Wilson Perumal & Company

GLOBAL MARKETS COMPLEXITY INDEX 2019

Navigating across borders in a complex world

Developed for The Wall Street Journal

CONTENTS

ABOUT WILSON PERUMAL & COMPANY

Wilson Perumal & Company (WP&C) is a premier strategy consultancy that helps clients navigate an increasingly complex business environment. For the last decade, WP&C has served multinational corporations, private equity firms, and government entities, supporting their growth agendas. With operations in North America and Europe, our focus is helping these organizations develop and execute strategies for successfully competing in the Age of Complexity. We are laser-focused on client value and results—our projects often yield a 20–40% improvement in EBITDA.

Co-founded by experienced consultants and bestselling authors Stephen Wilson and Andrei Perumal, we are not only practitioners but also thought leaders. We have published two books on competing in a complex world: *Waging War on Complexity Costs* and *Growth in the Age of Complexity* (McGraw-Hill).

Our services range from growth strategy to business simplification—whether that be your portfolio or your business operations—to organizational transformation.

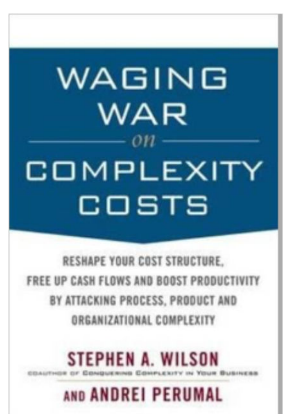
Our work is informed by a distinct perspective and supported with unique methodologies. Our *Square Root Costing* methodology helps businesses understand where exactly they are making money by accounting for complexity costs to understand the true profitability of their products, services, and customers. Our yardstyck® cultural assessment tool is a methodology for measuring organizational culture, a first step to transforming it. The Global Markets Complexity Index is just the latest R&D effort in our pursuit of insights to help businesses navigate international expansion in the Age of Complexity.

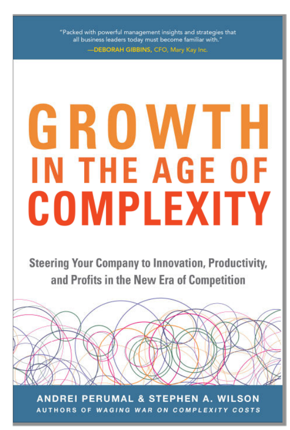
Our team is united in support of this mission. Given our focus on complexity, our employees have deeper knowledge and more experience on this topic than any other consultancy. This translates into faster insights, and ultimately better results.

For more on our services, see page 23. Learn how we can help you—GMCI@wilsonperumal.com.

"Perumal and Wilson offer a nuanced and evidence-based analysis of the paradox of complex growth, but they move beyond description to offer practical and field-tested advice on how to avoid the traps they identify."

Don Sull, Senior Lecturer
MIT SLOAN SCHOOL





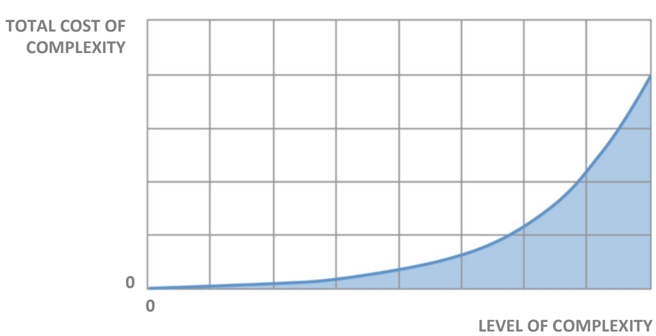
UNDERSTANDING COMPLEXITY

Given that the focus of this report is the complexity associated with new market expansion, we are laying out here a brief primer on complexity. The world has become vastly more complex in the last decade, with the emergence of new technologies, greater customer variety, global operations, and shifting regulations. In many cases, this is good news for customers—more choice and more convenience. But it represents a substantial shift for companies, many of which are still operating with outdated frameworks and mindsets.

Complexity arises at the points of intersection and increases with the number of different things you have in your business. This includes the number of products and services you offer, the number of steps in a process, the number of countries you operate in, the number of different store formats you may have, and so on.

As complexity grows, the costs—and other impacts—of that complexity grow geometrically. With more complexity, service levels deteriorate, customers become overwhelmed by too many choices, and a company's resources are spread too thin. As we add more complexity to a business, we also increase the potential number of interactions.

COMPLEXITY CURVE



As the complexity of a system grows, the relationships and linkages between the parts become ever more important. With only two items, there is only one possible link or interaction between them. Increase this to four items, and the number of possible links grows to six. At 100 items, there are nearly 5,000 links! Unfortunately, the cause and effect are not always clear in organizations. In fact, what we've found is that many of the actions that companies take in a bid to drive growth fundamentally impede their ability to grow. We named this the Growth Paradox.

For example, consider the food services company that expanded into more than 100 countries over the course of eight years with a focus on revenue growth. But the business had not understood the complexity—and cost—of expanding into these new markets. The net effect was overspending to attain poor positions in weak markets, which led to margin declines and ultimately impeded their ability to invest, compete, and grow. To recover their top-line growth, the business exited more than 50 of those markets.

So the challenge is twofold for companies: simplify to grow, and grow with scale. Growing with scale requires diligence and discipline in how you make expansion decisions—resisting the 'Sirens of Growth,' as we refer to them. Going outside a core market may represent the logical expansion of a territory: if you have the leading position at home, why not easily capture new areas abroad? But unfortunately, great success in one arena is rarely an automatic guarantee of success elsewhere. The answer to this is **not** to just stay home. But rather build your understanding of the sources and impacts of complexity, and develop capabilities to better assess whether such a move creates scale or fragments it.

FOREWORD

Navigating across borders in a complex world

Few decisions are more significant for a business than the decision to expand overseas. Executed well, such a move can provide a company with access to new markets, customers, and revenue streams. Done poorly, it can lead to a world of headaches and even threaten the core business.

Unfortunately, for many companies the process for identifying target markets is ad hoc and unstructured, more anecdotal than rigorous, and lacking a consideration of the additional complexities associated with operating in a new market—and there can be many. For example, it's not unusual for a company to underestimate the difficulty of marketing to a new consumer base, to struggle navigating a complex regulatory environment, or to see costs skyrocket due to unanticipated operational challenges.

Nonetheless, despite the risks, seeking new markets for your products and services outside your base region is a critical lever for growth in a global economy. Whether it's a U.S. company looking to China, or an Australian company considering Europe, geographic expansion is more important than ever as a means to achieve scale. For many corporate leaders, it's not a matter of **whether** to expand into new countries, but a matter of **where** and **how**.

Developed for *The Wall Street Journal*, the Global Markets Complexity Index (GMCI) seeks to help decision makers by introducing a new framework for assessing geographic expansion, rooted in an analysis of market, operational, and regulatory complexity across 83 countries. These three categories—and the underlying subcategories detailed in this report—represent the most important dimensions of complexity that businesses encounter when operating in foreign countries.

MARKET
The complexity of engaging with target customers and converting to sale

OPERATIONAL
The complexity of producing and transporting goods and services

REGULATORY
The complexity of adhering to financial and regulatory requirements

Based on the analysis, we developed country profiles informed by different aspects of complexity—for example, *high market complexity + low operational complexity + low regulatory complexity*—and classified countries into eight distinct groupings using machine learning. These groups are the crux of the GMCI, informing business leaders of what they may expect expanding into each country and which countries share similar complexity profiles. Past success in one country may suggest an opportunity in another country in the same group.

At each end of the spectrum you'll find the usual suspects. **Group 1 (MVPs)** is comprised of countries with very low complexity across the board and includes most major advanced economies, including U.S., U.K., Australia, Germany, Japan, and the Nordics. **Group 8 (Only the Brave)** is at the other end of the spectrum with high complexity in every area. This group includes Nigeria and Pakistan—both relatively large economies that represent viable market opportunities for the right business with the right approach, but challenging for the uninitiated.

FOREWORD (continued)

For multinationals seeking growth beyond the predictable destinations, more interesting, perhaps, is what sits between the extremes. These groups—such as **Group 4 (Walled Gardens), Group 5 (Upstream Paddlers)** and **Group 6 (The Builders)**—all have specific complexity challenges. But if the complexity is understood and mitigated as part of the growth plan, there is also ample opportunity.

If you're operating in one of these countries already, you may be interested in discovering analogs. One of the primary use cases for the GMCI is exactly that—think of it like a Netflix recommendation. If you're already successfully operating in a Group 5 country, such as Morocco, then your company has already learned to thrive in a market with high operational complexity, and you may do well in other Group 5 countries, such as Tunisia or Vietnam.

On the flipside of expansion, we have contraction. Many companies today find themselves overextended after a decade of unmanaged growth, with operations in unprofitable markets and resources strained by complexity challenges. For these companies, the right decision may actually be to exit markets and consolidate their country portfolio. The GMCI provides a framework for identifying geographies that do not align with a company's strengths or create too many unique management needs. These outliers, frequently 'the problem children,' may be candidates for exit to free up resources better deployed elsewhere.

There are also insights here for governments. We have quantified and given shape to discussions happening in boardrooms around the world. Make no mistake, the complexity of the regulatory and operational environment has a direct bearing on a multinational's decision to enter into your market—or look elsewhere! Policy choices that ultimately attract or deter foreign investment are reflected in the GMCI.

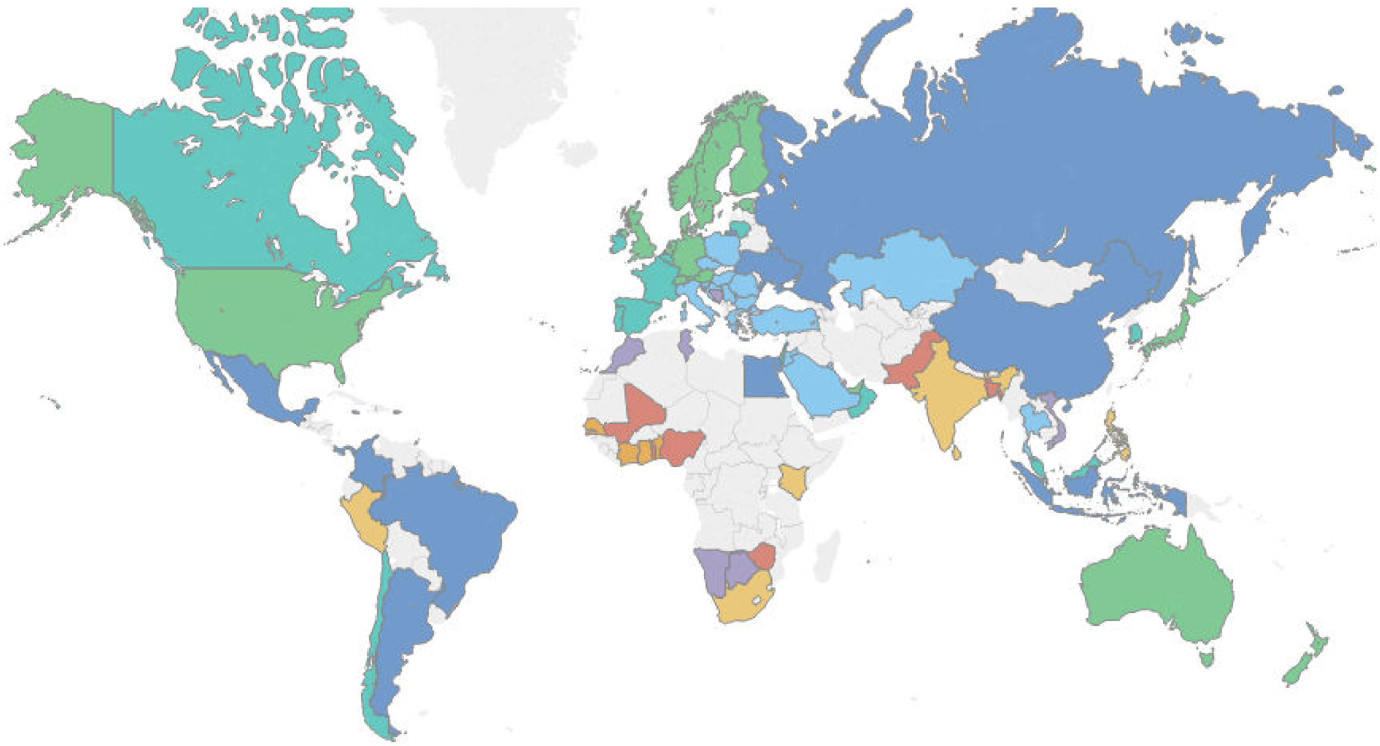
Other insights emerge with the GMCI data. For one, bigger isn't necessarily better (from a complexity perspective). The 20 largest economies in the world are spread across six different groups. Secondly, geographic proximity is rarely an indicator of similar levels of complexity, so expanding 'next door' is not as easy as it sounds. Thirdly, there are plenty of multinationals that operate successfully across all GMCI groups. The key to doing this is to understand the different capabilities required in each new country in order to manage its complexity, deploying the right products, processes, operating model, and people. Appointing leadership that has experience with a similar country archetype is critical.

We hope you enjoy WP&C's Global Markets Complexity Index report, plus our interactive dashboard at www.wilsonperumal.com/GMCI, and find it thought-provoking. We look forward to discussing the findings with you in the year ahead and welcome your comments and questions at GMCI@wilsonperumal.com.

Stephen Wilson
Managing Partner
Wilson Perumal & Company

COMPLEXITY GROUPS AT A GLANCE

The map below represents the output of the GMCI market, operational, and regulatory complexity scoring and subsequent clustering based on those scores. An interactive map is available at www.wilsonperumal.com/GMCI.



GMCI COMPLEXITY GROUPS

1	2	3	4	5	6	7	8
MVPs	UTILITY PLAYERS	MIDDLE OF THE PACK	WALLED GARDENS	UPSTREAM PADDLERS	THE BUILDERS	THE SPECTATORS	ONLY THE BRAVE

GMCI AT A GLANCE

- **Unique capabilities and skillsets are required** to manage different types and levels of complexity—these considerations are often overlooked as companies look to expand internationally
- **Moving to the right countries will deliver scalable growth** by leveraging current capabilities, while moving to the wrong countries will erode scale, decrease margins, and increase risk
- **The GMCI helps executives navigate international expansion** by highlighting countries with complexity profiles similar to countries in which they already successfully operate
- The **eight GMCI country groups were developed by assessing countries across 31 measures** of market, operational, and regulatory complexity and identifying groups with similar complexity profiles

HOW TO USE THE GMCI

FOR CORPORATE LEADERS

- Use the GMCI as a conceptual framework for thinking about complexity at a national level
- Identify adjacency opportunities using the GMCI groupings, which offer more depth beyond typical considerations like economic output and geographic location
- Consider your company's capability with each of the three dimensions of complexity—market, operational, and regulatory; the GMCI treats all three equally, but your firm may prioritize regulatory stability over market accessibility

FOR COUNTRY LEADERS

- Use the GMCI to understand your starting point in terms of market, regulatory, and operating complexity
- Understand how the level of complexity in your country may affect your attractiveness to external corporate entities
- Identify levers that you can pull to reduce complexity and improve specific facets of the business operating environment

HOW NOT TO USE THE GMCI

- As a proxy for economic opportunity; several indices and metrics measure development levels and disposable income; the GMCI describes complexity, not macroeconomic trends
- As an ordinal ranking of countries from best to worst
- As a replacement for thorough due diligence work; while the GMCI offers useful insights, entering a new country requires deep research and planning

CEO INSIGHTS

1 BIGGER ISN'T ALWAYS BETTER

The size of the potential market is a key factor in any decision to expand geographically, but it is rarely a good indicator of the level of complexity. So, while market size indicates the potential prize, it has little direct bearing on a company's ability to be successful in that market.

According to our analysis, **the 20 largest economies in the world are spread across six different GMCI groups.** They vary from countries like Germany and Japan, with low complexity across all categories, to countries like India, with *high* market and *high* regulatory complexity. The allure of India's large population, fast growth, and relative wealth is attractive to many Western companies, but there have also been high profile retreats, such as Walmart and General Motors. Success in these situations requires the company to proactively change up the operating models that worked in low complexity countries to ones better suited to a high complexity market.

2 DON'T FORGET THE SMALL JEWELS

Conversely, in some aspects of complexity, small countries have inherent advantages—there tends to be less diversity in language and consumer tastes, the population tends to be concentrated in urban areas and easier to reach, and there are fewer challenges transporting materials and products.

In some cases, like Hong Kong and Singapore, those advantages have been further amplified by the establishment of a business-friendly regulatory model with clear and consistent application**. These small jewels are frequently 'islands of simplicity' in any given region**, enabling them to become—in addition to good markets in their own right—platforms for regional coverage. Other examples would include the Nordics, Ireland, Estonia, and UAE.

3 CLOSE, BUT NO CIGAR

Geographic proximity can be another red herring. **The linguistic, cultural, and logistical advantages of moving to a nearby geography are an obvious enticement, but it can be easy to focus too much on similarities and overlook the very real differences.** As our analyses show, even geographically close countries can vary significantly in the types and levels of complexity that characterize a market, which can erode the more obvious benefits of geographic proximity.

While some GMCI country groups have geographic concentrations (Western Europe in Groups 1 and 2; Middle East and Eastern Europe in Group 3), location is by no means an analog for complexity. Southeast Asian countries are spread across 7 of the 8 GMCI complexity groups. The US, Canada, and Mexico, all North American countries, are in three different groups.

4 STRENGTH IS NOT UNIVERSAL

As you move from one GMCI group to another, the basis of competition changes. Companies that succeed in one group may fail in another. In low complexity countries, with more stable environments, the onus is on consistently serving sophisticated customers better than your competitors. Fewer resources are spent on navigating complex regulation or on finding ways to shore up poor infrastructure.

It may be tough for a company that only competes in Groups 6, 7, or 8 to compete in Groups 1 and 2. But **success in countries in Groups 1 or 2—where many multinationals are based—does not automatically confer the capabilities to compete across all other groups. Strength is not universal across all groups.** These organizations may have deep resources and sophisticated capabilities, but will nonetheless face real challenges with geographic expansion if they do not explicitly understand and adapt to a different basis of competition.

CEO INSIGHTS (continued)

5 ‘GOOD’ COMPLEXITY & ‘BAD’ SIMPLICITY

In our work with clients, we often clarify that, within companies, there is ‘good’ complexity and ‘bad’ complexity. Good complexity is the variety that brings value to customers, and for which they will pay. The same can be said for countries. **A reduction in a country’s complexity is usually a good thing, but numbers require context.**

For example, in recent years Lebanon’s operational complexity score has improved as the supply base has become less fragmented. However, this change may be driven by the fact that firms are exiting the country, rather than by consolidation—a hypothesis reinforced by the corresponding increases in regulatory and market complexity. You could think of this as ‘bad’ simplicity.

Similarly, South Korea saw an increase in its market complexity score in recent years, as buyer sophistication increased. While this creates different challenges for companies who compete in South Korea, it is also indicative of a growing market for luxury brands, which is great news for many companies.

6 REGULATORY COMPLEXITY IS KEY

Governments have a great deal of control over a country’s level of complexity and the attractiveness of the business environment to multinationals. Regulatory complexity is the easiest category for government leaders to impact quickly: establishing clear rules and applying them consistently will reduce regulatory complexity (see Russia and India in ‘Movers & Shakers,’ page 20). Tracking these movements is an important job for executives who need to manage risk, plan operations, and source new opportunities.

In some cases, regulatory complexity may be an early indicator of a positive development path. **In mature economies, regulatory and operational complexity scores are highly correlated; less so in developing economies**. Although early movements by the government to regulate their economy may temporarily increase regulatory complexity, this effort is often a key step in a developing economy that sets the stage for future economic growth.

7 BECOME AN ADJACENCY SKEPTIC

Countless multinationals successfully operate across GMCI groups. The key is to recognize that each group has a different complexity profile requiring different skills, and that your organization may need to adapt to successfully navigate these new challenges. Due diligence often considers market size, competition, financials, even the operational requirements, but rarely do companies think through the complexity inherent in a market, and whether that complexity is beyond their core capabilities.

Many companies act like ‘adjacency addicts’ until experience reveals that that a bad adjacency is worse than not expanding. **It is therefore essential that before launching a geographic expansion, a company understand the complexity of the target market and all of the challenges it may impose on the company’s current business model. In short, become an ‘adjacency skeptic.’** If the country expansion option still looks appealing, one way to de-risk the move is to ensure the right leadership is in place—someone who has previously led a business in a country with a similar complexity profile.

METHODOLOGY & SCORING

To build the GMCI, our team began with a high-level framework that laid out the three key elements of complexity that a company will need to understand in order to successfully operate in a new country—the country's market complexity, operational complexity, and regulatory complexity. We then broke each of these categories down into subcategories and identified what measurable factors would be used to calculate the individual scores.

After creating the framework for our thinking, we began compiling data from major macroeconomic sources, such as the World Bank, to build the quantitative base of our index. We ultimately sourced 31 individual factors from publicly available data sources. Because the individual metrics used a wide range of data types and had differing scales, we translated each factor into a relative scale from 1 to 100, in which a score of 1 represents the most complex country and a score of 100 represents the least complex country.

Scaling all of the factors used allowed us to combine, for example, urban population percentages and internet access rates into a single score. We assigned each factor a weight representing its importance within the subcategory, which was used to aggregate the individual factors into subcategory scores.

Similarly, each subcategory was assigned a weight within its category which was then used to aggregate the subcategory scores into the three primary scores for market, operational, and regulatory complexity.

In addition to normalizing scores on a 1–100 scale, other adjustments were made to prepare individual factors for aggregation and extract the most useful information from each factor. For example, a natural log transformation was used to linearize select data sets that displayed exponential differences between the best and worst performers, so as to minimize the influence of an individual factor beyond its intended weighting.

Once each country had a score in each complexity category—market, operational, and regulatory—we implemented a machine learning algorithm, k-means clustering, to organize the 83 countries into groups. This algorithm partitioned the countries into a pre-determined number of clusters by minimizing the variance between the clusters' constituent country scores in each of the three categories.

To determine the optimal number of clusters, we examined silhouette width, a measure of group cohesiveness, and also considered qualitative factors such as how useful the groupings would be to an executive team. Ultimately, we arrived at eight groups.

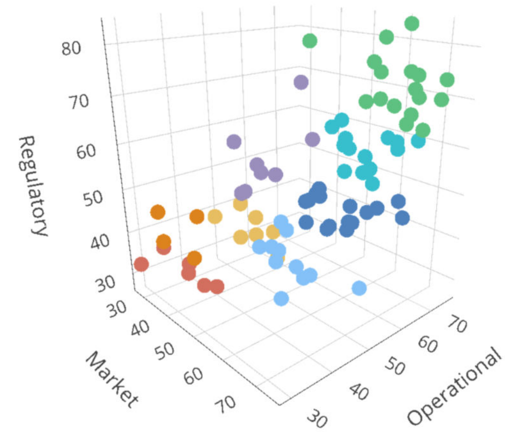
CATEGORIES	SUBCATEGORIES	FACTOR EXAMPLES
MARKET COMPLEXITY SCORE	Congruity	Income Inequality, Language Diversity, Net Migration
	Reach/Access	Urban vs. Rural Population, Internet Access
	Sophistication	Buyer Sophistication, Multinationals per Capita
OPERATIONAL COMPLEXITY SCORE	Import/Export	Time to Import/Export, Cost to Import/Export, Tariffs
	Supply Chain	Fragmentation of Competition, Freight Cost
	Building & Staffing	Manufacturing Base, Infrastructure, Quality of Work
REGULATORY COMPLEXITY SCORE	Ease	Regulatory Burden, Ease of Paying Taxes, Access to Credit
	Stability	Political Stability, Government Effectiveness
	Impartiality	Government Favoritism, Contract Enforcement, Property Rights

METHODOLOGY & SCORING (continued)

GROUPINGS

The ultimate goal of assigning scores to countries was to identify patterns of complexity—to conclude that operating in Country A is similar to operating in Country B—rather than to create an ordinal ranking from best to worst. We used machine learning, a k-means clustering algorithm, to create our eight country groupings.

An easy way to visualize this process is to think about each complexity category as an axis in three-dimensional space with countries represented by dots whose coordinates equate to their three complexity scores.



WHAT DO SCORES MEAN?

COMPLEXITY	SCORE
VERY LOW	100–67
LOW	67–58
MEDIUM	57–49
HIGH	48–40
VERY HIGH	39–0

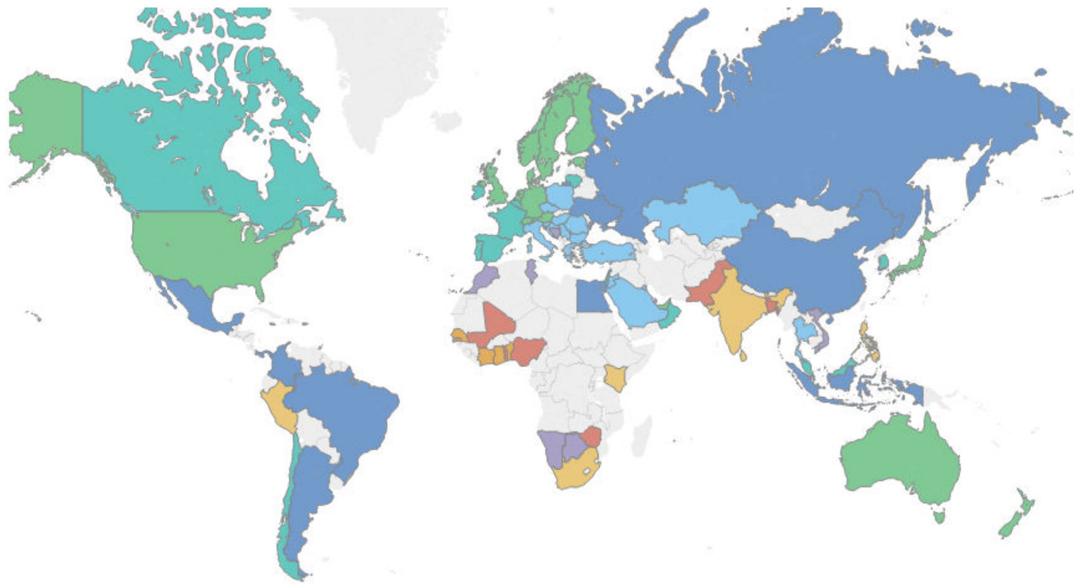
In this index, a high score represents positive attributes and lower complexity while a low score indicates a high degree of complexity in that dimension. In order to add clarity, scores were partitioned into buckets (very low to very high) based on quintile. These groupings allow comparison of country profiles and group profiles.

COMPLEXITY RANKINGS

		MARKET	OPERATIONAL	REGULATORY
GROUP 1	MVPs			
GROUP 2	UTILITY PLAYERS			
GROUP 3	MIDDLE OF THE PACK			
GROUP 4	WALLED GARDENS			
GROUP 5	UPSTREAM PADDLERS			
GROUP 6	THE BUILDERS			
GROUP 7	THE SPECTATORS			
GROUP 8	ONLY THE BRAVE			

EXPLORE THE COMPLEXITY GROUPS

The following pages explore the GMCI country groups and their unique complexity profiles. An interactive map featuring detailed group and country analyses is available at wilsonperumal.com/GMCI.



GROUPS

1 MVPs
2 UTILITY PLAYERS
3 MIDDLE OF THE PACK
4 WALLED GARDENS
5 UPSTREAM PADDLERS
6 THE BUILDERS
7 THE SPECTATORS
8 ONLY THE BRAVE

GROUP 1 MVPs

Australia
Austria
Denmark
Estonia
Finland
Germany
Hong Kong
Japan
Netherlands
New Zealand
Norway
Singapore
Sweden
Switzerland
UAE
United Kingdom
USA

GROUP 2 UTILITY PLAYERS

Bahrain
Belgium
Canada
Chile
France
Ireland
Israel
Lithuania
Malaysia
Mauritius
Oman
Portugal
South Korea
Spain

EXPLORE THE COMPLEXITY GROUPS (continued)

GROUP 3 MIDDLE OF THE PACK

- Bulgaria
- Croatia
- Czech Republic
- Greece
- Hungary
- Italy
- Jordan
- Kazakhstan
- Kuwait
- Poland
- Romania
- Saudi Arabia
- Serbia
- Slovenia
- Thailand
- Turkey

GROUP 4 WALLED GARDENS

- Argentina
- Brazil
- China
- Colombia
- Egypt
- Indonesia
- Lebanon
- Mexico
- Panama
- Russia
- Ukraine

GROUP 5 UPSTREAM PADDLERS

- Bosnia and Herzegovina
- Botswana
- Jamaica
- Morocco
- Namibia
- Qatar
- Tunisia
- Vietnam

GROUP 6 THE BUILDERS

- India
- Kenya
- Peru
- Philippines
- South Africa
- Sri Lanka
- Trinidad and Tobago

GROUP 7 THE SPECTATORS

- Benin
- Côte d'Ivoire
- Ghana
- Senegal

GROUP 8 ONLY THE BRAVE

- Bangladesh
- Mali
- Nigeria
- Pakistan
- Togo
- Zimbabwe

GROUP 1 MVPs

COMPLEXITY RATING

CEO BRIEF

This group of countries can boast of being the 'Most Valuable Players' (MVPs) because they are the all-around least complex countries in which to do business. MVPs have the lowest barriers to production and easy-to-reach markets, but be prepared to face demanding customers and saturated markets. These business-friendly, well-developed nations are fertile ground for expanding multinationals.

The MVPs are wealthy countries with large economies. You won't be surprised to see their names on the list but it is surprising which companies didn't make it into the lowest-complexity group (see Group 2). Be advised that success in an MVP country may not prepare a company to be successful in other higher-complexity markets.

ADVANTAGES

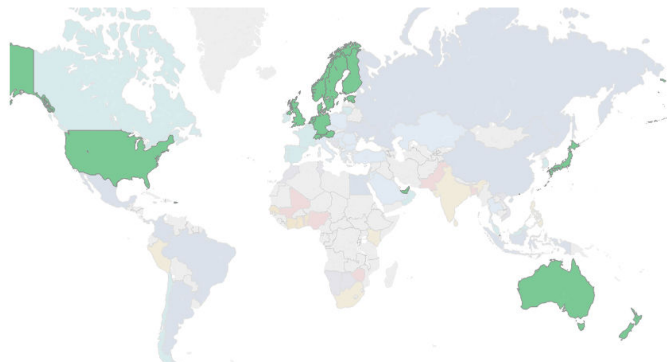
- Lowest complexity across the board
- Affluent markets with high GDP per capita
- Business-friendly regulatory environments
- Pure market capitalists

- Sophisticated consumers with high expectations for both price and value
- Attractive markets with well-established players make these countries highly competitive

CHALLENGES

COUNTRY LIST

Australia	Hong Kong	Sweden
Austria	Japan	Switzerland
Denmark	Netherlands	UAE
Estonia	New Zealand	United Kingdom
Finland	Norway	USA
Germany	Singapore	

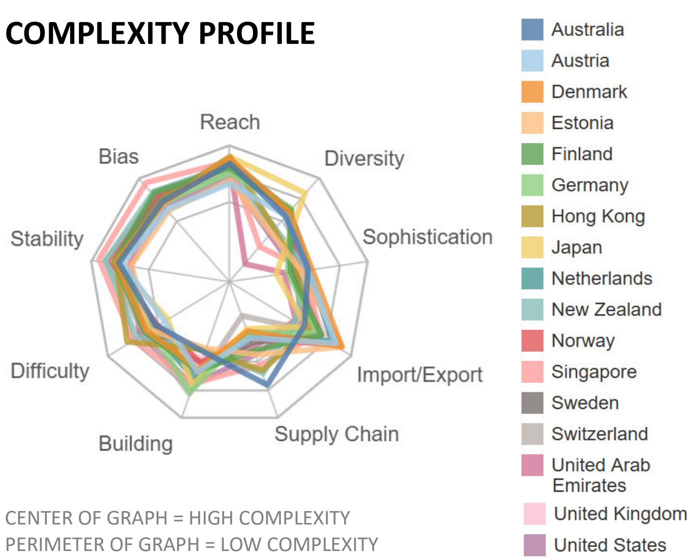


VISIT WILSONPERUMAL.COM/GMCI FOR INTERACTIVE MAP

KEY INSIGHTS

- MVPs are wealthy, capitalist, industrialized countries
- Rich targets for expanding multinationals
- Political stability supports highly-competitive markets
- Lowest complexity in all three major categories
- Sophisticated consumers require good branding, pricing, and value

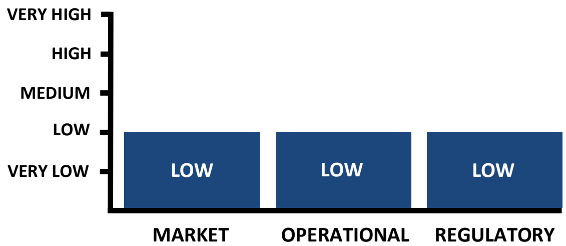
COMPLEXITY PROFILE



CENTER OF GRAPH = HIGH COMPLEXITY
PERIMETER OF GRAPH = LOW COMPLEXITY

GROUP 2 UTILITY PLAYERS

COMPLEXITY RATING



CEO BRIEF

In sports, ‘Utility Players’ are athletes who can competently play multiple roles—they aren’t the top players, but they are reliably proficient at most things. The GMCI Utility Players are wealthy countries with generally low complexity across the board, but have aspects of market, operational, and regulatory complexity that make them slightly more challenging than the MVPs.

Utility Players are near the top of the pack, but companies operating in these countries experience high levels of regulatory ‘friction.’ In most cases, this friction is the result of government policies put into place to provide stability for workers but which impacts the ease with which companies can do business.

ADVANTAGES

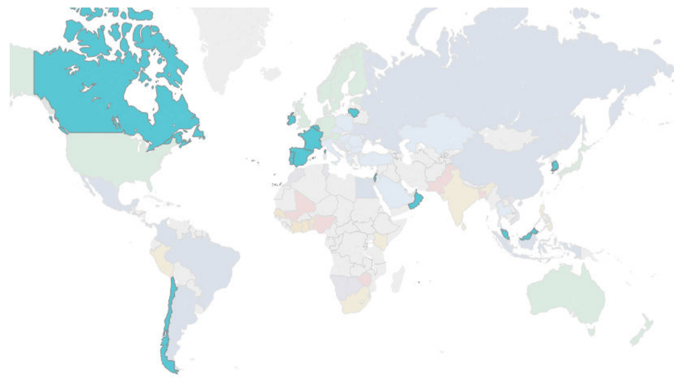
- The complexity characteristics fall into a narrower band than the MVPs—no extreme highs or lows
- Relatively low complexity across the board
- Reaching customers is very easy

- Regulatory friction diminishes business agility
- Sophisticated buyers are easy to reach but challenging to serve
- More regulatory bias and bureaucracy than the MVPs

CHALLENGES

COUNTRY LIST

Bahrain	Ireland	Oman
Belgium	Israel	Portugal
Canada	Lithuania	South Korea
Chile	Malaysia	Spain
France	Mauritius	

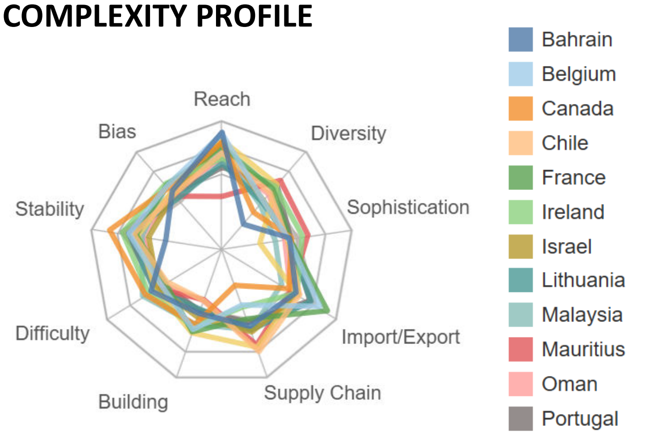


VISIT WILSONPERUMAL.COM/GMCI FOR INTERACTIVE MAP

KEY INSIGHTS

- Utility Players and MVPs have similar profiles, with competitive markets and sophisticated buyers
- Utility Players have lower highs and higher lows than the MVPs
- Easily-reached, attractive markets
- Regulation and government policies limit businesses’ ability to change and adapt quickly

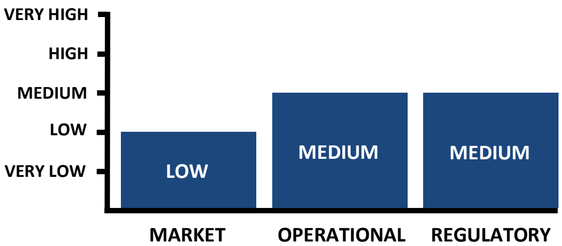
COMPLEXITY PROFILE



CENTER OF GRAPH = HIGH COMPLEXITY
PERIMETER OF GRAPH = LOW COMPLEXITY

GROUP 3 MIDDLE OF THE PACK

COMPLEXITY RATING



CEO BRIEF

'Middle of the Pack' countries have both complexity ratings in the middle of the spectrum and also have a geographic concentration in the Middle East and Eastern Europe. These countries have lower levels of operational and regulatory complexity than Group 4, but their markets are significantly smaller.

Middle of the Pack countries are some of the most developed countries within less developed regions. Their populations are relatively homogenous, but are rural which makes these markets harder to reach and sell to than the markets of previous groups.

ADVANTAGES

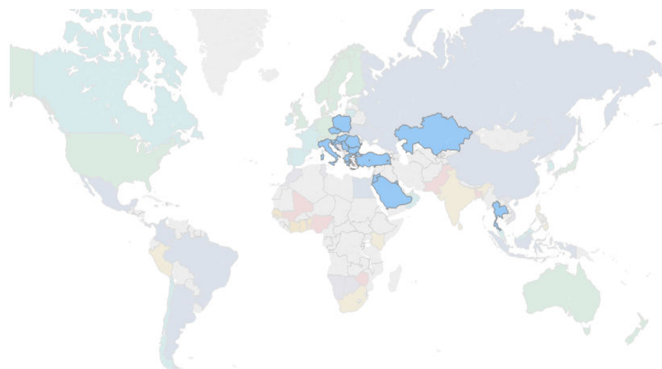
- Biased but stable regulatory environments
- Easier to market to less diverse populations
- Relatively stable governments
- Efficient trade practices with simple import and export processes

- Less internet access than previous groups
- Work force and infrastructure pose challenges in these least developed of the developed countries
- Significant rural populations

CHALLENGES

COUNTRY LIST

Bulgaria
Croatia
Czech Republic
Greece
Hungary
Italy
Jordan
Kazakhstan
Kuwait
Poland
Romania
Saudi Arabia
Serbia
Slovenia
Thailand
Turkey

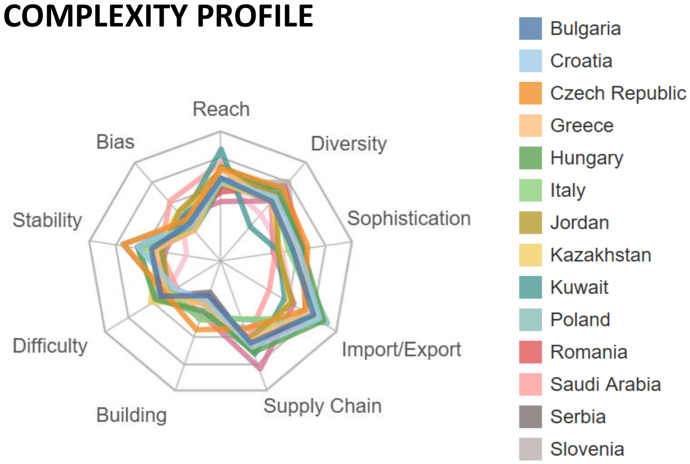


VISIT WILSONPERUMAL.COM/GMCI FOR INTERACTIVE MAP

KEY INSIGHTS

- Middle of the Pack countries are geographically concentrated in the Middle East and Eastern Europe
- Most market congruity with low income inequality, language diversity, and net migration
- In a market sophistication 'sweet spot'; buyers engage with international brands but do not require the competitive marketing necessary in previous groups

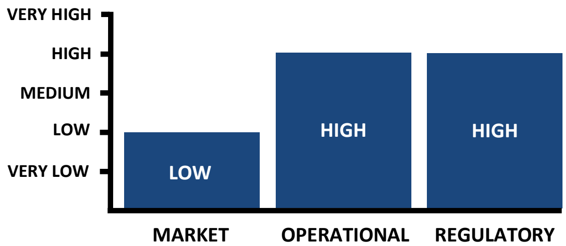
COMPLEXITY PROFILE



CENTER OF GRAPH = HIGH COMPLEXITY
PERIMETER OF GRAPH = LOW COMPLEXITY

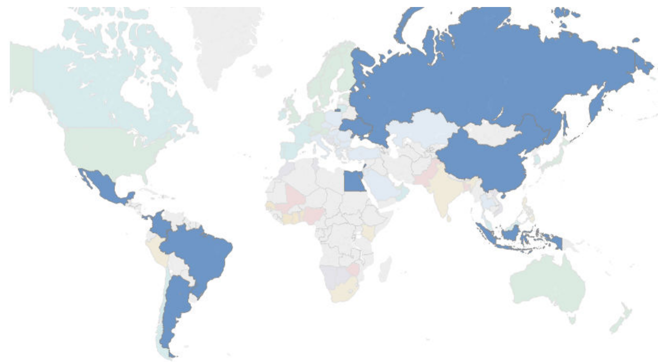
GROUP 4 WALLED GARDENS

COMPLEXITY RATING



COUNTRY LIST

Argentina	Egypt	Panama
Brazil	Indonesia	Russia
China	Lebanon	Ukraine
Colombia	Mexico	



VISIT WILSONPERUMAL.COM/GMCI FOR INTERACTIVE MAP

CEO BRIEF

The ‘Walled Gardens’ are generally large countries in terms of area and population, with markets conventionally attractive to multinationals. However, access to those markets is impeded by a wall of operational and regulatory complexity. The size and potential of these markets make the investment in breaking through those walls of complexity worthwhile for many companies.

To overcome the operational complexity of serving large areas with poor infrastructure and less-trained workforces, entry into these countries can be simplified by focusing on large cities. Due to the size and purchasing power of their markets, the Walled Gardens may be more attractive to companies than Groups 3, 5, and 6, despite the fact that those groups have less operational and regulatory complexity.

ADVANTAGES

- Low market complexity
- Reasonably well-developed markets
- Accessible consumers, broad internet access

- Less trained workforce relative to the economic output of these countries
- Hampered by political instability
- Legal uncertainty due to bias of regulators
- More competitive markets with more discerning customers

CHALLENGES

KEY INSIGHTS

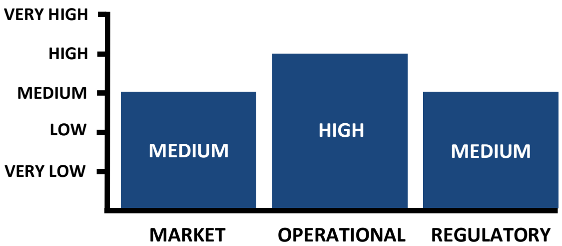
- Most Walled Gardens have large populations, geographic areas, and economies
- These relatively developed countries have made efforts in regulation and infrastructure, but face challenges with large, dispersed, and rural populations
- This group is has a unique mix of low and high complexity characteristics—a high value, but challenging market

COMPLEXITY PROFILE

CENTER OF GRAPH = HIGH COMPLEXITY
PERIMETER OF GRAPH = LOW COMPLEXITY

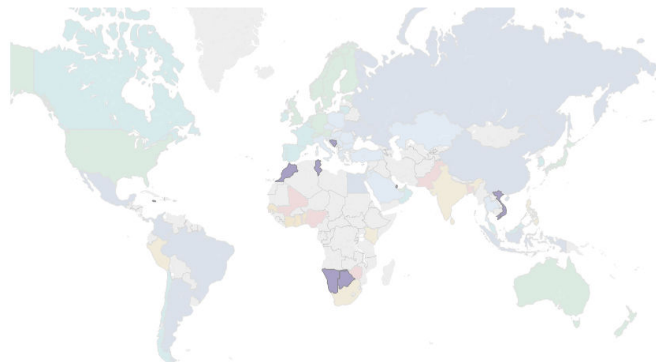
GROUP 5 UPSTREAM PADDLERS

COMPLEXITY RATING



COUNTRY LIST

Bosnia and Herzegovina
Botswana
Jamaica
Morocco
Namibia
Qatar
Tunisia
Vietnam



VISIT WILSONPERUMAL.COM/GMCI FOR INTERACTIVE MAP

CEO BRIEF

The ‘Upstream Paddlers’ are countries actively working to make themselves more attractive to multinationals, but fighting against challenging complexity currents. Despite the challenges, many of these countries have achieved the lowest complexity profiles of their region. For example, Morocco is setting itself apart from its neighbors as a business-friendly gateway to the complex markets of Africa.

The attractiveness of the Upstream Paddlers for multinationals comes from well-developed supply chains that are suited for production. The more challenging aspects of operating in these countries are setting up businesses and importing or exporting. The regulatory environments in these countries are relatively stable and business-friendly, but they suffer from inconsistent application of regulations.

KEY INSIGHTS

- Lower regulatory complexity than every group except the MVPs and the Utility Players
- Qatar lines up well with the other Upstream Paddlers but has a more diverse and easily reached population
- Upstream paddlers have accessible markets and regulatory stability—two characteristics shared with the MVPs and Utility Players
- Most are taking steps to make themselves more attractive to expanding multinationals

ADVANTAGES

- Strong supply chains
- Stable regulatory environments
- Moderate import/export capabilities

- Lack of consistency in regulation application
- Small, diverse markets that are hard to reach
- Need developed infrastructure and skilled labor to raise building and staffing capabilities

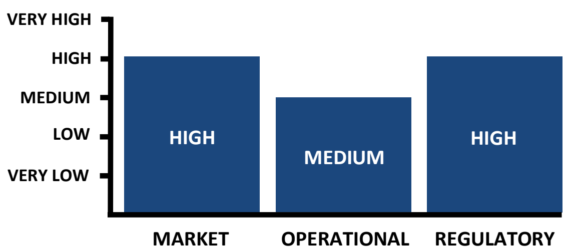
CHALLENGES

COMPLEXITY PROFILE

CENTER OF GRAPH = HIGH COMPLEXITY
PERIMETER OF GRAPH = LOW COMPLEXITY

GROUP 6 THE BUILDERS

COMPLEXITY RATING



CEO BRIEF

'The Builders' are countries on the march towards development. Most have established themselves as regional and global manufacturing centers—they have less operational complexity than market or regulatory complexity. With well-established supply chain capabilities and less onerous import/export regulations, they have set themselves up to be attractive producers.

However, customers in these markets are economically, culturally, and geographically diverse, making them hard to reach and convert to sale. Production in these countries is often exported to less challenging markets. Compounding the market complexity, these countries suffer from biased and unstable regulations that make planning difficult.

ADVANTAGES

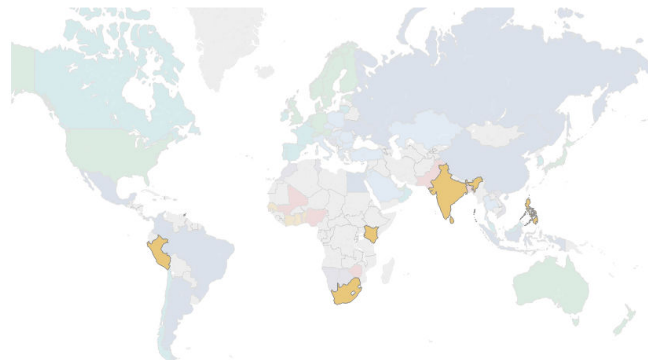
- Strong import/export capabilities attract multinationals for production
- Established supply chain capabilities support ongoing growth

- Income inequality and diverse populations make marketing challenging
- Corruption and bias increase complexity
- Government regulations in place to minimize complexity but lack consistency in application

CHALLENGES

COUNTRY LIST

India	Philippines	Sri Lanka
Kenya	South Africa	Trinidad and Tobago
Peru		



VISIT WILSONPERUMAL.COM/GMCI FOR INTERACTIVE MAP

KEY INSIGHTS

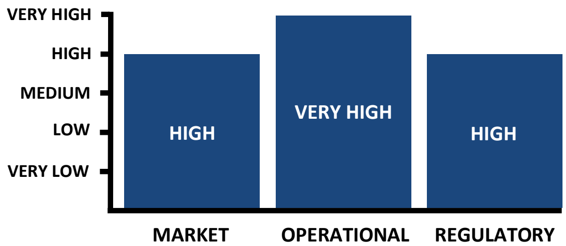
- The Builders are attractive for production but less desirable as end markets
- These countries are geographically similar to Group 8, but are more developed and have taken steps to reduce complexity
- Making active attempts to be more business-friendly, but regulation needs to mature and stabilize

COMPLEXITY PROFILE

CENTER OF GRAPH = HIGH COMPLEXITY
PERIMETER OF GRAPH = LOW COMPLEXITY

GROUP 7 THE SPECTATORS

COMPLEXITY RATING



CEO BRIEF

'The Spectators' are countries with less complexity than Group 8, only because they have not developed to a point where government regulation and market sophistication begin adding complexity. These countries are watching from the sidelines. These are the least developed countries included in the GMCI and provide a highly challenging business environment for the few multinationals that enter—thus the name.

As The Spectators develop, their likely next step is to develop regulations to govern business. Combined with an increasingly sophisticated market of buyers, these countries would likely move to Group 8, the most complex group, before learning to manage their complexity and moving into The Builders.

ADVANTAGES

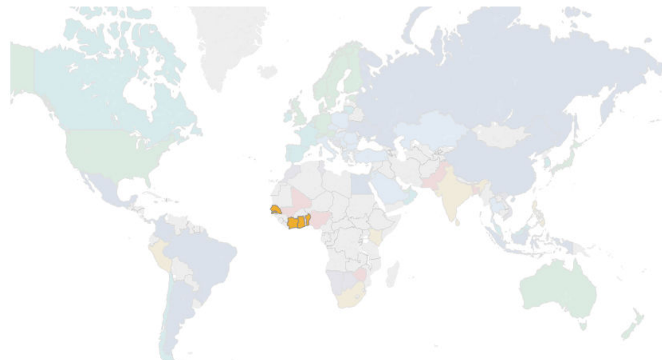
- Lack complex supply chains because few suppliers are in place
- Little competition to discourage market entry

- Early stage governments are susceptible to corruption and bias
- Building and staffing are exceptionally challenging
- Customers are more oriented to locally-focused markets

CHALLENGES

COUNTRY LIST

Benin
Côte d'Ivoire
Ghana
Senegal

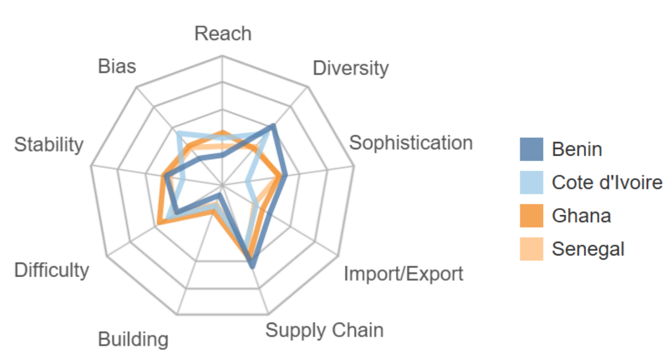


VISIT WILSONPERUMAL.COM/GMCI FOR INTERACTIVE MAP

KEY INSIGHTS

- Despite having less complexity, The Spectators are less economically developed than Group 8 and are likely to initially increase complexity as they develop
- The lack of developed regulatory environments makes operating in these countries less onerous, but also less predictable
- The relatively low supply chain complexity indicates fewer providers, not a robust, mature supply chain as found in other groups
- Many countries not included in the GMCI (due to limited data) would likely reside in this group

COMPLEXITY PROFILE



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GROUP 8 ONLY THE BRAVE

COMPLEXITY RATING

CEO BRIEF

'Only the Brave' includes the most complex countries in the world. These countries have the highest market, operational, and regulatory complexity in the GMCI. However, this complexity is better characterized as growing pains than a terminal illness. Some of these countries are simply in a rapid development phase, with quickly changing regulatory environments, consumer preferences, and operational challenges. Over time, they will likely gain control over this complexity and improve the business environment.

Many of these countries would have been in The Spectators group a decade ago. As countries develop, they do not follow a smooth path of complexity reduction. Early-stage development typically results in added complexity that, although painful, ultimately enables continued development.

ADVANTAGES

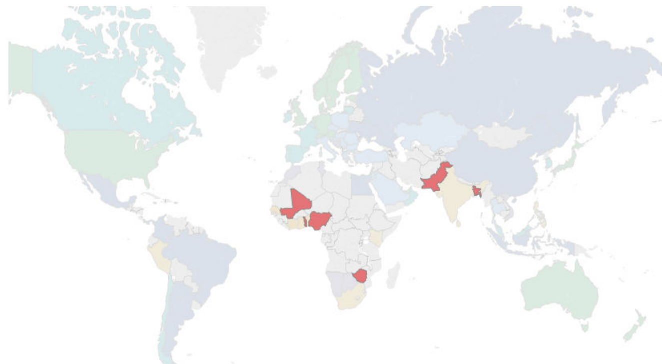
- Building infrastructure and adding regulations to drive economic development
- Many have substantial natural resources
- Sizeable market opportunities

- Early stages of government open to bias
- Large, diverse countries are difficult to regulate and require complicated marketing strategies

CHALLENGES

COUNTRY LIST

Bangladesh	Nigeria	Togo
Mali	Pakistan	Zimbabwe

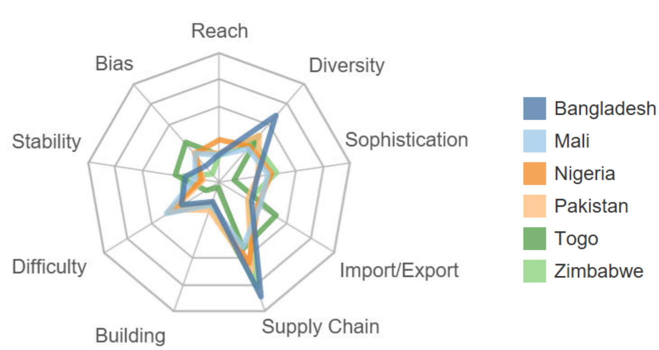


VISIT WILSONPERUMAL.COM/GMCI FOR INTERACTIVE MAP

KEY INSIGHTS

- Only the Brave countries inadvertently add complexity as they develop operational and regulatory infrastructure
- These developing regulatory environments are susceptible to bias and corruption
- The Spectators and Only the Brave are closely related; it is likely countries in Group 7 will move to Group 8 as they develop
- Bangladesh, Pakistan, and Nigeria are three of the eight most populous countries in the world, making them attractive targets for the right companies

COMPLEXITY PROFILE



CENTER OF GRAPH = HIGH COMPLEXITY
PERIMETER OF GRAPH = LOW COMPLEXITY

TOP 10: MOST & LEAST COMPLEX COUNTRIES

MARKET COMPLEXITY

LEAST COMPLEX	RANKING CHANGE 2013–2018
1. Denmark	↑2
2. Netherlands	↓1
3. Argentina	↑3
4. Czech Republic	↑1
5. Japan	↑10
6. Australia	↑3
7. Norway	–
8. Hungary	↓6
9. Sweden	↑2
10. United Kingdom	↓2
74. Senegal	↓3
75. India	↓1
76. Nigeria	↓1
77. Sri Lanka	↑6
78. Côte d'Ivoire	↓11
79. Zimbabwe	↓7
80. Kenya	↓7
81. Pakistan	↓4
82. Mali	↓4
83. Togo	↓4
MOST COMPLEX	

OPERATIONAL COMPLEXITY

LEAST COMPLEX	RANKING CHANGE 2013–2018
1. Singapore	–
2. France	↑10
3. Germany	↓1
4. South Korea	↑9
5. Netherlands	↑2
6. United States	↓3
7. Austria	↓2
8. Switzerland	–
9. Finland	↓5
10. Denmark	↓1
74. Jamaica	↑6
75. Zimbabwe	↓3
76. Pakistan	↑1
77. Ghana	↑2
78. Nigeria	↓3
79. Mali	↓5
80. Benin	↑2
81. Côte d'Ivoire	↓10
82. Togo	↑1
83. Senegal	↓2
MOST COMPLEX	

REGULATORY COMPLEXITY

LEAST COMPLEX	RANKING CHANGE 2013–2018
1. Singapore	–
2. Switzerland	–
3. UAE	↑4
4. New Zealand	–
5. Hong Kong	↑1
6. Finland	↓3
7. Netherlands	↑1
8. Germany	↑5
9. Qatar	↓4
10. Sweden	↓1
74. Argentina	↑4
75. Mali	↓10
76. Sri Lanka	↓10
77. Colombia	↓2
78. Pakistan	↑4
79. Togo	↓8
80. Nigeria	↓1
81. Philippines	–
82. Bangladesh	↑1
83. Zimbabwe	↓3
MOST COMPLEX	

MOVERS & SHAKERS (2013–2018)

As with any index, it is always intriguing to identify the Movers & Shakers—countries that have moved up the charts, and countries that have fallen. Below is the list of which countries have seen the biggest increases or decreases in complexity over the last five years.

MARKET COMPLEXITY CHANGES

COUNTRY	RANK CHANGE	MAIN DRIVER	INSIGHTS
TUNISIA	+16 ▲	**Sophistication** **51 Point Increase**	Tunisia benefited from increased multinational activity as the country recovered from the 2011 Arab Spring uprisings
OMAN	+12 ▲	**Congruity** **31 Point Increase**	Oman saw a reduction in Market Complexity due to less diversity and immigration, potentially linked to recent visa restrictions
SOUTH KOREA	-8 ▼	**Sophistication** **13 Point Decrease**	South Korea is a growing market for luxury brands—good news for many companies, but also driving complex buyer preferences
CÔTE D'IVOIRE	-8 ▼	**Sophistication** **41 Point Decrease**	Côte d'Ivoire has seen less multinational investment after several years of political instability

OPERATIONAL COMPLEXITY CHANGES

COUNTRY	RANK CHANGE	MAIN DRIVER	INSIGHTS
JAMAICA	+10 ▲	**Import/Export** **21 Point Increase**	Jamaica greatly improved the efficiency of its trade practices, making it easier for organizations to process shipments
LEBANON	+8 ▲	**Supply Chain** **24 Point Increase**	Lebanon reduced supply chain fragmentation, although firms may be leaving the country amid the economic crisis rather than consolidating
MALI	-8 ▼	**Import/Export** **37 Point Decrease**	Mali and Côte d'Ivoire suffered setbacks due to increased mean-weighted tariffs, making the import and export of goods more difficult for new entrants
CÔTE D'IVOIRE	-13 ▼	**Import/Export** **17 Point Decrease**	

REGULATORY COMPLEXITY CHANGES

COUNTRY	RANK CHANGE	MAIN DRIVER	INSIGHTS
INDIA	+14 ▲	**Regulatory Ease** **16 Point Increase**	India and Russia attacked regulatory complexity by greatly reducing the number of procedures required to start a business between 2013–2018
RUSSIA	+10 ▲	**Regulatory Ease** **24 Point Increase**	
SAUDI ARABIA	-8 ▼	**Regulatory Ease** **37 Point Decrease**	Paying taxes in Saudi Arabia became more difficult; the number of procedures required to start a business nearly quadrupled
TURKEY	-13 ▼	**Regulatory Stability** **17 Point Decrease**	Turkey suffered from destabilization likely related to the failed coup attempt in 2016

COUNTRY DEEP-DIVE EXAMPLE: FRANCE

WHERE DO WE GO FROM HERE?

The GMCI provides a different lens on expansion decisions—one that is additive to traditional adjacency assessment approaches. The example below considers a company with successful operations in France looking to expand. A typical approach would be to look at a) nearby geographies or b) countries with similar economic profiles. Although these elements are important, taking this approach can lead to options that would be a very poor fit from a complexity perspective—see the first 2 examples below. The third country set reflects a GMCI-aligned country set, one that would have to be vetted for market opportunity.

COUNTRIES WITH CLOSE PROXIMITY TO FRANCE

Country	GMCI ANALYSIS
SPAIN	✓
GERMANY	✗
BELGIUM	✓
ITALY	✗

GMCI INSIGHTS ON NEARBY COUNTRIES

- Belgium and Spain border France and share similar overall complexity profiles making them good options for international expansion
- Germany's less cumbersome regulatory environment and hyper efficiency represent a different basis of competition
- Managing government favoritism and weak property rights in Italy would be incremental challenges to ones a company would face operating in France

COUNTRIES WITH SIMILAR GDP/CAPITA TO FRANCE

Country	GMCI ANALYSIS
BAHRAIN	✓
DENMARK	✓
JAPAN	✗
SAUDI ARABIA	✗

GMCI INSIGHTS ON COUNTRIES WITH SIMILAR GDP/CAPITA

- Denmark and Bahrain align with France economically while also having similarly strong manufacturing capabilities and sophisticated buyers
- Japan's less diverse and less sophisticated consumers would require less market complexity management capability than France
- Saudi Arabia has far more regulatory complexity than France and would require additional capabilities, processes, and organization to navigate

COUNTRIES WITH SIMILAR COMPLEXITY TO FRANCE

Country	GMCI ANALYSIS
CHILE	✓
SOUTH KOREA	✓
MALAYSIA	✓
ISRAEL	✓

GMCI INSIGHTS ON COUNTRIES WITH SIMILAR COMPLEXITY

- There are other Utility Player countries that are obvious fits for expansion from France based on language, culture, and geography like Belgium, Spain, Ireland, and Canada
- However, the unique complexity lens provided by the GMCI identifies less obvious options for expansion that align with the complexity management capabilities necessary in France—Chile, South Korea, Malaysia, and Israel

FAQs

Are some groupings better than others?

The short answer to this question is no. The GMCI uses a scoring system to evaluate complexity across nations and to group countries together based on their scores. Therefore, the groupings indicate complexity type while remaining agnostic to normative judgements like better or worse. With that said, it takes an unusual company to thrive in the most complex environment. We have found that some countries have high levels of complexity across all categories. And while complexity can add value, it is generally true that the most complex environments generate a disproportionate amount of non-value-add complexity.

How is this report different from others?

There are many reports that rank countries to determine the attractiveness of the business environment. WP&C's GMCI, on the other hand, examines what makes countries similar to each other in order to help executives navigate thorny but important questions about geographic expansion. By using the unique lens of complexity to unearth these trends, the GMCI can serve as a reference guide for adjacency opportunities that goes deeper than indicators like geographic proximity and economic output.

Why group and rank countries?

The most productive way to view complexity at an international level is through relative comparisons. There is not one best country for international expansion. A company's success entering a new market depends not only on the attractiveness of that market, but also on their own capability to successfully navigate the new market. The GMCI allows CEOs to view over 80 adjacency comparisons from a broad strategic perspective in order to identify where their current capabilities will play best.

How did you choose which data to use?

We first developed a rigorous framework that broke our three complexity categories (market, operational, and regulatory) into constituent subcategories. We then identified and sourced data from leading international institutions to address each subcategory. We took care to ensure that each metric was additive, rather than compounding a single effect, by referencing an index-level correlation matrix.

How were the groups determined?

After developing the market, operational, and regulatory score for each country, we used clustering, a machine learning technique, to create the country groupings. We used both descriptive statistics and subjective judgment in order to determine the number of groupings that created the most coherent country groups and the best insight. In a few instances, countries straddle groups, sharing characteristics of two major groups. In those cases, we examined which of the three complexity categories was most important for defining the potential groups, and used that dimension to determine where the country best fit.

Whom should I contact with questions?

Please send all questions and inquiries to GMCI@wilsonperumal.com or sign up for updates at www.wilsonperumal.com/GMCI.

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Wilson Perumal & Company is the leading consulting partner to companies seeking to thrive in a complex world. For the past decade, WP&C has helped multinationals, private equity firms, and government institutions increase profitability, reduce risk, and accelerate growth in the Age of Complexity. This is our focus.

Co-founded by renowned experts Stephen Wilson and Andrei Perumal, WP&C are not only practitioners but also thought leaders, with two leading books published on the topic of business complexity: *Waging War on Complexity Costs* and *Growth in the Age of Complexity* (McGraw-Hill).

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GROWTH STRATEGY
More than 40% of companies become less profitable as they grow—eroding scale and ultimately impeding their ability to grow. This results from an overreliance on traditional strategy tools and frameworks that are no longer fit for today's complex world. WP&C brings new tools, mindsets, and strategies to ensure growth plans create scale, not dilution.

NEW MARKET ASSESSMENT & STRATEGY
WP&C works with companies considering potential adjacencies, to help them identify and assess a robust set of alternatives (geographic, product, customer, or otherwise). This involves an external assessment of new market opportunities, an evaluation of the company's ability to execute, and the subsequent due diligence on specific opportunities.

COUNTRY PORTFOLIO OPTIMIZATION
A decade or more of international expansion has left many multinationals overextended, with operations in countries that are not profitable for the business and which distract them from core areas that are better prospects for growth. WP&C helps companies optimize their country portfolio and ensure a fit-for-purpose operating model for each country archetype.

COMPLEXITY DIAGNOSTIC
Complexity in a company's product portfolio, processes, and operations is costly and also inhibits growth. WP&C helps companies simplify, leveraging proprietary methods to help executives understand the cost of complexity and where they truly make money—a foundation for profitable growth.

COUNTRY-COMPETITIVENESS ADVISORY SUPPORT
As governments implement policies and strategies that reduce the complexity of operating in their countries, they improve their attractiveness to multinationals. WP&C has a successful track record working with government institutions, and improving ease of doing business and overall efficiency.

For more information or to request a conversation with one of our complexity experts, please reach us at contact@wilsonperumal.com.

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GLOBAL MARKETS COMPLEXITY INDEX 2019

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