

United Nations/Brazil Symposium on Basic Space Technology Use of Space Technology Via Digital Disruption Oswaldo A. Garcia



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Introduction

We are living in a digital disruption where transformation is era caused by emerging technologies business models, these and disruptions can impact the value of existing products and services offered in the space industry, we will discuss the incremental rate of improvement that space emerging countries will have using existing infrastructure of mature space nations and focusing capacities, resources and human capital in developing processing platforms to generate valuable data and decision making insights in a rapid, cost-effective adoption of space technologies.

Start-Up Panorama LATAM

523

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- Deliver the National Space Needs
- Development of Specialized Niches in Space Industry
- Increase of Human Capital and Ο **Dedicated Resources**
- Different Value Propositions in

6 D's Exponential Growth

Digitized

Once a technology is digitized it becomes an information science, and so we can use computers to manage it.

Deceptive

Exponential growth is hard to spot. At the beginning of most exponentially advancing

# Start-Ups	Country	Investment
467	Chile	US\$ 11,323,555
523	Mexico	US\$ 5,166,931
491	Brazil	US\$ 4,431,000
85	Argentina	US\$ 1,080,496
43	Uruguay	US\$ 875,000
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US\$ 800,656

the Space Business

- Reduced Time and Cost for Implementation
- National and International Collaboration
- Increase of Governmental Incentives
- Society Integration in Space Activities

Conclusions

LATAM becoming İS an exponential power in the creation of disruptive business models, it has a large human capital that is

environments, the early stages of development are almost imperceptible.

Disruptive

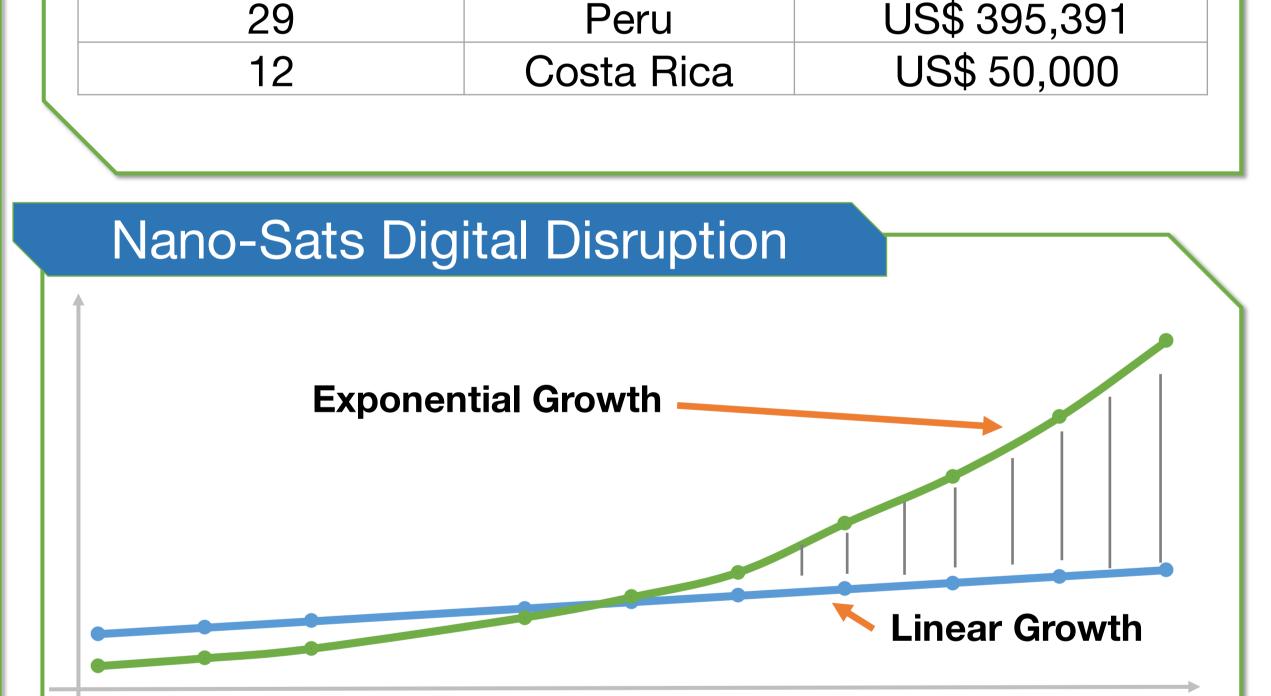
After the initial deceptive growth, the development of an exponentially advancing technology can make the previous paradigm effectively obsolete, out-performing it in both effectiveness and cost.

Dematerialized

Items that were once large and unwieldy can now fit easily into our pockets. The miniaturization of sensors paired with digitization allows for the elimination of dedicated single-use physical devices.

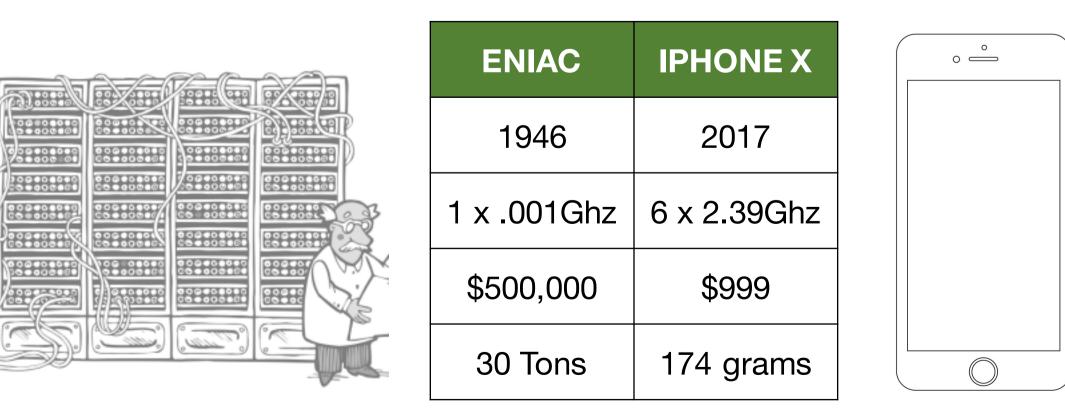
Demonetized

The cost of producing and replicating dramatically cheaper than software is creating the physical version of it, and the economies of scale associated with the sensors allow them to become eminently



Colombia

Nano-Satellites currently are in the *Deceptive phase*, where exponential trends don't seem to grow very fast at first, but are close to the *Disruptive phase* where an incremental growth is expected to change the space business in the next 5 years.



developing capacities in traditional industry sectors, it is estimated by 2020 more than 45% of the young people will produce innovative value in a environment, Startup these countries also are space developed countries, with the new technological strategies disruptive models will be decisive in the global space sector.

References

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affordable.

Democratized

Products, services, and information that were once only available to wealthy nations, research labs, or companies, are now becoming accessible by an ever-increasing percentage of the global population.

Just as cellphones, Nano-Satellites are becoming smaller, faster, cheaper, and more people can have access to it. This its an opportunity for LATAM to build, implement, develop and outperform what space-fairing nations have been done with this technology.

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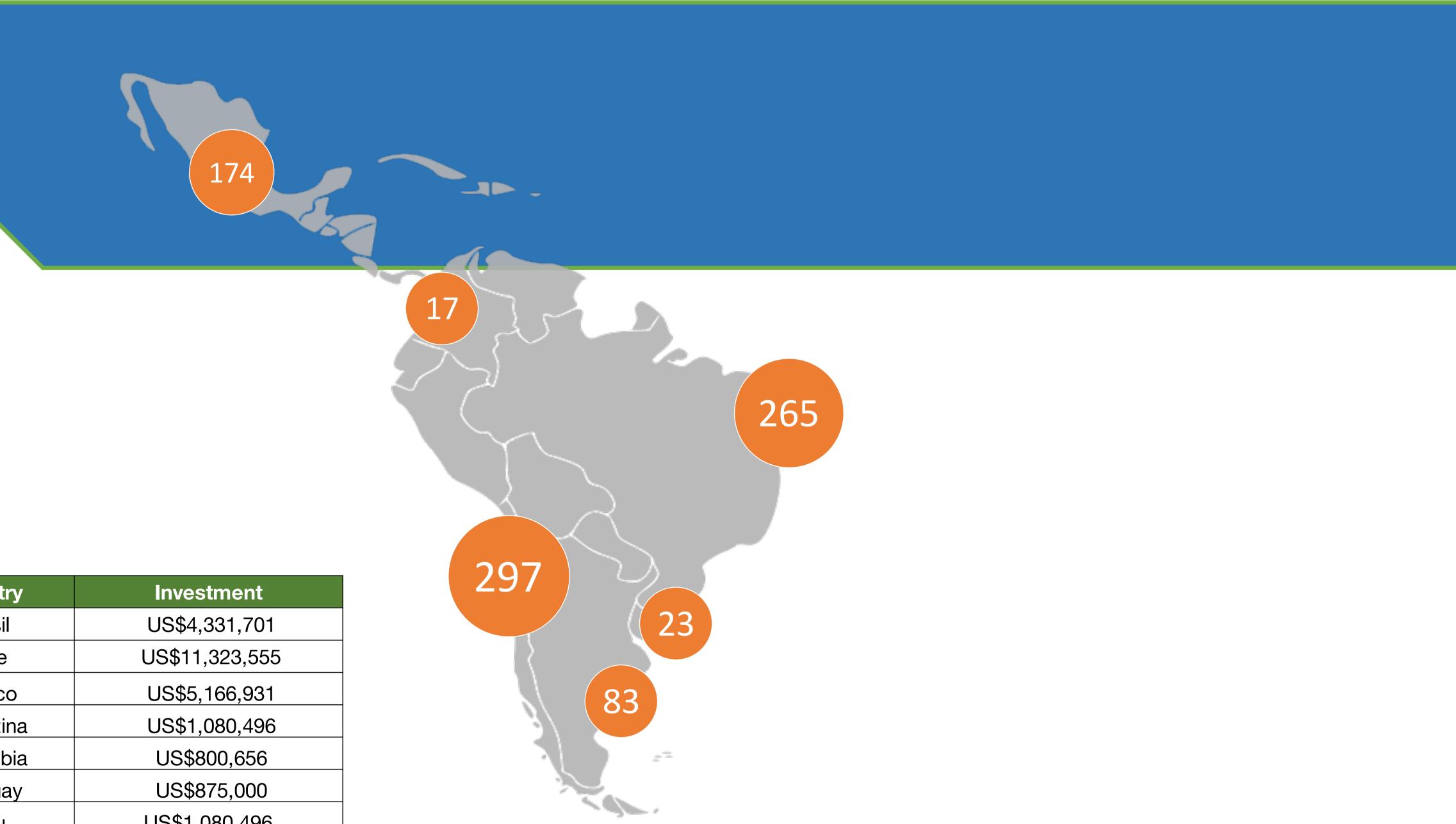
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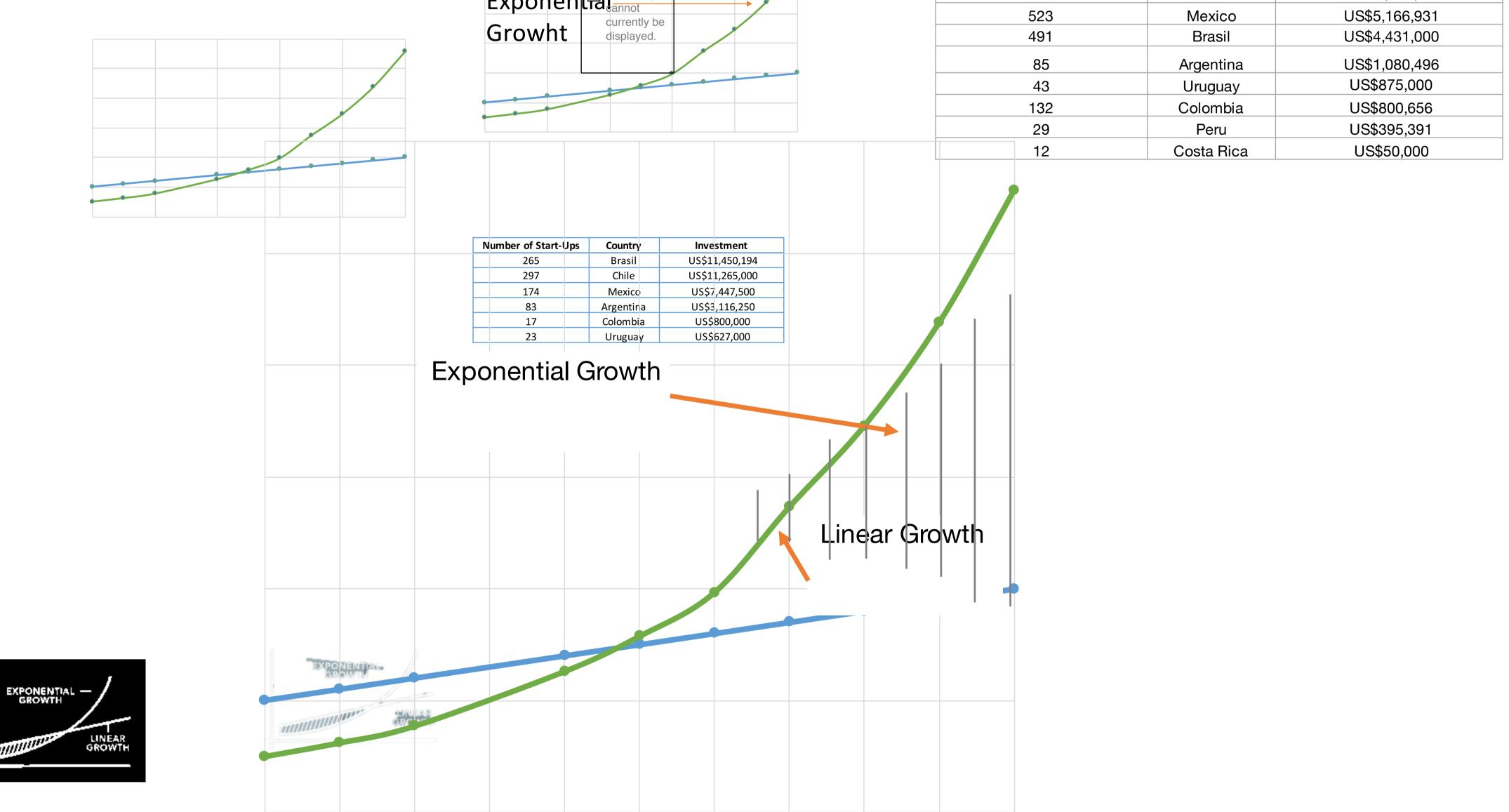
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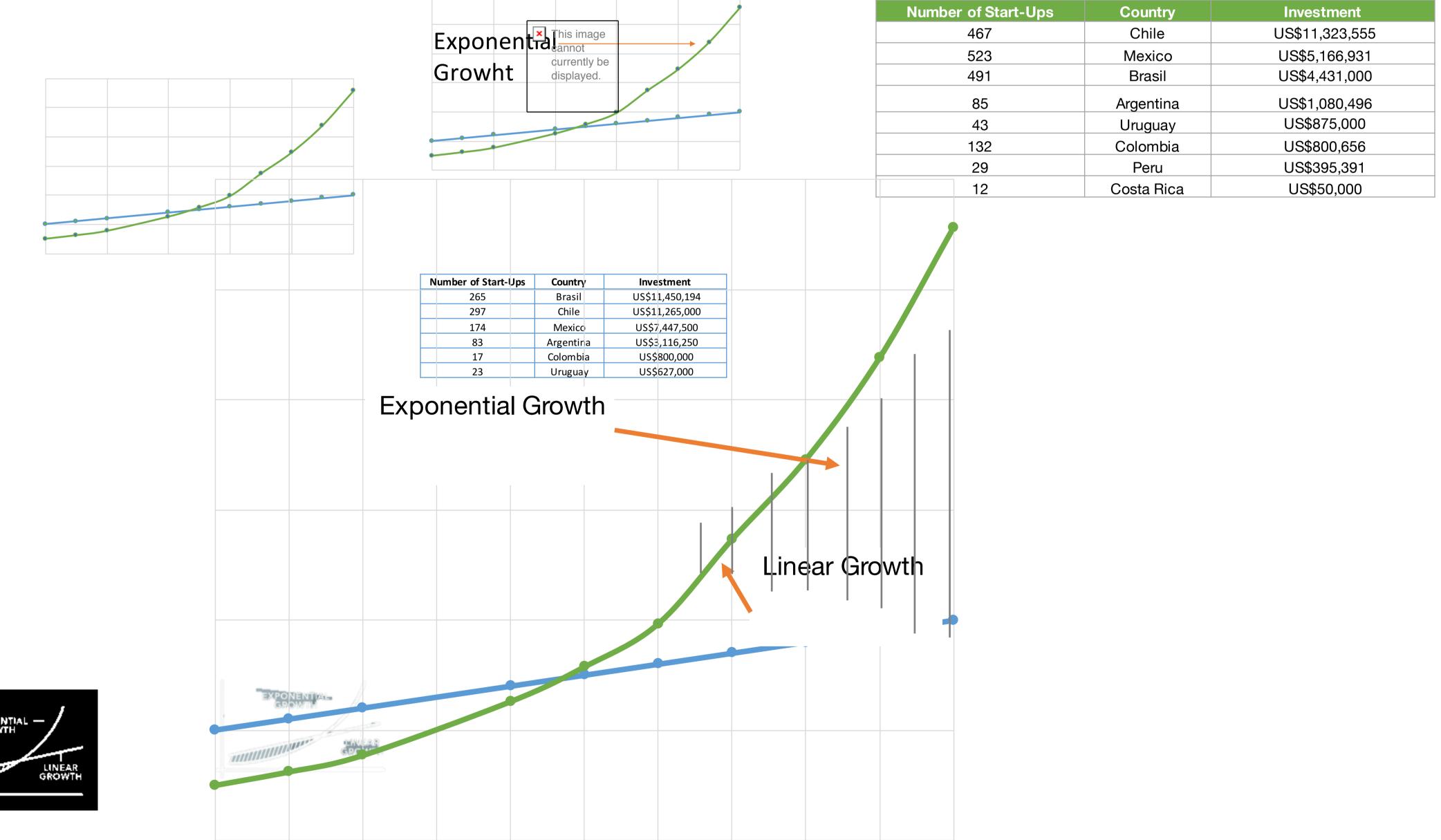






Number of Start-Ups	Country	Investment
491	Brasil	US\$4,331,701
467	Chile	US\$11,323,555
523	Mexico	US\$5,166,931
85	Argentina	US\$1,080,496
132	Colombia	US\$800,656
43	Uruguay	US\$875,000
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12	Costa Rica	S\$1,080,496





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132	Colombia	US\$800,656
29	Peru	US\$395,391