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The Power of Packaging eBook Series: A Guide to Global Markets

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The State of the Global Packaging Industry

Examining the world's largest developed and emerging markets illustrates how each region is responding to trends and economic factors within the scope of their market.

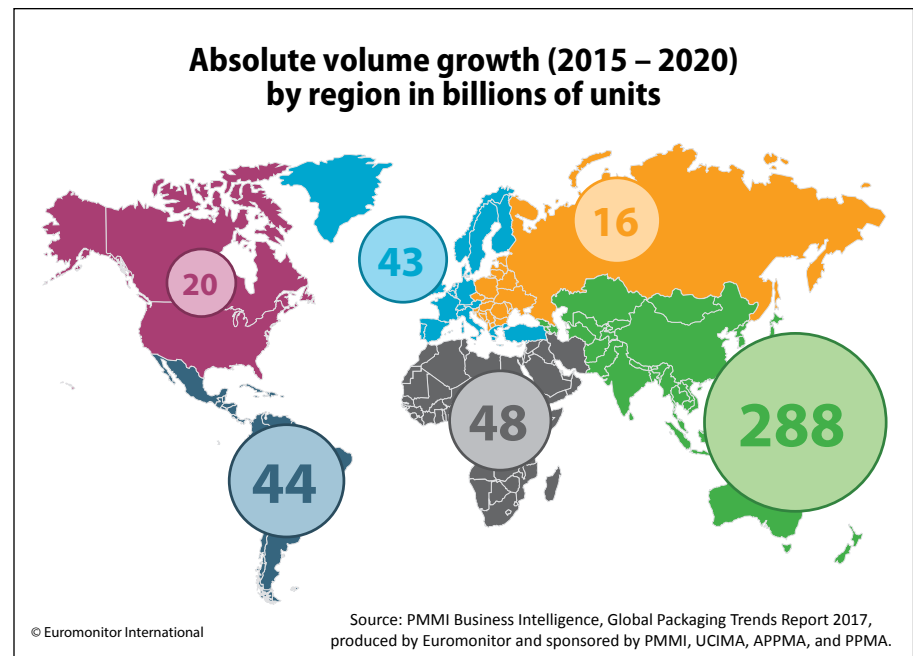
By Matt Trowbridge, VP of Marketing, Omron

The bottom line is that the global packaging market is sustaining growth. A great example of this is Mexico, which boasts one of the highest growth rates. Mexico is experiencing rapid urbanization, a growing middle class and a rising number of women in the workforce, all leading to their ability to produce more output at a rapid pace. This also means that their purchasing power is growing, so suppliers, machine builders and end users from around the world are making investments in Mexico.

The 2015 global packaging market was valued at just over \$400B. Growth strongly underlines a shift in balance toward emerging markets. The Asia, Oceania, Africa and Middle East region has increased its packaging market value share to 34%, matching that of Europe, which dropped by 2%. Both North America and Europe showed moderate increases from the prior year, with Europe faring slightly better than North America, which is valued at \$128B.

Food packaging is the largest segment globally, accounting for 51% of the total global market value. Beverage packaging accounts for 18%, followed by 6% for healthcare. Packaging for healthcare experienced above-average growth in 2015, while the food and beverage segment remained more in line with overall packaging growth.

An industry report in 2015 surveyed executives from some of the top global packaging companies, and according to over half of them,



pricing pressures remain the highest barrier to growth. Volatile commodity prices, such as raw materials and rising labor costs are also seen as major barriers to growth. When it comes to volatile commodity prices as a barrier to growth, the cause is most likely rooted in the increasingly globalized packaging market. When commodity markets were more localized in nature, participants had a better feel for demand.

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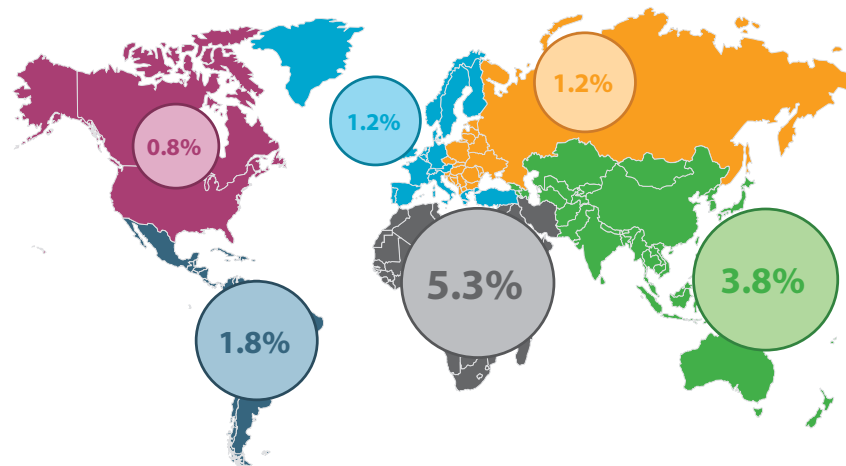
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Continued The State of the Global Packaging Industry

Forecast Volume CAGR 2015 – 2020 by region



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Source: PMMI Business Intelligence, Global Packaging Trends Report 2017, produced by Euromonitor and sponsored by PMMI, UCIMA, APPMA, and PPMA.

This proximity to supply and demand factors allowed prices to follow more predictable patterns. However, the fact remains that the global packaging market has been permanently opened and this has caused volatility. The unpredictability of price levels has led

countries that understand their own long-term raw material shortages to enter and exit markets as prices reach certain levels. So what is happening now is an increase in the frequency of price movements.



Global Trends Impacting the Packaging Industry

The main drivers affecting the packaging industry are the performance of the worldwide economy and demographic factors—but that's only the tip of the iceberg.

By Laura Studwell, Packaging Industry Marketing Manager, Omron

The key demographic factors affecting the packaging industry are population growth and increasing levels of disposable income, which boost demand for products. Nevertheless, other trends such as new packaging types and legislation also affect the development of the market.

Standardization

The end market for machine builders ranges from multinational corporations that demand a standard machine globally to local companies with varied requirements from one supplier to the next, depending on the country. However, the packaging industry is undergoing consolidation. This has been enhanced by a number of recent acquisitions in the pharmaceutical industry.

Many multinational end users have adopted a policy of standardized machinery used in plants regardless of region. For example, machinery used in plants in the U.S. are essentially the same as ones being sold into plants in India. There are a number of advantages to standardizing machinery, such as:

1. Economies of scale where processors and packagers can demand a lower price and rationalize purchasing activities
2. Ease of troubleshooting and maintenance, allowing for a remote expert to support local engineers

3. Achievement of standards (such as safety) on a global scale

Modularity

End users are also looking for complete packaging lines that incorporate numerous functions such as molding, filling and labeling from a single source. There are few suppliers capable of offering a complete portfolio, so often one company will take the lead on a project and integrate machines from other suppliers into the deliverable.

This trend is becoming more prevalent as end users' in-house engineering teams have decreased due to economic slowdown, leading to a greater demand for third-party integration. And while there is a trend toward complete lines, they are being designed with modular machinery. With the increased variety of materials and packaging styles, end users are often considering future requirements—mainly flexibility—when purchasing machinery. This is being addressed via modularity.

End users typically include plans for increased product throughput in their annual forecasts. As they move forward with their capital investment plans, rather than paying a higher cost for a whole new line, they are opting for modular lines where they can either upgrade specific components or replace an individual machine.

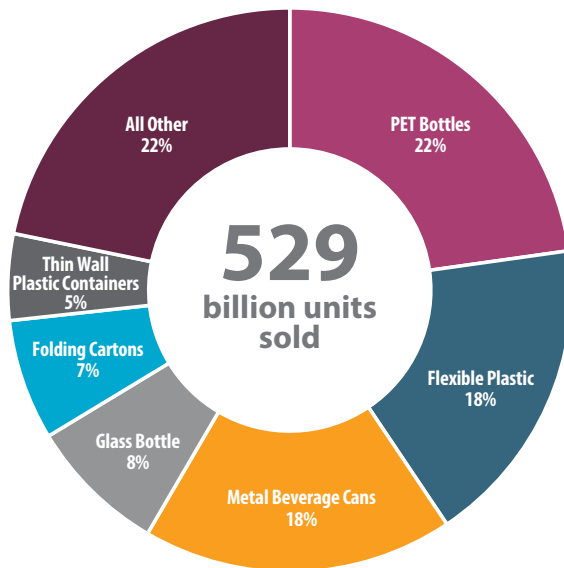
The upfront cost of building a modular line is higher, but it offers

Continued Global Trends Impacting the Packaging Industry

A Deeper Dive

North America Still Dominated by PET Bottles, Plastic Pouches, and Metal Beverage Cans

Volume Share of Package Types in North America-2015



Source: Global Packaging Landscape: Growth, Trends & Innovations.
Euromonitor International in conjunction with PMMI, UCIMA, APPMA and PPMA.

[More Analysis](#)

significant lifetime savings by eliminating additional capital investment as product throughput demands increase. Modularity also offers savings because failure in a particular part of a modular line will not result in the whole line being shut down—parts and even machines are interchangeable.

Retailer Pressure

Price pressure within the food and beverage sectors, mainly from retailers, is among the highest of any industry. What this means is that producers are seeking to improve efficiency and productivity in their facilities to meet demands. An increasing number of food and beverage sales are through retailers such as Walmart, which have formidable purchasing power. In addition to squeezing profits from their suppliers, retailers are also looking to reduce the number of their suppliers.

Food and beverage processors and packagers are looking for flexible ma-

chines that can reduce production costs. This is going to continue as the retail market becomes more consolidated and price sensitive. There are several implications for machine builders:

1. Importance of price when purchasing machinery
2. The need for flexible machinery
3. Automation to reduce associated costs

Consumer-Driven Product Variation

Many brands have responded to retailers by diversifying their product portfolio through modifications to packaging formats and portion sizes. To satisfy the needs of a demanding and diversified consumer base. This trend is driving investment in the machinery needed to introduce new lines and to compensate for the proliferation of SKUs.

And that diversifying consumer base is becoming more demanding, particularly in the food and beverage

Continued Global Trends Impacting the Packaging Industry

industries. Growing consumer health consciousness coupled with increasingly busy lifestyles has driven demand for convenience foods and single-serve portions. It has also driven demand for different packaging designs and completely new recipes. Healthier and more convenient consumption has resulted in the emergence of many new products in the market. Some of these products and packages require specific packaging machinery.



Sustainability

The packaging industry is making an ongoing push to improve sustainability. And we're seeing that in two different forms. The first is through the use of recycled materials, especially the plastic used on bottle caps and in PET bottles. While notable, recycled materials present challenges to machine builders because they are less uniform. So what producers are seeing is that machinery operating with recycled materials cannot operate at the same performance level as with non-recycled materials. For example, tray sealers may require a lengthier sealing process at a lower temperature to ensure correct sealing.

The second sustainability major push is through lightweighting, or thin-walling, packaging to reduce the amount of packaging being used. To facilitate this, machinery is being developed with improved functionality to maximize production speeds while accommodating thinner, more fragile packaging.

The Poland Springs brand is a great example of Nestle Waters' commitment to sustainability across both sustainability trends. Their bottles are made with 30% less plastic than the average half liter bottle. This directly results in a 30% reduction in resin consumption, 30% reduction in energy and CO2 emissions from production and transport of resin and 30% reduction in production scrap. Lightweighting or thin-walling leads to shorter cooling and process times, which in turn results in higher demands in production speed, repeatability and reliability to produce more products in a shorter time.

Continued Global Trends Impacting the Packaging Industry

Flexible Packaging

To expand on the topic of lightweighting, flexible packaging is experiencing rapid growth. Flexible packaging costs less, is lighter in weight, comes in a range of shapes and sizes and uses less material than rigid packaging. The design of the package is printed directly on the pouch, so there is no need for printing separate labels. Packagers are gravitating toward the aesthetically appealing nature of pouches as they look for ways to differentiate their products from the competition on retailer shelves.

Flexible packaging is already established in some emerging markets, such as Brazil, where disposable income is less. The U.S. and Canadian markets have traditionally been more resistant to changes in packaging types, preferring the higher throughput rates attained with rigid packaging. The throughput rates of rigid containers can be 60% higher than those of pouches. However, within the next five years, growth for flexible packaging in North America is expected to exceed that of emerging markets. As flexible packaging becomes more popular, this will result in additional growth for machinery that is able to handle flexible material.

Traceability and Serialization

Processing and packaging companies alike are dealing with the ever-evolving regulatory environment which is requiring a strong internal risk framework. This is most relevant in the food, beverage and phar-

maceutical segments. Food and beverage legislation in the U.S., such as the Food Safety Modernization Act (FSMA), deals with enhanced tracing and recordkeeping and requires companies to identify, at a minimum, the immediate supplier as well as the recipient of a product.



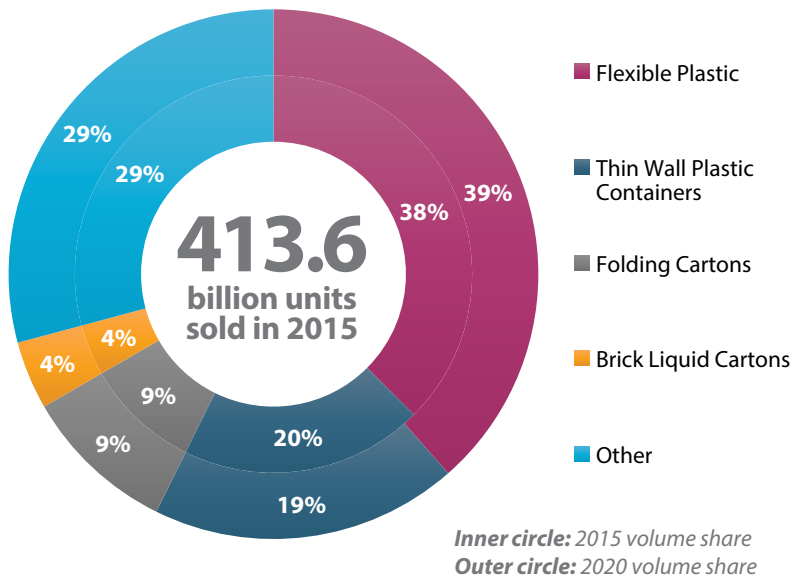
In the pharmaceutical industry, the Drug Quality and Security Act was put into place to combat the counterfeit drug market. This Act regulates serialization and requires both primary and secondary packaging to have serialized coding. While this Act and the European Falsified Medicines Directive are aimed at regional markets, the impact

Continued Global Trends Impacting the Packaging Industry

A Deeper Dive

Western Europe Might See Limited Growth Because of Environmental Concerns

Volume Share of Food Packaging in Western Europe



Source: PMMI Business Intelligence, Global Packaging Trends Report 2017, produced by Euromonitor and sponsored by PMMI, UCIMA, APPMA, and PPMA.

[More Analysis](#)

will be felt equally by the rest of the world. Any region that exports finished products to the U.S. or Europe will need to invest in labelling and coding machinery to meet these regulations.

Consequently, traceability and recordkeeping are major factors for machine builders and there is growing demand for integrated software-based solutions. And regulations will continue to lead investment in new coding and labeling machinery, spurring growth in demand ahead of legislation implementation deadlines.

Demand for Automation

Automation within machinery will increase in order to satisfy demand for greater levels of productivity, safety and functionality. Machine builders are integrating automation to help end users meet legislative requirements. But there are also other benefits to automation, including:

1. Increased throughput by minimiz-

ing the degree of manual operation required

2. Increased operability of machines through the standardization of parts and processes, for example
3. Increased flexibility of machinery that can easily facilitate on-the-fly changes to the product or its packaging

The move from semi-automatic machinery to full-automated solutions means increased levels of automation components, such as increasing the number of servo-driven actuators, the introduction of machine vision, increasing safety controls and even remote monitoring. And the big trend within automation is machine-to-machine communication and software that connects machinery on the factory floor to the enterprise level.

Machinery Flexibility

Many of the drivers affecting the packaging industry lead into the need

Continued Global Trends Impacting the Packaging Industry

for flexible machinery. For example, accommodating sustainability efforts and varying packaging materials requires the design of machinery that is smart—or machinery that adds more individualization to production.

Coca-Cola was one of the first companies to popularize the mass production of customized products. In 2011, they launched the “Share a Coke” campaign. Bottles and cans were labelled with a wide variety of common names. The back end of the campaign, or the production stage, was made possible because of flexible labelling and printing machines which enable different names to be applied without significant changeover time during production.

Incorporation of Robotics

Under the category of automation is the use of robotics in both processing and packaging, mainly in pick-and-place applications. Over the last 5-10 years, the use of robotics in the packaging industry has increased significantly. Not only are they used in end-of-line applications, but their use has moved upstream to primary and secondary applications. In fact, the International Federation of Robotics (IFR) is predicting 15% annual growth through 2019.

Incorporating robotics into production offers many benefits including:



1. Higher throughput rates
2. Greater precision and consistency
3. Minimization of scrap and waste

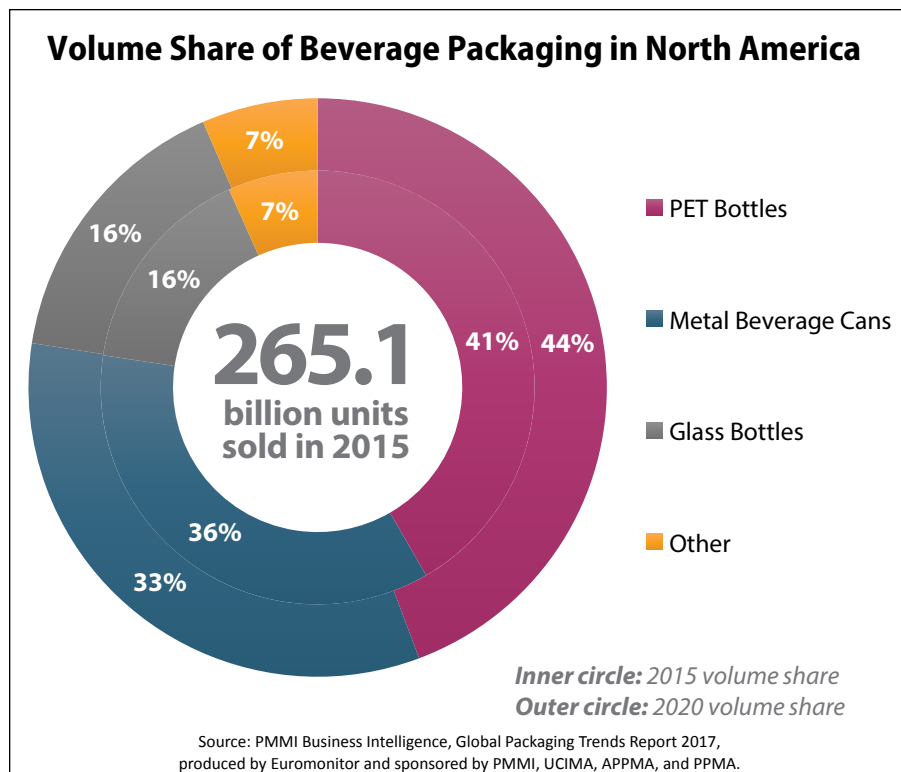
Because robots themselves are becoming easier to integrate and offer production flexibility, companies can easily use them to handle different product shapes and sizes. Robots are also performing specialized tasks, such as handling delicate products.

Regional Developments Impacting Demand

There are broad economic developments that impact demand not only on a regional basis but also on a global scale.

By Michael Uhrain, Technical Sales Manager - Packaging & Global Key Account Manager, Sumitomo Demag

It is important to understand what goes on in the regional markets, at least on a basic level. Regional markets affect sales, expansion efforts and even the type of machinery needed to produce goods in a given market.



North America

North America's economy is expected to grow as oil prices remain low. The downside risks to consumer spending revolve around stagnant wages and a volatile housing market. Regardless, unemployment rates are dropping and consumer confidence is growing, so companies are expanding operations and upgrading machinery to keep up with demand.

In the U.S., there are external risks which affect investment in packaging machinery. Potential risks include worsening global economic conditions, a stronger U.S. dollar and potential tightening of monetary policy. But overall growth will encourage capital expenditures. And the lower interest rates of the past few years have spurred capital investment as companies seek to lock in financing at lower rates.

In early 2015, Mexico increased taxes on many segments of the economy, most notably levying an 8% tax on packaged foods and beverages that are considered to be unhealthy. Companies responded by, among other things, creating smaller pack sizes that can be sold for the same retail price as before the tax. In this response, smaller portions equate to a healthier diet. Nevertheless, some U.S. and Canadian companies have given intention of moving production to Mexico where they get duty-free access as well as access to less expensive labor.

Continued Regional Developments Impacting Demand

Latin America

Latin American economies are challenged by modest growth, volatile currencies and high inflation rates as well as political instability. The fall of oil prices will continue to hinder economic growth and provoke volatility in foreign exchange markets. For example, Brazil has numerous issues that have elevated due to a decline in commodity prices. Brazil is heavily reliant upon low commodity prices for economic growth.

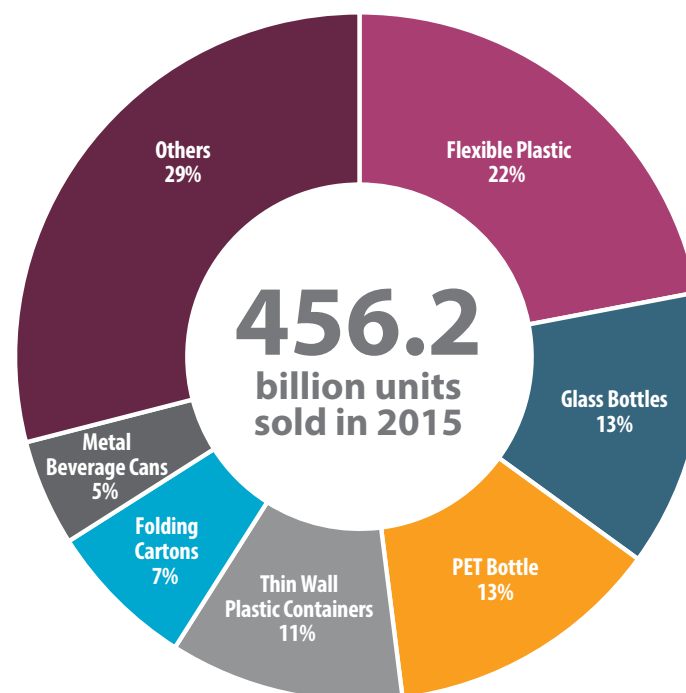
Brazil also faces long-term debt, a poor infrastructure, excessive tax and administrative policies and high inflation. Reforms and fiscal adjustments are on the horizon and policymakers have already said there could be tax hikes in the future and interest rates could push higher to keep inflation in check. Although needed, these activities may further dry up investment in Brazil.

Europe

While European CPG companies have fared well with the erosion of buying power in the region, a new threat for consumer spending in Western Europe is deflation. Consumers are delaying purchasing decisions in anticipation of lower prices. The strengthening of the U.S. dollar to the British pound will affect sales at multinational companies who have heavy exposure to emerging markets.

Deflation across a number of European economies, such as Spain, will affect the food sector and prices will remain low in the foresee-

**Volume Share of Packaging Types
in Latin America - 2015**



Total 2015 market size	456
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Total 2020 market size	500
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Forecast CAGR (2015 - 2020)	1.8%
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Source: PMMI Business Intelligence, Global Packaging Trends Report 2017, produced by Euromonitor and sponsored by PMMI, UCIMA, APPMA, and PPMA.



Continued Regional Developments Impacting Demand

able future. Eastern Europe will see unstable growth as Russia looks at a recession. German and Italian packaging machinery manufacturers will concentrate sales efforts in the U.S. and other high-growth markets, particularly as a stronger dollar in relation to the Euro will make imported machinery cheaper.

Africa

Food processing and production methods in Africa are under-developed and many African countries depend on imports of packaged products. With a large portion of the population without a great deal of discretionary income, selling products at affordable prices is essential. Thus, investments in modern food processing and production machinery are becoming more common in an effort to make Africa self-sufficient.

To aid in the development of the food and beverage sectors as well as the retail market, a number of multinational companies have committed to investments in Africa. For example, Coca-Cola announced plans to invest \$5B to grow its African operations over the next five years.

Middle East

The Saudi Arabian food processing segment has developed at a considerable pace over the past decade. The government currently supports the industry by providing attractive financing, funding

machinery and imposing high tariffs on select food imports that compete with locally produced equivalents. Growth has taken place across a number of food segments such as meat processing and confectionary.

Like Africa, there is interest in increased investment by multinational companies. Nestl has announced a commitment to tripling the current levels of sales in the Middle East by 2020. The company said that it expects to invest around \$400M into building new factories and creating new brands. The confectionary segment has witnessed recent major investment announcements made by both Mondelez and Mars.

Asia Pacific

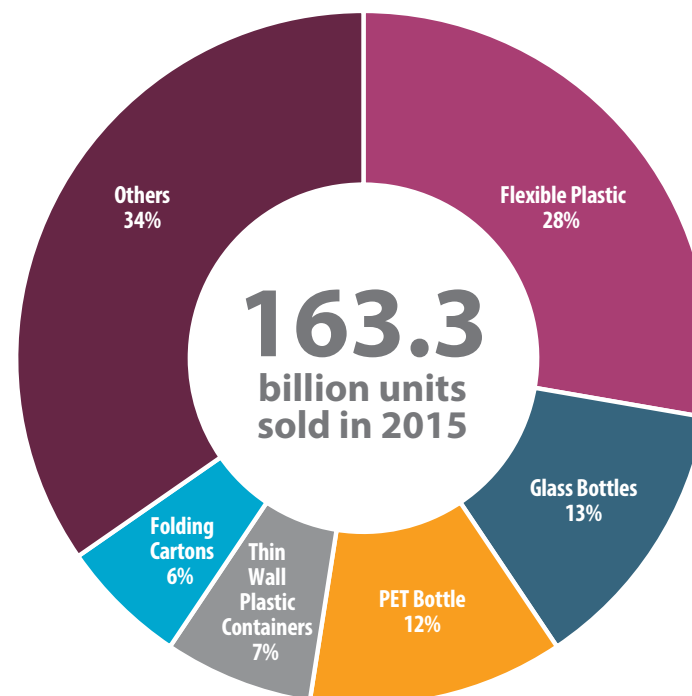
East Asia remains the world's fastest growing region and outlook is projected to reach \$1B by 2020. As China's economy develops, growth will require improvements in productivity. To increase production, the Chinese government announced its intention to restructure the industrial sector with a focus on moving toward high-end machinery.

Currently, the two major challenges faced by Chinese machinery manufacturers are continued dependence on foreign technology and lack of innovation capabilities. The envisioned industry restructuring contains a shutdown of small companies to consolidate the machin-

Continued Regional Developments Impacting Demand

ery market. It also accelerates the development of advanced machinery by offering tax incentives for component imports.

Volume Share of Packaging Types in the Middle East & Africa - 2015



Total 2015 market size	163
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Total 2020 market size	211
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Forecast CAGR (2015 - 2020)	5.3%
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Source: PMMI Business Intelligence, Global Packaging Trends Report 2017, produced by Euromonitor and sponsored by PMMI, UCIMA, APPMA, and PPMA.

Packaging Machinery Market Growth: Global Expansion

This section will cover each group's value to the market and the trends that are having the greatest impact on demand.

By Hermann Fleps, Director of Operations, Anritsu Infivis Inc.

The packaging industry commonly separates machinery into 10 consolidated groups. Here we'll examine the market growth outlook for all 10.

Bottling Line Machinery

The value of the bottling line machinery group is estimated to be worth about 9% of the total packaging machinery market with the sub-category of feeding machinery making up roughly 65% of machinery shipments. This group is forecasted to grow at a CAGR of 1.3% through to 2019. Demand for this machinery is influenced by the single-serve portion trend in the beverage industry. Growth of

the beverage industry is steady, which has contributed to the growth of this group.

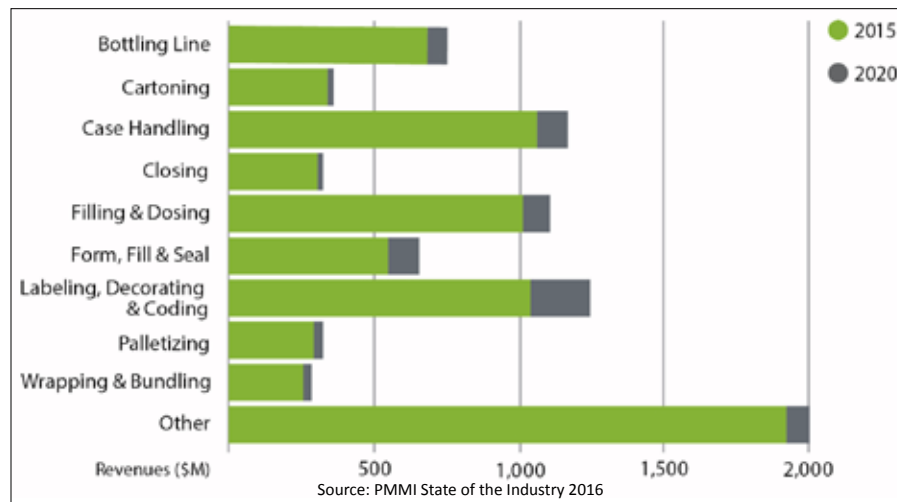
Cartoning Machinery

The value of the cartoning machinery group is estimated to be worth about 5% of the total packaging machinery market and is forecasted to grow at a CAGR of 0.8% through to 2019. Demand for cartoning machinery is influenced by end users who are increasingly demanding versatile machinery capable of running multiple material types, such as corrugated cartons and paperboard. This has resulted in new machinery designs that replace previous models only capable of handling one type of material. Additionally, more precise machinery is being developed that is capable of using thinner materials, which will reduce material consumption and overall weight.

Closing Machinery

The closing machinery group is estimated to be worth about 4% of the total packaging machinery market and is forecasted for low growth at a CAGR of 0.7% through to 2019. This group's below-average performance is due to the replacement of closing machinery by form, fill and seal machinery. And it is also influenced by trends in the personal care and pharmaceutical sectors.

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Continued Packaging Machinery Market Growth: Global Expansion

proper closing and sealing is important. Within form, fill and seal machinery, there have been advancements in melt temperature to seal packaging, thus stealing market share from closing machinery.

These innovations significantly reduce energy consumption, reduce temperatures and offer shorter dwell times, which can result in both faster throughput speeds and reduced exposure of drugs and foods to unnecessary heat.

Filling and Dosing Machinery

The value of the filling and dosing machinery group is estimated to be around 13% of the total packaging machinery market, making it one of the largest machinery groups. It is forecasted to grow at a CAGR of 0.9% through to 2019. As with closing machinery, this group has been affected by competition from form, fill and seal machinery. This has resulted in slower growth for dedicated filling and dosing machinery.

While growth is hindered, there are other factors driving the group, including demand for increased flexibility, reduced changeover times, clean-in-place machines and aseptic filling, mainly for the pharmaceutical industry. These factors have created demand for fully automated machines, a shift from standard motors to servo motors, the use of touchscreen HMIs and a transition from pneumatic to electromechanical actuators.

Form, Fill and Seal Machinery

The form, fill and seal machinery group is estimated to be worth around 7% of the total packaging machinery market and is forecasted to grow at a CAGR of 3.5% through to 2019. It is projected to have the fastest growth of all the groups boosted by the replacement of single function forming, closing and filling machines. The subcategory of horizontal form, fill and seal machinery makes up about 75% of

Continued Packaging Machinery Market Growth: Global Expansion

machinery shipments in this group.

A form, fill and seal machine is capable of conducting multiple operations within one machine and:

- Reduces the footprint of machinery
- Reduces MRO costs
- Saves costs as compared to purchasing multiple standalone machines
- Increases throughput

There are two designs of form, fill and seal (f/f/s) machinery, horizontal and vertical, depending on how the product will be dispensed. Horizontal f/f/s machinery is primarily used for solid products that can be easily contained. Vertical f/f/s machinery is often used for solid products as well, but it can also handle liquid and granulated products that are more difficult to contain.

Vertical f/f/s machines typically have a smaller footprint and are easy-to-use, lower-cost solutions. With their ability to fill both solids and liquids, vertical form, fill and seal machines are projected to grow at a faster rate than that of horizontal form, fill and seal machines over the short-term.

Labelling / Decorating / Coding Machinery

The labelling, decorating and coding machinery group's estimated worth is 14% of the total packaging machinery market and is forecasted to grow at a CAGR of 3.1% through to 2019. It is also forecast-



ed to be one of the fastest-growing groups mainly due to legislation demanding enhanced labelling and coding on products. In addition, legislation like the Drug Quality and Security Act will require serialization of all prescription products with the ability to electronically transfer data throughout the supply chain.

End users are already purchasing new machines in order to meet legislation. Many companies upgrade their printing systems so that

Continued Packaging Machinery Market Growth: Global Expansion

ERP software can tell line management software a string of numbers or codes, which can be printed onto packages. Similarly, vision systems are being integrated to review those codes or labels and check for any errors.

Palletizing

The value of the palletizing machinery group is estimated to be worth around 4% of the total packaging machinery market and it is forecasted to grow at a CAGR of 1.6% through to 2019. Within the palletizing group, robots are increasingly being used in a range of applications from primary packaging to unit loading.

There is growing demand for mixed load palletizing, where a pallet may include different products of different dimensions for a single customer. In combination with a vision system and software, robots can load cases in the proper configuration to ensure the pallet is built up in

the most efficient way. The packaging industry is seeing a move from general purpose robots to those optimized specifically for packaging operations in order to improve performance.

Wrapping and Bundling Machinery

The wrapping and bundling machinery group is estimated at 4% of the total packaging machinery market and is forecasted to grow at a CAGR of 1.4%. Wrapping and bundling machinery is one of the less technically sophisticated categories, with a higher proportion of semi-automatic machinery than in many of the other groups. To minimize waste, wrapping machines are operating with thinner films. Because of this, integrating vision systems to detect the quality of the film is imperative. In addition, integrating servo motors is critical to enabling a high level of synchronization between the rotation of the pallet and the wrapper.

Case Study: Omron's Motion & Control Systems Help APPE Put This One in the Bag



Through a unique motion and control design, APPE's new VFFS bagging machine offers an average of 20% improvement in overall productivity, 25% in overall savings, 50% reduction in rework and line losses as well as a 15% reduction in packaging material cost.

[Download Case study](#)



Industry Sector Demand Forecast

This section will cover the trends affecting machinery in each of the largest industry sectors and how the trends might influence each other.

By Mohamed Magraoui ing., Electrical Maintenance Supervisor, Lassonde

The largest industry sector in terms of revenue is estimated to be food, followed by beverages. The smallest sector is estimated to be personal care, toiletries and cosmetics. The pharmaceutical sector is forecasted to grow the fastest, followed by the beverages sector. The household, industrial and agricultural chemicals sector is forecasted for the slowest growth.

Food Industry

Economic development is creating busy lifestyles and this is fueling the growth for convenience. But as consumers become more health conscious, there is not only a growing demand for convenient options, but also healthy options. This is driving investment in packaging machinery because producers need to introduce new lines. The food sector is also trending toward more sustainable packaging, often through the use of recyclable materials.

There are a couple of additional trends impacting machinery within this sector, including:

- Legislation addressing cleanability of machinery as well as traceability of products throughout the supply chain
- Frequency of changes to packaging

Beverage Industry

The beverage industry is mature in North America and Western Europe and its growth is slower than the emerging markets of South America and Asia Pacific. This industry is heavily influenced by trends—mainly portion size. For example, many beverage companies now offer smaller size cans and bottles. Not only does this give the consumer variety, it enables them to compete with cheaper alternatives without devaluing the brand.

Another factor affecting this industry is efficiency, which offers benefits from the factory to the consumer. For example, smaller, more efficient packaging is convenient for the consumer. The smaller size also saves on packaging, transportation and storage costs.

There are three more trends impacting machinery in this sector, similar to the food sector, including:

1. Legislation that demands improved cleanability of machinery
2. Single-serve portions that dictate the modification of existing line to accommodate new sizes
3. High frequency of changes to packaging, such as grip styles, that drive demand for specific machinery or components

Continued Industry Sector Demand Forecast

Personal Care Industry

The personal care sector is mature, so it does not change dramatically. Packaging often acts as a differentiator, distinguishing one product from another in a saturated market. For manufacturers in North America, the greatest opportunities will come from exports to emerging markets. One of the notable trends in the personal care sector is the reduction of container size while maintaining content volume. Essentially, this is simply a reduction in the amount of packaging – or lightweighting.



This is quite opposite to the cosmetic sector, where the trend is larger, heavier packaging to give the consumer the feeling they are purchasing a premium product.

Chemicals Industry

In terms of product development, the household chemicals market is slow moving. Diminishing brand loyalty and a willingness to buy value brands are two factors affecting this industry. Again, increasingly busy lifestyles means convenience is a key factor in product development. And alternatives to traditional household cleaning products are growing, such as cleaning wipes for everything from bathroom surfaces to laptop computers.

The industrial chemicals market is diverse and covers a wide range of products that serve a broad array of end user categories including automotive, consumer and electronics. It serves the vast majority of manufactured goods and is closely linked to the general health of the economy. Consumer requirements for packaging are generally functional, more so than other sectors, such as food, beverage and pharmaceuticals, where aesthetically pleasing packaging is more important.

Pharmaceutical Industry

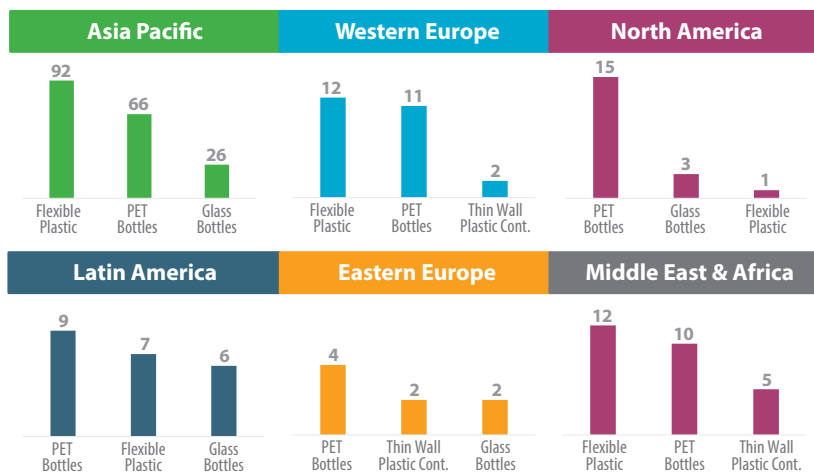
The pharmaceutical industry is highly concentrated, where a few

Continued Industry Sector Demand Forecast

A Deeper Dive

Flexible Packaging and PET Bottles Still Driving Steady Growth Around the World

Top Pack Types by Absolute Volume Growth by Region
(in billions of units); 2015 – 2020



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Source: PMMI Business Intelligence, Global Packaging Trends Report 2017, produced by Euromonitor and sponsored by PMMI, UCIMA, APPMA, and PPMA.

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multinational corporations dominate production with little diversification. As with other industries, growth is influenced by general economic development. As more people can afford access to medicine, this will, in turn, drive growth in packaging machinery.

Many pharmaceutical companies are outsourcing some of their production to countries with low labor costs. This will bolster growth in emerging economies, but is likely to hurt the North American packaging machinery sector. Growth in this industry is less driven by consumer habits and more by devel-

opments in medicine and packaging technology.

There are a couple of trends impacting machinery within the pharmaceutical sector, including:

- The expiration of patents, which allows low-cost products to enter the market. This has increased machinery sales because there is different packaging being produced.
- The use of machinery without electrical cabinets, reducing the number of electronic parts. This lowers MRO costs and allows for greater use of identical system parts.

Economic Outlook: Interconnected Risks

Here we focus on what the global economy can expect from the packaging industry over the next few years.

By John Wenzler, Corporate Industry Development Manager, Omron

The global economic outlook with its strong interconnections between regional economies is currently on track for continued, albeit slow, improvement with considerable risks to all regions. Many developed economies are still trying to grow their way out of a recession phase while at the same time trying to reduce their debts. Improvement in the U.S. economy is balanced by continuing problems in Europe and Japan as well as by containing credit risks in China.

Value of the Packaging Market – 2019

The global packaging market is projected to reach \$975B by 2019. Currently, Asia leads the regions at 36% of the total market value – which is projected to increase to 41% by 2019. Unfortunately, Asia's growth comes at the expense of North America and Western Europe, which are both projected to decrease in share from 23% each to 21% and 19% respectively.

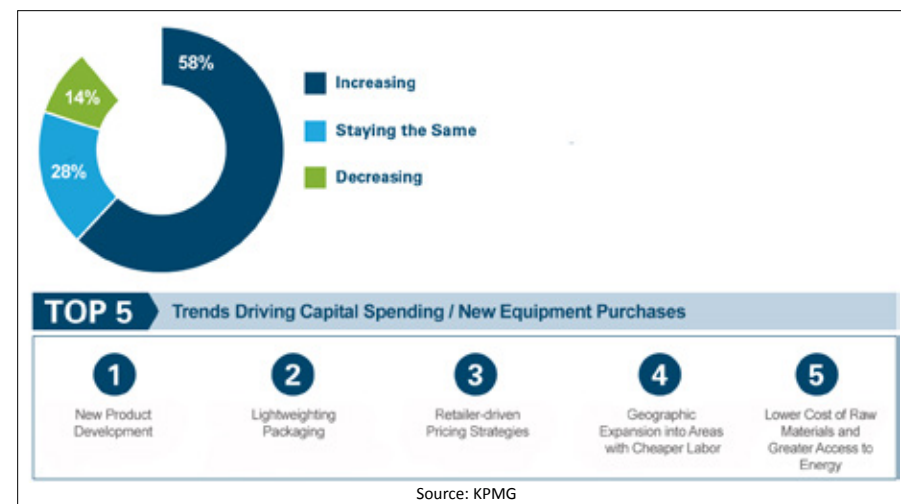
There are numerous reasons for the expected growth including technical developments, cost per package and, perhaps most importantly, the growth of the consumer class in the Asia-Pacific, South and Central America and Eastern European regions.

The growth of the global packaging market is being driven by a number of trends, which vary depending on region. Growing urbanization, investment in infrastructure, development of retail chains and the burgeoning healthcare and cosmetics sectors are driving

packaging demand in BRIC and other emerging economies. In developed markets, the trends toward smaller households and demand for on-the-go or convenience products are having a major impact on developments in packaging.

Capital Spending Outlook

Earlier mentioned was a group of global packaging industry executives, surveyed by KPMG, regarding barriers to growth. 58% of that same group indicated that investment in capital expenditure is expected to increase. KPMG sites reasons for capital spending to be driven by new product development, industry trends such as



Continued Economic Outlook: Interconnected Risks

lightweighting packaging, retailer-driven pricing strategies that force cheaper ways of producing customized products as well as geographic expansion into areas with cheaper labor, lower cost of raw materials and greater access to energy. This outlook favors machine builders and component suppliers.

Industry Sector Outlook

The food industry is expected to grow over the next few years. The pace is expected to slow this year but reaccelerate in early 2017 with growth strongly by the poultry industry. Production in the beverage industry is down from the prior year but the next few years are expected to be high growth due to coffee and tea.

Personal care production is currently at its highest level on record and is expected to beat overall packaging industry growth in the upcoming years. The chemicals industry is expanding at an accelerating pace, although a period of slower growth is on the horizon. The pharmaceutical industry experienced the highest growth in over five years and is expected to show continuous growth over the next few years.

Packaging Material Outlook

The packaging industry is constantly challenged with differing types of packaging material. While flexible packaging remains the most dominant category, PET bottles are rapidly growing in popularity. Bottled water, carbonated drinks and milk products account for 75%

of PET bottles and are the driving force of overall material growth in North America.

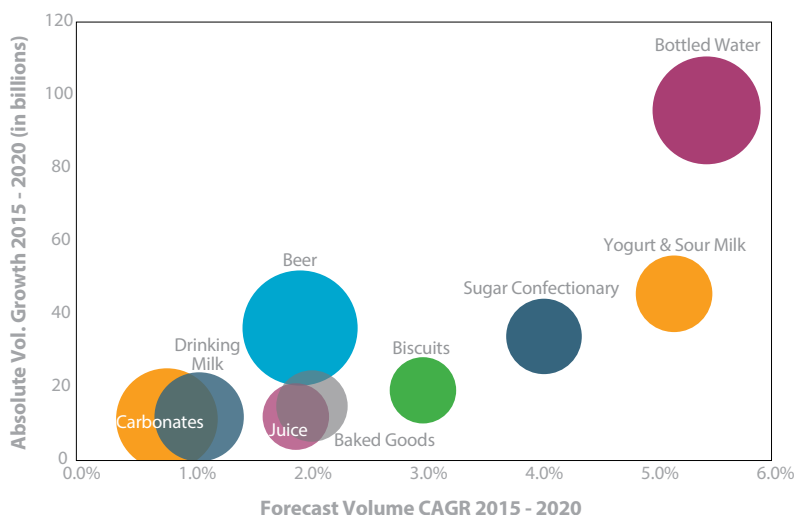
But the largest growth in packaging material is expected to be in plastic pouches due to on-the-go and convenience trends. This is not just in emerging markets as developed regions are also beginning to see these trends. For illustrative purposes, the market size for flexible pouches in Latin America is 28% compared to North America's 6%.



A Deeper Dive

The Bottled Water Category Has the Largest Packaging Growth Opportunity Globally

Bottled water to achieve highest absolute volume growth



Size of bubbles represents total 2015 volume in billions of units

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Source: PMMI Business Intelligence, Global Packaging Trends Report 2017, produced by Euromonitor and sponsored by PMMI, UCIMA, APPMA, and PPMA.

[More Analysis](#)

Achieving Economic Success in the Packaging Market

The global market has been taking the traditional “slow and steady” approach to investing in growth and innovation.

By Kyle Brooks, Engineering Manager & Rohan Hofmeyer, Continuous Improvement Engineer, LIQUI-BOX

With volatility in world markets, focusing on the basics is a common practice. The “basics” comprise sales growth, reducing the cost structure and increasing cash flow from operations. KPMG reports that only 32% of global manufacturers are increasing R&D and developing new products. The bottom line is that companies risk falling behind their global counterparts without investing in the areas that will help brands remain relevant and competitive in the future.

In order to drive new growth and innovation, packaging companies need to move into a more aggressive role and focus on three main strategies:

Entering New Geographic Markets as well as Channel Expansion

Due diligence is required to determine where in the global market it makes the most financial sense to export or produce products. It also needs to be determined where the biggest markets are for any given product and how to get closer to them. Once thorough research is performed and the appropriate markets identified, the benefits of expanding globally can be substantial. For most packaging companies, where sales growth is the top priority, having a strategy for moving into new markets should be an immediate focus.

Embracing Supply Chain Visibility and Collaboration


Packaging companies can gain significant strategic and cost advantages by embracing supply chain visibility and


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Continued Achieving Economic Success in the Packaging Market

collaboration. This means making the supply chain a key strategic focus and ensuring it has representation at the leadership table. There may be some risk involved in having complete visibility and collaboration along the entire supply chain, but it can also offer the potential to run a leaner, more efficient and cost-effective operation.

Entering New Product Segments and New Partnerships to Drive Innovation

The industry's focus has traditionally been on developing products incre-

mentally rather than putting all their eggs in one proverbial research basket. Innovation can take longer, is more risky and costs more. And in the past few years, companies have not shown the tendency to take risks.

With government-backed investment incentives recently announced in several of the global regions as well as a heightened focus on innovation by many leading global manufacturers and their suppliers, packaging companies need to access some of their unused capital or explore financing options and invest.

Graphic Data Charts Source: PMMI Business Intelligence, Global Packaging Trends Report 2017, produced by Euromonitor and sponsored by leading packaging associations PMMI, Australian Packaging and Processing Machinery Association, Italian Manufacturers of Automatic Packing and Packaging Machinery, and the Processing & Packaging Machinery Trade Association. Euromonitor International compiled data points and qualitative analysis for 80 countries. Markets include Beauty and Personal Care, Beverages, Dog and Cat Food, Home Care and Packaged Food. Both primary and secondary retail packages were studied, including Internet sales. Download the entire 95-page study: pmmi.org/research.