration already concentrates most activities. The question there is not to create an agglomeration but to steer its specialisation.

Schmitz: the most transferable framework, subject to three amendments

Schmitz's model is the best corroborated, but it calls for three amendments. Multilateral joint action is indeed, as he argued, the mechanism that distinguishes agglomerations capable of responding to shocks. It thus separates the Mauritius Export Association, which supported diversification before the end of the Multi-Fibre Arrangement, from the Windward Islands Farmers Association.

The Windward Islands association sought to extend the banana preference through fair trade certification. Hurricanes and Latin American competition nevertheless got the better of the sector.

The first amendment concerns the relationship between joint action and external economies. In small SIDS, joint action does not complement passive external economies: it substitutes for them. It must produce, through organisation, the shared services that critical mass would spontaneously generate elsewhere.

The second amendment concerns the role of the pivotal firm. In some configurations, the locking-in of a pivotal firm's capital replaces joint action. The Seychelles State's equity

stake in the cannery and the National Gas Company's joint ventures at Point Lisas bear witness to this. Centred on SME clusters, Schmitz's framework does not anticipate this configuration, which the notion of strategic coupling makes it possible to conceptualise (Coe et al., 2004).

The third amendment concerns insertion into global value chains. Humphrey and Schmitz (2002) analyse it as a constraint on upgrading. In the island cases, it also appears as the very source of competitive discipline. Through trade preferences, it further constitutes the most frequent trigger of emergence.

It follows that the agglomeration lives to the rhythm of an external clock, that of the preference, which Schmitz's model does not address.

Singapore, a limiting case

Singapore appears on the UN-OHRLLS list of SIDS and seems to contradict the article's thesis. The city-State indeed hosts some of the world's most consolidated clusters, such as the Jurong Island petrochemical complex, developed by the State from the 1990s onwards. It has also developed financial, logistics and biomedical hubs.

Yet the case illuminates the thesis more than it refutes it. On the one hand, its population of nearly six million places Singapore outside the scope of small SIDS defined in Section 2.2. On the other, its trajectory stems from deliberate strategic coupling between a developmental State and multinational firms (Huff, 1995; Yeung, 2016).

The trigger there was external, in the form of foreign investment attracted by a proactive public policy. Retention rests on non-relocatable assets, such as its port position and the quality of its jurisdiction, as well as on institutionalised public action. Singapore thus illustrates, on a larger scale, the anchoring mechanisms that the article attributes to small SIDS.

The case indicates, finally, that smallness is not destiny. It changes the nature of the problem rather than its outcome, provided that the State organises anchoring. Table 2 summarises the confrontation of the three models with the stylised facts.

Table 2. Confrontation of the three models with island stylised facts

Theoretical mechanism	Model prediction	Observation in the cases examined	Verdict
Marshallian passive externalities: labour, suppliers, atmosphere	Trigger agglomeration	Not observed as a trigger; learning follows consolidation	Not observed as a trigger
Interweaving of community and productive system (Becattini)	Lowers transaction costs	Observed where collective organisation precedes the State: Iceland, Faroe Islands, Trinidad, Sao Tome	Corroborated
Domestic rivalry (Porter)	Driver of innovation	Weak or absent; competitive pressure imported through GVCs	Not observed
Demanding domestic demand (Porter)	Pulls quality upward	Not observed in the cases examined	Not observed

Localised related industries (Porter)	Strengthen the cluster	Imported, except where deliberately created: Point Lisas, Iceland	Rarely observed
Mapping and strengthening of existing clusters (Porter, Ketels)	Useful guide for public action	Useful as diagnosis; inapplicable as measurement, for lack of data	Partially corroborated
Multilateral joint action (Schmitz)	Enables response to shocks and upgrading	Distinguishes agglomerations that survive the erosion of their trigger	Corroborated, to be amended
External economies and joint action (Schmitz)	Complementary	Joint action substitutes for missing external economies	Amended
GVC governance and upgrading (Humphrey and Schmitz)	Captive forms block functional upgrading	Observed: Yazaki, clothing; the GVC is also trigger and discipline	Corroborated, to be amended

Source: compiled by the author from the cases in Appendix A.

Towards a research agenda: four shifts and a method

Four theoretical shifts

The foregoing results cannot be reduced to any of the three canonical models, yet they do not dismiss them. They recombine their elements around a problem these models did not have to solve, namely retention.

In a large economy, the cluster question is one of agglomeration: why do activities concentrate in one place? In a small SIDS, agglomeration is a given, since everything is already concentrated. The question then becomes one of persistence: why does an activity stay put?

Such an activity indeed has insufficient critical mass and imported inputs. Its business costs structurally exceed those of its continental competitors (Winters and Martins, 2004). The trigger of its emergence is, moreover, temporary by construction. In our view, a model adapted to SIDS should make four shifts.

Anchoring first replaces density. Marshall and Porter derive cluster advantages from proximity among many actors. In a SIDS, the durability of an agglomeration would rather derive from a retention mechanism. This may be a non-relocatable asset, such as a resource, a site, a jurisdiction or symbolic capital. It may also be a collective organisation that has an interest in staying.

The hypothesis echoes Baldacchino's (2006) PROFIT strategy, which invites small jurisdictions to exploit what they alone possess. It also extends Colletis and Pecqueur's (2005) notion of specific resource, whose value is lost outside its territory.

Next comes imported rivalry, which substitutes for domestic rivalry. In the diamond, rivalry spurs innovation. In a SIDS, this function would be fulfilled by the pipelines of Bathelt, Malmberg and Maskell (2004): value chains, buyers and regional organisations that organise comparison between islands. Pipelines would then become the main substitute for local buzz, reversing the hierarchy established for continental clusters.

The third shift replaces passive externalities with institutionalised joint action. What Schmitz (1999a) presents as a complement would become the main source of shared

services. Critical mass would no longer be a critical mass of firms but an institutional critical mass. A few anchored actors and a collective organisation would produce, through deliberation, what numbers produce elsewhere through externalities.

The country-cluster and the archipelago-cluster, finally, replace the subnational cluster. The relevant scale would be the national territory, or even the regional space organised by the Indian Ocean Commission, the OECS, CARICOM or the Pacific Islands Forum. Cluster policy would then become national industrial policy, a conclusion Armstrong and Read (2003) already drew from their comparison. It would also open the way to inter-island clusters sharing collective services, a possibility mentioned by Rabellotti and Conz (2023) but rarely implemented.

The rent clock

To these shifts is added a temporal dimension that the three models ignore. Every island agglomeration born of a trade preference or a regulatory regime lives with an expiry date. The Multi-Fibre Arrangement ended in 2005 and the Sugar Protocol in 2009, while the European banana regime was dismantled in stages.

Island financial centres face similar deadlines, through FATF grey lists or the renegotiation of tax treaties. The literature on preference erosion (Alexandraki and Lankes, 2004) provides empirical foundations and orders of magnitude for this phenomenon.

Managing this "rent clock" would be the primary strategic function of collective governance. The task is either to renew the preference or to break free of it through diversification, while organising resilience to natural and institutional shocks. For SIDS, Menzel and Fornahl's (2010) cluster life cycle should thus be complemented by a life cycle of the rents that give rise to clusters.

A method for testing these hypotheses

These shifts constitute hypotheses, whose testing runs up against the methodological limits specific to small economies. Mapping by location quotients requires employment data disaggregated by sector and by subnational spatial unit. Yet such data are absent or confidential in most SIDS, and the number of spatial units there is negligible.

The econometrics of cluster effects (Delgado, Porter and Stern, 2010, 2014) requires large numbers of firms, a control group and exogenous variation in public support. None of these conditions is met. Monographs provide depth on mechanisms without generalisation. They also favour successes, which feeds survivorship bias.

Three methods, by contrast, appear suitable. Qualitative comparative analysis (Ragin, 1987, 2008; Rihoux and Ragin, 2009), designed for intermediate numbers of cases, reasons in terms of necessary and sufficient conditions. It favours configurations over net effects and admits equifinality, which the diversity of island trajectories makes indispensable. The companion article follows this path.

Social network analysis (Giuliani and Bell, 2005; Giuliani, 2007; Ter Wal and Boschma, 2009) is all the more practicable as island networks are small and enumerable. It nonetheless requires managing the confidentiality inherent in close-knit societies. *Process tracing* (Beach and Pedersen, 2013), finally, makes it possible to reconstruct the causal chain through which an agglomeration is established.

It thus sheds light on who initiates, how governance stabilises and why some initiatives fail, where grey literature describes only outputs. Qualitative comparative analysis identifies configurations without establishing the mechanisms that link them to the outcome. *Process*

tracing fills precisely this gap. To borrow Hamdouch's (2008) conclusion, research will advance through the concomitant use of these complementary tools.

Conclusion

The article started from an observation. The cluster concept, whose indeterminacies Hamdouch (2008) has shown, is applied to SIDS on the basis of models whose founding assumptions are not satisfied there. The article has examined the relevance, usefulness and limits of these models. It has drawn on the frameworks of economic geography and small-state economics, then confronted the models with the stylised facts of documented island agglomerations.

Three lessons emerge. Smallness and insularity do not condemn productive agglomeration, as Point Lisas, Port Victoria and, on another scale, Singapore show. They nevertheless change its nature: the question is no longer why activities concentrate, but why they stay.

Schmitz's model then proves the most transferable of the three. It must be acknowledged, however, that joint action substitutes for external economies within it and that it can be replaced by the capital anchoring of a pivotal firm. The temporality of external triggers, finally, is the variable that the three models ignore. In SIDS, it most often decides the fate of agglomerations.

These lessons outline a research programme. The aim is to build and test a model of the anchored island agglomeration, which substitutes anchoring for density and imported rivalry for domestic rivalry. It would also substitute institutional critical mass for critical mass of firms, and the country-cluster for the subnational cluster.

If the cluster concept is to become, for SIDS, something other than an imported label, it will have to incorporate retention, anchoring and the time of rents.

Declarations

Declaration of interests. The author serves as National Coordinator of the APILE-Comoros project, implemented by UNIDO with European Union funding. The analyses and opinions expressed are solely those of the author. They do not necessarily reflect the positions of UNIDO or the European Union.

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Data availability. The sources used are public and referenced. The coding of the twenty-seven cases will be made available with the companion article.

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Appendix A. Cases used in this article

Case	Country and status	Trigger	Retention mechanism and trajectory	Sources
Manufacturing export processing zone	Mauritius, SIDS	1970 Act; Lomé preferences and MultiFibre Arrangement	Coalition of State, sugar capital and exporters; MEXA; diversification and survival	Alter (1991); Statistics Mauritius (2024)
Sugar sector	Fiji, SIDS	Sugar Protocol	Path dependence; weakening after the end of the Protocol	Medina Hidalgo et al. (2024)
Point Lisas Industrial Estate	Trinidad and Tobago, SIDS	Gas field; public investment	Non-relocatable asset; NGC joint ventures; shared services	Ministry of Energy and Energy Industries (n.d.); AEA (2024)
Indian Ocean Tuna cannery	Seychelles, SIDS	Tuna fishing zone; preferential access to the European market	State equity stake; deepwater port	EEAS (2024)
Rum	Barbados, SIDS	Long-established sugar sector	Terroir and reputation; four distilleries	Companion article
Nutmeg	Grenada, SIDS	Long-established smallholder sector	Hurricane Ivan shock (2004); slow recovery	World Bank (2005)
Clothing	Fiji, SIDS	SPARTECA; Multi-Fibre Arrangement	Weak retention; contraction after 2005	Storey (2006)
Yazaki wire harnesses	Samoa, SIDS	Foreign investment; Australian automotive outlet	No retention; closure in 2017	Automotive World (2017)
Bananas	Windward Islands, SIDS	European banana regime	WINFA and fair trade certification; decline of the sector	Companion article
Cocoa	Sao Tome and Principe, SIDS	Support programme; partnership with Kaoka since 2001	Foreign pivotal firm; CECAB cooperative	Kaoka (n.d.)

Coffee	Timor-Leste, SIDS	Donor programme; cooperative	Arrangement projected from outside	Companion article
Ylang-ylang, vanilla, cloves	Comoros, SIDS	Donor programmes, including APILEComoros	Arrangement under construction; single national sector	UNIDO (n.d.); Enhanced Integrated Framework (n.d.)
Compete Caribbean programme	Caribbean, regional arrangement	Donor programme	Variable results depending on cluster maturity	Technopolis Group (2016); Rabellotti and Conz (2023)
Iceland Ocean Cluster	Iceland, counterpoint	Entrepreneurial initiative (2011)	Collective organisation; valorisation of by-products	Sigfusson (2020)
Salmon farming	Faroe Islands, counterpoint	Coastal resource	Sectoral regulation; three companies	Companion article
Limassol maritime services	Cyprus, counterpoint	Legal and tax regime for shipping	Jurisdiction	Companion article
Jurong Island petrochemicals	Singapore, SIDS, limiting case	Proactive public policy; foreign investment	Strategic coupling; shared infrastructure	Huff (1995); Yeung (2016)

Note: the full list of the twenty-seven cases, their calibration and their coding appear in the companion article (Saïd Attoumane, 2026).