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Executive Summary

„How much potential is there in the BRICS?“

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Abstract

Die vorliegende Studie zum Potenzial der BRICS-Staaten für die österreichische Außenwirtschaft diskutiert in einem ersten Schritt aktuelle makroökonomische Entwicklungen und strukturelle Aspekte der fünf BRICS-Staaten sowie die damit verbundenen Herausforderungen für die Zukunft. In einem zweiten Schritt wird die Außenhandelsverflechtung Österreichs mit diesen Ländern dargestellt und deren ökonomische Bedeutung für Österreichs Wirtschaft ermittelt. Strukturelle (mittels Constant-Market-Shares Analyse) und innovationsökonomische Merkmale der Exportaktivitäten werden in diesem Kontext diskutiert. Außerdem werden einzelne Sektoren anhand ihrer RCA Werte (Revealed Comparative Advantage) identifiziert, bei denen Österreich spezifische Branchenvorteile gegenüber den BRICS-Staaten aufweist. Auf Basis langfristiger Wirtschaftsprojektionen und der strukturellen Anpassungsdynamik Österreichs werden Exportentwicklungspfade abgeschätzt. In einem dritten Schritt wird die Sicht bereits aktiver sowie potenziell aktiver Akteure auf den Märkten der BRICS-Staaten betrachtet. Dazu wurden rund 400 Unternehmen mittels standardisiertem Fragebogen zu motivationalen Faktoren für ein Engagement in diesen Ländern, zu den Herausforderungen und Risiken in diesen Märkten sowie den Erfolgsfaktoren befragt. Interviews mit ExpertInnen aus Politik und Wirtschaft dienten darüber hinaus der Vertiefung der Analyseergebnisse. Auf Basis einer Synthese der Erkenntnisse dieser Untersuchungen werden abschließend Handlungsempfehlungen für die österreichische Wirtschafts- und Außenwirtschaftspolitik abgeleitet.

Keywords: Internationalisation, Export, Austrian Trade Potential, BRICS, Company Survey, Trade Relations, Value-added effects of Trade

JEL-codes: F14, F15, O52, O53, O54, O55

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Austria's economy has internationalized significantly during the last years. This was a result of the opening-up of Central and Eastern European countries as a consequence of the fall of The Iron Curtain, the integration of the European Union and, last but not least, the increasing globalization in which Austria has successfully played a part. Ederer and Schiman (2013), for example, show that the Austrian trade balance improved substantially between 2000 and 2005. They attribute this development to the fact that Austria was able to strengthen its position in foreign trade as a result of intensified trade relations with non-OECD and non-European countries. What is more, growth markets of global importance emerged outside Europe. Against this background, initiatives aimed at further regional diversification of Austrian foreign trade are to be welcomed. This study serves as a basis for identifying the trade potential of the BRICS¹ for Austrian export trade.

The question "How much potential is there in the BRICS?" will be answered in five steps:

1. Analysis of the economic development of the BRICS since 2000 and short-, middle- and long-term challenges for their economies

- Since 2000, the economic growth of the BRICS has exceeded that of most of the developed countries, which has, in turn, enabled these emerging markets to continue catching up economically with developed economies.
- But on closer inspection it soon becomes clear that there are several differences among the BRICS: The economic growth in Russia, Brazil and South Africa was driven by positive developments on international commodity markets and increased demand for crude materials in China and India in the last decade. China has successfully implemented a growth strategy that focuses on increasing production capacity and stimulating exports. The cheap production costs in China represented an essential precondition for the economy's success; the same could be said about India. However, the country was not able to achieve its full economic potential due to its structural weaknesses.
- As for the market orientation, it should be noted that the major part of the production in the BRICS remains in the internal market, while between 7% and 15% are sold abroad. At the sector level, a less clear picture emerges: In India and China, a large share of the textile and leather goods, furniture, jewellery as well as office and communication machinery produced are destined for export. Furthermore, business-related services in India are predominantly export-oriented. This is also the case for the aviation and shipping industry in China. The raw materials industries, mining, metallurgy (including the production of metal goods) and the timber industry in Brazil, Russia and South Africa are also mainly focused on foreign markets. In Russia and Brazil, the chemical industry is also strongly engaged in the export business. In South Africa, the products in

¹ Brazil, Russia, India, China, South Africa

the automotive industry, which has performed particularly dynamically in recent years, are for the most part exported.

- The export-orientation of an industry must not be equated with actual export volumes, though. In fact, a look at the export structure of the BRICS in terms of value and quantity shows a more differentiated picture: Crude materials and related products are also the dominant export goods in Brazil, Russia and South Africa, while China and India have a more diversified foreign trade structure. For the Chinese export economy, the industrial sector plays a particularly important role: Machinery and transport equipment represent almost 50% of overall exports. Both India and China have a high demand for raw materials that is partly covered by imports from other BRICS. By contrast, the main import commodities in Brazil, Russia and South Africa are industrial goods.
- China's main trading partners are the USA, Hong Kong, Japan, South Korea and Germany. These countries alone account for 48 % of the entire Chinese exports and for 39 % of the imports. China, the USA and Argentina are Brazil's major trading partners, but the trade with certain EU states such as the Netherlands (exports) and Germany (exports and imports) is also significant. Russia's most important trade markets are China, Germany, the Netherlands and Italy as well as Ukraine. However, the country also imports a substantial volume of goods from the US and Japan. The US, the United Arab Emirates, China, Singapore and Hong Kong are the five most important trading partners for India. On the import front, apart from China and the US, oil-producing Arab countries are also important for the Indian economy, which reflects India's considerable demand for crude oil. Interestingly, large volumes of goods are also imported from Switzerland (in 4th place, measured by import volumes) which thus exports higher volumes to India than Germany (in 9th place). The five major destinations for South African exports are China, the US, Japan, Germany and India. These countries are also relevant for the South African import market, however large import volumes also stem from Saudi Arabia, an important trade partner for the oil-demanding country.
- The economic growth of the BRICS is likely to slow down in the future, although it will probably still outstrip the growth of developed economies. The slowdown can be explained by structural problems, large bureaucratic hurdles, high levels of corruption as well as the bad infrastructure conditions in these states. Furthermore, most of the BRICS countries have poor educational and health systems as well as a difficult macroeconomic environment; also long-term developments might hamper growth in the BRICS. These include the ageing of the population that will particularly affect Russia and, to a lesser extent, China.
- Urbanization, environmental pollution and climate change will represent further challenges for the BRICS. Moreover, the broadening of the middle-class will lead to a change in the needs of these societies. Increased mobility, for example, will become an important topic and challenge.

2. Austria's foreign trade relationship with BRICS and its role as supplier or exporter of capital goods in conjunction with Germany

- The Austrian export volume to the BRICS increased significantly compared to 2005: In 2013, the nominal value of the exports was 88% higher (calculations by Eurostat based on the EU-concept; it doubled its 2005-level according to calculations based on the national concept provided by Statistik Austria). The import value exceeded its 2005 level by 74% (Eurostat; by 86% according to Statistik Austria). Moreover, the Austrian balance of trade with the BRICS was continuously positive in this period. The most important export market for Austria among the five countries is Russia; the highest proportion of Austrian imports comes from China.

- The main Austrian goods exported to the BRICS are machinery, electrical equipment, metal and metallic products as well as pharmaceutical goods. The main imports include clothing products (India), mineral fuels and natural gas (Russia), machinery and electrical appliances (Brazil and China) as well as cars and car parts (South Africa).
- As for the use of Austrian export goods in the destination countries, an increasing share of Austrian products are used as intermediate goods and a decreasing one as capital goods. This can be explained by the shift in production in the BRICS, as well as the transfer of know-how to these countries.
- About 7.6 billion Euros of domestic added-value is created in Austria thanks to direct and indirect (via Germany) exports to the BRICS, the strongest effects in this respect are due to Russia and China. “Indirect” exports to the BRICS via Germany generate about 903 million Euros added-value in Austria.

3. Structural aspects of the Austrian export economy

- Despite an increase in volume, Austrian exports lost market share in the BRICS between 2003 and 2010. Similar developments can be observed for European innovation leaders like Denmark, Sweden or Finland. In contrast, the countries of Central and Eastern Europe (CEE) – with the exception of Slovenia – managed to gain market share, albeit from a lower starting point.
- Nevertheless, Austria’s competitiveness in the BRICS has improved over the last years, especially with regard to Russia and South Africa. To a lesser extent, this is also the case in China, India and Brazil. The positive development in Russia and South Africa is mainly due to competitive factors other than price.
- An analysis of the product structure of Austria’s export economy shows that demand from Russia has been particularly strong since 2000, but also from South Africa and India. More recently, demand from Brazil has also grown noticeably. As for China, there has been a mismatch between local import needs and Austria’s export structure since 1996.
- Regarding the level of technological intensity of its exports to the BRICS, Austria managed to position itself more prominently in the high-tech segment between 1995 and 2011. However, Austria has yet to close the gap vis-à-vis the European innovation leaders. Looking at the medium high-tech sector, Austria has basically defended its traditionally strong position despite an increase in competitive pressure from CEE.
- Competition from CEE in the BRICS has also intensified markedly with regard to complex export products and underlying production processes. In 2011, for instance, 82 % of the CEE exports to the BRICS were in the category of sophisticated products based on complex production methods. By comparison, Austria’s level (as a percentage of total Austrian exports to the BRICS) stood at only 64 %. Austria did, however, manage to increase its export share of less sophisticated products based on complex production methods from 20 % to 24 %. This underlines Austria’s core strength in providing extensive production know-how, even for less sophisticated products.
- A look at the educational level of the workforce used seems to confirm this thesis: The share of Austrian exports which require high-skilled labour increased from 39 % in 1999 to 44 % in 2011. This puts Austria well ahead of the group of innovation leaders (31 % in 2011).
- An analysis of Austria’s sector-specific strengths vis-à-vis the BRICS shows a comparative advantage in the sector “manufacture of timber, paper and print materials”. Austria’s competitive

edge in the areas “machinery and plant engineering” and “construction of traffic facilities and equipment” should also be noted, seeing that the corresponding import share of the BRICS is high. Moreover, the segments “metal and metal products” (China and India) and “food, beverages and tobacco” (Russia) hold export potential for Austria.

- Based on OECD projections of the global economic development in the next 30 years, almost half of the expected export demand will originate in the BRICS, mainly in China and India. This offers interesting growth potential also for the Austrian export economy, whose focus has traditionally been on inter EU-trade.

4. Potential of the BRICS from the perspective of Austrian companies

- In order to evaluate the potential of the BRICS from a corporate perspective, a total of 19 in-depth interviews and 405 standardised (i.e. questionnaire-based) interviews were conducted.
- Companies with established operations in the BRICS first and foremost consider Russia to offer a high economic potential in the medium to long run, followed by China. When it comes to India, the respondents were more cautious. The stance regarding Brazil and South Africa varied, notwithstanding that both markets offer economic potential according to the interviewees. South Africa’s potential, though, is considered rather low.
- The further away the foreign market is from Austria, the more likely companies are to set up local subsidiaries or start local production in foreign markets.
- The main motivations for establishing operations in the BRICS are market size, market growth and sales potential for the companies’ range of products and services. In contrast, low production costs and low wages tend to play a less important role overall. On a country level, however, production costs do matter in the case of India and China, whereas they are of no relevance as far as Russia is concerned. In India and China, having a local presence is considered an essential strategic aspect of doing business, much more than the market potential is.
- The main success factors in the BRICS include having an extensive network of contacts, high product quality and an established reputation as a reliable business partner. In addition, in-depth market knowledge, a qualified local workforce, technological expertise and service quality were identified as prerequisites for business success in the BRICS.
- Bureaucratic hurdles, legal uncertainty and corruption comprise the main challenges for companies operating in the BRICS. Furthermore, high competitive pressure constitutes a major obstacle for entering foreign markets, particularly in South Africa and Russia.
- Companies that have yet to establish operations in the BRICS but are intent on doing so also mentioned corruption, legal uncertainty and bureaucracy as challenges posed by their planned market entry. Other factors stated in this context include high financial risks, a lack of skilled labour and an absence of reliable business partners.
- In general, the majority of companies not yet operating in the BRICS show little interest in entering these markets. Corruption, bureaucracy and legal uncertainty count among the explanations for this lack of interest. Besides, there are a number of company-specific obstacles to doing business in the BRICS, including: a product range that is not well-suited to the BRICS, a general strategic direction that does not foresee activities in those markets, a perceived lack of market potential, a company size that is considered too small for such operations and high financial risks.

- The services offered by the export-related institutions in Austria are used extensively by the respondents. The services of the Austrian Federal Economic Chamber (WKO) and its foreign arm, Aussenwirtschaft Austria, enjoy by far the highest degree of popularity (61 %), followed by those of the Oesterreichische Kontrollbank (OeKB) and, less closely, by those of the Austria Wirtschaftsservice GmbH (AWS). In contrast, the services provided by the Exportfonds, regional agencies (e.g. on a federal level), the Oesterreichische Entwicklungsbank (OeEB) and the Austrian Development Agency (ADA) are used by a smaller number of companies.
- Asked how satisfied they were with the services offered by the aforementioned institutions, the companies ranked AWS top, followed by OeKB, WKO and Aussenwirtschaft Austria, and Exportfonds. The services provided by OeEB, ADA and regional agencies were categorised as “satisfactory” by the majority of the respondents.

5. Future potentials and recommendations for action

The various research steps of this study have generated a number of key insights into future potentials for Austria's external sector. There are several ways in which policy-makers can support Austrian companies in taking advantage of business opportunities in the BRICS. More specifically, the following **recommendations for action** should be considered:

- **Recommendation: “Promoting international projects via networking with IFI”**
There are four key areas in which Austrian technological companies and high-tech niche players can tap the business potential offered by economic and social developments in the BRICS. These areas are:
 - Traffic infrastructure: planning and constructing rail and road traffic projects (including tunnel construction), implementing toll systems, etc.
 - Urbanisation: There is, for instance, a high demand for products and services in the fields of security technology, transportation, waste management as well as water and wastewater treatment.
 - Energy and resources: Business opportunities present themselves regarding the planning and construction of power plants. In addition, Austria could position itself more prominently in the BRICS as far as alternative energy and environmental technology are concerned.
 - Healthcare: The BRICS in general, and Brazil in particular, offer interesting perspectives for Austrian niche players in areas such as medical technology (e.g. medical imaging) or chemical and pharmaceutical products.

Numerous projects in the BRICS are carried out in cooperation with, and supported by, International Financial Institutions (IFI). As indicated in a study in 2012², Austrian authorities dealing with IFI would be well-advised to undertake steps to further improve operating conditions for companies along all project phases (from awarding projects right up to financial execution).

- **Recommendation: “Focused sector-specific strategies and brand policies”**
Over the past years and decades, Austria has gained valuable experience in operating in emerging markets. This know-how could be used more extensively with regard to the market potentials in the BRICS, for instance in the field of environmental technology, where Austria has a lot of expertise and a steadily growing export share. Furthermore, there are interesting opportunities in

² Ebner and Lueghammer (2012).

the food industry: Austria enjoys a comparative advantage in this area (see results of the RCA analysis) and stands to benefit from a particularly high demand from Russia, but also - as market experts have noted - from China and India. Other sectors worth mentioning include consumer goods, luxury goods and packaging, where Austria is a technological leader in specific market niches, as well as the automotive supply industry, which offers considerable potential particularly in Russia.

To put it briefly, Austrian companies have both business experience in emerging markets and a competitive edge in certain sectors. The focus should thus be on supporting those industries which offer the highest potential in the BRICS. On the one hand, this can be achieved by enhancing the proven range of foreign trade instruments (e.g. economic missions, related events and consulting services). On the other hand, promoting and funding sector- and country-specific studies of market potentials would help companies operate abroad.

The survey also showed that companies would find it helpful if official authorities were to undertake efforts to position "Austria" as a brand more prominently on an international level. Austrian contractors and trade partners have already benefited greatly from being associated with values such as "reliability" or "high product quality" in the BRICS. Nevertheless, experience shows that domestic brand-name products (particularly those in the food and consumer good industry) are, in fact, not always associated with Austria. In order to tackle this problem, a full range of branding instruments should be deployed on an overall economic level.

- ***Recommendation: "Continuing the industrial policy approach of niche positioning combined with technological leadership"***

Austria has developed a particular strength in the medium high-tech sector, for instance regarding products in the area of machine and vehicle engineering. This applies both to the domestic industrial structure and to the structure of Austria's exports to the BRICS. As for the latter markets, these products are in high demand: In Russia, for example, machinery and transport equipment accounted for 47 % of total imports in 2012. However, competitive pressure has increased in the medium high-tech segment (e.g. from CEE or China). Austria can sustain its competitiveness on an international level by occupying market niches and fostering technological leadership, i.e. by a high level of R&D intensity.

Taking this into consideration, Austria's industrial and innovation policies ought to address the growing importance of research & development (R&D), particularly in the medium high-tech segment. Moreover, scientific research can also help identify new market niches for Austrian medium high-tech companies in the light of ever-changing economic structures worldwide.

According to experts, building up implicit production know-how is another key success factor, seeing as it helps prevent imitation of medium high-tech products. In this regard, educational policy can make a valuable contribution by implementing adequate measures, not least with regard to the dual training system.

- ***Recommendation: "Promoting a broad spectrum of key enabling technologies"***

The importance of the high-tech segment has grown markedly over the last years as far as Austria's exports to the BRICS are concerned. Indeed, Austria has experienced considerable growth in patents regarding five out of six key enabling technologies defined by the European Commission (only exception: biotechnology). However, there is still room for improvement, especially in comparison with European innovation leaders like Denmark, Sweden, Finland and Switzerland.

By intensifying its R&D efforts, Austria could benefit considerably from the innovation potential offered by its already balanced approach to key enabling technologies. Advancing new developments could result in spillover effects between different areas of technology, thus creating a whole new dynamic and unprecedented technological creativity. This, in turn, would lead to innovations. From a competitive perspective, it is also essential to swiftly identify adequate fields of industrial application for newly created technologies, ideally in market niches that offer export opportunities. Obviously, promoting and funding research plays a crucial role in this context. Furthermore, fostering the creative potential of future generations at a very early stage is considered a worthwhile approach. This can be achieved by promoting special educational policies, from (pre-)school to university level, as well as professional training.

- **Recommendation: “Policies for promoting strategic anchorage”**

The survey conducted among 405 companies for the purpose of this study showed that, unlike large corporations, small and medium-sized enterprises (SME) tend to limit their international operations to only one market in the BRICS (often Russia). New stimuli for the Austrian economy would result from SMEs diversifying their operations abroad, ideally towards all the BRICS.

The foreign economic policy measure proposed here is based on the idea that large companies could provide “strategic anchorage” for SMEs, thereby enabling or facilitating market entry for SMEs (and niche players). To this end, politicians would need to develop a new set of instruments and structures aiming at implementing market- and sector-specific models for strategic alliances between companies. Here the focus should be on creating information and communication platforms which ensure a sustainable functioning of these alliances. This, in turn, requires incentive and promotion systems, both for SMEs wishing to enter new markets and for “anchorage” companies (which may or may not be active in the BRICS at this point).

- **Recommendation: “Stronger positioning in lucrative segments of the value chain”**

The corporate survey also showed that foreign activities of Austrian companies in the BRICS mainly focus on exports (73 %). Local subsidiaries (i.e. foreign direct investment), in contrast, are mostly reserved for far away markets.

Strategically speaking, it would prove beneficial from a foreign economic perspective to promote both exports and foreign direct investments of Austrian companies in the BRICS. This is, of course, tied to the question where Austria can and should position itself along the international value chain in the future. If production processes were increasingly built up in the BRICS via foreign direct investment, Austrian headquarters could specialise in highly qualified, knowledge-intensive pre- and post-production services (e.g. R&D, design and conceptualisation, logistics, etc.). This would, in turn, generate higher value added for the Austrian economy.

- **Recommendation: “Bilateral education cooperation and labour market regulation”**

A key aspect of the corporate survey was the question about risks in the BRICS. Besides corruption, bureaucracy and legal uncertainty, the respondents considered the lack of well-trained and reliable local workers to be an important challenge. On the Austrian side, insufficient foreign language skills were identified as a key obstacle for operating in the BRICS.

Several respondents have expressed a clear wish towards Austrian politicians to promote education and training programs (including, for instance, training for officials and experts from the BRICS, like Indian power plant engineers). Additionally, the existing body of strict regulations and formalities should be loosened. The latter point also applies to the area of working-time policy, where Austria’s strict legal regulations tend to be incompatible with the requirements of international projects.

- **Recommendation: “Enhancing the services offered by export-related institutions as well as strategies and initiatives for strengthening Austria’s foreign economy”**

As part of the corporate survey, it was examined how satisfied globally active companies are with regard to Austria’s export-related institutions. The services provided by the foreign arm of the Austrian Federal Economic Chamber, Aussenwirtschaft Austria, are used most extensively, followed by those of the Oesterreichische Kontrollbank (OeKB) and, less closely, by those of the Austria Wirtschaftsservice GmbH (AWS). Despite a generally high degree of satisfaction with the services offered, a number of suggestions for improvement have been made.

Further enhancing the existing range of services has been a major concern expressed by the respondents. More precisely, the focus should be on measures like promoting equity financing or granting foreign currency loans (e.g. in currencies used in the BRICS), the latter combined with tools for hedging currency risks. Moreover, streamlining the services based on actual demand and corporate practice was suggested. Other important aspects include:

- *Improved cooperation and coordination between the export-related institutions on the one hand and the different public authorities on the other hand;*
- *Concerted efforts in public relations aiming at building public awareness, e.g. with regard to positive effects of direct investment for the Austrian economy;*
- *A need for studies, e.g. evaluations of market potentials in promising target countries and industries (in the BRICS), including concrete strategies for operating abroad.*

- **Recommendation: “Negotiating bilateral investment protection treaties with South Africa and Brazil”**

As part of the interviews with policy-makers and market experts, it was discussed which measures Austria should take regarding its foreign economic policy towards the BRICS, also in the context of EU-BRICS relations. Most notably, the importance of bilateral agreements (like investment protection or double tax treaties) between Austria and each individual country of the BRICS was stressed. South Africa’s termination of its investment protection treatment with Austria, in particular, was pointed out in this regard.

In fact, the expiration of the bilateral agreement with South Africa as of August 2014 has raised considerable concern. Interviewees have expressed the wish for a stronger emphasis on Austria’s interests in the international arena as well as for expediting negotiations with South Africa. Moreover, the fact that there is no bilateral investment protection agreement with Brazil was addressed critically, thus prompting a call for action on the part of policy-makers and export-related institutions.

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