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Three biases that impede local content development

Seeing through the illusions

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Executive summary

Governments in developing economies are increasingly crafting policies to expand the share of local goods and services in large infrastructure projects worth trillions of dollars. Doing so can boost growth, create jobs, and support national economic strategies. However, many governments have a sense of urgency that, although commendable, can lead to short-sighted and counterproductive policies.

Specifically, there are biases that can interfere with robust, fact-based analysis and policy design. With regard to local content development policymaking, there are three deeply rooted illusions:

- ***False aggregation of demand.*** Policymakers tend to overestimate the localization potential from a given product category, failing to factor in the huge disparities in sizes, designs, and costs of goods in that category.
- ***A fixation on familiar objects.*** Policymakers tend to focus disproportionately on familiar product categories, such as consumer goods, wind farms, or solar panels, rather than lesser-known goods and industries that hold greater potential to create value.
- ***Absolutist target-setting.*** Policymakers aim for higher percentages of local content without analyzing the underlying economic value created. Some inputs will always be cheaper to import.

Overcoming these biases will require analytical and behavioral safeguards that complement and reinforce each other. Regarding analytical measures, policymakers need to develop a detailed view of procurement spending, establish a baseline of local supply chain capabilities, and quantify the trade-offs from specific initiatives. As for behavioral measures, policymakers must be aware of biases, encourage dissent and constructive debate, and require adversarial reviews of the policy recommendations.

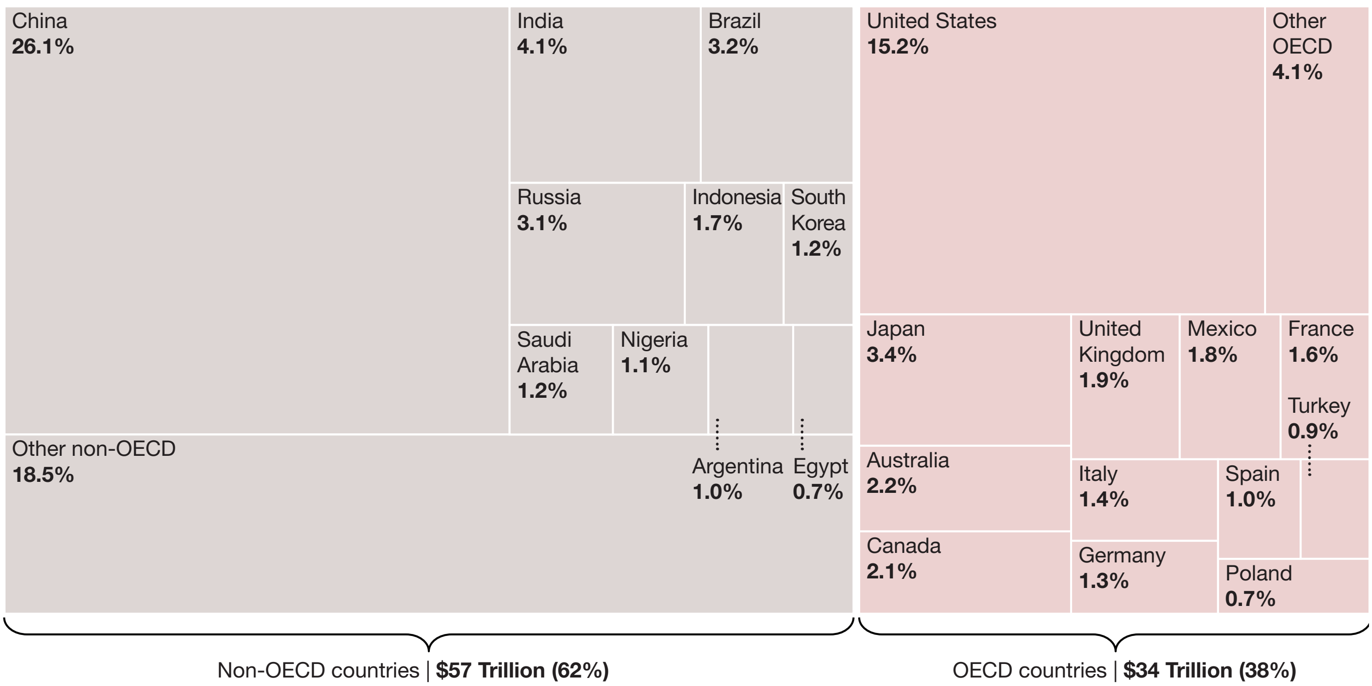
The rise of local content development policies

The sourcing of manufactured goods and services from within the local economy continues to play a central role in the industrial policies of a growing number of governments, particularly in developing countries. The trend toward local content requirements reflects an increasing recognition that the trillions of dollars that governments spend on mining, oil and gas, power, water, and transportation infrastructure could potentially fuel economic growth, create jobs, and support broader national strategies.

The countries that are the keenest on local content development are also those spending the most on infrastructure. Between 2008 and 2017, countries from outside the Organisation for Economic Co-operation and Development (OECD) spent US$13 trillion on critical infrastructure, compared to $9 trillion for OECD countries. In the coming 20 years, this gap will widen, with non-OECD states projected to spend more than $57 trillion on infrastructure projects, compared to $34 trillion by OECD countries (*see Exhibit 1*).

Exhibit 1
Infrastructure spending is a significant economic opportunity, particularly in non-OECD countries

Projected infrastructure investment by country (% of global total, 2019–2038)



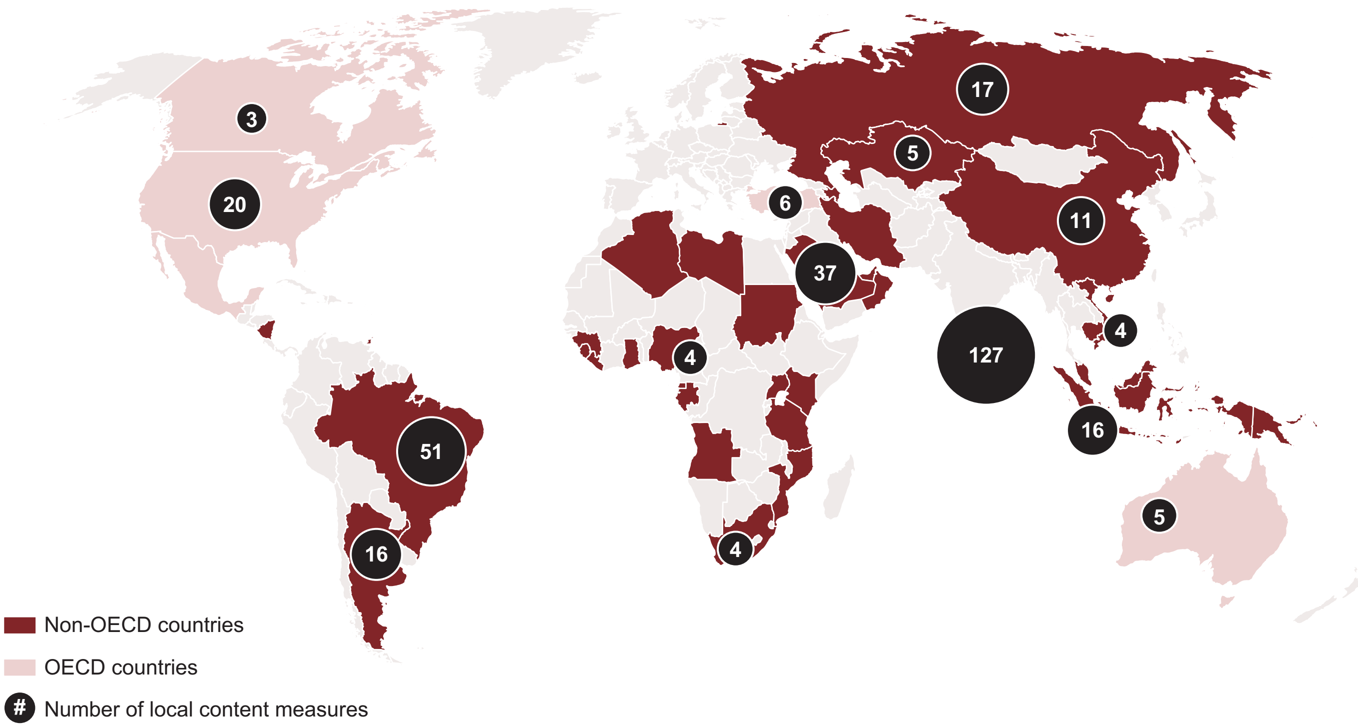
Source: Oxford Economics; Rystad; Strategy& analysis

In conjunction with this spending, policymakers in non-OECD countries have increased their commitment to promote localization of their infrastructure spend. Nearly 300 local content requirements measures are currently in place in non-OECD countries (*see Exhibit 2, page 6*).

Local content requirements vary across sectors and geographic markets. For example, Indonesia requires that up to 71 percent of electrical power infrastructure spending come from local suppliers, along with as much as 50 percent of expenditure on equipment used in wireless broadband services and base stations. Brazil has steadily raised its local content requirements from 30 percent to 65 percent on offshore deep-water oil and gas exploration and development projects, across multiple bidding rounds. In Saudi Arabia, Saudi Aramco aims to achieve 70 percent localization by 2021 for its In-Kingdom Total Value Add (IKTVA) program, which puts local content at the heart of the oil giant's procurement process and makes it a requirement for doing business with it.[1]

Exhibit 2
Non-OECD countries are implementing a larger number of local content measures

Countries with local content measures (2018)



Source: Hanna Deringer, Fredrik Erixon, Philipp Lamprecht, and Erik van der Marel, "The Economic Impact of Local Content Requirements: A Case Study of Heavy Vehicles," European Center for International Political Economy, January 2018 (http://ecipe.org/publications/the-economic-impact-of-local-content-requirements/); World Bank; Strategy& analysis

Policymakers in developing countries are justifiably keen to derive maximum economic value from massive public expenditure. Still, creating a policy framework for local content development that nurtures economically sustainable and internationally competitive domestic industries has proven remarkably challenging. A mounting sense of urgency and public expectations of immediate job creation, national business support, and non-resource-based GDP growth typically drive local content development policies. Urgency comes, however, with a host of cognitive biases and distortions that interfere with objective, fact-based judgment. The resulting policy incoherence can thwart the achievement of long-term national goals.

Illusions, biases, and distortions

Behavioral economists and psychologists have long recognized that a number of cognitive biases, inherently human information processing errors, affect individuals in day-to-day decision making. Trained, seasoned, and seemingly objective professionals in the administrative and policymaking arena often succumb to the same set of unconscious biases in reasoning and evaluation. The result is policies that do not meet their objectives.

How behavioral science can help policymaking

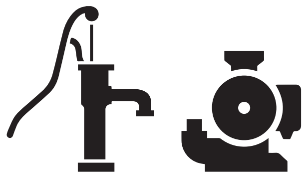
Governments in the Gulf Cooperation Council (GCC)[2] are implementing ambitious programs of economic, environmental, and social transformation. However, such large-scale initiatives run the risk of falling short of expectations, because they rely upon citizens making certain choices that seem rational to policymakers but may be unappetizing to the public. This is because people often have cognitive biases, or natural tendencies to resist change, even when this goes against their best interests. Of course, it is not just the public that has cognitive biases — policymakers also have them. To counter such biases, and ensure that new policies are successful, many countries are integrating behavioral science into their policymaking processes. Behavioral science can also help policymakers understand their own hidden biases.

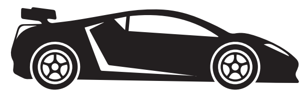
Behavioral science combines insights from economics, neurology, psychology, and sociology to create messages that encourage people to take desired actions. The approach has been successful in achieving policy objectives in areas related to environmental sustainability, healthy lifestyles, and civic engagement. These behavioral interventions are relatively inexpensive and easy to adjust to improve outcomes. To capitalize on the approach, governments in the region are beginning to create centralized behavioral insights units, which can begin developing capabilities, gather data and insights, and choose the right behavioral tools to apply.

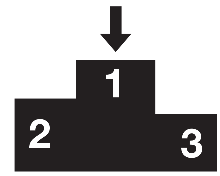
Specifically in the context of local content development policymaking, three illusions that are deeply rooted in cognitive biases impede local content policies (*see Exhibit 3, page 8*).

Exhibit 3

Policymakers should guard against the three pitfalls of local content strategies







	False aggregation	Object fixation	Absolutism
Local content policy distortions	Lack of specifics in product categories leads to overestimation of localization potential. For example, valves can be small, plastic, and mass-produced or large, specially designed, and extremely expensive	Familiar objects are prioritized over more attractive components or intermediate products	Higher percentages of localization of spend are considered more desirable regardless of value creation
Underlying cognitive bias	**Confirmation bias**	**Salience bias**	**Optimism bias**

Source: Strategy&

False aggregation of demand

Confirmation bias, the overweighting of evidence consistent with a favored belief, manifests itself in local content development policies as a persistent tendency to overestimate the localization potential of certain products. Usually this is due to vague categorization that leads to a lack of specifics and detail. For example, a strategy may identify products like pumps, motors, or valves as categories in which aggregating demand across several state-owned enterprises offers significant opportunities for localization. Such an approach neglects the reality that even the simplest of products can exhibit a significant diversity of sizes, materials, and designs. A valve, for example, could be anything from a quarter-inch plastic turn valve to a large-diameter, nickel-chromium, double-flange butterfly valve. One sells for pennies whereas the other requires precise engineering and can cost tens of thousands of dollars. Grouping two such disparate objects into the same category creates the illusion of a large market opportunity where none exists.

Fixation on familiar objects

Salience bias, the tendency to focus on familiar concepts, often draws the attention of policymakers to more recognizable end-products like solar panels, wind turbines, automobiles, and household appliances. Fundamental base industries, unfamiliar intermediate products, and obscure sub-components are often overlooked. For example, several countries favor domestically assembled end products like solar panels by exempting the imported sub-components (e.g., solar modules) from duties. Paradoxically, such a policy inadvertently disadvantages domestic manufacturing of products further up the value chain, such as solar cells. The evaluation of localization policy success should be measured in terms of incremental value creation, not eye-catching trophies.

Absolutist target-setting

Optimism bias — a partiality for positive expectations divorced of context and freed from nuance — often colors the lens through which policymakers view local target setting. Some government administrators may consider higher percentages of local content more desirable without a clear understanding of whether they create economic value. Imposing local content requirements creates value for the national economy up to a certain threshold. Thereafter, requirements may actually destroy value. The percentage of economically beneficial local content could increase with time as the capabilities of the domestic industrial supply chain progress, but it will naturally stop short of 100 percent. Some inputs will always prove cheaper to import than to build locally.

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Removing biases from local content development policies

The exact quantitative impact of cognitive biases on local content development policy is difficult to measure — yet they clearly impede objective analysis and decision making and lead to opportunity costs. Moreover, the magnitude of government procurement spending indicates that the stakes are very high. It is especially important for policymakers to pause and review their existing local content development activities. Their decisions on local content development can have wide-ranging, difficult-to-reverse effects on long-term economic growth, productivity, and national competitiveness. Policymakers should ask if their decision-making processes have sufficient mechanisms to check and correct for biases and blind spots.

Based on our experience, a set of safeguards can improve the quality of such decisions and the underlying analysis. These fall into two categories, behavioral and analytical, which complement and reinforce each other (*see Exhibit 4*).

Exhibit 4

Analytical and behavioral safeguards are needed to improve the quality of local content policymaking

Analytical safeguards

- Detailed, multi-level view of procurement spend
- Realistic baseline of local supply chain capabilities
- Quantification of economic value-add

Behavioral safeguards

- Awareness and eradication of biases
- Obligation to dissent and foster constructive debate
- Adversarial review and external validation

Source: Strategy&

Analytical safeguards

A few analytical guidelines can help policymakers establish basic quality standards for local content development studies and to ensure that their analyses are robust.

Develop a detailed and accurate view of procurement spend and domestic market sizes.
An effective local content policy cannot be built on averages. Proper analysis requires a detailed, multi-level view of sub-industries and product categories, and an understanding of manufacturing processes and markets. Through this analysis, governments can disaggregate products at a logically meaningful level and expand the universe of targeted manufacturing activities beyond finished products to cover components and intermediate products.

In many policymaking organizations, spending data are dispersed across multiple, incompatible systems, and data quality is usually poor. However, governments can still use statistical sampling techniques and expert estimates to build more detailed analytical models, with data structures that can be updated easily as the necessary data become available.

Conduct a realistic and robust baseline of existing capabilities within the local supply chain.
Local content development strategies must be grounded in the realities of local industrial supply chains. This requires a baseline of the current capabilities of local businesses and a realistic assessment of their development potential in the short to medium term. Again, such an understanding of the local industrial landscape can be built gradually over time. Policymakers should focus on developing a comprehensive structure that uses the best available information, and then deploy processes that constantly test and improve that information.

Quantify and optimize the economic value from localization policies.
Measurement forms the basis for rational policymaking and coherent actions that lead to the achievement of localization goals. The selection of a few accurate, comprehensive, and easy-to-administer metrics enables policymakers to validate their decisions and ensures alignment between day-to-day execution and strategic objectives. Rather than chasing potentially misleading metrics like expenditure, policymakers should focus on broader measures of full economic impact and evaluate the trade-offs among various options.

Local content development strategies must be grounded in the realities of local industrial supply chains.

Behavioral safeguards

Like any good set of tools, the effectiveness of the abovementioned analytical safeguards ultimately depends on how they are used. Unless the policymaking organization exhibits a few key behaviors, the best analytical tools and techniques will not lead to constructive debate and healthy decision making.

Be aware of dysfunctional, biased decision making, and replace that with a more rational and systematic approach
An awareness of cognitive biases can help policymakers consciously identify and replace ingrained thinking and behaviors. For example, teams can jointly devise a short briefing or charter before meetings with reminders and directives to increase awareness of the most common cognitive biases, while framing new issues, analyses, or policy recommendations.

Encourage dissent and constructive debate
Hierarchy in any organization can smother dissent, especially in governmental entities. Overcoming cognitive biases often relies on the ability of junior employees — who have the most direct experience with how policies are actually working — to speak their minds openly and to be direct and assertive in defending their evaluations and assessments. Effective leaders should welcome a healthy working tension and be wary of perfunctory consensus and agreement. The healthcare industry provides a good example of this: it tends to encourage questioning and constructive dissent, in part because patient treatment may require multiple specialists to cooperate.

Governmental organizations are not alone in struggling to encourage internal debate. There have been similar problems in the airline industry, in which some carriers suffered catastrophic failures in part because of a culture of not questioning the pilot and being closed to external advice. These were particular problems at Korean Air, which responded by bringing in foreign advisors and changing the "cockpit culture" with new team protocols and a transformed corporate culture.[3] In many organizations, leaders will need similarly to foster actively a culture in which dissent is more than just tolerated, it is strongly encouraged.

Unless the policymaking organization exhibits a few key behaviors, the best analytical tools and techniques will not lead to constructive debate and healthy decision making.

Require adversarial reviews of local content policy recommendations by external expert commissions and market participants
Many are the uses of adversity. If policymakers know that they will have to defend their analyses and recommendations against an external critical review, internal deliberations should improve. An independent review, or open consultation with the local and international investor communities, forces a more thorough examination of assumptions and choices in order to explain them satisfactorily.

Some government bodies outside the realm of local content policymaking, particularly scientific agencies, deliberately use mechanisms to remove bias and to challenge ideas. Some use "murder boards," in which teams are explicitly tasked with identifying holes in the logic and analysis of a particular policy. In the U.S., the National Institutes of Health (NIH) and National Science Foundation use a rigorous review process to eliminate biases in research. For example, in its grant-making the NIH uses a so-called dual review.[4] Applying the same practices to local content development can create the right tension and expose sloppy assumptions and poor analysis.

Conclusion

The right local content policies can help developing economies capitalize on the trillions of dollars they will spend on infrastructure projects over the next two decades. However, good intentions are not enough. Policymakers must understand the biases that cloud their analyses and decision making. Armed with a greater awareness of such biases, government entities can dramatically improve the quality of their analysis and the effectiveness of local content development policies. Only by changing the way they think will they be able to ensure that their economies benefit.

Endnotes

[1] Georges Chehade, David Branson, Dr. Yahya Anouti, and Hitesh Chelawat, "Rethinking oil-field partnerships in Saudi Arabia: Changing roles for the new era," Strategy&, 2017.

[2] The GCC countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

[3] Bruce Stanley, "Korean Air Bucks Tradition To Fix Problems," *The Wall Street Journal*, January 9, 2006 (https://www.wsj.com/articles/SB113676875085241209).

[4] National Institutes of Health Office of Extramural Research, NIH Grants Policy Statement, "2. The National Institutes of Health as a Grant-Making Organization, 2.4 The Peer Review Process" (https://grants.nih.gov/grants/policy/nihgps/html5/section_2/2.4_the_peer_review_process.htm).

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