

BigSur's "Brain Belts" Strategy

Back in the early-1980s, the World Bank economist Antoine van Agtmael coined the term "emerging markets", while working at the International Finance Corporation. Thirty years later, he just published a great new book, *The Smartest Places on Earth*, which documents how the baton has now passed from the emerging world to the old "Rust Belts"¹ of the developed world. The remarkable story of how Rust Belt cities such as Akron and Albany in the United States and Eindhoven in Europe are becoming the unlikely hotspots of global innovation, where sharing brainpower and making things smarter—not cheaper—is creating a new economy that is turning globalization on its head.

According to Mr. van Agtmael, two critical assumptions behind the rise of EM have been overturned. The first was that globalization was irreversible. Recent data confirms that global trade is growing more slowly than at any point since the implosion of 2009. The second was that the emerging world's cheaper labor would be an enduring competitive advantage – which is far less true than it used to be.

In a world and time when uncertainty seems to be omnipresent, we focus on areas and themes which we feel provide true intrinsic value and "alpha" to our clients. Over the last several years, we have been integrating elements of the "Brain Belts" strategy in identifying investments, and after reading *The Smartest Places on Earth*, feel that we have crystallized this approach.

The 3 foundations for the "Brain Belts" strategy are as follows:

1. Making things cheap to gain an edge over high-cost Western companies just has not been cutting it anymore.

The days of the low-cost advantage seem to be essentially over. Could it be true that cheap labor no longer creates the advantage for the developing countries as it had once been? Has there been a new spurt in the processes of innovation and product development? After several decades of a near-obsession with making things as cheap as possible, the next decades would be focused on making things as smart as possible. Smart innovation, rather than cheap labor, has been the key competitive edge, and leading tech companies such as Apple and Google offer proof. What matters now, Mr. van Agtmael realizes, is how smartly something is produced, rather than how cheaply. That smart production turns out to be happening in "Brain Belts" which have sometimes transformed themselves from Rust Belt cities. Mr. van Agtmael visited

The Thinking Man's Approach



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Ignacio Pakciarz | CEO
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With or without impeachment of the President, Brazil faces a deep and long-lasting political and economic crisis. While current economic policies are unsustainable in the medium term and will have to be reversed, further structural reforms are key. We do not believe the conditions are yet present for a real change in the political system in the short-term nor that there could be a deep shift in the economic model of crony capitalism anytime soon. Tragically for Brazil, it is far from clear what will follow President Rouseff. While it's not our base scenario, the danger of Brazil following Venezuela's path is latent. However, in any case, transitions, even peaceful ones, are messy and take time: even if there is political change tomorrow, it will take a long time for Brazil's economy to regain balance. Caution and patience are warranted.

For more on how we are positioning our portfolios, please contact your investment advisor or email:

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several examples, such as Akron, Ohio, or Albany, New York, Kansas City, Kansas or Pittsburgh, Pennsylvania. The central idea of this book is that the revitalization of former Rust Belt areas to Brain Belts is bringing new competitiveness to the United States and Europe.

2. A Key Common Player in the Brain Belts: the existence of a Research Center, like a University or a Medical Center

The areas that have had the most success in transforming themselves all had centers of innovation and smart manufacturing. Spurred both by necessity, and by innovative universities keen to be used as incubators for new innovations, these cities are leading a “quiet renaissance.” We highlight how this has been done in three different Brain Belt examples:

- a. [Pittsburgh, Pennsylvania](#): The state and local politicians have encouraged the growth of the medical technology sector through grants and other measures; the two major universities (Carnegie Mellon and the University of Pittsburgh) have committed to building research and medical centers; and in the private sector, small concentrations of both biotech and medical firms are flourishing. All of these are positioning Pittsburgh to become a leading medical technology hub, which will help the growth of the economy. The University of Pittsburgh Medical Center (UPMC), on its own represents a \$8 billion health-care conglomerate, and is western Pennsylvania's biggest employer, with 50,000 employees

Pittsburgh has “transformed itself from the city of steel to a center for high-tech innovation—including green technology, education and training, and research and development.”¹ Today, its main industries, health care and education, are thriving. Thanks to universities of the stature of Carnegie Mellon and the University of Pittsburgh, many new companies and recruits are drawn in. This has resulted in an environment of low vacancy rates and rising rents.

- b. [Batesville, Mississippi](#): In October 2008, General Electric opened a new composite factory and production facility in the United States. A decade earlier, the company would have chosen a low-cost labor location for this type of site. And this isn't any factory - it's main purpose is for the production of next generation aircraft engines, a central element of GE's business. This shows evidence that major American companies are bringing back some of their most important manufacturing operations back to the United States.

GE also chose a relatively obscure place for this factory - what struck us in particular was the exact location of the new facility: a town called Batesville, Mississippi. Why there? According to Jeffrey Immelt, CEO of GE, the Batesville was chosen because it is right next door to Mississippi State University. Mississippi State University happens have a research team with tremendous knowledge of new materials that are integral in the creation of the next generation of superlight, ultra-quiet, extremely fuel-efficient aircraft engines. GE felt

¹ The Smartest Places on Earth



that the proximity to the university would facilitate and maximize the sharing of knowledge between the two players.

- c. [Akron, Ohio](#): Long the center of the global tire industry, the city had slipped into decline as tire production went offshore. As it lost its tire manufacturers, jobs and the economy suffered. Now Akron now has more than 1,000 polymer companies, many of which are startups, which jointly employ more people than four big tire groups did, even at their peak. Luis Proenza, the President of the University of Akron was instrumental in revitalizing the city, and really the whole region of Northeast Ohio, turning it into a center of excellence in the field of new materials.

Neither Batesville nor Akron are “glamorous” cities and their success has not been highly publicized. They are unlikely to make any list of the world’s most successful innovation hubs, which has long been topped by the amazing concentrations of brainpower places in Silicon Valley, California, which dominate the public’s perception of where America’s innovation lies.

3. The importance of Collaboration: these Brain Belts operate in a collaborative ecosystem of contributors and are open to sharing knowledge and expertise

The Brain Belts of course look to leaders such as Apple and Google, Stanford University and the Massachusetts Institute of Technology (MIT), and the iconic innovation zones of Silicon Valley and Cambridge, Massachusetts for inspiration and models. Besides a major research university, a Brain Belt ecosystem usually includes a major corporation, a global player, such as the chip maker Intel in Portland, Oregon. Although Intel is founded and headquartered in Silicon Valley, the company has six campuses west of Portland, which together comprise Intel’s largest and most comprehensive site in the world. The company has entered into a collaborative research project with the state-funded Oregon Health & Science University (OHSU) to develop the Collaborative Cancer Cloud. Consequently, Portland became a hub for the emerging practice of precision medicine.

Another great example is Minneapolis, Minnesota, where the ecosystem of Medtronic (today the largest global player in medical devices), the University of Minnesota and world-class hospitals like the Mayo Clinic are working with the funding and grants of the National Institute of Health (NIH). Together, they have created the city with the most cardiac research & development (R&D) in the world.

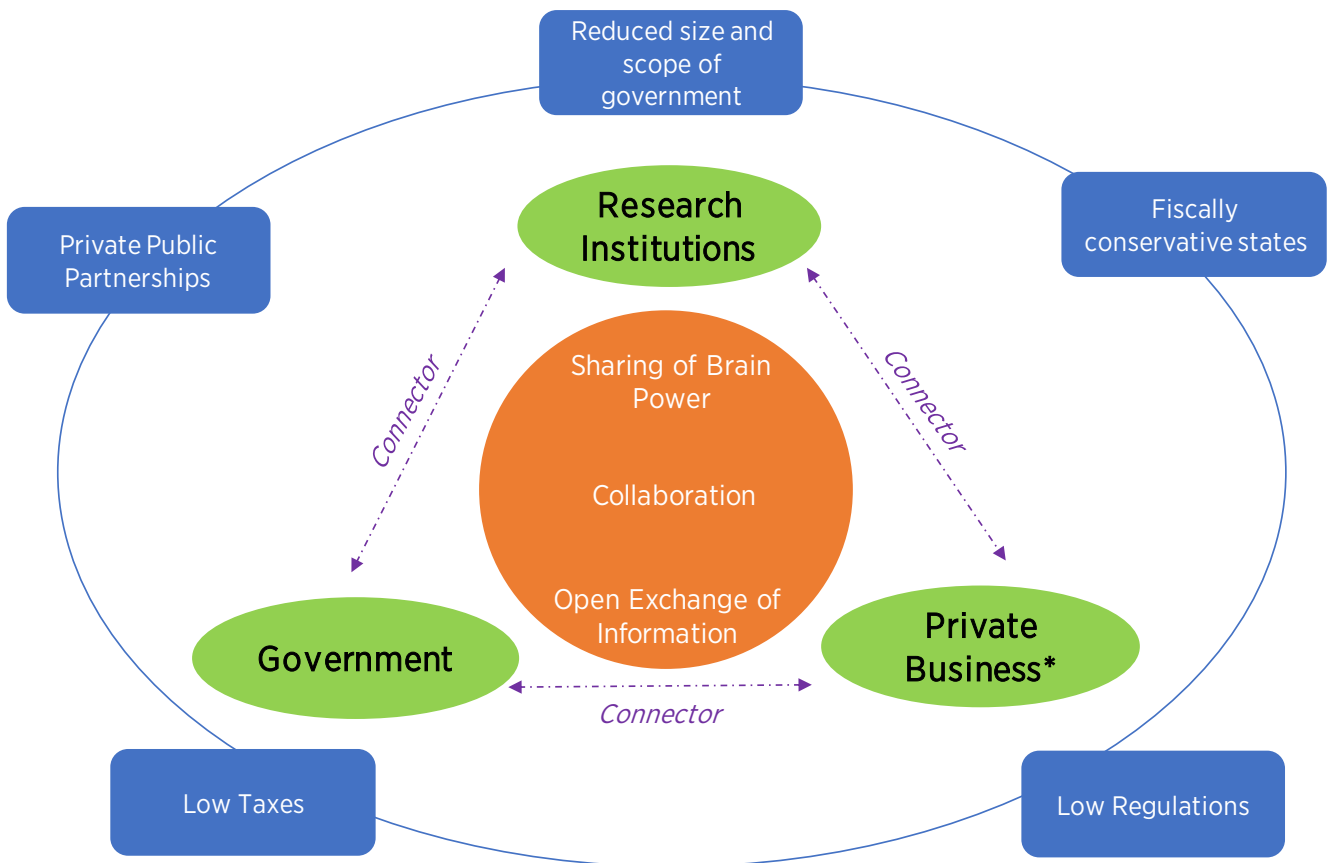
The collaboration is based on commercial necessity and mutual trust. Mr. Antoine van Agtmael & Fred Bakker interviewed various Chief Technology Officers about their general process and approach. Increasingly, they said, they were working in collaboration with multiple partners, often universities and even government agencies, because their companies could no longer bear the cost of research alone and because they needed specific expertise they did not have, or did not want to establish, in house. They mentioned that the process of innovation and creation of products involved collegial collaboration, open exchange of information, partnerships between the worlds of business and academia, multidisciplinary initiatives, and ecosystems composed of an array of important



players, all working closely together. The brilliant pair of “geeks in a garage” was no longer relevant in an era when new product development is expensive, multidisciplinary, and complex. Mr. Antoine van Agtmael & Fred Bakker refer to it as the “sharing of brainpower.”

Below you will find a diagram we created of the Ecosystem. In green you can see the three Key Players in a Brain Belt, which typically interact with each other through a connector, someone who has the vision and capacity to connect these entities together in a meaningful way, whether it is an entrepreneur, scientist or other player. The behavioral dynamics of the Key Players – how they interact with each other is shown through the orange circle, which represents the Internal Factors of the Ecosystem. Finally, External Factors, also known as state factors, are outside elements which influence how the Ecosystem works.

Ecosystem of the “Brain-belt”



- **Internal Factors:** organizational characteristics of how the ecosystem works
- **Key Players:** the contributors: academia/research, business and government
- **External Factors:** positive macro externalities
- - - - **Connector:** an entrepreneur, a scientist or another that has a vision & the ability to link it all together

*Private Business {
 Major corporation (usually global)
 Start-up community

Conclusion

BigSur has been integrating some of the themes of the Brain Belt and Rust Belt cities to help identify attractive investment opportunities. Over the years we have made a few investments which



exemplify these opportunities, mostly in real estate investments. These have been in markets which are typically considered “second tier” or “third tier” cities. Although they may currently lack the size, wealth, or metropolitan center of a first tier city, they have been propelled by their own Brain Belt conversion. See below for our examples:

Some of BigSur's Direct Investments Focused on Brain Belts

- Pittsburgh, Pennsylvania: we invested in a Class A building in the heart of downtown. As noted earlier in the piece, Pittsburgh has developed into a leading global medical device hub, and the downtown commercial business district is booming – there are low vacancies and rising rental rates.
- Kansas City, Missouri: we invested in a Class A building in the central business district of the city. Kansas City was distinguished as Number 5 on Forbes list of “America's Biggest Brain Magnets” list due to its well educated work force; quality of life and affordable cost of living. Driving factors in the city also include a new focus on Technology - Google chose Kansas City as the test market to for its ultra-high speed network, Fiber, and has set up a growing operation in downtown.
- Fort Worth- Dallas – we invested in a multifamily residential property in a suburb of the Fort-Worth-Dallas metropolitan area, known as the DFW Metroplex. Over the last decade the population grew by over 25%, and is now the fourth largest metropolitan area in the country. DFW is more than just a beneficiary of the oil boom in Texas – the area headquarters over 21 Fortune 500 companies, a number which has been growing steadily in the past few years. American Airlines announced in October 2015 its plans to build a new 300-acre campus in Fort Worth, and has plans to build a company flight academy, conference center to host its 100,000 employees, and operations center.
- Global Real Estate Fund positions: we have invested in a large global real estate fund which allows us access investments to large scale commercial projects, one of which is a mall in Dearborn, MI. This mall is across from Ford Motor Company's world headquarters. Dearborn was Henry Ford's home, and the birthplace of the US automotive industry. The University of Michigan has set up a campus in the city, and has distinguished itself as an applied research center in automotive and manufacturing engineering, with significant funding from governmental agencies (National Science Foundation, Department of Energy and US Army) and the industry (General Motors and Ford).

As book by Van Agtmael “*The Smartest Places on Earth*” helped to further refine and structure our approach to investing in this theme that we believe will provide value for our clients. We will continue to explore real estate and direct investments which capture this theme, perhaps expanding the geographic scope to Europe, where Mr. van Agtmael has identified several emerging Brain Belts.



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