



Robert Eller Associates, Inc.

CONSULTANTS TO THE PLASTICS AND RUBBER INDUSTRIES

SUCCESSFUL STRATEGIES FOR COMPETING IN CHINA

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5th Specialty Elastomers/TPE's
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CONSULTANTS TO THE PLASTICS AND RUBBER INDUSTRIES

- Robert Eller Associates is a 15 year-old global plastics consulting company helping companies analyze technical, marketing and economic implications for their business to facilitate management in strategic decision making
- Offices in Akron, Ohio (home office), Paris, Shanghai, New Zealand
- Asia: Active in China, India, Middle East
- 5 Key Focus areas: TPE's, ETP's, Automotive, Compounding and Foams
- Multi-client studies:
 - China TPE Market: 2006
 - North America/Europe TPE: 2006
- Single client studies
- Mergers and acquisitions:
 - Complete management service for small acquisitions
 - Due diligence
 - Technical Advisors

What all customers seem to ask first.....

What is your price?

.....but at what quality, what performance and what service level?

STRATEGY DILEMMAS

- Western Companies:
 - How do I protect/grow my share of the companies requiring my high quality and higher prices?
 - How do I get a portion of the domestic Chinese market
 - The toothbrush syndrome.....*if only I could sell just one toothbrush.....*
 - How can I produce products as low cost as domestic producers?
- Chinese Companies
 - How do I take advantage of my low cost position and sell product into the higher quality export market segments?

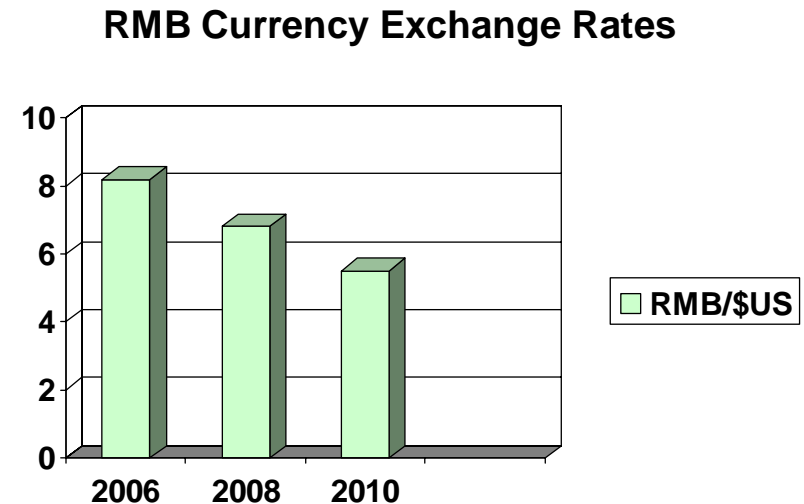
THE TARGET IS CHANGING

- Exports to domestic consumption
 - Current global economic slowdown will slow exports
 - Quality concerns overseas
 - Toys
 - Milk
 - Rising prices due to higher costs reduce export demand as businesses look to move to lower cost manufacturing locations
 - Chinese “buying class” becoming large enough to drive globally competitive manufacturing plants
- Understanding how to compete
 - Understand low product quality/performance/price requirements and how to be competitive

GLOBALIZATION:

China's role as low cost producer is changing.....

- RMB currency exchange rate
- Labor cost increases 65-80% over last four years
- Property cost escalation
- Inflation > 8% becoming a factor
- Innovation taking off
 - Original Chinese designs
- Higher value, higher technology industries
- R&D investment payoff

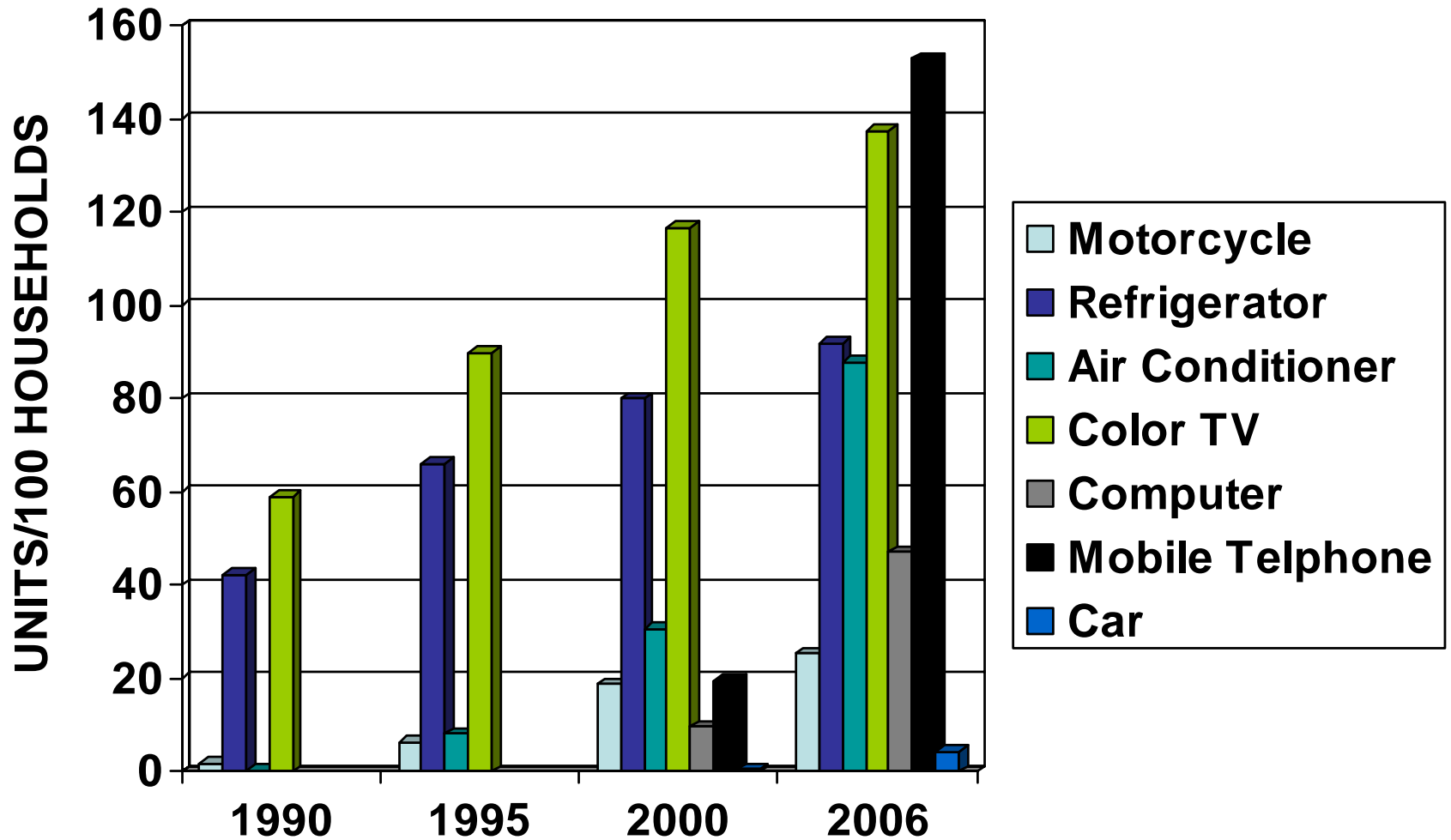


SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008

EMPOWERED MIDDLE CLASS

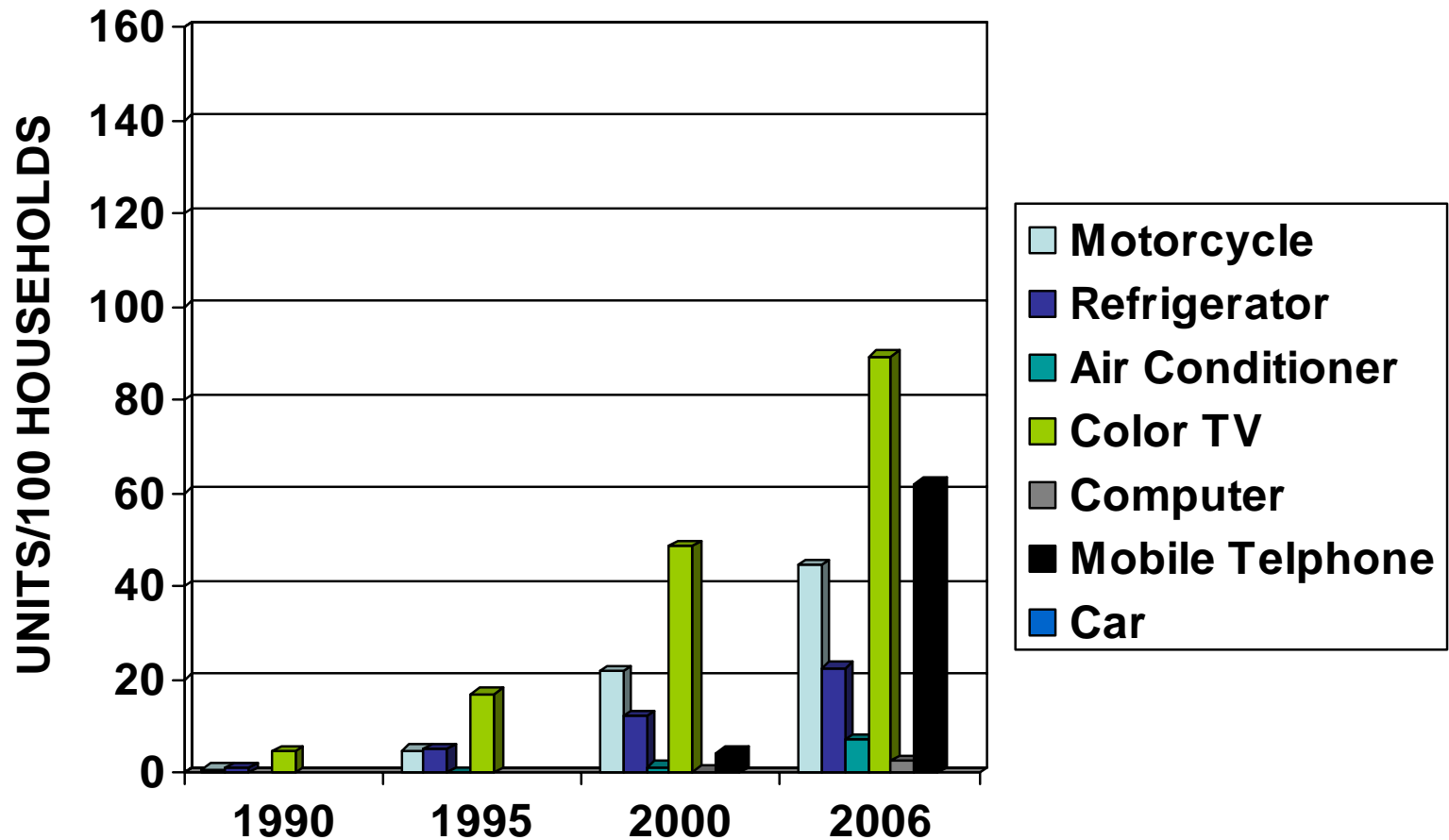
- The number of urban households with income greater than 40000 RMB/year will triple in the next ten years and by 2025 will represent over 70 % of the forecast 400 MM urban households
- This boom is just taking off
- Will become a significant driving element of Chinese economy with export business
- Shanghai/Beijing center of this buying spree, other urban centers are also growing but not as quickly.
- Buying cars, mp3 players, video games, computers, telephones
- Foreign brands popular and extract premiums over domestic products

DURABLE GOODS OWNED PER 100 URBAN HOUSEHOLDS IN CHINA



SOURCE: CHINA NATIONAL BUREAU OF STATISTICS

DURABLE GOODS OWNED PER 100 RURAL HOUSEHOLDS IN CHINA



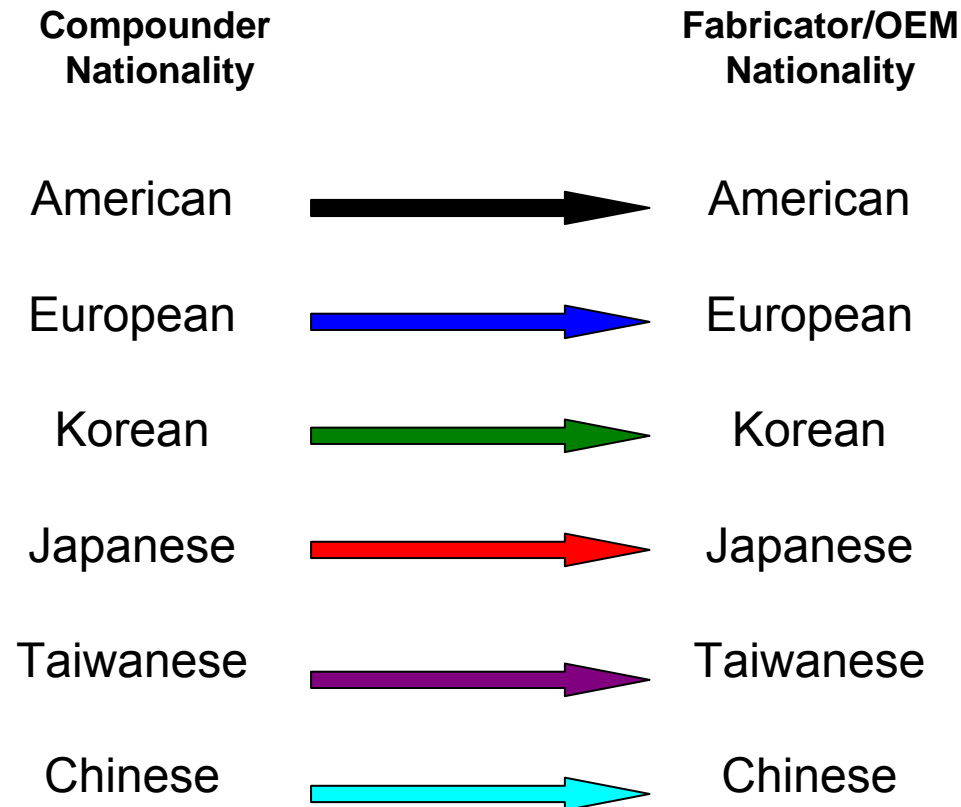
SOURCE: CHINA NATIONAL BUREAU OF STATISTICS

GLOBALIZATION VS. LOCALIZATION

- Globalization
 - Sourcing/manufacturing at the least cost global source
- Localization
 - Sourcing locally with locally produced raw materials
- Export/global market
 - very OEM driven
 - Global uniformity/specification process
- Domestic vs. International Platforms
 - Chery, Nissan, others
- Adapting to the local market needs
 - Cell phones from Nokia, Motorola, Samsung competing with TCL and Bird
 - Colgate Palmolive: acquisition with San Xiao

PARALLEL SUPPLY CHAIN

Nationality Based



SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008

QUALITY TIERING OF CHINA MARKETS



MARKET SEGMENT	PRODUCT/QUALITY DEFINITION
Global	Products produced for Global market meeting global quality and performance standards at global pricing
Glocal*	Products produced for domestic and export markets with near global quality and performance standards with near global pricing
Local*	- Products produced for the local market meeting local performance, quality and price requirements
Low End*	Products marketed based solely on price, with low concern for quality, and performance

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008

Note: * = Will gain share in global recession

QUALITY/PERFORMANCE TIERING

	Quality	Performance	Service	Price
Global	High	High	High	High
Glocal	Near Global	Near Global	Moderate	Near Global
Local	Local standards	Local requirements	Low	Local
Low End	Low	Low	None	Low

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008

THE EVOLVING LEVEL OF QUALITY: DEVELOPED WORLD VS. UNDEVELOPED WORLD

- Developed World: 80% of the opportunity is global and glocal
- Undeveloped World: 80% of the opportunity is typically local and low end
- Japan (1960's), Korea (1990's) are comparable models
 - Asian countries that evolved from low cost global producer to high productivity global competitors
- Quality changes as manufacturing culture matures.....quality becomes greater importance
 - Concepts like six sigma and high productivity manufacturing techniques put greater pressure on quality, performance and consistency
 - People increasingly willing to pay for reliability and quality until a global quality level is achieved
- Expect pressure on low end and local products to improve quality/performance

QUALITY TIERING: SOME EXAMPLES

	GLOBAL	GLOCAL	LOCAL	LOW END
Toothbrushes (Colgate Palmolive)	Colgate Palmolive	San Xiao	San Xiao	One time use like hotel amenities
Toothbrushes (SEBS Compounds)	GLS	Hotai	TSRC	Not used
Compounding Extruders (Coperion)	ZSK: Designed and made in Germany.	STS: Designed and part made in Germany, rest in China. Cost 0.35-0.45 of a ZSK	CTE: Designed and made in China. Cost 0.10-0.15 of a ZSK	
SEBS Resin	Kraton	TSRC	Baling	Wide spec
TPV	Santoprene		Dawnprene	

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008

CHINESE COMPOUNDER ADVANTAGES

- Local raw materials
- Typically lower wage rate than western companies
- 4-10 x lower capital depreciation
- Greater creativity in raw materials/raw material sourcing
- Lower packaging costs: returnable bags, reuse of bags
- Lower shipping costs
- Government funded institutes provide R&D sources for compounders as advanced material or high technology centers

PRODUCT DEVELOPMENT VS. CAPITAL BASE

	Local Quality Extruders	Glocal Quality Extruders	Global Quality Extruders
Global Quality Raw Materials			
Glocal Quality Raw Materials			
Local Quality Raw Materials			

The diagram illustrates a 3x3 grid where the columns represent different extruder types and the rows represent different raw material quality levels. An arrow points from the bottom-left cell (Local Quality Raw Materials, Local Quality Extruders) to the top-right cell (Global Quality Raw Materials, Global Quality Extruders), indicating that costs increase as both the quality of raw materials and the quality of extruders increase.

PRODUCT DEVELOPMENT VS. CAPITAL BASE CAPABILITIES

- Difficulties competing in broad market segments with only top notch western equipment or using only a single raw material source
- Skills are required for developing formulations with various raw materials
- Understanding the quality/performance requirement for each application is critical for price competitiveness and profitability
- Targeting markets and applications where the quality and performance of your product development skills and capital base will best allow you to compete.
- Understand what quality/performance applications you cannot compete because of lack of product development or capital equipment capabilities

APPLICATION DEVELOPMENT VS. CAPITAL BASEan example

	CTE	STS	ZSK
Kraton			Highest Price
TSRC			
Sinopec	Lowest Price		



Increasing Costs



Increasing Costs

PRODUCT MARKET ANALYSIS

- Markets will divide into several quality segments at several price points so you can define required quality and pricing with the proper quality product at the right price cost
- Necessary to understand the volume for each segment and the price and a profitable strategic plan can be developed appropriate for your capital and geographic capabilities
- Can the right product be produced at the right price for the application requirements?

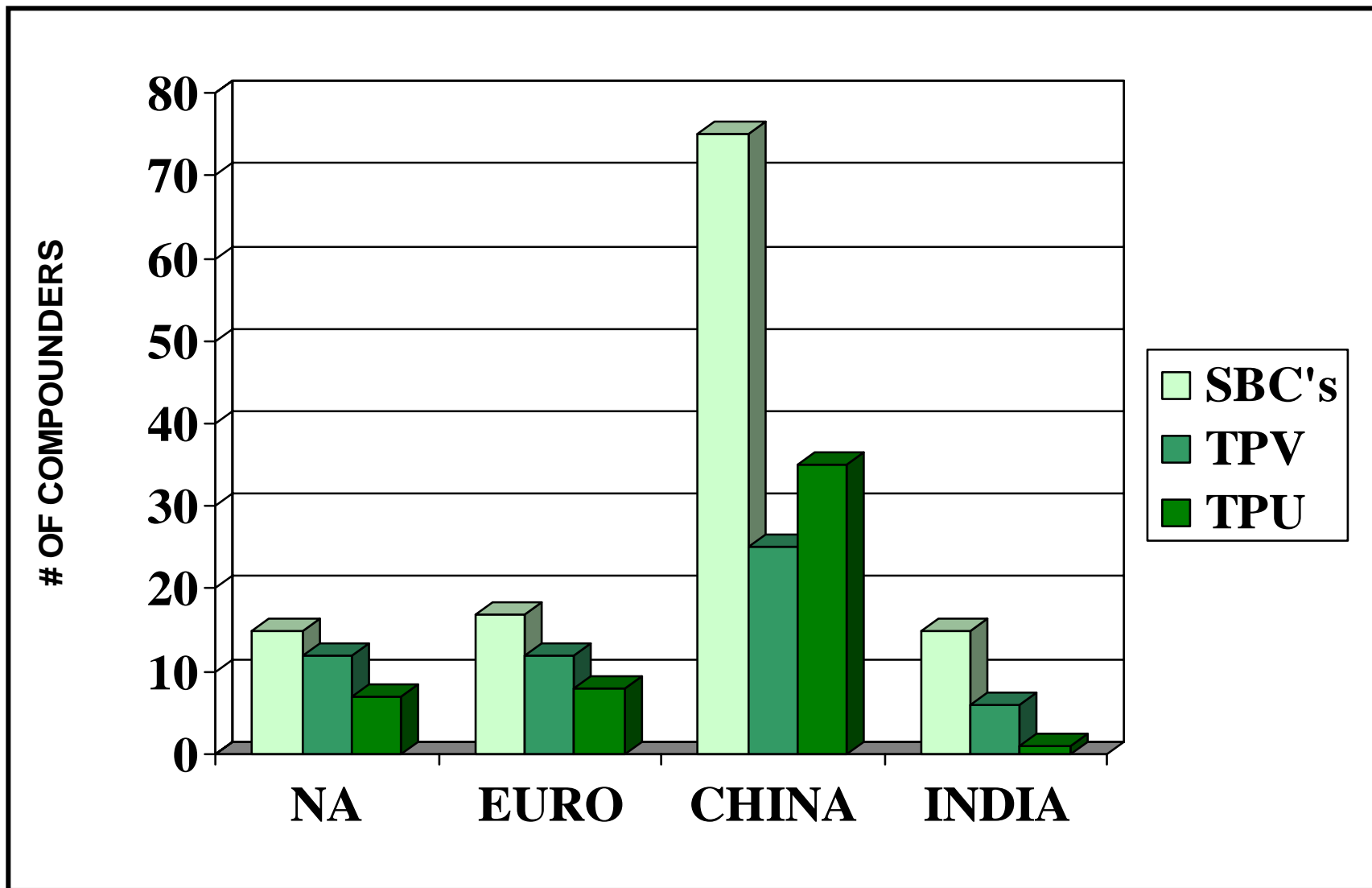
Examples:

- Medical markets will normally require global and glocal products and as a result are typically higher priced
- Automotive will require glocal and global products with some after market products using local products
- Soft touch has applications in each one of the segments and specific applications like toothbrushes have all of the tiers
- Footwear market
- Power tools (intermaterial competition between COPE, TPU, o-TPV and SEBS) for various quality levels
- Increased use of SBS to meet local quality standards

CONSOLIDATION.....NATIONAL STRATEGY

- National strategy
 - Close to the customer
 - Necessary for the domestic business
 - Simplifies logistics
 - Geographic footprint
 - Capital footprint
 - Product Development footprint
- Too many players
- Examples of this strategy:
 - **Kingfa**
 - Guangzhou, Shanghai, Dalian, Mianyang (ChangXin)
 - **Lyondell Basell**
 - new plant in Guangzhou (in addition to Suzhou)
 - purchase of Solvay Engineered Plastics (TPO/TPV)
 - **PolyOne/GLS**
 - acquisition of GLS by PolyOne (Suzhou)
 - Shenzhen and Suzhou (Engineered Materials)
 - **TSRC**
 - Kaoshung (Taiwan), Shanghai and Jinann
 - **Sabic Innovative Plastics**
 - Nansha, Shanghai and Nantong (2010)

CHINA HAS LARGE NUMBER OF LOCAL TPE COMPOUNDERS



SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008

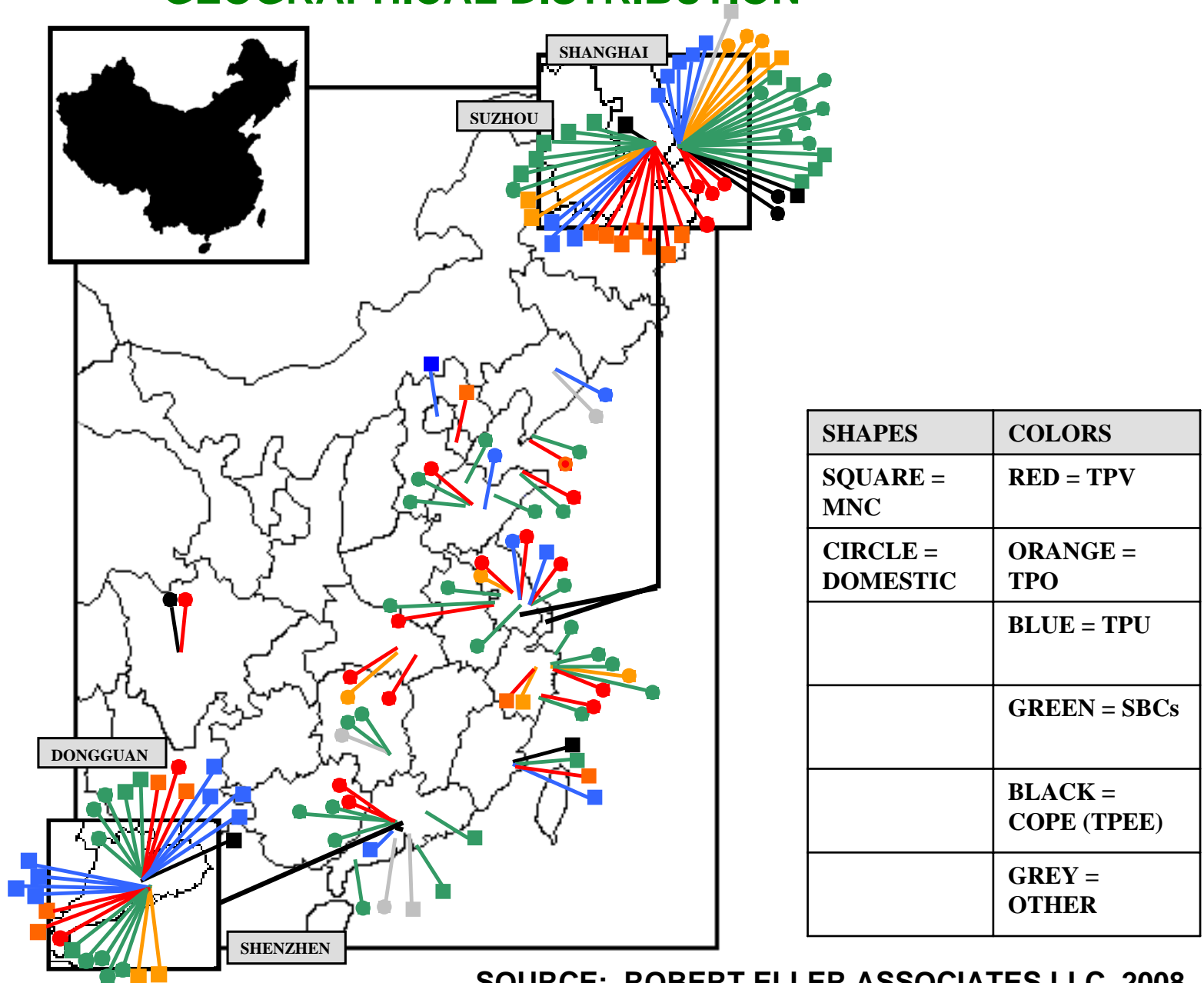
COMPETITIVE GEOGRAPHIC/PRODUCT TIERING POSITIONING

- Capital footprint capabilities
- What is your footprint?
 - vs your competitors?
 - vs the market segment that you participate in
- Overlay with markets that you participate in and are successful
- What opportunities should be targeted due to similar successes
- Analytical understanding of what to target tactically and what it requires to get there

	Global	Glocal	Local
East			
South			
North			

	Low Cost Extruder	Moderate Cost Extruder	High Cost Extruder
East			
South			
North			

GEOGRAPHICAL DISTRIBUTION



SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008

VULNERABLE BUSINESS

- China is losing its low costs advantage and business that are particularly labor sensitive will shift further inward (westward) or to low cost producers like Vietnam, India
- High technology businesses will replace low labor costs early entries particularly in South China (toys and footwear)
 - Electronics, medical, automotive and advanced materials some of the targeted industries to grow
- Driven by incentives from local governments

BRANDING

- Western brands can have high value
 - Acquisition of western brands by Asian companies
- Branding successful in developing quality perception in China
- Increased use of product/price/value tier separation
 - Bayer: Texin, Desmopan, and Utchellan
 - Exxon Mobil: Santoprene, Exxon Mobil TPV, use of masterbatch

GLOBAL BUSINESSES: GETTING CLOSER TO THE MARKET

- Electrolux
 - Global Plastics purchasing in Shanghai
- IBM
 - Corporate Purchasing in Guangzhou
- Bayer
 - TPU Global Business relocated to Hong Kong
- Dow
 - Footwear Solutions market facing business headquartered in Hong Kong
- Lyondell Basell
 - Advanced Polymer Systems relocated global advanced polypropylene resins and compounds business to Hong Kong

CORPORATE STRATEGIES IN CHINA

- The global companies: Chasing the “export” truck
 - Sabic Innovative, GLS, RTP, Kraiburg, A Schulman
- Extending penetration with global businesses to “glocal” tier business
 - Dow, Exxon Mobil (Santoprene), PolyOne
- Acquired domestic position to combine with global products
 - Colgate Palmolive (San Xiao), Coperion (Nanjing Keiya), Bayer (Uretech), Coca Cola (Huiyuan Juice)
- Domestic Chinese companies with quality/performance to begin to challenge the imports as fabricators look to localize raw materials:
 - Polymax, Sunstar, Hotai, Sanpo, Dawn
- JV’s large risk
 - Control/Cultural differences major liability
 - NZ Fontera JV with San Lu

STRATEGIES FOR SUCCESS

- **Understand tiering and target the proper quality/performance best suited to your skills and capabilities for optimum profit**
 - Where do you fit
 - Assessment and Analysis
 - Strategy: Where do you want to be?
 - What is your footprint?
 - What should you look at strategically for a next market, next capital expansion?
 - How do you achieve the required changes?
 - Organic
 - Acquisition, jv, technology acquisition??
- **Understand the dynamic nature of quality, evolving steadily higher over next few years**
- **National Strategy:**
 - industry consolidation is reasonable expectation
 - Increase reach of successful compounding operations
 - Increase probability of equipment diversification
 - Increased database for product development formulations
 - Target industries that will not be subject to relocation due to lower labor costs
- **Branding**
 - Keep the value of a quality brand
- **Getting close to the market**
 - Speed
 - Relationships

Thank You!



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