Trade Competitiveness Diagnostic

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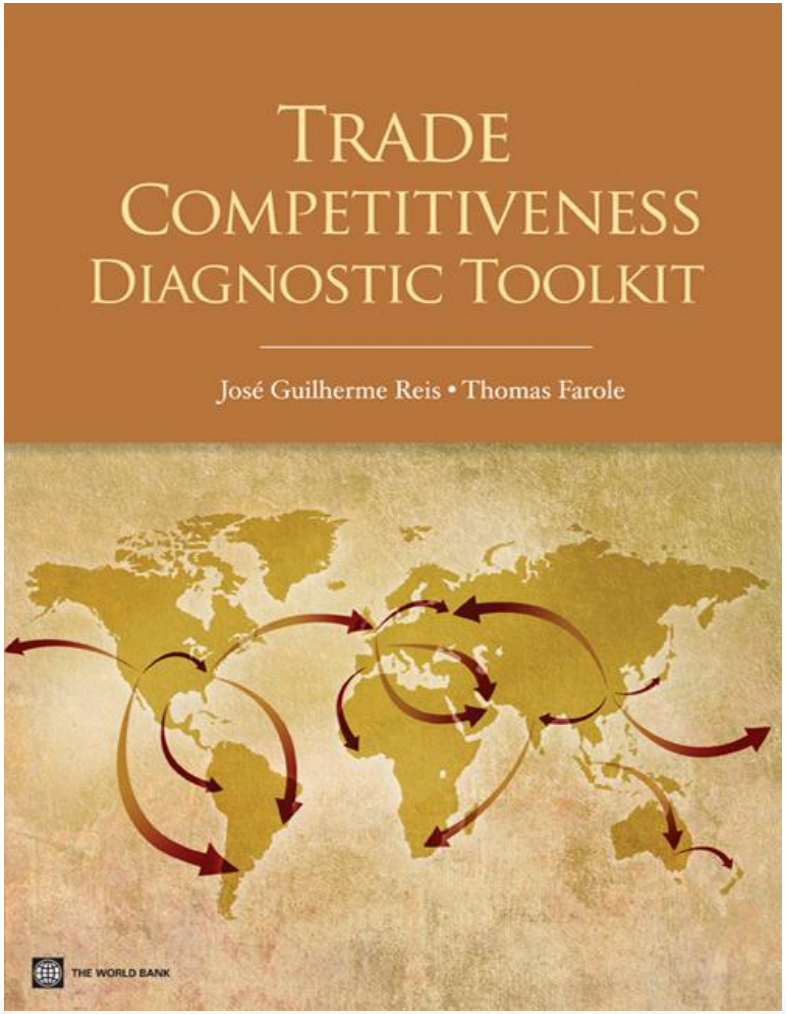
Available in hard copy and as e-book



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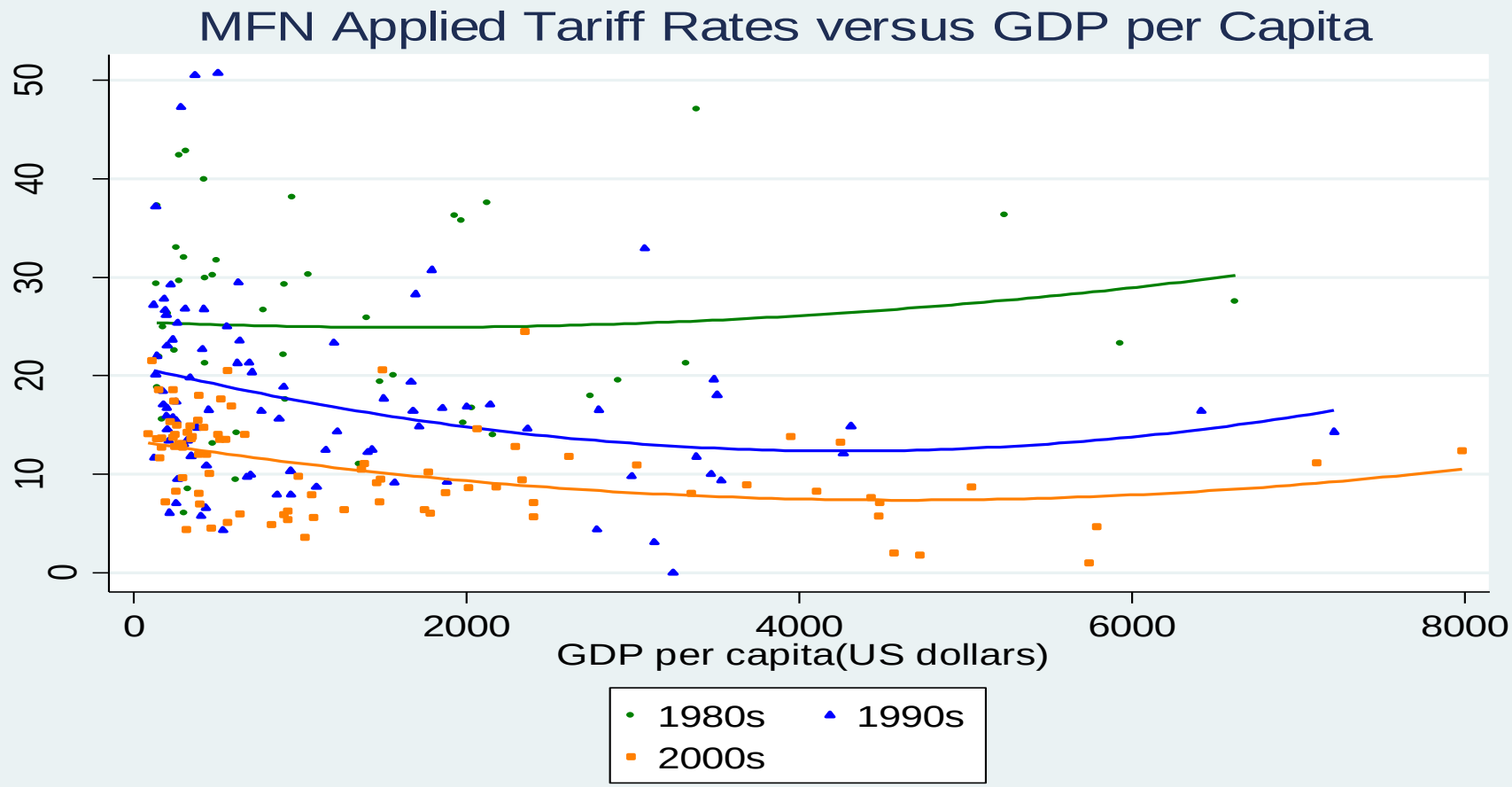
1 Introduction

Emergence of a Behind the Border Agenda



A more complex trade policy agenda

Even with the reduction of tariffs and the benefits of preferential market access, developing country exporters often face considerable barriers that prevent them from competing effectively in global markets.

Many constraints to international trade and supply chains lie "behind-the-border" – transport logistics, customs, trade finance, but also poor factor conditions, lack of competition, information and coordination failures, etc.

In addition, many countries still highly dependent on a few exports: diversification critical for sustaining higher growth.

The realization of this gap has contributed to the emergence of the behind the border agenda in recent years.

Why look at competitiveness from a trade perspective?

- The Bank is repeatedly requested by client countries to provide support and guidance on competitiveness .
- Competitiveness assessment usually have a proritization problem.
- Trade is a useful lens for looking at competitiveness – export markets are most demanding, so countries competitive in exporting are likely to be competitive among domestic dimensions
- Recursive relationship between trade and productivity – the most productive firms become exporters, and become more productive still from the demands of export markets
- Data advantages – trade data rich, uniform across countries

How to link constraints to exports?

- Utilization of a diagnostic approach.
- By conducting an in-depth and thorough analysis of trade data – examining both aggregate flows and firm-level data- it is possible to generate hypothesis about main constraints and obstacles for exporters performance.
- The availability of firm-level data and modern computational techniques nowadays is a promising route, allowing to directly connect macro variables (e.g. customs data) with huge firm level datasets. Its use combined with qualitative information can provide the basis for the diagnostics, helping to reject or to identify constraints.

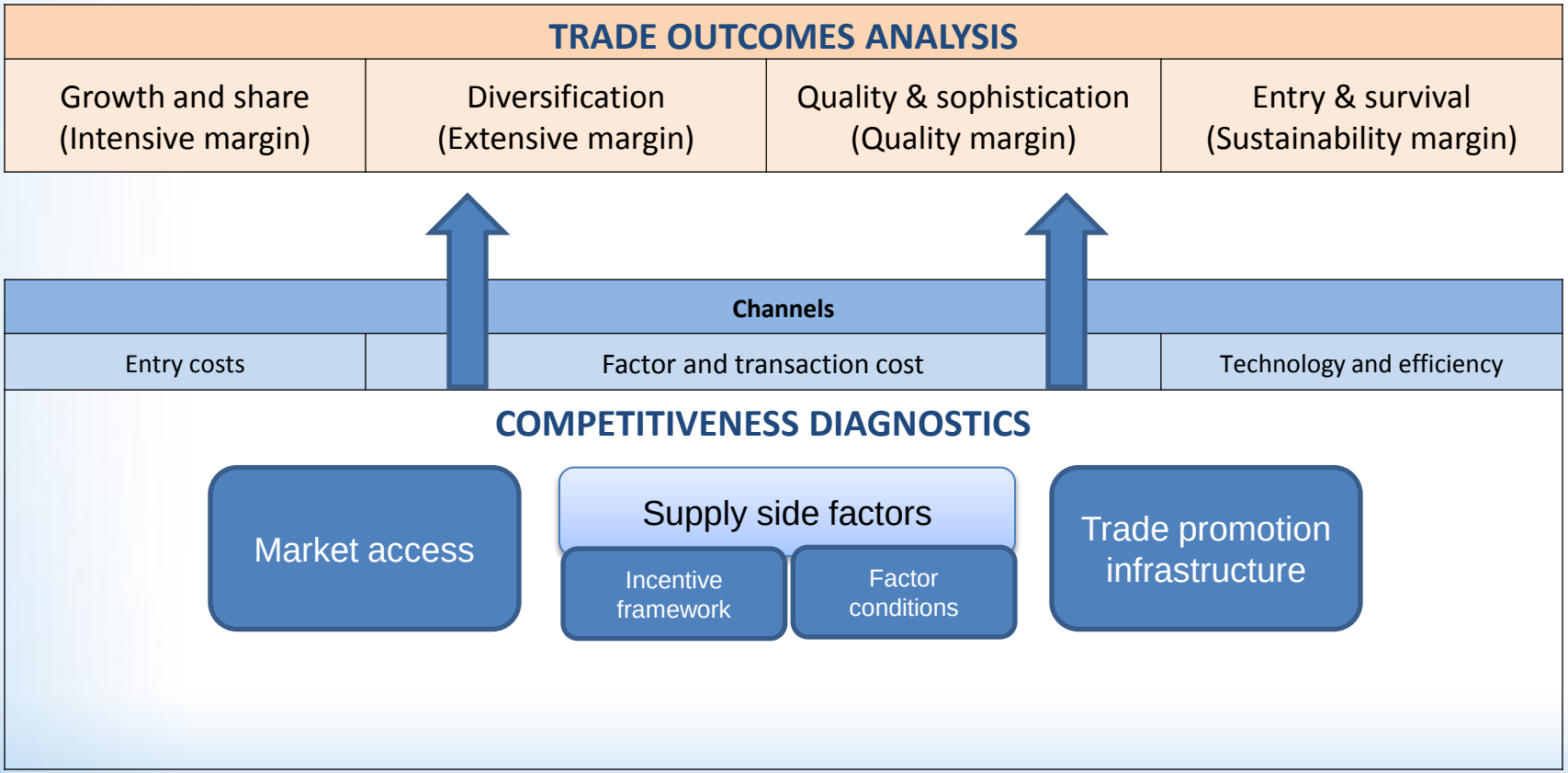
Objective: To help countries understand the **position, performance, and capabilities** in export markets, and the **factors that determine (constrain) competitiveness** in current traded sectors.

- Policy-oriented: allow for prioritization and guidelines for action
- Flexible: Can be applied to cross-country level, to national level or to individual sectors.
- Comparative: Combines qualitative and quantitative analysis on a combination of macro, product and firm level data, with focus on benchmark comparisons.

2 Trade Competitiveness Diagnostic

Framework of the TCD

The TCD framework links explanatory factors to observed trade performance. It has two main components: **Trade Outcomes Analysis** and **Competitiveness Diagnostics**.



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The TCD framework links explanatory factors to observed trade performance . It has two main components: **Trade Outcomes Analysis** and **Competitiveness Diagnostics**. The two components are usually conducted sequentially. First, the Trade Outcomes Analysis gives a picture of trade performance, identifies key areas of
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Trade Outcome Analysis

The Trade Outcomes Analysis provides an assessment of trade performance organized around four themes:

1. **Level, growth, and market share** performance of existing exports (the “intensive margin”)
2. **Diversification** of products and markets (the “extensive margin”)
3. **Quality and sophistication** of exports (the “quality margin”)
4. **Entry and survival** of new exporters (the “sustainability margin”)

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Competitiveness Diagnostics

Competitiveness Diagnostics provides a framework for analyzing determinants of trade competitiveness across three broad areas:

1. **Market Access**: This focuses on the external trade policy environment.
2. **Supply-side Factors**: This covers a broad range of determinants that establish the incentive framework faced by the private sector, as well as the factor inputs that determine competitiveness at the factory or farm gate.
3. **Trade Promotion Infrastructure**: This covers the range of interventions by government, including traditional export promotion, SEZs, industry coordination bodies, and standards regimes.

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Some caveats and limitations…

Sector context v export basket

- Toolkit provides indications on specific issues of relevance to key sectors, but it is cross cutting
- Generally, sectors used as a lens rather than an object of study

Services sector

- Data limitations
- Framework of determinants also somewhat different
- Services diagnostic toolkit under development

Trade v Exports – are imports missing?

- Main emphasis in trade outcomes on export performance
- However, detailed assessment of imports within Diagnostics

Binding constraints: linking determinants to outcomes

- Some science… a lot of art
- Testing empirical approaches to link Diagnostics with Outcomes, with extensive use of firm-level data.

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3 Stage 1 – Trade Outcomes Analysis

Trade Outcomes Analysis: Step 2 – Download and compile data

The trade outcomes analysis uses an assessment of time series and cross-sectional data. While the process of preparing the data for analysis is relatively straightforward, there are some issues that need to be considered

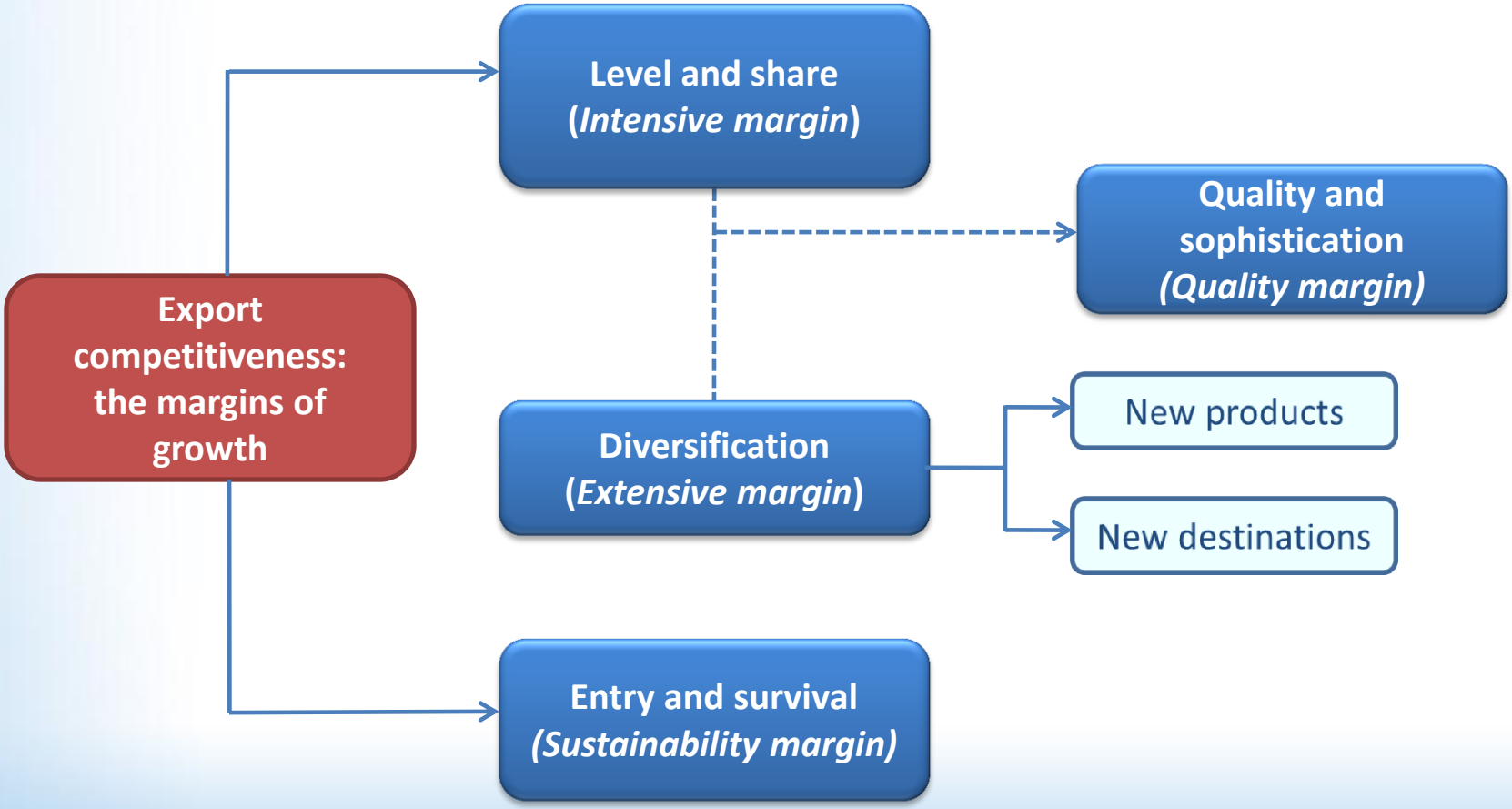
- Data sources
- Data nomenclature and classification
- Use of mirror data
- Firm-level data

Trade Outcomes Analysis: Step 1 - Selecting Peer Countries

In conducting the Trade Outcomes Analysis, it is useful to select "peer countries" for which data will be collected and analyzed along with the main country in question.

Trade Outcomes Analysis: The key components

The Trade Outcomes Analysis covers four broad components of trade performance.



Level, Growth, and Market Share (Intensive Margin)

What is covered in this component?

- This section outlines tools to assess a range of issues reflecting the structure and competitiveness of the **existing export basket**, including both products and markets.

Why do we look at this?

- Outward openness in the form of sustained trade and investment ties with the rest of the world is one of the major determinants of long-term prosperity.

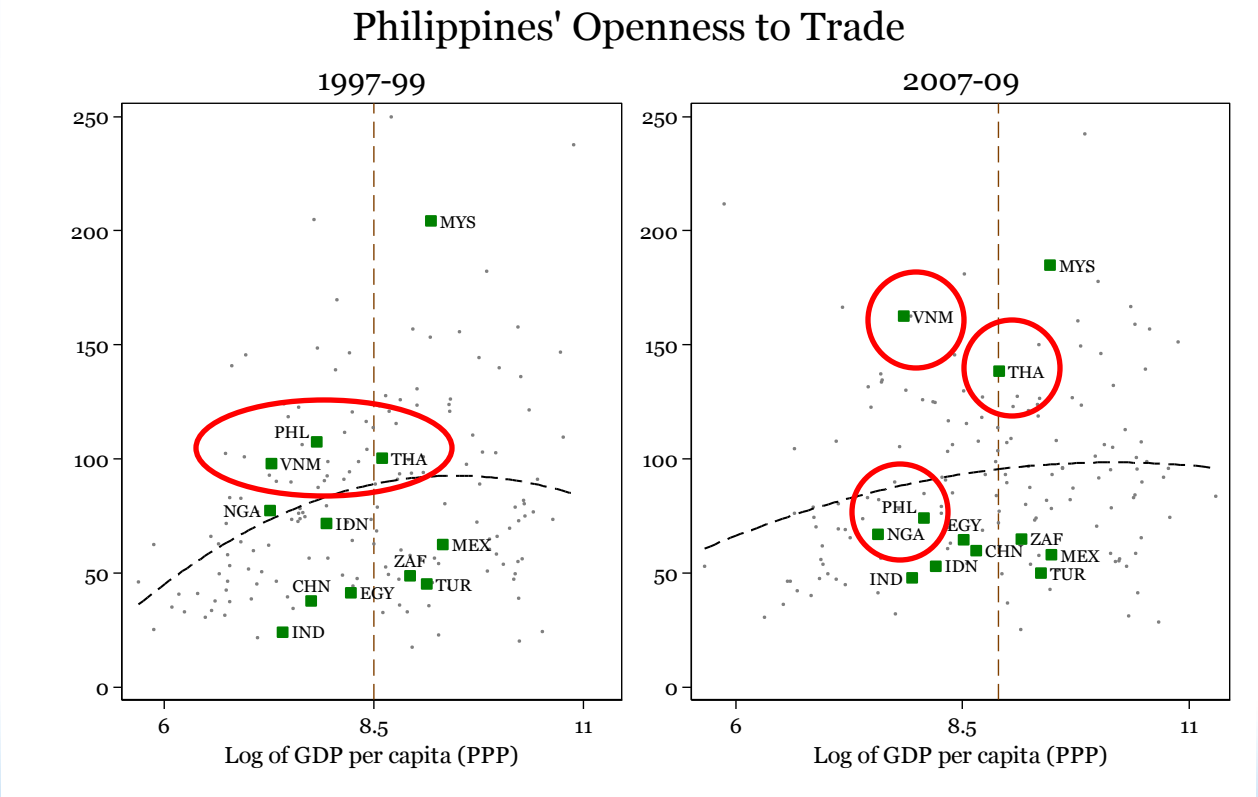
- An analysis of the basic orientation of trade is crucial to judge whether a country's trade structure is conducive to economic growth.

Level, Growth, and Market Share (Intensive Margin) – summary of indicators

Issues	Indicators	Questions and Implicit Hypotheses
Trade Openness	Trade-to-GDP ratio	(1) Relative to countries at comparable levels of income, how integrated is a country in the world? How does the ratio change when it is adjusted to control for population, remoteness, and cost of inland trading? (2) How has the ratio evolved over the past decade?
Trend in Trade Growth	Evolution of export volumes of both goods and services, annual growth rates of total exports, and share of merchandise trade in GDP	(1) Has growth of exports of goods and services been steady? Has trade share of GDP grown in tandem with GDP or faster? What explains deviations from the trend, if any?

Example: measuring openness to trade

The following diagrams show scatter plots of average trade-to-GDP ratios from 1997 to 1999 and from 2007 to 2009 against the log of GDP per capita in PPP. The broken line indicates the world median income; and the curve is the regression line of the trade-to-GDP ratio on the log of GDP. This reflects a stylized fact that countries tend to trade more, relative to nominal GDP, as their per capita incomes rise, but at a decreasing rate. This example shows the serious decline in trade openness in the Philippines over a decade.

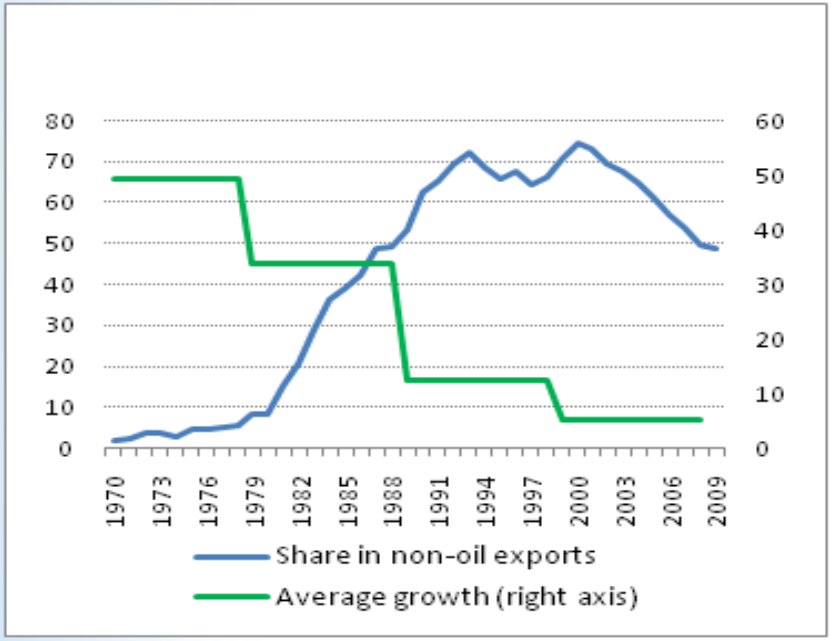


Source: WDI

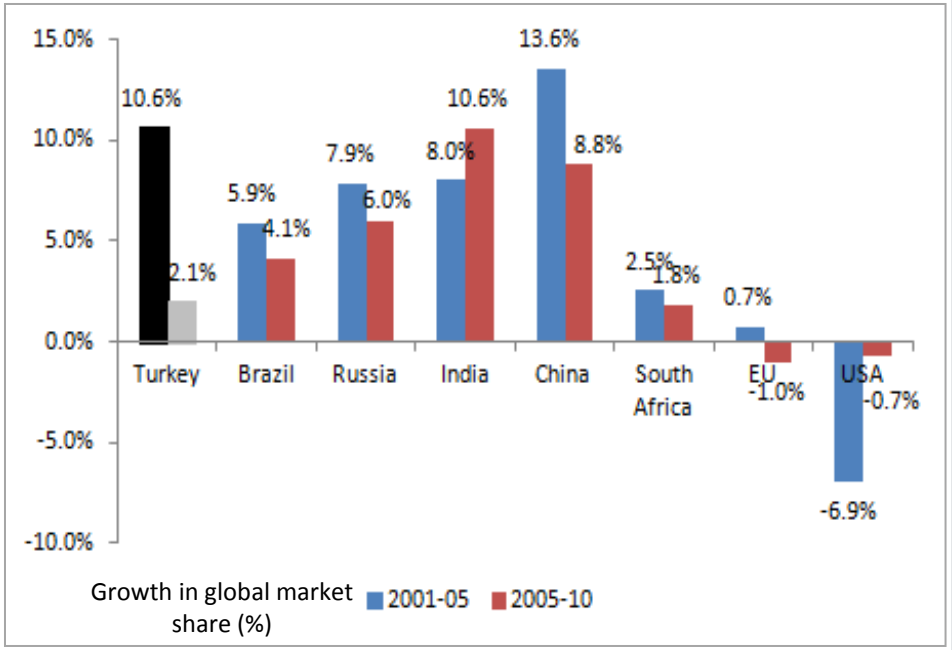
Example: Basic trade growth trends

Simple plots of trade growth trends can already start to tell stories or at least set out "problem statements".

Indonesia: is manufacturing in terminal decline?



Turkey: are we losing competitiveness?

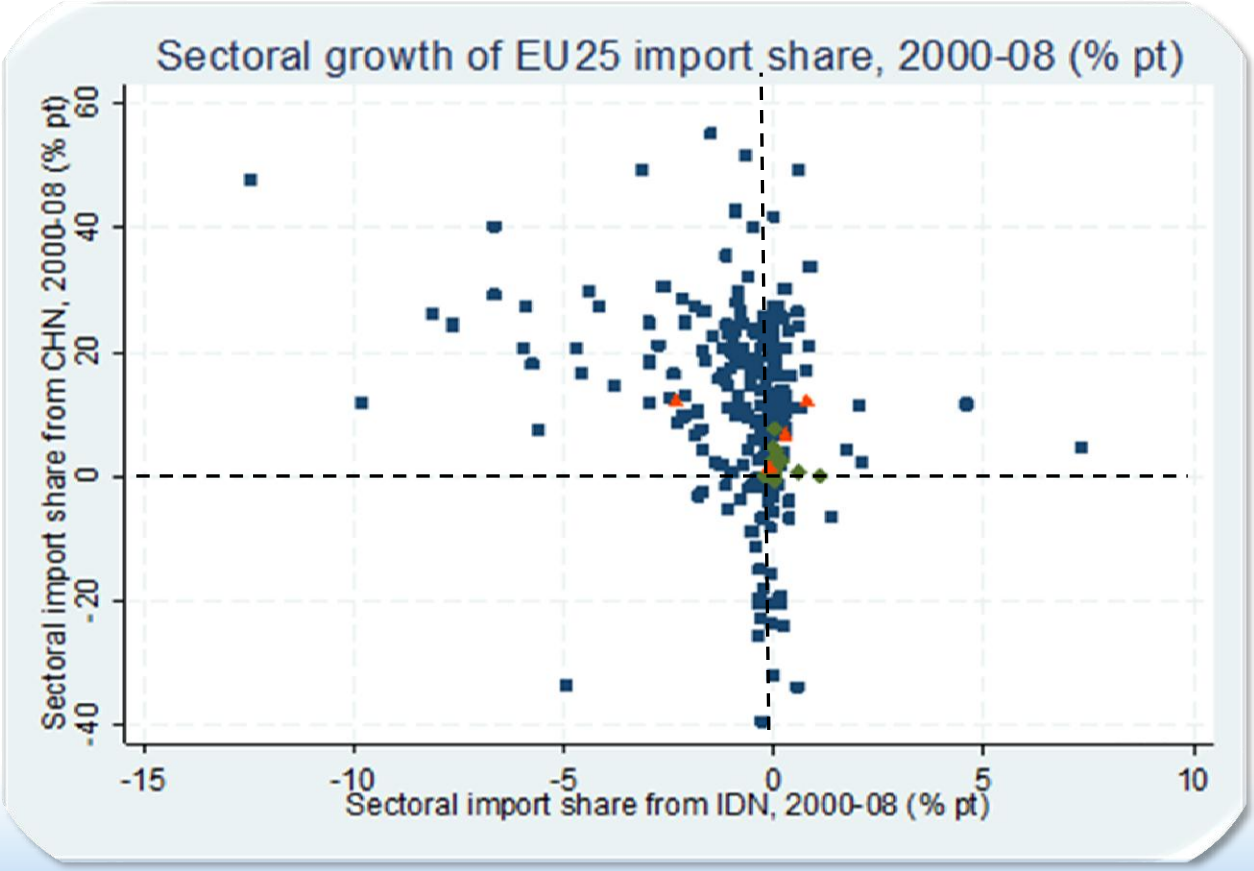


Level, Growth, and Market Share (Intensive Margin) – summary of indicators

Issues	Indicators	Questions and Implicit Hypotheses
Export Composition, Revealed Comparative Advantage, and Trade Integration	Total exports (US$) by each (disaggregated) sector, including services, and its share in total exports	(1) How have exports grown at the sector level? Has competitiveness (say, in terms of RCA) evolved differently over time across sectors? Have there be dramatic changes in certain sectors? Why? (2) How has real export per capita evolved over the past 30 years compared to peer-countries? (3) Are export earnings emanating from a diversified economic base, or just natural resources? (4) Is the country taking part in global production networks? What is the share of intra-industry trade?
	RCA of each sector	
	Compound annual growth rate in exports over a period of 5 to 10 years	
	Real export per capita Share of trade in parts and components	

Example: Market share performance

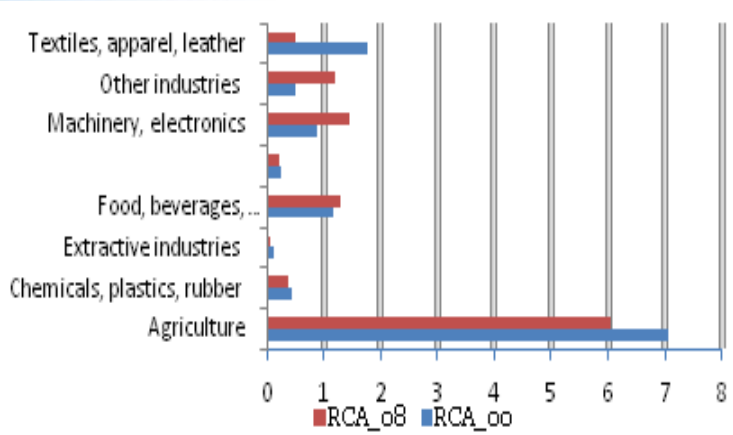
The example below compares Indonesia's market share of textiles products in Europe (based on total European imports) relative to China's. Each dot represents a specific product. The figure shows that Indonesia's overall market share fell in about 2/3 of products. But against China, even for those products in which Indonesia gained share in Europe, they lost relative share to China.



Example: Revealed comparative advantage

RCA can be useful to understand the changing nature of the export basket.

Costa Rica: dual competitiveness



Turkey: changes at the top

	2000	2010
Articles of apparel and clothing accessories	**7.593**	**4.7218**
Vegetables and fruit	**6.1032**	**4.5211**
Tobacco and tobacco manufactures	**5.2441**	**2.617**
Textile yarn,fabrics,made-upart.,related products	**5.0682**	**4.4863**
Sugar,sugar preparations and honey	**3.9436**	**1.0434**
Iron and steel	**3.0069**	**3.2269**
Crude fertilizers and crude materials (excl.coal)	**2.7745**	**5.3389**
Textile fibres (except wool tops) and their wastes	**2.29**	**0.9748**
Miscel.edible products and preparations	**2.038**	**1.7492**
Animal-vegetable oils-fats,processed,and waxes	**1.9937**	**1.5233**
Rubber manufactures,n.e.s.	**1.9271**	**2.047**
Non-metallic mineral manufactures,n.e.s.	**1.91**	**1.7832**
Sanitary,plumbing,heating and lighting fixtures	**1.8502**	**3.1147**
Cereals and cereal preparations	**1.7402**	**1.7336**
Essential oils & perfume materials	**1.5693**	**1.1897**
Other transport equipment	1.2218	0.55
Coffee,tea,cocoa,spices,manufactures thereof	1.176	0.9115
Manufactures of metal,n.e.s.	**1.1438**	**1.8327**
Fixed vegetable oils and fats	1.1236	0.4276
Animals,live,zoo animals,dogs,cats etc.	0.9625	0.4102
Hides,skins and furskins,raw	0.8933	0.0689
Metalliferous ores and metal scrap	0.8368	0.6868
Crude animal and vegetable materials,n.e.s.	0.8174	0.4536
Non-ferrous metals	0.7494	0.8516
Miscellaneous manufactured articles,n.e.s.	0.7263	0.8516
Telecommunications & sound recording apparatus	0.7128	0.3879
Furniture and parts thereof	**0.6595**	**1.4032**
Road vehicles (incl. air cushion vehicles	**0.6249**	**1.6287**
Dyeing,tanning and colouring materials	**0.5931**	**1.0344**
Power generating machinery and equipment	0.591	0.8167

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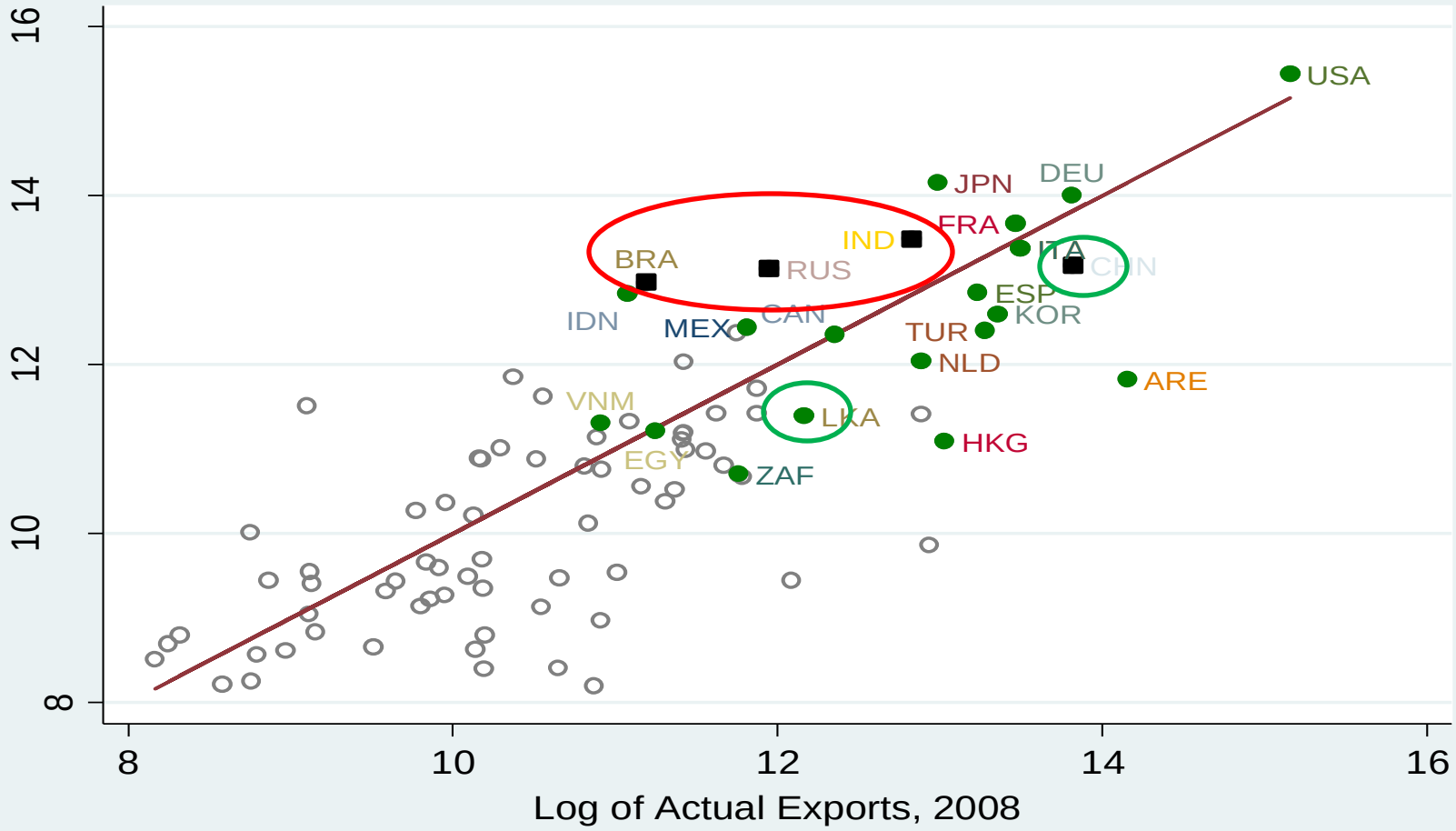
Level, Growth, and Market Share (Intensive Margin) – Summary of indicators

Issues	Indicators	Questions and Implicit Hypotheses
Trade Partners	Comparative market share performance in key product	(1) Does a country over-trade or under-trade with individual partners, esp. those that are rich, large, nearby, or fast-growing? (2) What is the role of preferential trade agreements in boosting bilateral or regional trade? (3) Does a country have an unusually high or low level of penetration in partners that could be considered natural trading allies? (4) What is the degree of fit between a country's export profile and a potential partner's import profile?
	Trade Intensity Index	
	Trade Complementarities Index Gravity model of bilateral trade	

Example: Gravity model of bilateral trade

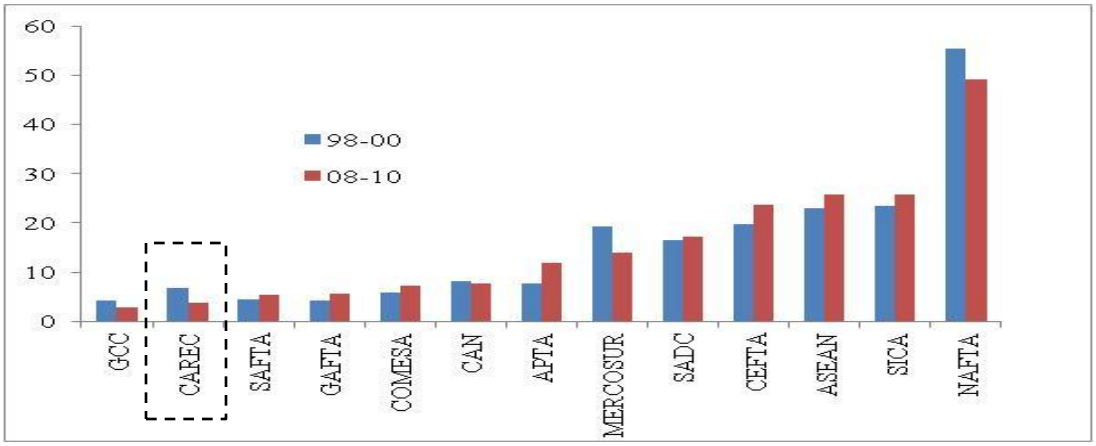
Example: Pakistan – the (missed) opportunity for regional trade



Example: Analyzing intra-regional trade

Trade complementarity indices useful for assessing opportunities that may arise from regional integration

Low intra-regional trade in Central Asia, but limited potential?



From:	To:								
	Azerbaijan	**Kazakhstan**	Kyrgyz Rep.	Mongolia	Tajikistan	Turkmenistan	Uzbekistan	China	Russia
Azerbaijan		**11.2**	5.6	5.8	8.9	3.1	8.3	16.2	3.9
Kazakhstan	**5.7**		**8.1**	**7.5**	**12.2**	**3.7**	**11.3**	**23.9**	**6.0**
Kyrgyz Rep.	11.4	**11.8**		9.0	9.3	7.7	7.6	7.9	11.7
Mongolia	1.6	**8.1**	2.2		4.6	1.2	6.1	16.5	2.7
Tajikistan	5.7	**4.2**	3.5	5.6		4.8	5.9	5.1	5.5
Turkmenistan	2.6	**8.8**	9.9	20.1	14.7		7.1	8.1	3.2
Uzbekistan	9.3	**9.3**	7.9	9.8	9.0	6.1		9.2	10.6

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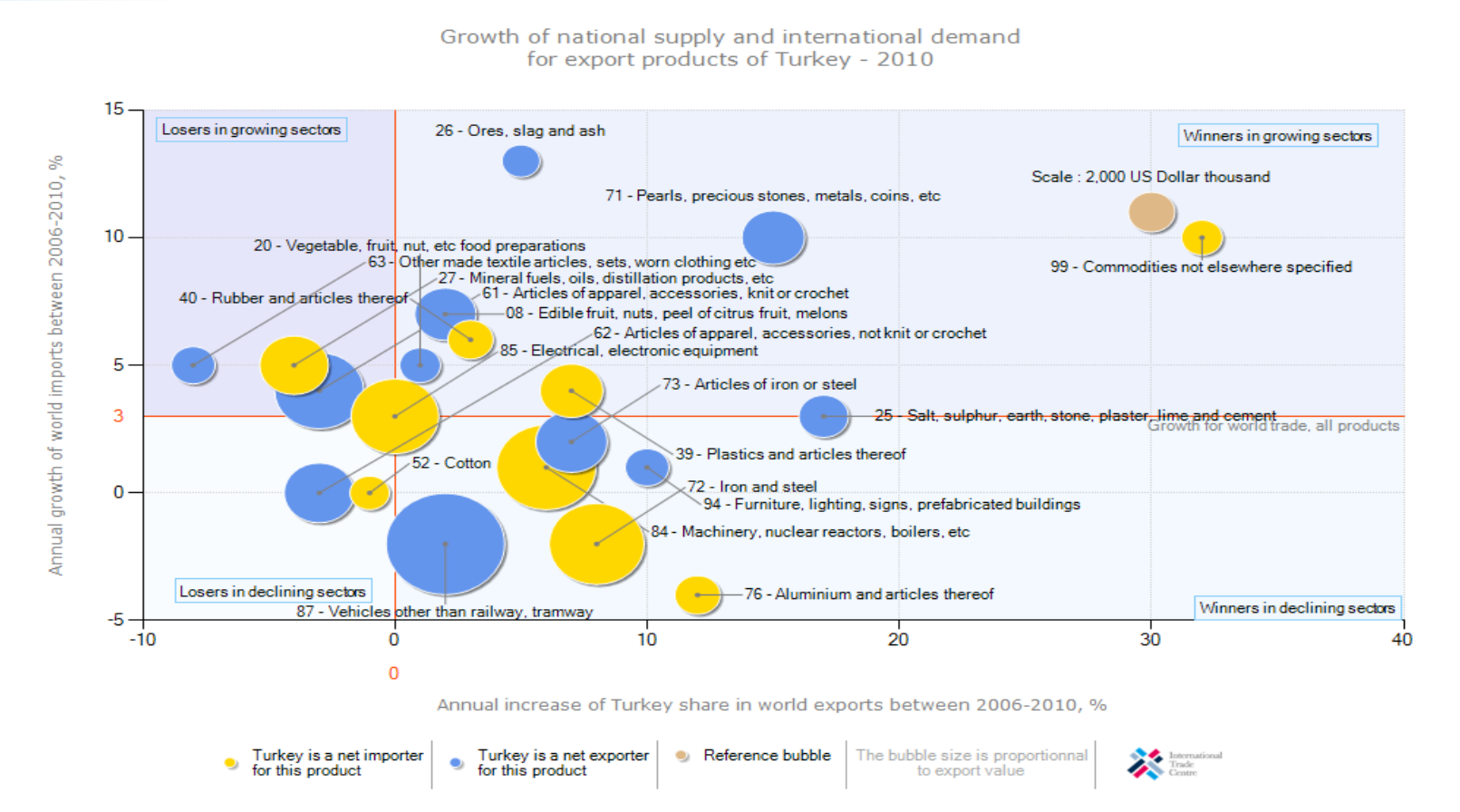
Level, Growth, and Market Share (Intensive Margin) – summary of indicators

Issues	Indicators	Questions and Implicit Hypotheses
Growth Orientation of Portfolio	Scatter plot of import growth by countries against a country's share in those markets	(1) What is the orientation between world growth rate of products and their shares in national portfolio? Are there slow growing products or markets that a country relies on excessively? (2) What is the experience of exporters in emerging and fast growing markets? What is inhibiting them – search costs, market access, and competitiveness?
	Scatter plot of world growth of products against a country's share in those products	

Example: Growth orientation

The ITC tool for product and market growth orientation.

Example: Turkey (top 20 products)



Competitiveness indicators using decomposition techniques

Using a shift-share technique the new competitiveness indicator decomposes past export growth into “pull” factors, including both sector and market composition and “push” factors, including volume and price.

Figure 2.3: Kazakhstan’s export performance decomposition- values

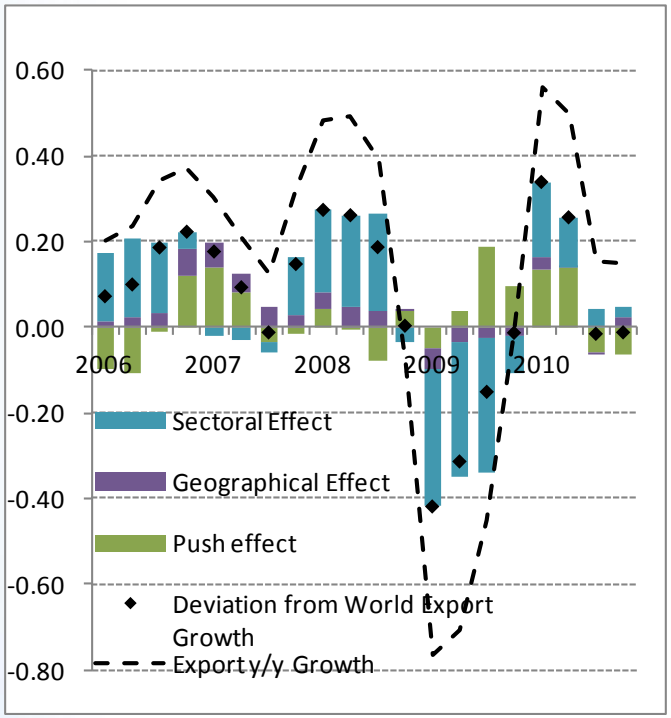
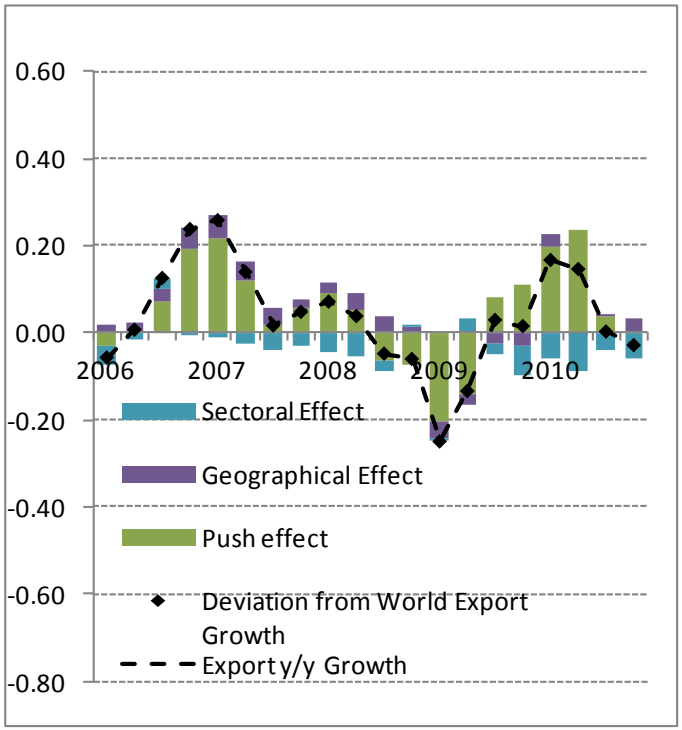


Figure 2.4: Kazakhstan’s export performance decomposition- volumes



Competitiveness indicators (contd)

Using a shift-share technique the new competitiveness indicator decomposes past export growth into “pull” factors, including both sector and market composition and “push” factors, including volume and price.

	Export growth	Export market share change	Performance (export growth without composition effects)	Pull factors (specialization, composition effects), of which:		Push factors ("performance", i.e. export market share growth without composition effects), of which:		
				Geographical	Sectoral	Overall (Value)	Price component	Volumes component
Kazakhstan	**15.9%**	**6.6%**	**10.7%**	**2.1%**	**3.1%**	**0.7%**	**0.6%**	**0.1%**
of which in 2005-2008	*21.2%*	*11.8%*	*11.5%*	*3.2%*	*6.5%*	*0.2%*	*0.7%*	*-0.5%*
Azerbaijan	43.1%	33.7%	39.6%	-0.9%	4.4%	26.5%	1.2%	25.0%
Russia	12.4%	3.0%	8.4%	0.9%	3.1%	-1.2%	0.6%	-1.8%
Chile	10.9%	1.6%	9.0%	1.2%	0.7%	-0.5%	0.0%	-0.6%
Indonesia	12.5%	3.1%	10.8%	0.3%	1.5%	1.1%	0.3%	0.8%
Korea	11.4%	2.1%	11.1%	2.5%	-2.2%	1.6%	-2.5%	4.1%
Mexico	9.9%	0.5%	13.3%	-4.7%	1.3%	4.1%	1.4%	2.6%

Diversification (Extensive Margin)

What is covered in this component?

- This section looks at the level of concentration and variety of products and markets in the export basket.

Why do we look at this?

- A more diverse structure of exports reduces **vulnerability** to demand shocks and price swings in overseas markets (it depends on co-movements of markets).
- Can also be important with respect to orientation for **future growth**

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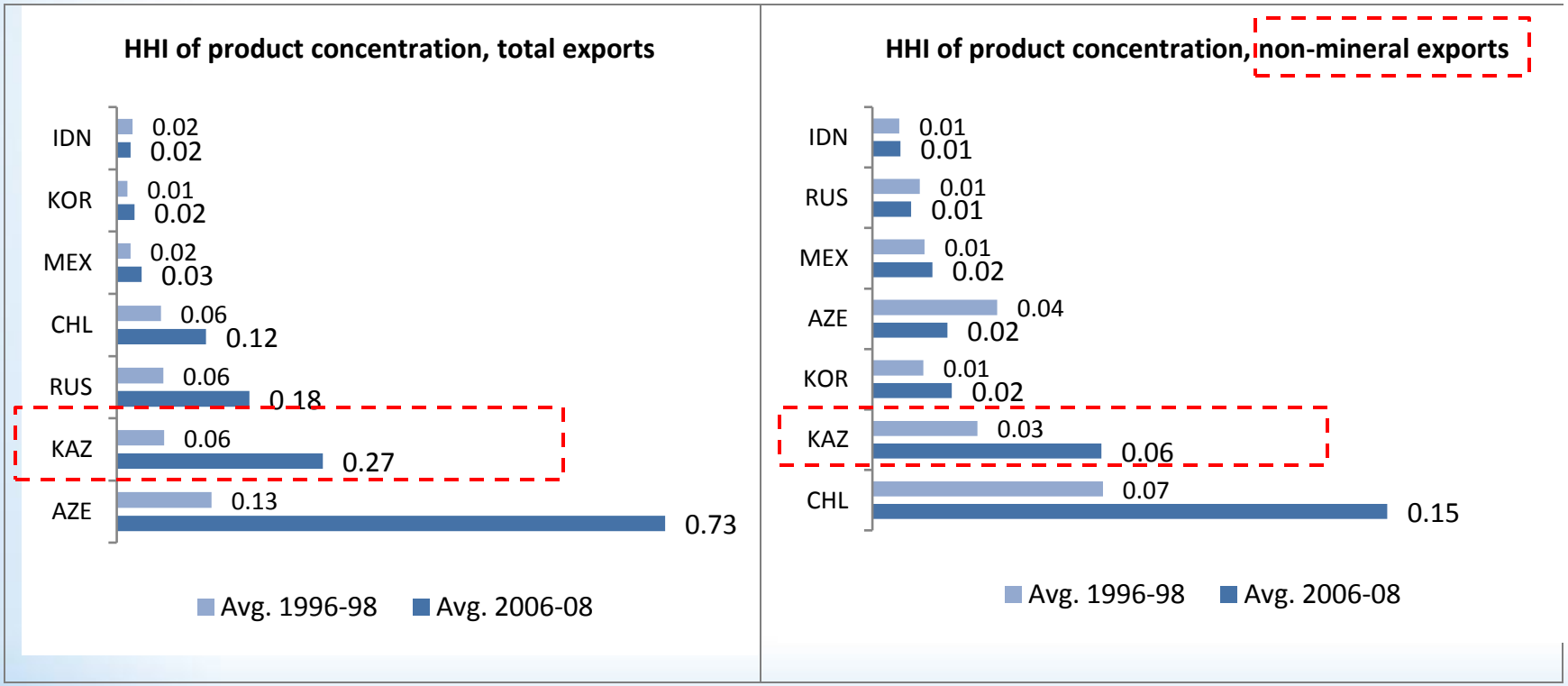
Diversification (Extensive Margin) – Summary of indicators

Issues	Indicators	Questions and Implicit Hypotheses
Measures of Concentration	• Share of top 3 or 5 products in exports • Share of top 3 or 5 markets in exports • Hirschman-Herfindahl Index • Theil's Entropy	1. How concentrated are exports in a narrow range of products or markets? 2. Is this concentration "benign"? Does growth in concentrated products generate benefits that outweigh potential cost from vulnerability?

Example: Concentration indices

The HH index gives a great snapshot of the overall level of product and market concentration. Results can sometimes be surprising, revealing quite a different picture than one can see by simply looking at broad sectoral shares. Generally, we find market concentration declining for most countries, while product concentration varies

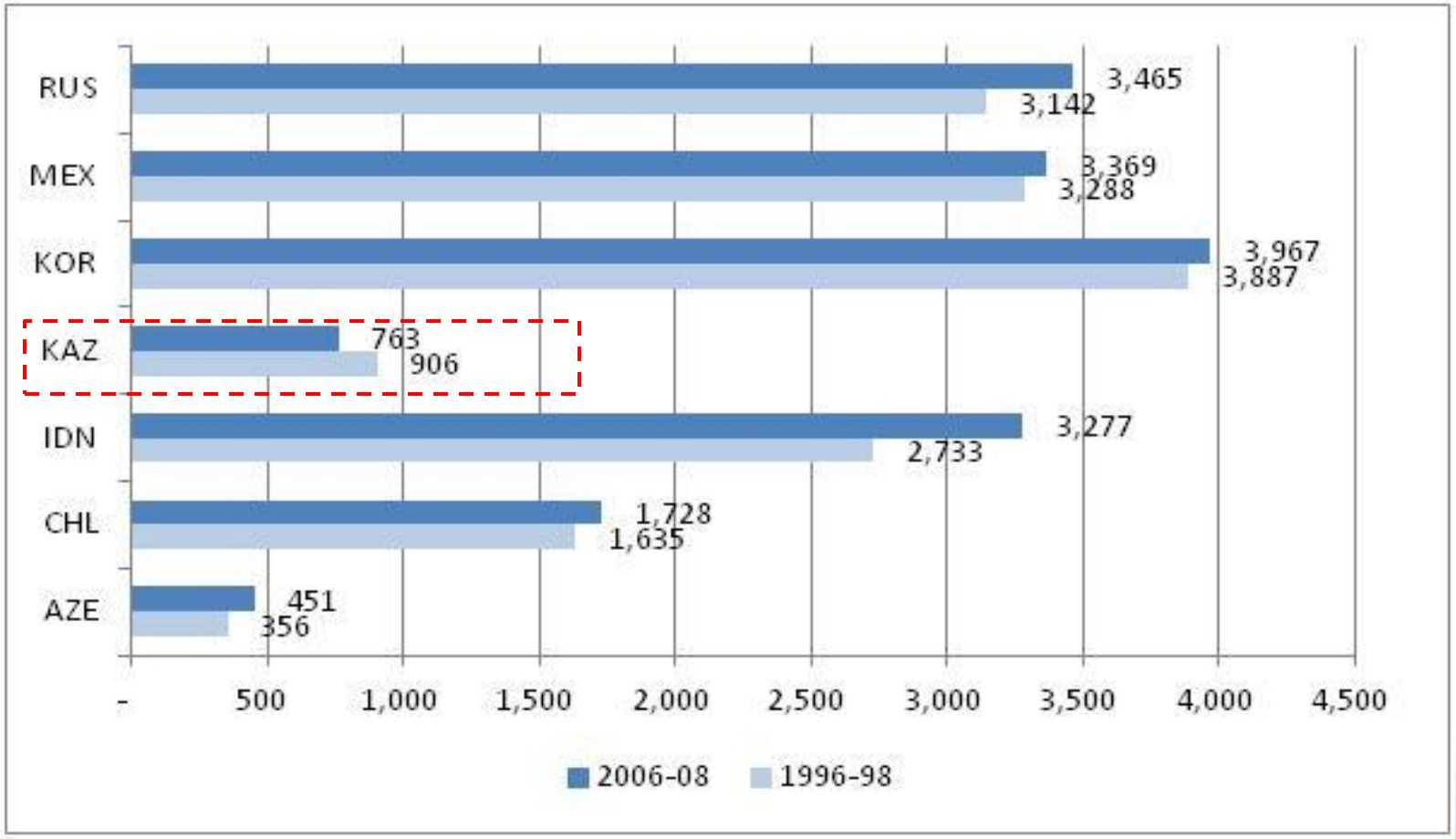
Example: Kazakhstan (products)



Example: Product variety

The number of products exported (overall or in a specific sector) gives a sense of the level of variety and experimentation in the export sector.

Example: Kazakhstan (number of HS 6-level products exported, w/US$50,000 threshold)

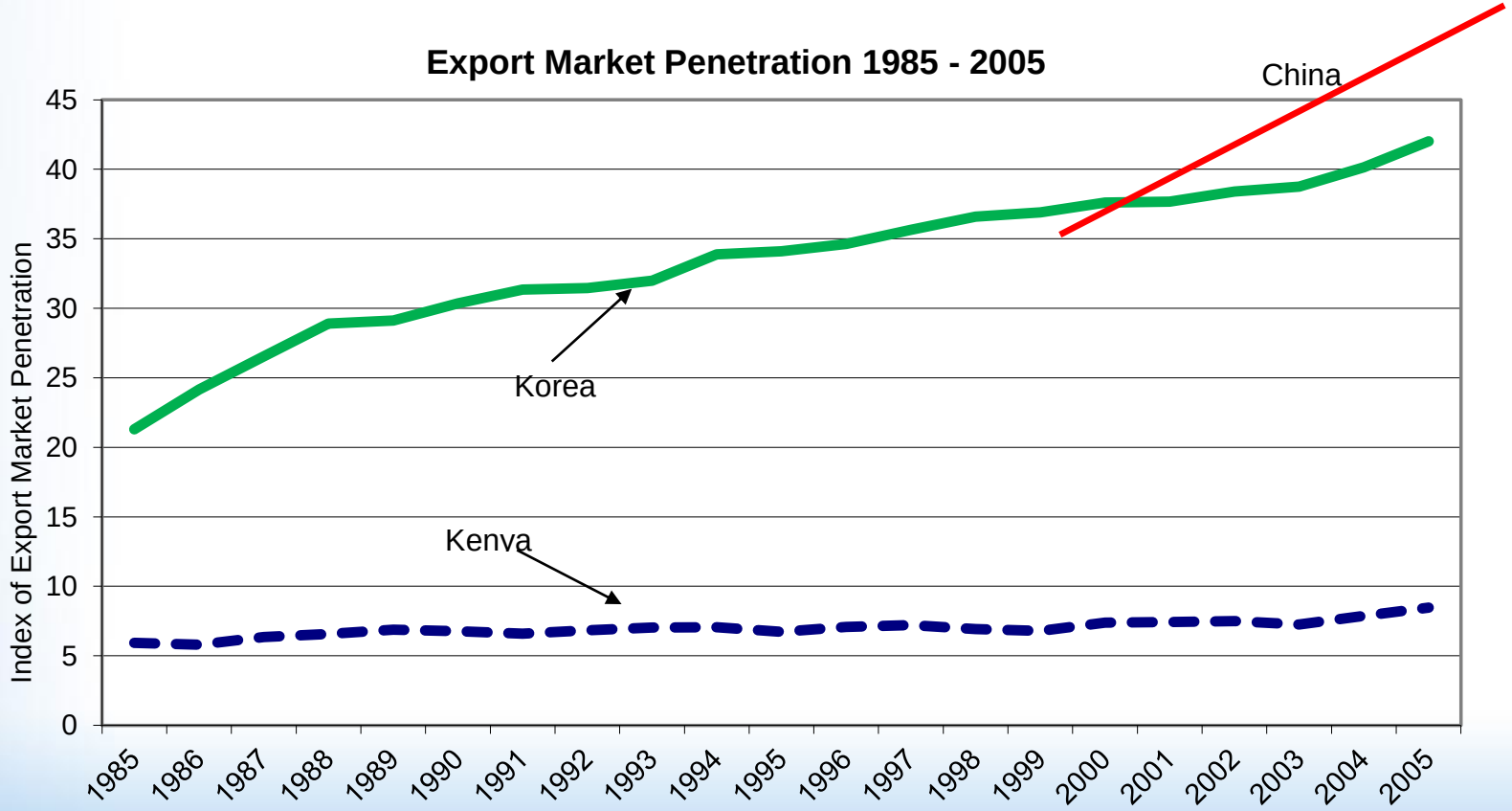


Diversification (Extensive Margin) – Summary of indicators

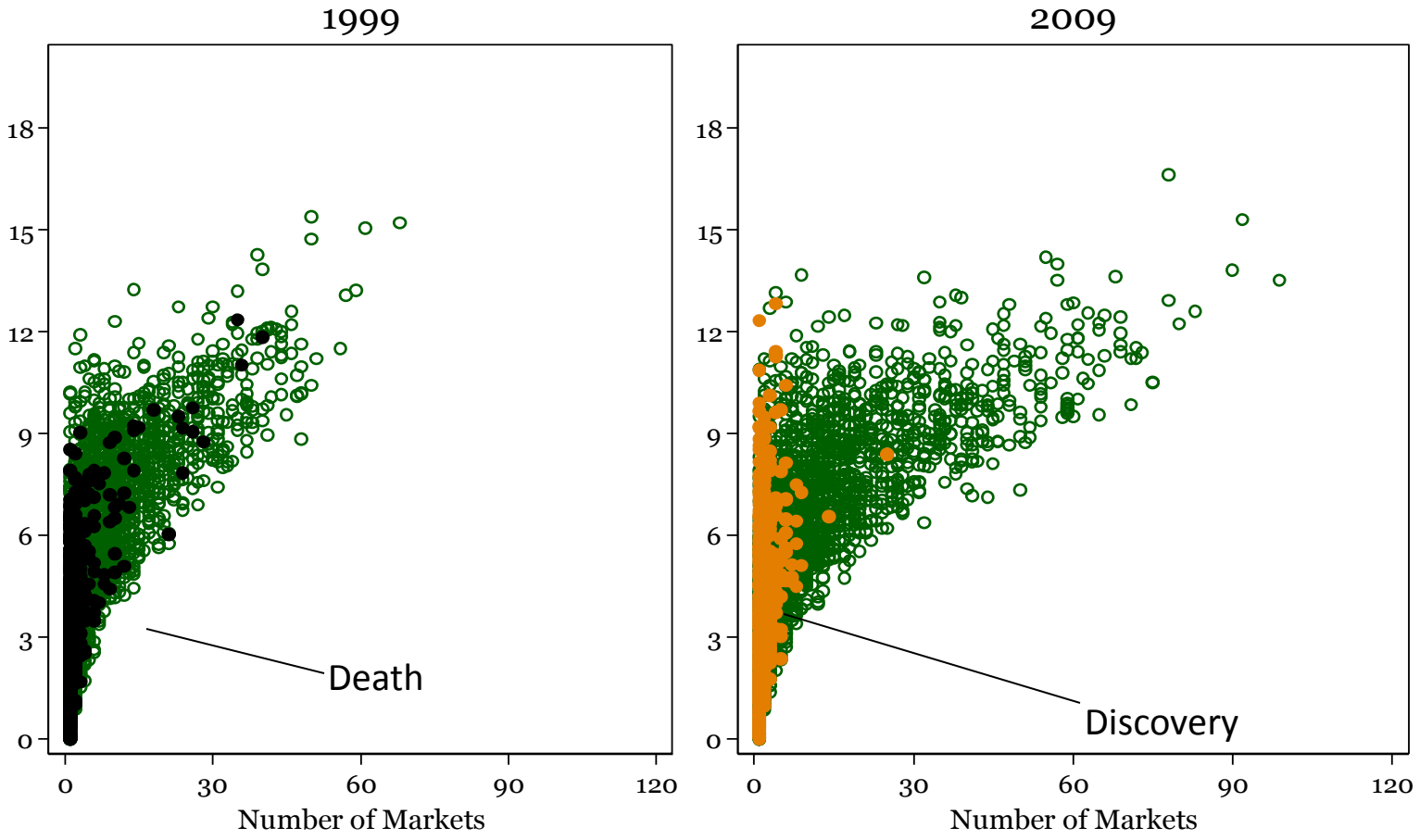
Issues	Indicators	Questions and Implicit Hypotheses
Market Reach of Exports	Index of Export Market Penetration (IEMP)	1. What were the products that substantially increased the number of markets they serve over a 10-year period? 2. Are there many "new" products or "deaths"? Which were the notable ones, and why? 3. Compared with peer countries, how much of the potential export relationships has a country exploited?

Diversification: Index of Export Market Penetration

Index of Export Market Penetration (IEMP) looks at a country's total number of exports, and the number of markets that each of those products reach. One of the world's most successful exporting nations, Germany, exploits only around half its potential. But many developing countries exploit almost none of it. Dynamic growth is associated with rapid expansion of market penetration



Another view of export market reach



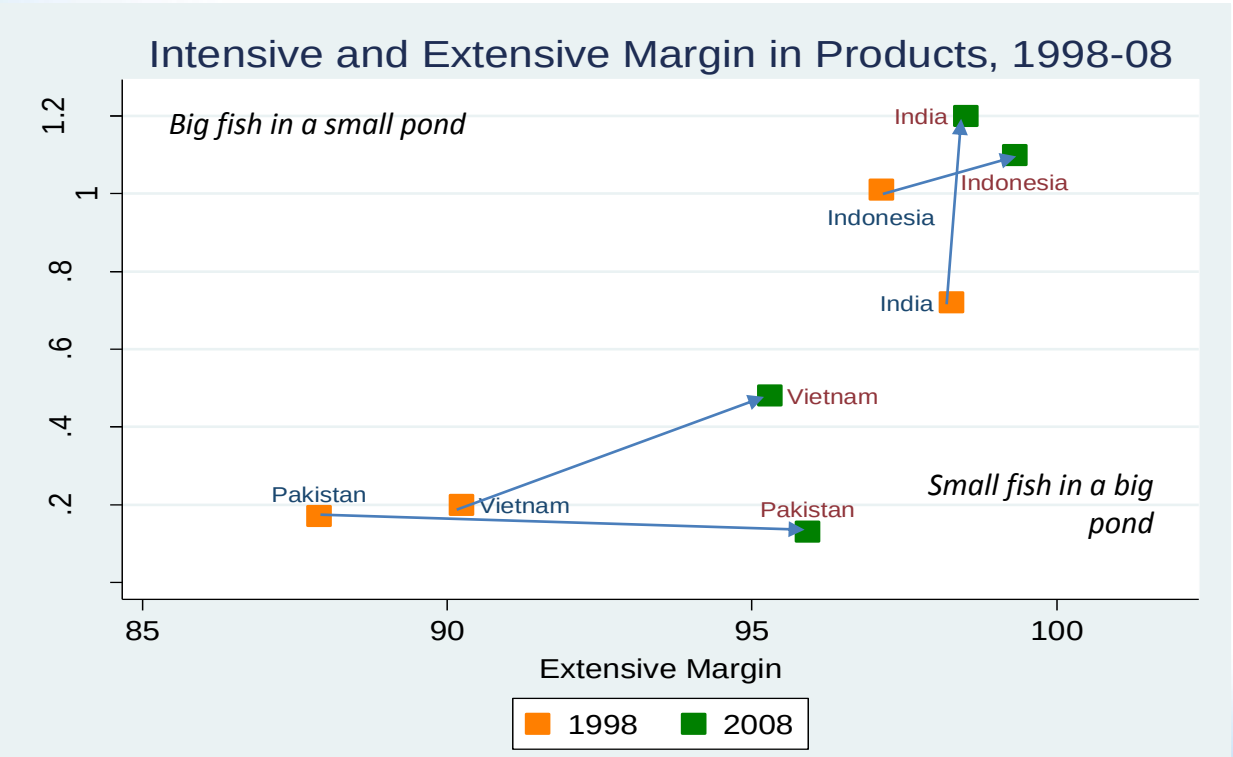
Diversification (Extensive Margin) – Summary of indicators

Issues	Indicators	Questions and Implicit Hypotheses
Intensive and Extensive Margins	Hummels-Klenow Extensive and Intensive Margins for both products and markets.	1. Over a decade, has a country added economically significant new products to its portfolio? Has it become a bigger player in products that it had a decade ago; Is a country big in what it exports and how much do those exports matter globally? 2. Is a country big in markets it exports to, and how much do those markets matter globally?

Diversification: Example of intensive-extensive margin plots

In the example below, we see that both Indonesia and Vietnam have diversified their export baskets while growing share in those products. India , already well diversified, significantly increased their market share performance in existing products. In Pakistan, however, there has been substantial diversification, but declining share performance across the export basket, raising concerns about the depth of the export sector.

Your market share in your export portfolio



Weight of your export portfolio in world trade

Diversification: Example of Intensive-Extensive Margin Plots

Over the last decade, the majority of export growth in Poland occurred at the intensive margin (67.7 percent of export growth is explained by existing trade relationships). 73.4 percent of export growth is explained by increases of exports of old products in old markets. The extensive margin overall contributed 32.2 percent to export growth in Poland over the 2000-2011 period. Increases of old products in new markets explained 28.7 percent of total export growth.

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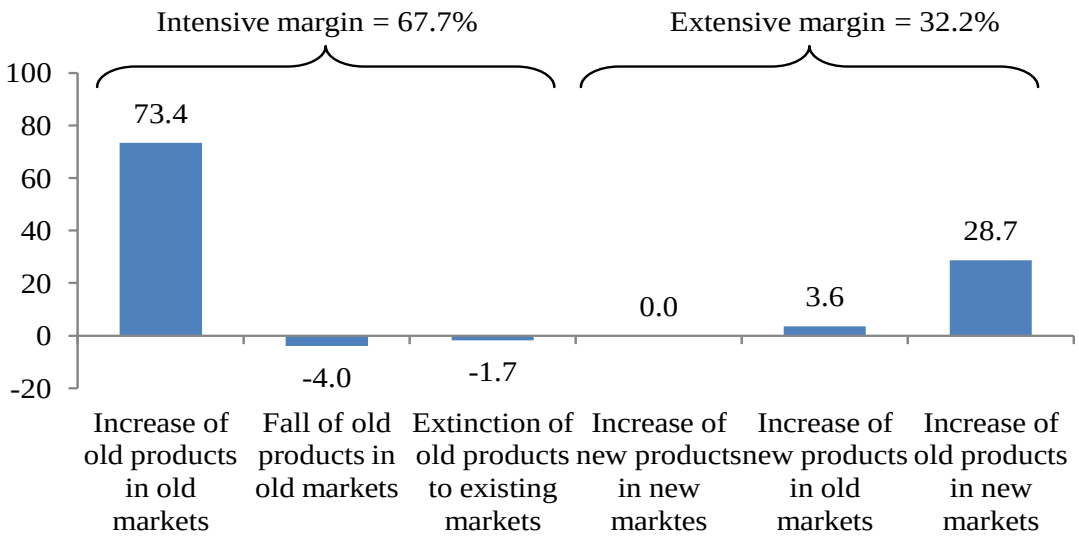


Source: Bank staff

Quality and Sophistication (Quality Margin)

What is covered in this component?

- This section looks at the level of concentration and variety of products and markets in the export basket.

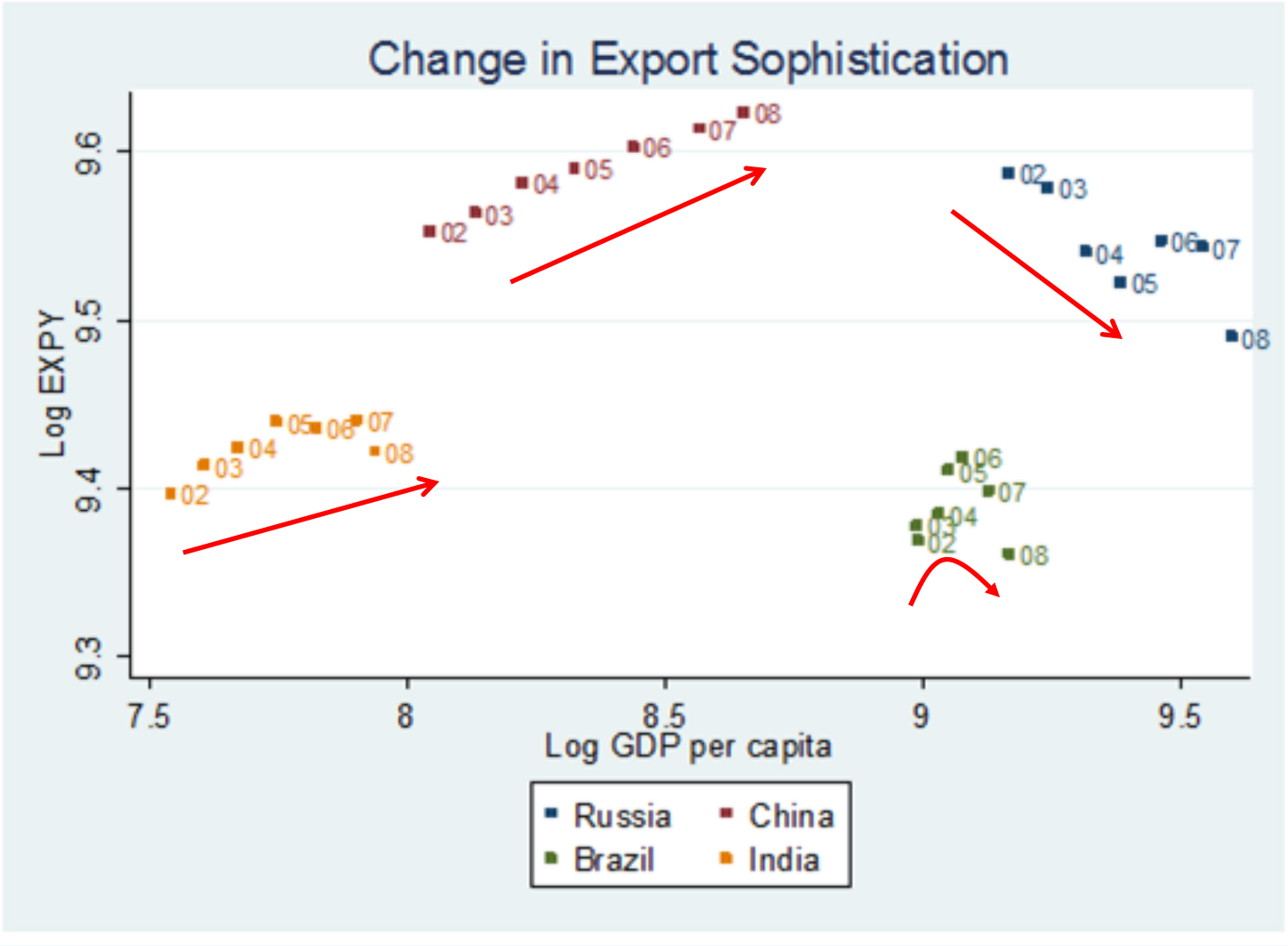
Why do we look at this?

- What countries produce, and how they produce them, matters for competitiveness.
- Quality and value addition are important ways to increase exports
- For many authors, it gives an indication on the potential for continued sustainable economic growth

Quality and Sophistication (The Quality Margin) – Summary of indicators

Issues	Indicators	Questions and Implicit Hypotheses
Sophistication	PRODY, EXPY	1. What is the "income" content of a country's exports? Does it produce what rich countries produce? 2. Can a country count on the existing portfolio of exports for future growth, or will it need to augment the process of "export discovery"? 3. Is sophistication illusory when taking into consideration the share of imported parts and components in final value?

Example – Sophistication



Example – Sophistication

Example: Export sophistication at sector level (Turkey)

Figure 4.14: Export performance and sophistication: automotive sector

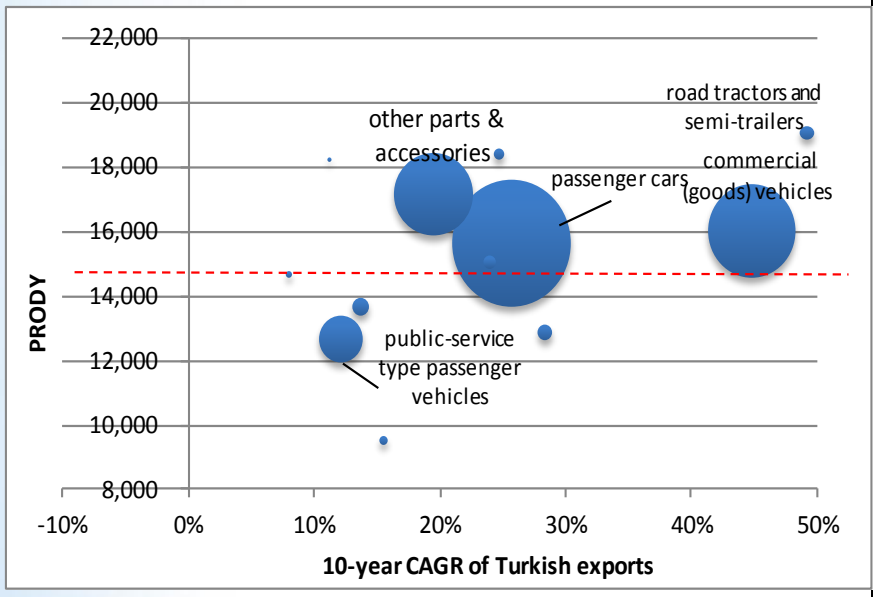
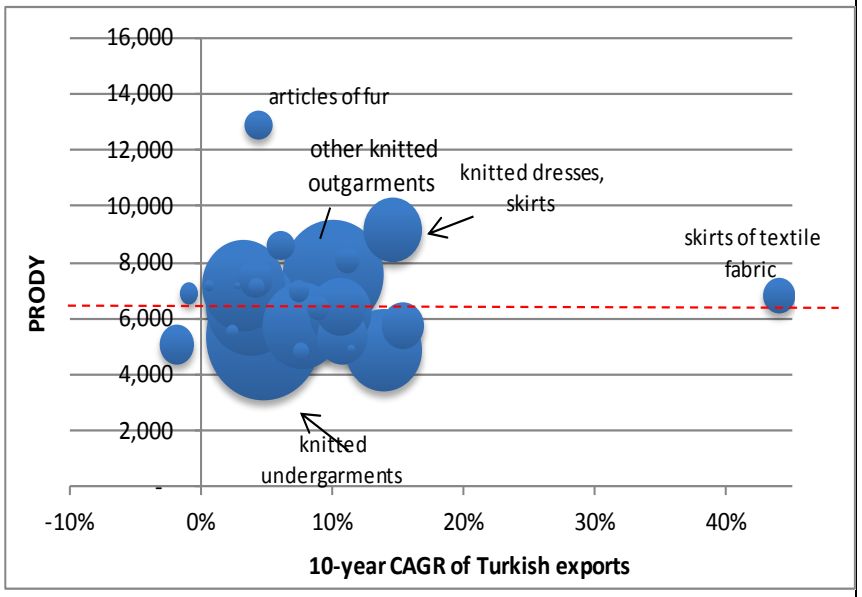
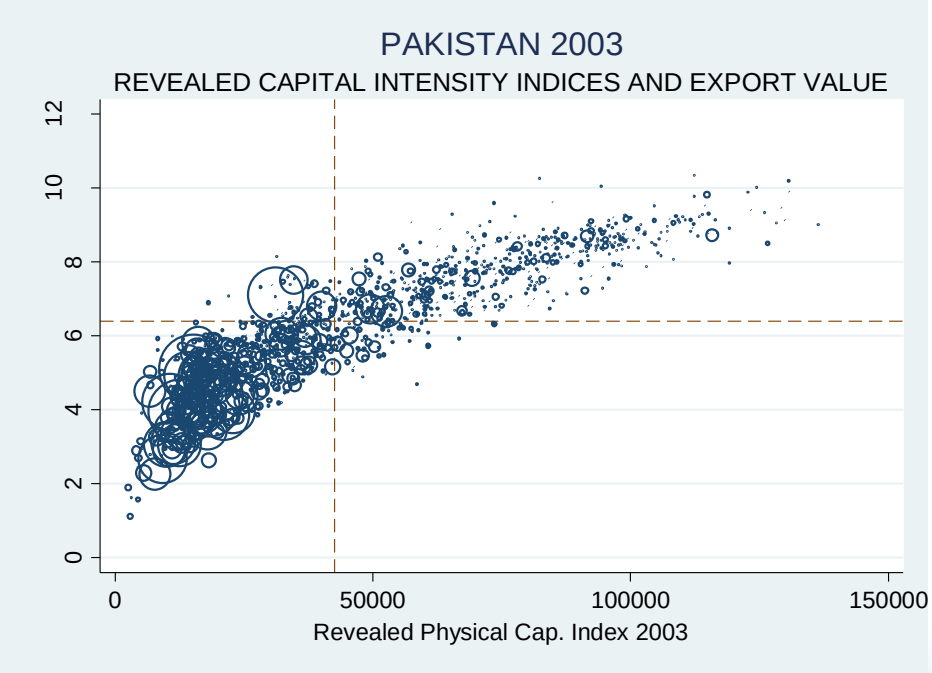


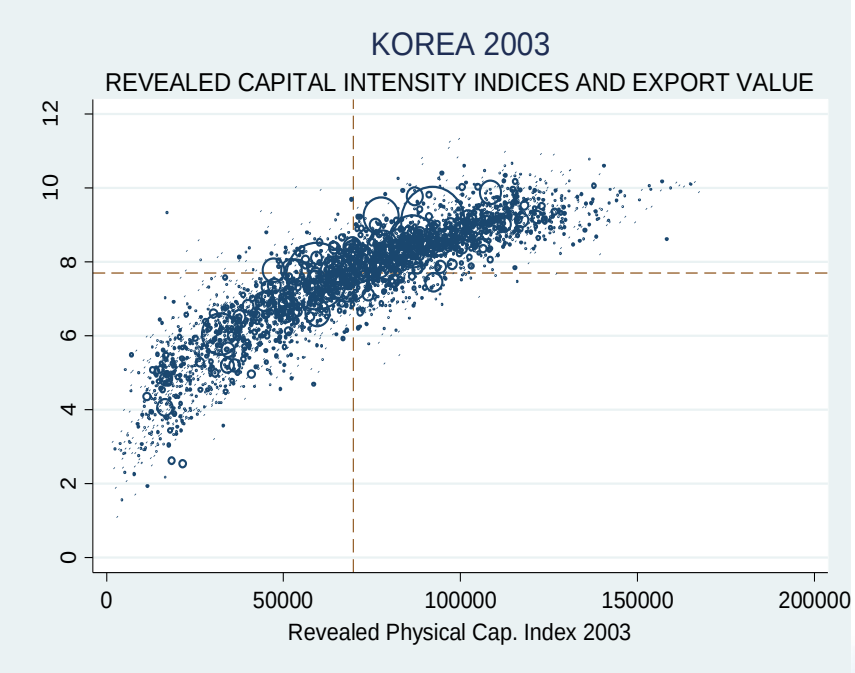
Figure 4.15: Export performance and sophistication: apparel sector



An alternative to sophistication – Revealed Factor intensity

The quadrants are formed by the median human and physical capital contents of each country's exports that year. Some of the biggest earning Pakistani exports (indicated by bubble size) embody human and physical capital content below the median of its portfolio. In contrast, Korea's big export earners embody capital content that is above the median of its overall export portfolio. Pakistan's most important exports in terms of value are those that need little machines, capital equipment, and schooling. Its exports that are capital intensive are yet to be scaled up.





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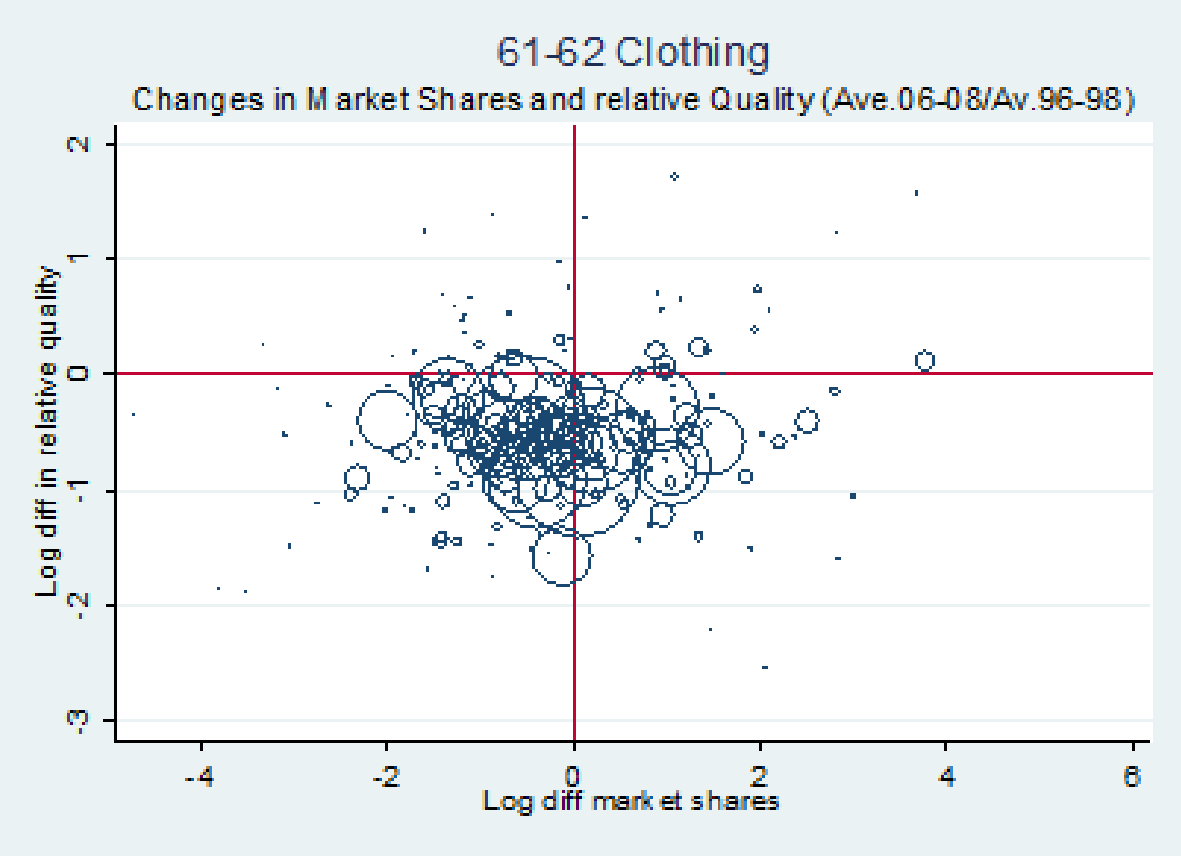
Quality and Sophistication (The Quality Margin) – Summary of indicators

Issues	Indicators	Questions and Implicit Hypotheses
Technological Content	Relative shares of high, medium, and low technology goods in total exports	Over a decade or so, has there been a shift away from the country's dependence on resource and primary exports to medium and high-tech exports?
Unit Values	Cross-country comparison of unit values at the SITC 5 or HS 6 digit level	1. Given the unconditional nature of unit value convergence, how likely is product upgrading as a strategy to become a secure source of economic growth? 2. What share of a country's exports is in industries that are deemed to be price-elastic relative to industries that are quality-elastic (Revealed Quality Elasticity)?

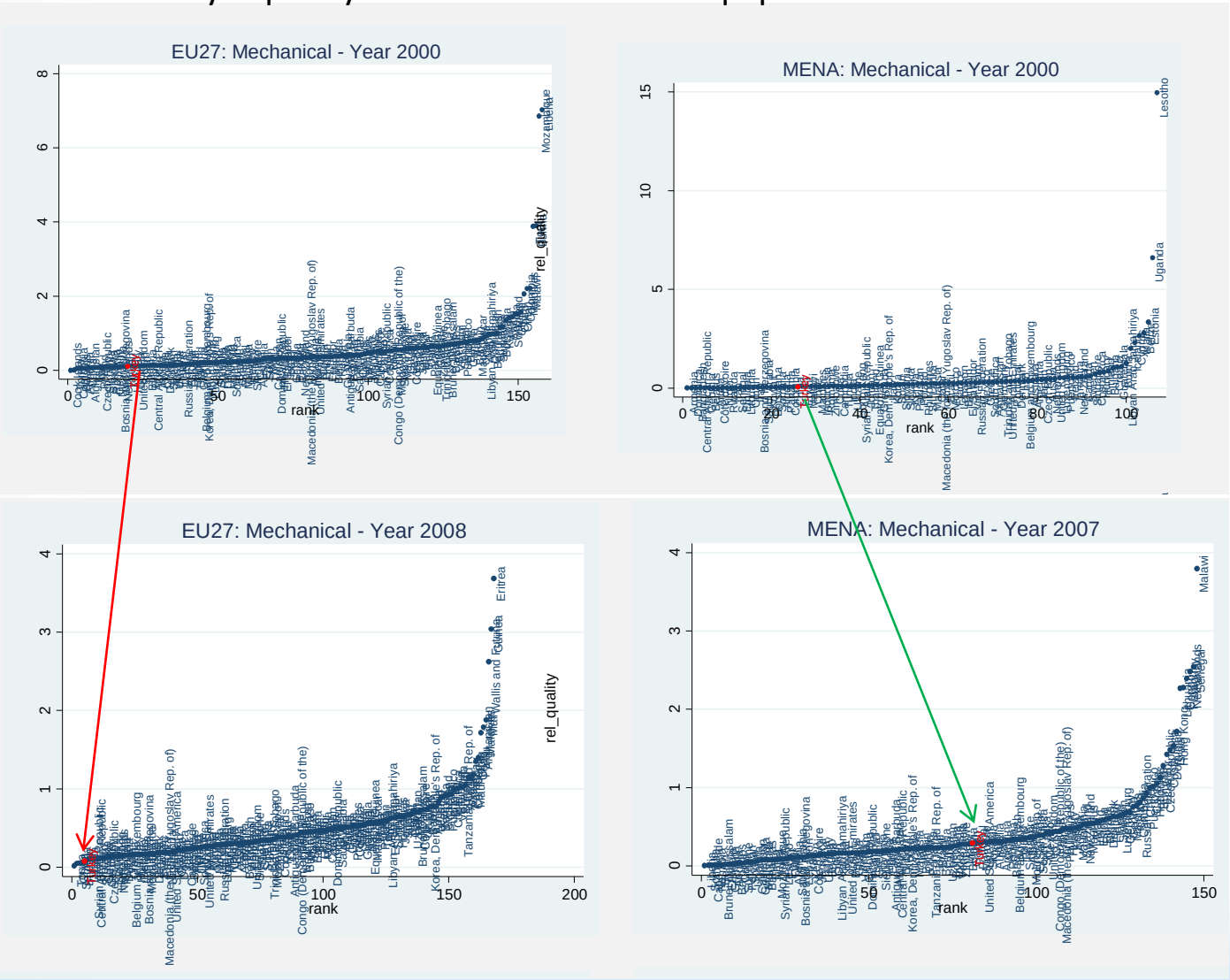
Example – Unit Values

When supply is competitive, higher prices are generally associated with higher quality and greater product differentiation. One way to increase the absolute amount of export per capita is to increase the value of export per unit. The figure below shows Indonesia's apparel exports to its main EU market. While its market share position has varied considerably by product, its quality position, relative to other exporters to the EU, has declined in most cases.



Example – Using unit values to analyze quality ladders

Turkey's quality ladder in mechanical equipment: EU and MENA



Entry and Survival (Sustainability Margin)

The last component of trade competitiveness focuses on **entry and survival** in export markets.

The majority of export relationships (at the product-country level) forged by developing countries do not survive for more than a few years. This is important because successfully diversified economies outperform less successful ones not in introducing new exports or entering new markets, but in *sustaining* them.

But churning is important to sort the most productive firms… what matters is the net outcome.

Entry and Survival (Sustainability Margin)

What is covered in this component?

- Dynamics of firm entry and survival; longevity of product-market relationships.

Why do we look at this?

- The majority of export relationships (at the product-country level) forged by developing countries do not survive for more than a few years.
- This is important because successfully diversified economies outperform less successful ones not in introducing new exports or entering new markets, but in *sustaining* them
- But churning is important to sort the most productive firms… what matters is the net outcome

Entry and Survival (Sustainability Margin) – Summary of Indicators

Issues	Indicators	Questions and Implicit Hypotheses
Firm dynamics	Number of firms; Number of exporters; nature of exporters (size, FDI share); Export share of production	1. What has been the trend of export participation? Is exporting accessible for most firms? 2. How large are typical exports and how reliant are exporters on domestic v export markets? 3. How important is FDI for the export sector?
Longevity	Kaplan-Meier survival function; Nelson-Aalen cumulative hazard function; extended mean graphs	1. What is the mean/median duration of a country's export relationship? Is this low or high when compared to peer-countries? 2. What export relationships were sustained over the full sample period of 10-15 periods? Which sector do they belong to (machinery, electronics)?

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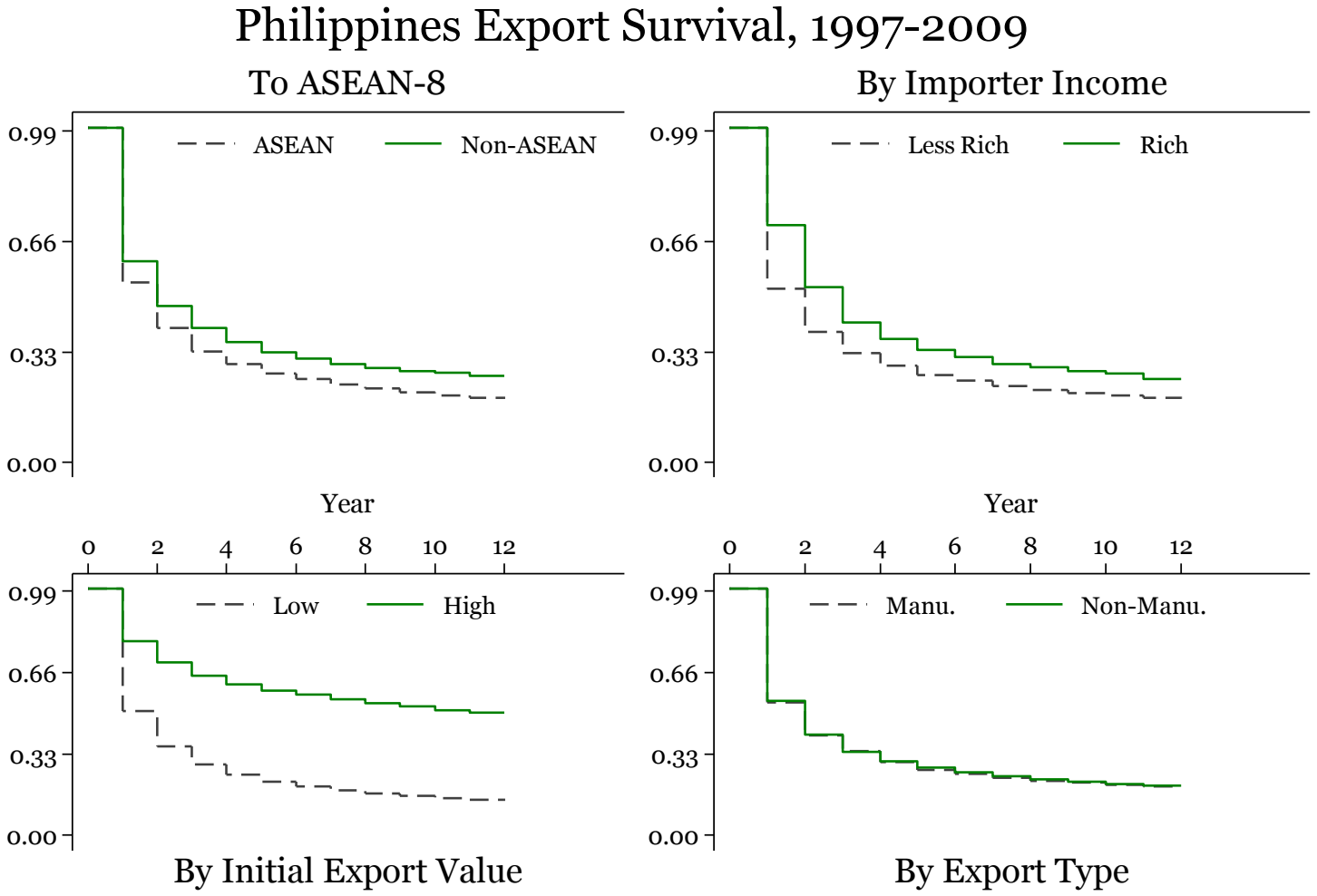
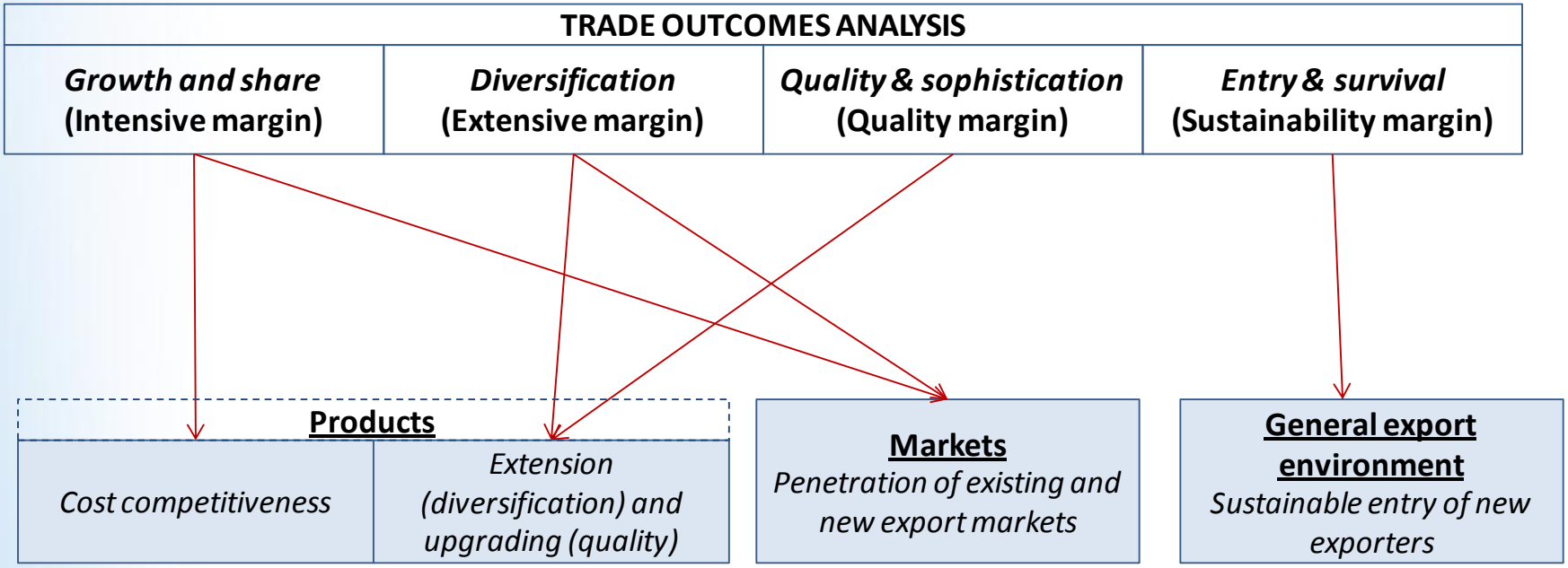
Example - Longevity

Below are survival rates of Philippines exports at the SITC 4-digit level



Trade Outcomes Analysis: Step 4 – Drawing Conclusions from the Analysis

After a thorough assessment of trade performance is undertaken under the four themes, the next step is to **hone in on the proximate causes of competitive weaknesses** that will be the focus of the Diagnostic exercise. In general, the broad issues with trade competitiveness can be boiled down to a problem with **products, markets, and/or the general environment for exporters**.



Questions for the Diagnostic Analysis

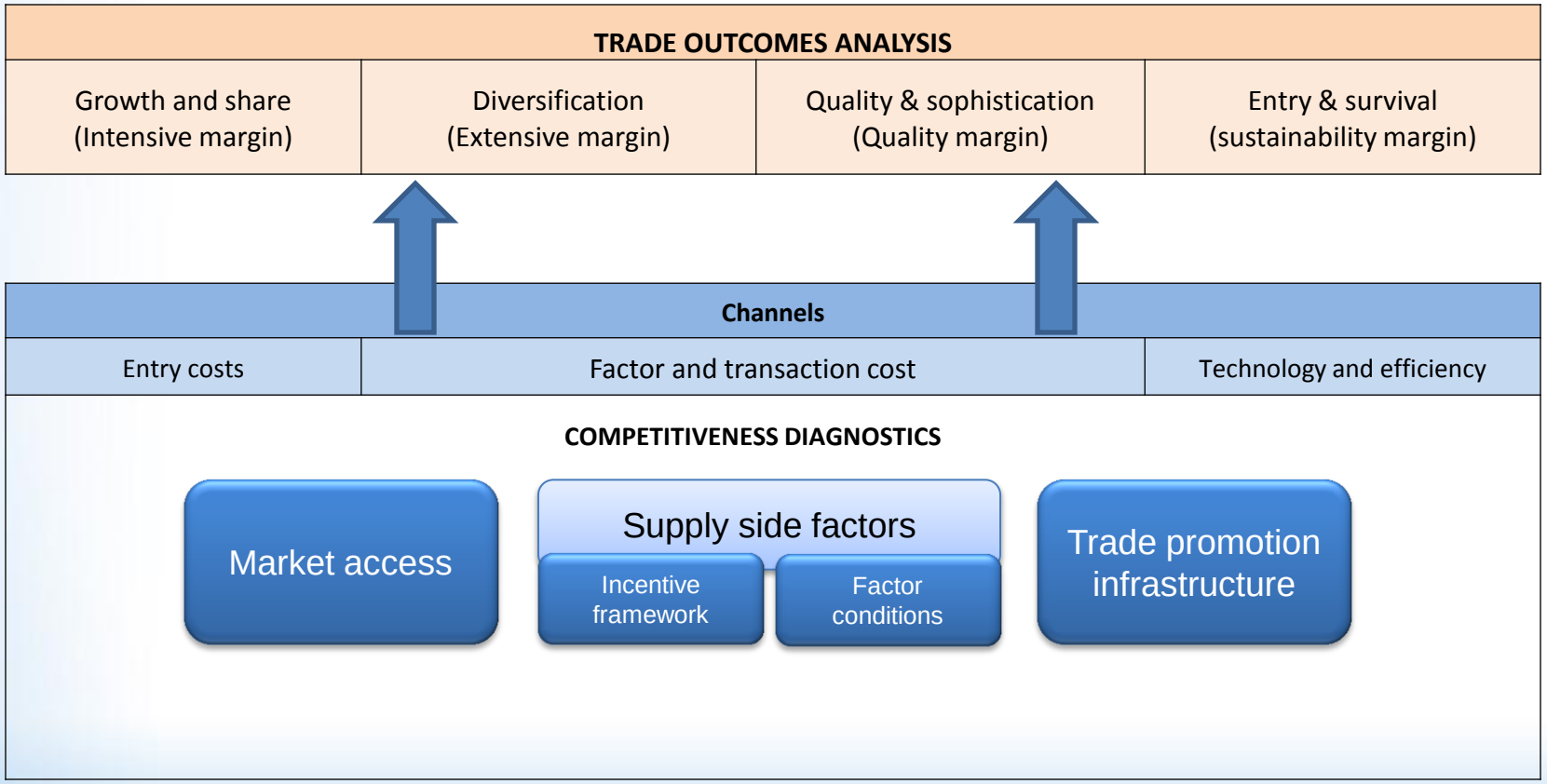
In addition to identifying the main issue areas for focus in the Diagnostics, it may be useful to identify broad questions around which the Diagnostics exercise can be organized or even very specific questions at the sectoral level. Below is an **example from a TCD exercise in Nicaragua**:

- What are the opportunities to expand exports regionally / to South America? Are there specific market access or other constraints at the moment?
- What are the main constraints to growing intra-regional trade (product complementarity, trade logistics, NTMs, etc)?
- What are the reasons why exports of animal and agriculture products to the EU have dramatically decreased? (Specifically, exports of Coffee and Bananas). Is it because fierce competition in the EU (Vietnam coffee)? SPS measures?
- Is (how is) the lack of market diversification linked to sectoral structure?
- To what degree is the country's export basket reliant on US trade preferences? or special incentive regimes (e.g. SEZ)
- Has the Nicaraguan government looked at the Brazilian experience of incentives for exports in the agri sector?

4 Stage 2 – Competitiveness Diagnostics

Diagnosing Competitiveness: Overview of the Framework

Following on from the Trade Outcomes Analysis, the Competitiveness Diagnostics proceeds through a logical approach of assessing how various factors may contribute to trade performance. The Diagnostics include three broad areas of assessment, as illustrated in the figure below



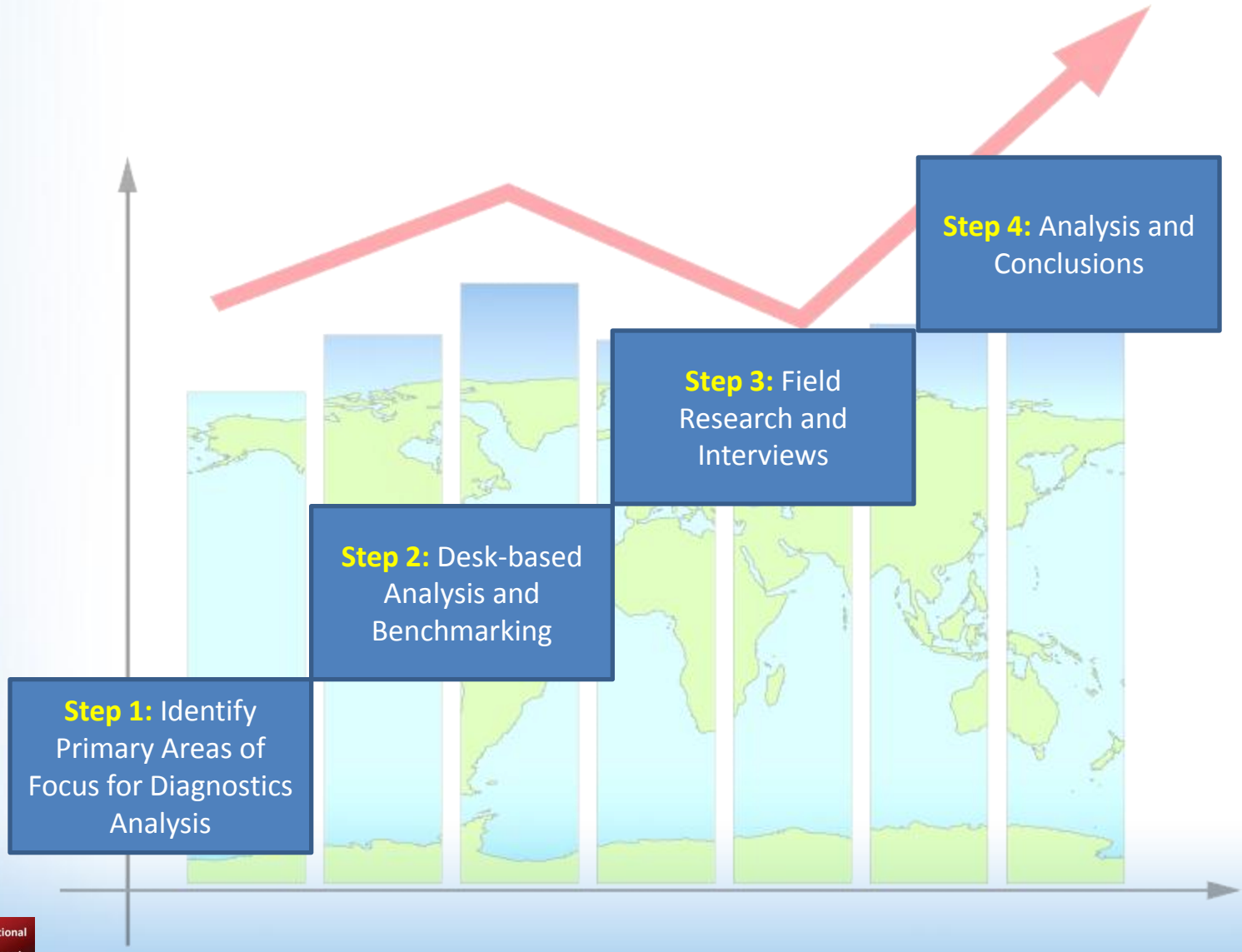
Competitiveness Diagnostics: Topics in Diagnostic

Component	Issues
Market Access	Market access (trade policy, NTMs)
Supply Side: Incentive framework	Trade and investment policy
	Domestic policies and institutions (competition, business environment, and governance)
Supply Side: Factor Conditions	Access to finance
	Labor markets, skills, and technical efficiency
	Intermediate inputs and backbone services
	Trade facilitation and logistics
Trade Promotion Infrastructure	Export and investment promotion
	Standards and certification
	Special customs regimes and SEZs
	Industry coordination and sector support
	Innovation

Each topic in the Diagnostic Toolkit includes:

- Discussion of how it links with the competitiveness challenges identified in the Trade Outcomes
- Quantitative indicators and data sources
- Interview targets and guides for conducting field interviews
- Sector-specific considerations
- Country-type specific considerations
- More detailed background information on links with competitiveness

Conducting Competitiveness Diagnostics: four main steps



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Competitiveness Diagnostics: Step 1 – Identifying Primary Areas of Focus

The broad-based nature of competitiveness means that the range of issues included in the Competitiveness Diagnostics is wide. Thus, an important first step is to review the Trade Outcomes results and assess the likely candidates that can be the focus of the initial analysis.

The premise of the TCD approach is that trade competitiveness is not determined by any single constraint. Instead, the **constraints are likely to be multiple and intertwined**, and possibly tied to cross-cutting issues for which there may not be direct policy fixes from the trade sector.

The Diagnostic helps prioritize the most binding constraints to export competitiveness in a world characterized by scarce resources and trade-offs among competing choices.

Competitiveness Diagnostics: Factors Impacting Competitiveness

The table below provides a checklist of the most likely factors impacting competitiveness for each of the broad areas that will be defined from the Trade Outcomes Analysis.

		Main challenges identified from the Trade Outcomes Analysis	General Export Environment	Cost Competitiveness	Product extension and Quality	Market penetration
Channels		Fixed entry costs	✓	✓		✓
		Factor Costs	✓	✓	✓	✓
		Technology and efficiency	✓	✓	✓	
Market access		Tariffs and quantitative restrictions	✓	✓		✓
		Non-tariff barriers	✓	✓	✓	✓
		Preferential trade arrangements	✓			✓
Supply side factors	Incentive framework	Macro-fiscal environment	✓			
		Exchange rates	✓	✓		✓
		Trade and investment policy	✓	✓	✓	
		Competition	✓	✓	✓	
		Regulatory environment and governance	✓	✓	✓	
	Factor Conditions	Access to finance	✓		✓	
		Scale economies	✓	✓		
		Labor regulations and skills		✓	✓	
		Firm-level technical efficiency		✓	✓	
		Land and infrastructure		✓		
		Intermediate inputs		✓	✓	
		Service inputs		✓	✓	
		Trade facilitation and logistics				✓
Trade promotion infrastructure		Export and investment promotion	✓	✓		✓
		Standards and certification	✓		✓	✓
		Special customs regimes and SEZs	✓	✓		
		Industry coordination bodies	✓	✓	✓	
		Innovation			✓	

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Competitiveness Diagnostics: Step 2 – Desk-based Analysis and Benchmarking

The Diagnostics begins with desk-based research. The purpose of this is two-fold: to make full use of the existing quantitative and qualitative evidence available to assess how specific factors influence trade competitiveness; and to assist in preparing the field research. This step involves three main types of research:

- Qualitative Analysis
- Census and Survey Data
- Quantitative Benchmarking

The results from desk research will provide some indications on which competitiveness factors a country performs particularly well or badly. This can establish additional hypotheses to test in the field and questions for further research.

Qualitative analysis should focus on learning from previous assessments of competitiveness. This can draw on secondary sources such as:

- Country Strategy reports
- Country Economic Memorandum (CEM)
- Diagnostic Trade Integration Studies (DTIS)
- Policy analyses
- Sector studies

These sources are from the World Bank, government, or third parties. Qualitative analysis of secondary sources should always be confirmed through interviews.

Desk-based Tools: Census and Survey Data

Detailed firm-level data may be available to provide valuable time series indications on factors contributing to competitiveness (input costs, factor proportions, productivity, etc.). One source is from existing surveys undertaken by the World Bank Group, particularly the **Enterprise or BEEPS Surveys**.

A second source is **country-specific census data** – for example many countries conduct annual or periodic census of all enterprises or of industry. Accessing **microdata (firm-specific) is key but** can often be difficult due to concerns over confidentiality (see separate presentation on firm-level data).

1. In order to have information about firms' characteristics, it requires merging customs transaction data with census or enterprise surveys data. It is then possible to conduct a very detailed analysis of market and product diversification and of determinants of export performance at both the extensive and intensive margins.

2. The firm-level data analysis needs to be complemented and tested with qualitative information (interviews, focus groups with exporters, etc).

Desk-based Tools: Benchmarking

The third analytical tool is **benchmarking**. As competitiveness is a relative concept, benchmarking country performance relative to a set of peers is integral to the Diagnostics, as it not only helps gauge performance but sets the parameters for potential improvement.

Benchmarking also provide a useful and straightforward (non-technical) way to communicate competitiveness performance.

Examples of these exercises are provided by the World Bank Group's **Doing Business indicators**, which benchmark and rank the cost and quality of business regulations for key cross-cutting investment climate issues**. The Global Competitiveness Ind**ex, published annually by the World Economic Forum, is another good example of the use of benchmarking.

Field research is critical to conducting any TCD. This is normally the source of critical insights that connect quantitative benchmarks with observed performance.

Three primary forms of analysis are used in the TCD for conducting field research:

- Stakeholder Interviews and focus groups
- Surveys
- Value Chain Analysis

Combining a number of the different quantitative and qualitative tools discussed in this section can allow the practitioner to identify the main elements connecting supply side factors to trade competitiveness.

One way of identifying the relative importance of the constraints is to combine the findings from the first and second stages of the TCD to identify where there is weak competitiveness performance in factors that typically matter most for the competitiveness challenges identified in the Trade Outcomes Analysis.

Competitiveness Diagnostics: Example

In this example, the Trade Outcomes Analysis identified the main challenge to be product quality and upgrading. In several of the areas that typically explain competitiveness challenges in product quality, the example country is performing particularly poorly, specifically in labor regulations and skills, technical efficiency, standards, and innovation.

Primary trade competitiveness challenge		**Product extension and quality**
Market Access	Tariffs and quantitative restrictions	--
	Preferential tariff arrangements	+
	Standards and TBTs	X
Supply side: Incentive framework for trade	Macro-fiscal environment	--
	Exchange rates	--
	Trade and investment policy	X
	Regulatory environment and governance	X
	Competition	--
Supply side: factor inputs	Access to finance	X
	Scale economies	+
	Labor regulations and skills	XX
	Technical efficiency	XX
	Land and infrastructure	--
	Intermediate inputs	--
	Services inputs	--
	Trade facilitation and logistics	X
Trade promotion infrastructure	Standards and certification	XX
	Export and investment promotion	--
	Innovation	XX
	Special customs regimes and SEZs	--
	Industry coordination bodies	--

+ positive impact on competitiveness
-- no major impact on competitiveness
X some negative impact on competitiveness
XX significant negative impact on competitiveness

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| Thank you |